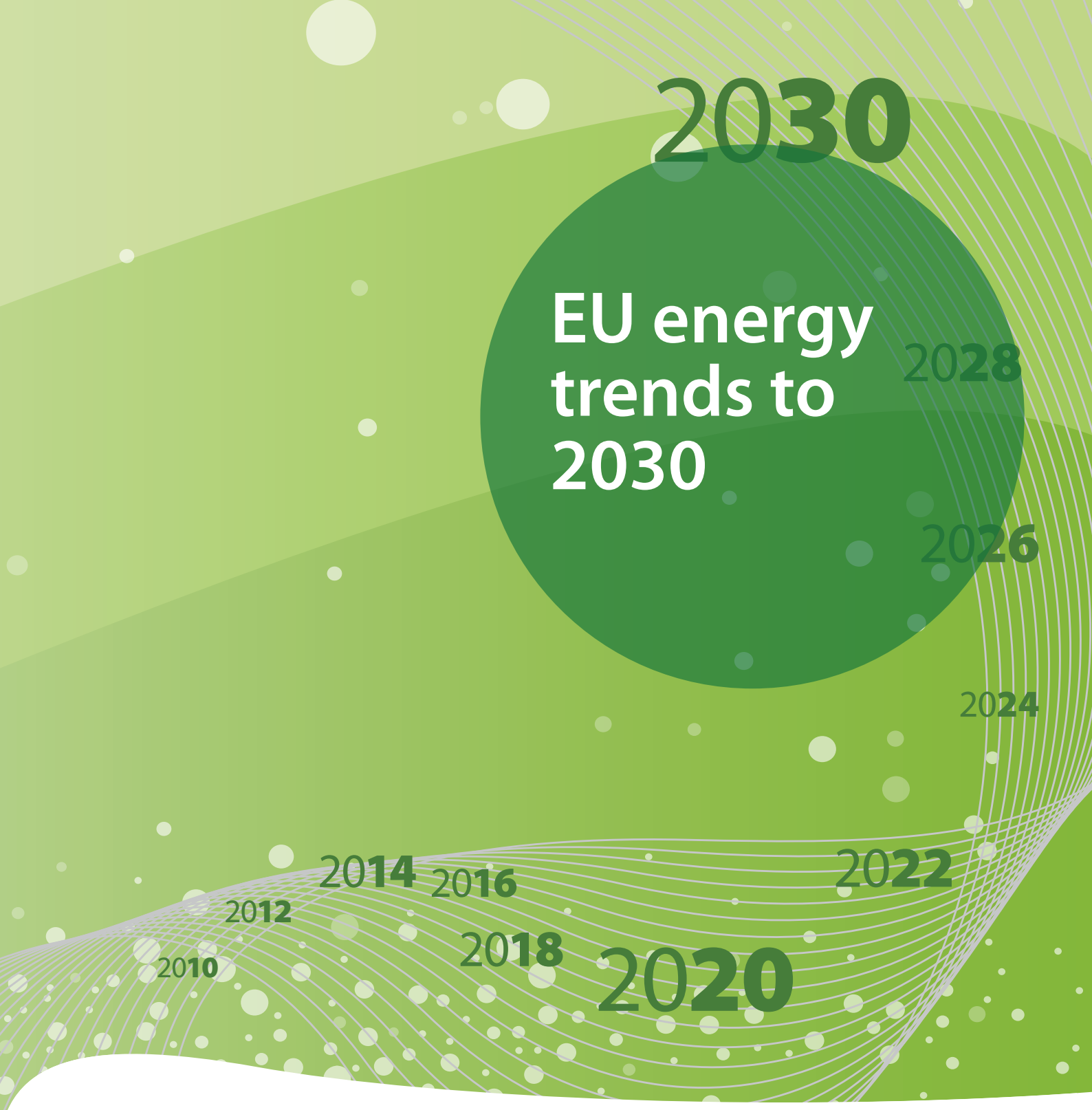

EU energy trends to 2030

UPDATE 2009

Directorate-General for Energy

EUROPEAN COMMISSION

EU energy trends to 2030 — UPDATE 2009

EUROPEAN COMMISSION
Directorate-General for Energy
in collaboration with Climate Action DG and Mobility and Transport DG

This publication was prepared by the Institute of Communication and Computer Systems of the National Technical University of Athens (ICCS-NTUA), E3M-Lab, Greece, for the Directorate-General for Energy and the Directorate-General for Climate Action, and represents that organisation's views on energy facts, figures and projections. These views have not been adopted or in any way approved by the Commission and should not be relied upon as a statement of the Commission's or the Directorate-General's views.

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ABBREVIATIONS & UNITS

ACEA, JAMA, KAMA	Automobile Manufacturers Associations
CCGT	Combined Cycle Gas Turbine
CCS	Carbon capture and storage
CDM/JI	Clean Development Mechanism - Joint Implementation
CHP	Combined heat and power
CIS	Commonwealth of Independent States
CNG	Compressed Natural Gas
COP	Coefficient of Performance
DG	Directorate General
DG CLIMA	Directorate General for Climate Action
DG ECFIN	Directorate General for Economic and Financial Affairs
DG ENER	Directorate General for Energy
DG MOVE	Directorate General for Mobility and Transport
DG TREN	Directorate General for Energy and Transport
EU	European Union
EU ETS	Emission Trading Scheme
EU-15	15 Member States of the European Union until 1 May 2004 (Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Sweden and the United Kingdom).
EU-27	27 Member States of European Union
EUROSTAT	Statistical Office of the European Communities
GDP	Gross Domestic Product
GIC	Gross Inland Consumption
GTL	Gas to Liquids
IEA	International Energy Agency
IPPC	Integrated Pollution Prevention Control
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
NM-12	12 Member States that acceded to the EU in 2004 and 2007(Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia)
OECD	Organization for Economic Cooperation and Development
PV	Solar photovoltaic
R&D	Research and Development
RES	Renewable Energy Sources
SUV	Sport-utility vehicle
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change

bbl	Oil barrel
bcm	Billion of cubic meters
boe	Barrel of oil equivalent
Gbl	Giga-barrels, or 10^9 barrels
GW	Giga Watt, or 10^9 watt
km	Kilometre
Mb/d	Million barrels per day
Mbl	Million barrels
MEuro	Million Euro
Mt	Million metric tonnes
Mtoe	Million toe
MW	Mega Watt, or 10^6 watt
MWh	Mega Watt Hours, or 10^6 watt hours
pa	per annum
pkm	Passenger-Kilometre (one passenger transported a distance of one km)
t (tons)	Metric tonne, or 1000 kilogrammes
toe	Tonne of oil equivalent, or 10^7 kilocalories, or 41.86 GJ (Gigajoule)
TWh	Terra Watt-hour, or 10^{12} watt hours

INTRODUCTION

1. Introduction

This report is an update of the previous trend scenarios, such as the "European energy and transport - Trends to 2030" published in 2003 and its 2005 and 2007 updates. Two scenarios, the Baseline 2009 (finalised in December 2009) and the Reference scenario (April 2010) are presented.

The economic context has dramatically changed since the 2007 Baseline scenario. In autumn 2008 the EU and the global economy entered the steepest downturn on record since the 1930s. The energy intensive industries experienced considerable drops in their production, while energy and electricity demand displayed negative rates of change in 2009. The economic analysts, including official bodies such as the IMF, OECD and European Commission (DG ECFIN), published gloomy forecasts about economic activity and growth. Their medium term and sometimes long term economic outlooks have been drastically revised compared to 2007, in order to reflect significantly lower economic growth.

In addition, legislation that will significantly affect energy demand and production has been adopted at both the EU (i.e. the Climate and Energy Package adopted in December 2008 and several energy efficiency measures adopted in 2008 and 2009) and the national levels. Both the crisis and the new legislation made imperative the conception of a new energy baseline scenario.

The report was commissioned by Directorate General for Energy in collaboration with Directorate General for Climate Action and Directorate General for Mobility and Transport.

The scenarios were derived with the PRIMES model by a consortium led by the National Technical University of Athens (E3MLab), supported by some more specialised models (e.g. GEM-E3 model that has been used for projections for the value added by branch of activity and PROMETHEUS model that has been deployed for projections of world energy prices). The scenarios are available for the EU and each of its 27 Member States simulating the energy balances for future years under current trends and policies as implemented in the Member States by April 2009.

The PRIMES model is a modelling system that simulates a market equilibrium solution for energy supply and demand in the EU27 and its Member States. The model determines the equilibrium by finding the prices of each energy form such that the quantity producers find best to supply matches the quantity consumers wish to use. The market equilibrium is for each time period and the simulation is dynamic over time. The model is behavioural but also represents in an explicit and detailed way the available energy demand and supply technologies and pollution abatement technologies. The system reflects considerations about market economics, industry structure, energy/environmental policies and regulation, which are conceived so as to influence market behaviour of energy system agents. The modular structure of PRIMES reflects a distribution of decision making among agents that act individually about their supply, demand, combined supply and demand, and prices. The market integrating part of PRIMES subsequently simulates market clearing.

PRIMES is a general purpose model; it is conceived for projections to the future, scenario building and policy impact analysis. It covers a medium to long-term horizon. Its modular structure allows either for integrating model use or for partial use.

2009 Baseline

The Baseline scenario determines the development of the EU energy system under current trends and policies; it includes current trends on population and economic development including the recent economic downturn and takes into account the highly volatile energy import price environment of recent years. Economic decisions are driven by market forces and technology progress in the framework of concrete national and EU policies and measures implemented until April 2009. This includes the ETS and several energy efficiency measures but excludes the renewable energy target and the non-ETS targets.

These assumptions together with the current statistical situation derived from the Eurostat energy balances represent the starting point for projections which are presented from 2010 onwards in 5 years' steps until 2030.

The Baseline scenario benefited from the comments of Member States experts from the Energy Economic Analysts Group. Many comments and pieces of information communicated by the Member States were accommodated in revising the draft Baseline scenario, while preserving a harmonised approach to EU energy modelling.

In addition to its role as a trend projection, the Baseline scenario is a benchmark for scenarios on alternative policy approaches or framework conditions (e.g. higher energy import prices, renewables and climate policies).

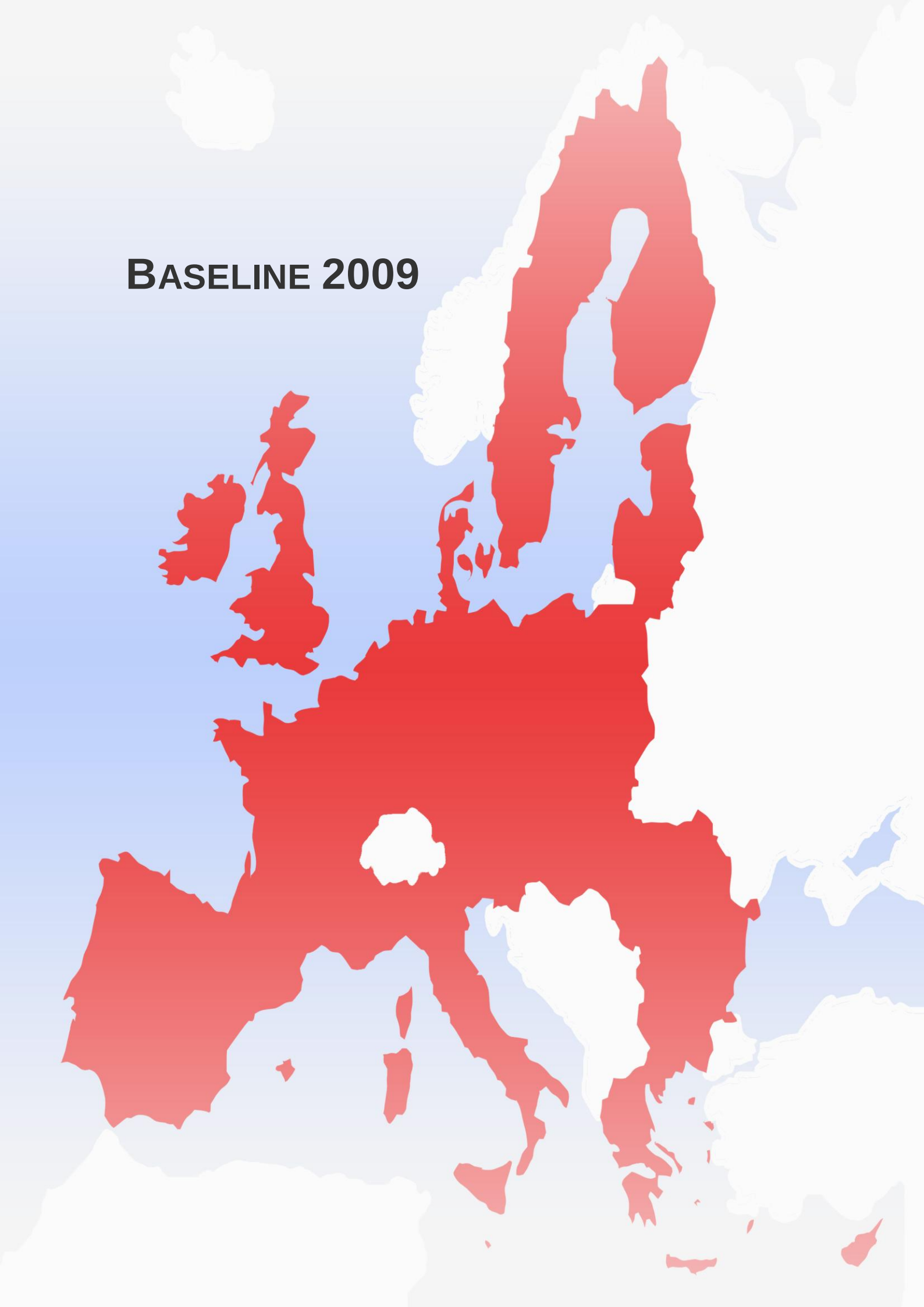
Reference scenario

The Reference scenario is based on the same macroeconomic, price, technology and policy assumptions as the baseline. In addition to the measures reflected in the baseline, it includes policies adopted between April 2009 and December 2009 and assumes that national targets under the Renewables directive 2009/28/EC and the GHG Effort sharing decision 2009/406/EC are achieved in 2020.

The Reference scenario, which includes the mandatory emission and energy targets set for 2020, can serve as a benchmark for policy scenarios with long term targets.

All numbers included in this report, except otherwise stated, refer to European Union of 27 Member States.

BASELINE 2009



2. Main Assumptions

Macroeconomic and demographic Scenario

The energy Baseline scenario of 2007 reflected the optimistic economic growth outlook, prevailing in 2006 and 2007.

The 2009 Baseline scenario builds on macro projections of GDP and population which are exogenous to the models used. They reflect the recent economic downturn, followed by sustained economic growth resuming after 2010. GDP projections for the short term (2009-2010) mirror economic forecasts from the European Commission, DG Economic and Financial Affairs (European Economy, May 2009), which complement the up to date statistics for 2005-2008 from Eurostat. The medium and long term growth projections follow the "baseline" scenario of the 2009 Ageing Report (European Economy, April 2009).

The Baseline assumes that the recent economic crisis has long lasting effects leading to a permanent loss in GDP. The recovery from the crisis is not expected to be so vigorous that the current GDP losses will be compensated. Modelled growth prospects for 2011 and 2012 are also subdued in line with these trends at around 1% per year. However, economic recovery enables higher productivity gains, allowing somewhat faster growth rates from 2013 to 2015.

After 2015, GDP growth rates mirror those of the 2009 Ageing Report. Hence the pattern of the baseline scenario is consistent with the intermediate scenario 2 "sluggish recovery" presented in the Europe 2020 strategy. However, given the recent juncture characterized by the financial and economic crisis, there remains uncertainty concerning the medium-term economic developments. The average EU-27 growth rate for the period 2000-2010 is now only 1.2% per year, while the projected rate for 2010-2020 is recovering to 2.2%, similar to the historical average growth rate between 1990 and 2000. GDP in 2020 is thus significantly lower than assumed in the 2007 baseline.

The population projections for EU27 are based on the EUROPOP2008 convergence scenario (EUROpean POpulation Projections, base year 2008) from Eurostat, which is also the basis for the 2009 Ageing Report. Population projections are higher compared to the 2007 PRIMES baseline due to different migration assumptions.

These projections were used as an input to the multi-sector and multi-country general equilibrium model GEM-E3 to develop projections at sectoral level (i.e. gross value added by branch of activity) while ensuring consistency with the short and long term GDP and demographic projections of the European Commission (DG ECFIN).

The macroeconomic scenario comprises numerical projections of GDP (volume), households' income, population and sectoral activity (using gross value added in volume as a proxy) for 22 sectors, in each EU Member State. The 22 sectors are divided in 10 energy intensive industries, 6 non energy intensive industries, 3 service sectors, construction, agriculture and the energy supply sector (the value added of which is not used as input to the energy model).

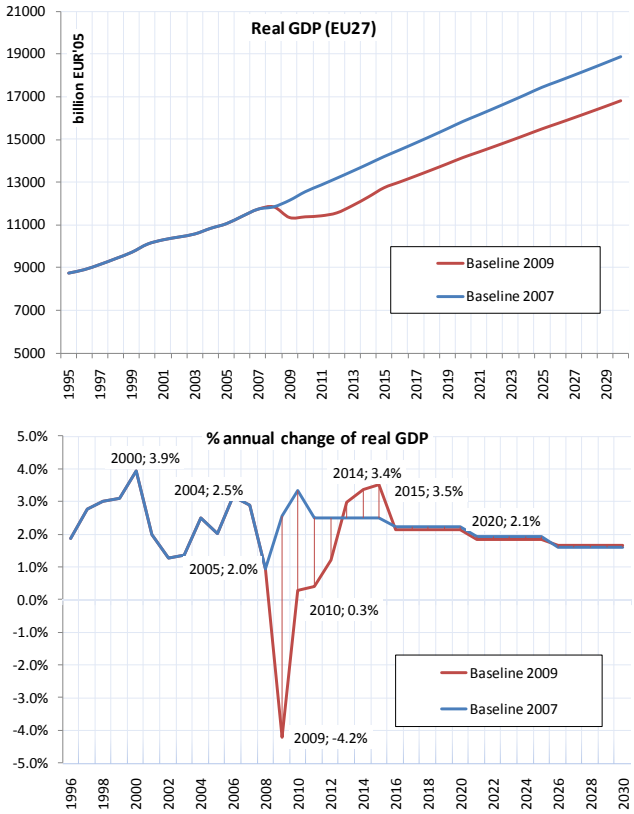
The results show the considerable economic downturn which started in autumn 2008. The reasoning behind the macroeconomic projection can be summarized as follows:

1. The financial crisis induced a marked deterioration of global economic prospects in the final quarter of 2008. The causes of the vicious recession spiral were the downturn in asset markets, the reduction in consumers and businesses confidence accompanied with increased uncertainty, and the resulting reduction in bank lending.
2. A credit rationing practice synchronized worldwide had a detrimental effect for emerging economies through reduction in global trade (credit facilitation to trade was dramatically decreased). Thus EU exports were negatively affected.
3. Credit rationing together with increased uncertainty resulted into a slowdown of private investment in all sectors and lowered households' expenditures on durable goods and

real estate. The rate of private savings increased, exerting further depressive effects on consumption. Altogether, the drop of exports, the lower private consumption and investment explain the negative effects on GDP growth rates for the EU Member States.

4. To alleviate the effects of the crisis, extraordinary measures were put in place, including reduction of basic interest rates, expansion of money supply and facilitation of credit availability. These measures are expected to remove the effects of credit rationing and reduce the "shadow" interest rate and so encourage investment and spending on durable goods and houses. The relatively low levels of oil and commodity prices compared to the first half of 2008 facilitate economic growth as costs of domestically produced goods fall. The worldwide global trade starts recovering due to increased credit availability. Thus, demand is progressively recovering in the EU, thanks to the contribution of exports, private consumption and investment.
5. The recovery process is accompanied by efficiency and productivity gains in many sectors, also because of the restructuring that takes place during the recession period. As a result, growth prospects of the EU are in percentage terms somewhat larger than before the crisis, albeit for a limited time period. Based on this logic, the projection displays higher growth rates compared to a similar projection carried out before the crisis. Despite this, a permanent loss of GDP and welfare is encountered when considering the entire period from 2008 to 2030.

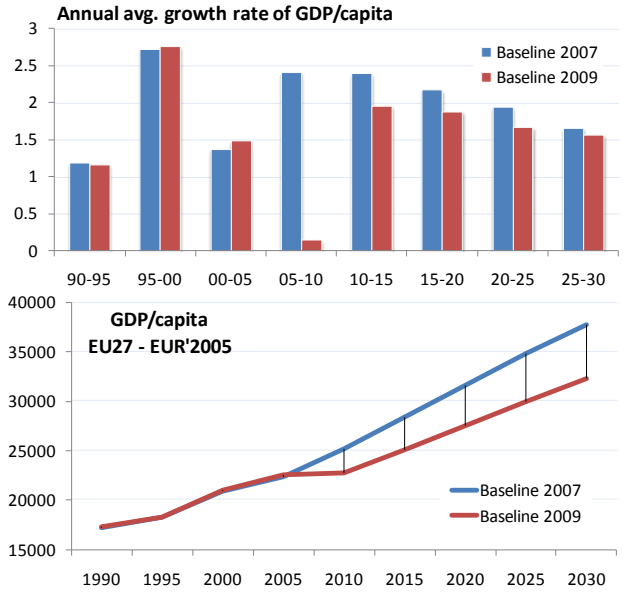
FIGURE 1: GDP GROWTH



In the longer term, the EU GDP growth is projected to slow down to 1.7% per year between 2020 and 2030.

The growth patterns differ by EU Member State: the Northern and Central Europe are more affected by the recession and recover more slowly, but stay on a significant and positive growth pace over the long term; the new Member States that joined the EU in 2004 and 2007 bear an important recession compared to the high growth experienced over the last few years, but they recover faster than the EU average, followed by a slowdown in growth rates as they are progressively converging towards the EU average; Southern economies display a similar growth pattern but their long term prospects are slightly lower than those of the new Member States.

FIGURE 2: GDP GROWTH PER CAPITA



The demographic projection, in accordance with ECFIN's Ageing Report 2009, includes a dynamic immigration trend which helps keeping positive growth rates but is not sufficient to sustain higher growth. Both total population and active population are assumed to grow at positive, albeit very low, growth rates over the entire projection period; this contrasts past scenarios. As for households, per capita income increases at an average rate slightly lower than 2% per year during the projection period.

In terms of GDP per capita, which has an important influence on energy projections, driving households' income, the new projection shows lower GDP and higher population compared to older scenarios. In the long term, GDP per capita increases (in real terms) at an average rate below 2% per year. The macroeconomic scenario involves gradual and steady convergence of GDP/capita among the Member States. Dispersion, notably between the old and the new Member States, persists in the projection even in the long term, but the gap is slowly closing.

The assumptions about future economic growth by sector of activity play an important role in energy projections. As already mentioned 22 sectors are considered. The sectoral outlook can be summarized as follows:

1. The services sectors are projected to dominate the EU's GDP throughout the projection period. The services contribute 72% of gross value added in the EU in 2005 and are projected to contribute 74.7% of the total by 2030.
2. Non energy intensive industries display the second fastest rate of growth among the sectors and their share is projected to remain around 13.5% throughout the projection period. The engineering industry, producing equipment goods, is the dominant industry within the non energy intensive industrial sector, growing faster than the average. Pharmaceuticals and cosmetics display high growth in the scenario but their share remains rather low. Food, drink and tobacco and other industries like wood, rubber and plastics, show significant dynamism, contrasting textiles which are projected to decline.
3. The energy intensive industry (chemicals, basic metals, construction materials, pulp and paper) represent a small share in total value added (3.4% in 2005). The scenario assumes that the bulk of industrial activity in this sector will stay in the EU territory and will even display a slow but steady growth (0.7% per year between 2005 and 2030). However the share of this industry will slightly decline, reaching 2.65% by 2030. The scenario also involves restructuring within the processing and type of products produced by the energy intensive industry. Gradually, their production mix is projected to shift towards higher value added product varieties like special steel, special ceramics and high quality glass. These shifts have consequences on energy consumption and the fuel mix.
4. Chemicals are the fastest growing industry, among the energy intensive ones. Pharmaceuticals and organic chemistry grow faster than fertilizers and inorganic chemistry. The non metallic minerals sector bear considerable slowdown as a result of the recession period and the reduction in real estate in-

vestment; their recovery is also projected to be slow. Iron and steel industry is projected to remain active in the EU taking benefits from restructuring towards higher use of scrap material and the production of higher quality end products as a result of technology progress.

The macro-economic and sectoral projections are available by Member State.

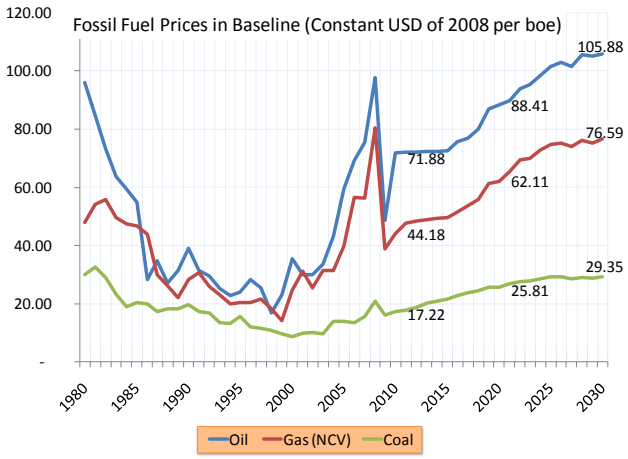
World Fossil Fuel Prices

The energy projections are based on a relatively high oil price environment compared with previous projections and are similar to reference projections from other sources[1]. The baseline price assumptions for the EU27 are the result of world energy modelling (using the PROMETHEUS stochastic world energy model) that derives price trajectories for oil, gas and coal under a conventional wisdom view of the development of the world energy system.

International fuel prices are projected to grow over the projection period with oil prices reaching 88$'08/bbl (73 €'08/bbl) in 2020 and 106$'08/bbl (91 €'08/bbl) in 2030. Gas prices follow a trajectory similar to oil prices reaching 62$'08/boe (51 €'08/boe) in 2020 and 77$'08/boe (66 €'08/boe) in 2030 while coal prices increase during the economic recovery period to reach almost 26$'08/boe (21 €'08/boe) in 2020 but then stabilize at 29$'08/boe (25 €'08/boe) in 2030.[2]

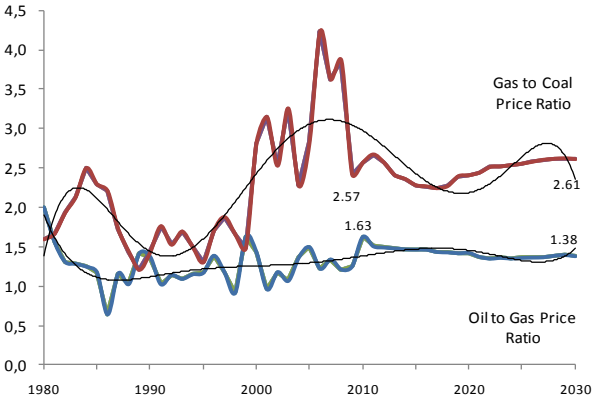
Figure 3 shows the development of fossil fuel prices in the Baseline scenario. It shows a constant increase of prices, but the ratio between the prices is expected to stay relatively constant in future projections (see Figure 4).

FIGURE 3: WORLD FOSSIL FUEL PRICES



The evolution of the ratio of gas and coal prices can to a great extent influence the investment choices taken by investors in the power sector. A relatively low gas to coal price ratio up to the year 2000, together with the emergence of the gas turbine combined cycle technology, led to investments in gas fired power plants. The investments decreased afterwards due to significant gas price increases. As the gas to coal price ratio is projected to remain rather stable (around 2.5), the investment decision will highly depend on the carbon price. Any volatility in the carbon price will lead to high uncertainty for investors in the power sector.

FIGURE 4: RATIOS OF FOSSIL FUEL PRICES



[1] This refers to energy projections from the US Energy Information Administration (EIA) and the International Energy Agency (IEA). The EIA International Energy Outlook 2009 assumed 130 $/barrel in 2007 prices for 2030, equivalent to 134 $/barrel in 2008 prices. The IEA World Energy Outlook 2009 assumed 115 $/barrel in 2008 prices for 2030.

[2] Stability of nominal exchange rates from 2020 onwards (mentioned under point 1.5 on page 24) in the presence of higher US inflation compared with inflation in the EU implies a decrease in the real $/€ exchange rate that is relevant for this comparison of real prices; this development reflects also the slowdown of economic growth in the EU due to demographic change (ageing population).

Policy assumptions

The 2009 baseline includes policies and measures implemented in the Member States by April 2009 and legislative provisions adopted by April 2009 that are defined in such a way that there is almost no uncertainty how they should be implemented in the future. The policies and measures reflected in the baseline 2009 are described in Table 1.

TABLE 1: INVENTORY OF LEGAL MEASURES AND COMMUNITY FINANCIAL SUPPORT INCLUDED IN THE BASELINE 2009

	Measure	How the measure is reflected in PRIMES
Regulatory measures		
Energy efficiency		
	Eco-design implementing measures	
1	Eco-design Framework Directive 2005/32/EC	Adaptation of modelling parameters for different product groups. As requirements concern only new products, the effect will be gradual (marginal in 2010; rather small in 2015 and up to full effect by 2030). The potential envisaged in the Eco-design supporting studies and the relationship between cost and efficiency improvements in the model's database were cross-checked.
2	Stand-by regulation 2008/1275/EC	
3	Simple Set-to boxes regulation 2009/107/EC	
4	Office/street lighting regulation 2009/245/EC	
5	Household lighting regulation 2009/244/EC	
6	External power supplies regulation 2009/278/EC	
	Other energy efficiency	
7	Labelling Directive 2003/66/EC	Enhancing the price mechanism mirrored in the model
8	Cogeneration Directive 2004/8/EC	National measures supporting cogeneration are reflected
9	Directive 2006/32/EC on end-use energy efficiency and energy services	National implementation measures are reflected
10	Buildings Directive 2002/91/EC	National measures e.g. on strengthening of building codes and integration of RES are reflected
11	Energy Star Program (voluntary labelling program)	Enhancing the price mechanism mirrored in the model
Regulatory measures		
Energy markets and power generation		
12	Completion of the internal energy market (including provisions of the 3rd package)	The model reflects the full implementation of the Second Internal market Package by 2010 and Third Internal Market Package by 2015. It simulates liberalised market regime for electricity and gas (decrease of mark-ups of power generation operators; third party access; regulated tariffs for infrastructure use; producers and suppliers are considered as separate companies) with optimal use of interconnectors

13	EU ETS directive 2003/87/EC as amended by Directive 2008/101/EC and Directive 2009/29/EC	The ETS carbon price is modelled so that the cumulative cap set for GHGs covered by the ETS is respected[3]. The permissible total CDM amount over 2008-2020 is conservatively estimated at 1600 Mt. Banking of allowances is reflected. The model endogenously calculates carbon prices clearing the ETS market that allow to match cumulative emissions over the period 2008-2030 with cumulative allowances assuming the maximum permissible use of CDMs. Resulting carbon prices in the baseline 2009 are: 25 €'08/t CO_{2eq} in 2020 and 39 €'08/t CO_{2eq}in 2030.
14	Energy Taxation Directive 2003/96/EC	Tax rates (EU minimal rates or higher national ones) are kept constant in real term. The modelling reflects the practice of MS to increase tax rates above the minimum rate due to i.e. inflation.
15	Large Combustion Plant directive 2001/80/EC	Emission limit values laid down in part A of Annexes III to VII in respect of sulphur dioxide, nitrogen oxides and dust are respected. Some existing power plants had a derogation which provided them with 2 options to comply with the Directive: either to operate only a limited number of hours or to be upgraded. The model selected between the two options on a case by case basis. The upgrading is reflected through higher capital costs.
16	IPPC Directive 2008/1/EC	Costs of filters and other devices necessary for compliance are reflected in the parameters of the model
17	Directive on the geological storage of CO_2 2009/31/EC	Enabling measure allowing economic modelling to determine CCS penetration
18	Directive on national emissions' ceilings for certain pollutants 2001/81/EC	PRIMES model takes into account results of RAINS/GAINS modelling regarding classical pollutants (SO_2, NO_x). Emission limitations are taken into account bearing in mind that full compliance can also be achieved via additional technical measures in individual MS.
19	Water Framework Directive 2000/60/EC	Hydro power plants in PRIMES respect the European framework for the protection of all water bodies as defined by the Directive
20	Landfill Directive 99/31/EC	Provisions on waste treatment and energy recovery are reflected
Transport		
21	Regulation on CO2 from cars 2009/443/EC	Limits on emissions from new cars: 135 gCO_2/km in 2015, 115 in 2020, 95 in 2025 – in test cycle. The 2015 target should be achieved gradually with a compliance of 65% of the fleet in 2012, 75% in 2013, 80% in 2014 and finally 100% in 2015. Penalties for non-compliance are dependent on the number of grams until 2018; starting in 2019 the maximum penalty is charged from the first gram.
22	Regulation EURO 5 and 6 2007/715/EC	Emission limits introduced for new cars and light commercial vehicles
23	Fuel Quality Directive 2009/30/EC	Modelling parameters reflect the Directive, taking into account the uncertainty related to the scope of the Directive addressing also parts of the energy chain outside the area of PRIMES modelling (e.g. oil production outside EU).
24	Biofuels directive 2003/30/EC	Support to biofuels such as tax exemptions and obligation to blend fuels is reflected in the model The requirement of 5.75% of all transportation fuels to be replaced with biofuels by 2010 has not been imposed as the target is

[3] For the allocation regime for allowances in 2010, the current system based on National Allocation Plans and essentially cost-free allowances is assumed, with price effects stemming from different investment and dispatch patterns triggered by need to submit allowances. For the further time periods, in the power sector there will be a gradual introduction of full auctioning, which will be fully applicable from 2020 onwards, in line with the specifications of the amended ETS directive.

For the other sectors (aviation and industry), the baseline follows a conservative approach which reflects the specifications in the directive on the evolution of auctioning shares and the provisions for free allocation for energy intensive sectors based on benchmarking.

		indicative. Support to biofuels is assumed to continue. The biofuel blend is assumed to be available on the supply side.
25	Implementation of MARPOL Convention ANNEX VI - 2008 amendments - revised Annex VI	Amendment of Annex VI of the MARPOL Convention reduce sulphur content in marine fuels which is reflected in the model by a change in refineries output
Financial support		
26	TEN-E guidelines (Decision 1364/2006)	The model takes into account all TEN-E realised infrastructure projects
27	European Energy programme for Recovery (Regulation 2009/663/EC)	Financial support to CCS demonstration plants; off-shore wind and gas and electricity interconnections is reflected in the model. For modelling purposes the following amounts for CCS power plants were assumed, following assumptions of summer 2009: Germany: 950 MW (450MW coal post-combustion, 200MW lignite post-combustion and 300MW lignite oxy-fuel), Italy 660 MW (coal post-combustion), Netherlands 1460 MW (800MW coal post-combustion, 660MW coal integrated gasification pre-combustion), Spain 500 MW (coal oxy-fuel), UK 3400 MW (1600MW coal post-combustion, 1800MW coal integrated gasification pre-combustion), Poland 896 MW (306MW coal post-combustion, 590MW lignite post-combustion).
28	RTD support (7th framework programme- theme 6)	Financial support to R&D for innovative technologies such as CCS, RES, nuclear and energy efficiency is reflected by technology learning and economies of scale leading to cost reductions of these technologies
28	State aid Guidelines for Environmental Protection and 2008 Block Exemption Regulation	Financial support to R&D for innovative technologies such as CCS, RES, nuclear and energy efficiency is reflected by technology learning and economies of scale leading to cost reductions of these technologies
29	Cohesion Policy – ERDF, ESF and Cohesion Fund	Financial support to national policies on energy efficiency and renewables is reflected by facilitating and speeding up the uptake of energy efficiency and renewables technologies.
National measures		
30	Strong national RES policies	National policies on e.g. feed-in tariffs, quota systems, green certificates, subsidies and other cost incentives are reflected
31	Nuclear	Nuclear, including the replacement of plants due for retirement, is modelled on its economic merit and in competition with other energy sources for power generation except for MS with legislative provisions on nuclear phase out. Several constraints are put on the model such as decisions of Member States not to use nuclear at all (Austria, Cyprus, Denmark, Estonia, Greece, Ireland, Latvia, Luxembourg, Malta and Portugal) and closure of existing plants in some new Member States according to agreed schedules (Bulgaria 1760 MW, Lithuania 2600 MW and Slovakia 940 MW). The nuclear phase-out in Belgium and Germany is respected while lifetime of nuclear power plants was extended to 60 years in Sweden. Nuclear investments are possible in Bulgaria, the Czech Republic, France, Finland, Hungary, Lithuania, Romania, Slovakia, Slovenia and Spain. For modelling the following plans on new nuclear plants were taken into account: Bulgaria (1000 MW by 2020 and 1000 MW by 2025), Finland (1600 MW by 2015), France (1600 MW by 2015 and 1600 MW by 2020), Lithuania (800 MW by 2020 and 800 MW by 2025), Romania (706 MW by 2010, 776 MW by 2020 and 776 MW by 2025), Slovakia (880 MW by 2015). Member States experts were invited to provide information on new nuclear investments/programmes in spring 2009 and commented on the PRIMES baselines results in summer 2009, which had a significant impact on the modelling results for nuclear capacity.

Energy Technology Progress

The 2009 Baseline, takes into account energy efficiency gains, penetration of new technologies and renewables, as well as changes in the energy mix driven by relative prices and costs. Implemented policies to promote energy efficiency, renewables and new technologies, as well as market trends bring about energy intensity improvements and energy technology changes. The technology portfolio in the PRIMES 2009 baseline includes the following:

- End-use energy efficiency (thermal integrity of buildings, lighting, electric appliances, motor drives, heat pumps, etc.)
- Renewable energy in centralized and decentralized power generation, in direct heating and cooling applications, as well as for blending with gasoline or diesel oil
- Supercritical coal plants, advanced gas combined cycle plants and CHP
- CO_2 carbon capture and storage (CCS)
- Nuclear energy (generation III and III+)
- Advanced transmission and distribution grids and smart metering
- Plug-in hybrid and electric vehicles, both for passenger and freight road transportation
- Improvements in conventional engines in transport

Although the technologies in the portfolio are known today, the assumed evolution of their technical and economic characteristics presupposes that substantial industrial research and demonstration takes place before deployment at a wide scale.

The modelling also assumes that learning curves apply by technology, thus reflecting decreasing costs and increasing performances as a function of cumulative production. The steepness of the learning curve differs by technology, depending on their current stage of maturity.

For power generation technologies the Baseline 2009 takes an optimistic view about the future, without assuming any breakthrough in technology development. All power technologies known today are projected to improve in terms of unit cost and efficiency.

Energy efficiency gains are driven by microeconomic decisions, reflecting the aim of minimizing costs and maximizing economic benefits in the context of public policies that promote energy efficiency. Similarly, renewables and CHP development are driven by private economic considerations taking into account supportive policies which are assumed to continue in the scenarios and gradually decrease in the longer term. Therefore market forces and least cost considerations drive the development of renewables and cogeneration of heat and power taking into account a continuation of support schemes.

The technical-economic characteristics of existing and new energy technologies used in the demand and the supply sectors of the energy system evolve over time and improve according to exogenously specified trends. Following the logic developed in the Baseline 2007, consumers and suppliers are generally hesitant to adopt new technologies before they become sufficiently mature. They behave as if they perceive a higher cost (a higher subjective discount rate) when deciding upon adoption of new technologies.

Public policies, through campaigns, industrial policy, R&D support and other means, aim at pushing more rapid adoption of new technologies by removing uncertainties associated with their use. In this way, the technologies themselves reach maturity more rapidly as a result of “learning-by-doing” effects and economies of scale. To take into account supportive policies for the adoption of technologies with higher energy efficiency, the perception of the technologies by the consumers is modified.

Nevertheless, agents do adopt new technologies just because they aim at reducing the costs of energy services. This process is also supported by the EU and national energy technology research programmes complementing similar policies of the Member States promoting new and cleaner technologies. GDP growth is therefore associated with continuous improvement of energy intensity, in addition to the effects from structural change in the economy.

The deployment of some of the new technologies depends on the development of new infrastructures and regulations, which are state-driven. This is the case for CCS regarding the transportation and storage of captured CO_2 and for the electrification of transportation which depends on TSOs and DSOs undertaking grid and control systems investments. For CCS, the scenarios assume that the infrastructure and the regulations will deploy and become operational after 2020. For the electrification of transportation, the scenarios presented in this report assume that the development pace will be slow and so electrification of transportation will not show up before the end of the projection period (2030).

Further assumptions

Discount Rates

The PRIMES model is based on individual decision making of agents demanding or supplying energy and on price-driven interactions in markets. The modelling approach is not taking the perspective of a social planner and does not follow an overall least cost optimization of the energy system. Therefore, social discount rates play no role in determining model solutions though they can be used for ex post cost evaluations.

On the other hand discount rates pertaining to individual agents play an important role in their decision behaviour. Agents' economic decisions are usually based on the concept of cost of capital, which is depending on the sector - weighted average cost of capital (for firms) or subjective discount rate (for individuals). In both cases, the rate used to discount future costs and revenues involves a risk premium which reflects business practices, various risk factors or even the perceived cost of lending. The discount rate for individuals also reflects an element of risk averseness.

The discount factors vary across sectors and may differ substantially from social discount rates (such as 4-5%) which are used in social long-term planning. For the scenarios, the discount factors assumed range from 8% (in real terms) applicable to large utilities up to 17.5% applicable to individuals. Additional risk premium rates are applied for some new technologies at their early stages of development.

More specifically, for large power and steam generation companies the cost of capital increases from 8.2% in 2005 to 9.0% for 2015-2030. For small companies the cost of capital is 9.5% in 2005 and 10.5% in 2015 – 2030. In industry, services and agriculture the discount rate amounts to 12% for the whole projection period. Households have an even higher discount rate of 17.5%. For transport, the discount rate depends on the type of operator. Private passenger transport investments (e.g. for cars) are based on a discount rate of 17.5%, while for trucks and inland navigation the rate is 12%. Public transport energy investment is simulated with an assumed discount rate of 8% reflecting the acceptance of longer payback periods than those required in industry or private households. All these rates are in real terms, i.e. after deducting inflation.

Degree days

The degree days, reflecting climate conditions, are kept constant at the 2000 level, which is higher than the long term average without assuming any trend towards further warming. The degree days in 2000 were fairly similar to the ones in 2005. This allows comparison of recent statistics with the projection figures, without entailing the need for climate correction.

Exchange rates

All monetary values are expressed in constant terms of 2005 (without inflation). The dollar exchange rate for current money changes over time; it starts at the value of 1.45$/€ in 2009 and is assumed to decrease to 1.25 $/€ by 2020 and to remain at that level for the remaining period.

3. Results for the Baseline scenario

The Baseline scenario includes all policies that have been implemented until April 2009. This pertains in particular to ETS and a number of energy efficiency measures. It is not assumed that the renewable energy targets and the non-ETS obligations will be achieved given that implementation has not yet been completed.

ETS is modelled in such a way that ETS emissions - plus limited use of CDM credits- just meet the cumulative ETS cap in 2008-2030. This gives rise to carbon prices clearing the ETS market at 25 €'08/t CO_2 in 2020 and 39 €/t in 2030 (endogenously calculated). These prices allow cumulative CO_2 emissions from ETS sectors to match cumulative allowances until 2030 as provided for in the ETS Directive taking into account that in baseline context economic actors would use the maximum permissible amount of CDM.

Short term trends to 2010 and 2015

The model is used to make projections also for the year 2010 because the complete energy statistics available in 2009 were only up to the year 2007. Care was taken to constrain the projection for the year 2010 so as to take into account any existing information about the energy consumption trends and investments. The baseline 2009 and reference scenarios therefore differ only slightly in the trends towards 2015, as the trends are mainly determined by the system inertia and investment decisions taken in the past. Compared to previous projections there are substantial differences due to the influence of the economic crisis and the implementation of energy efficiency policies in both scenarios.

Economy

The economic growth slowdown combined with the new policies implemented until spring 2009 is reflected into the new Baseline scenario. This explains the significant differences in results between the 2009 Baseline (and the Reference scenario), on the one hand, and the 2007 Baseline, on the other, regarding the evolution of the EU energy system.

The effects of the economic crisis on primary energy requirements are noticeable in the short run: the crisis implies less economic activity and consumption, hence lower energy consumption but at the same time it implies a slower pace in investment and capital turnover. As energy productivity progress is mostly embedded in new capital vintages, the slowdown in equipment renewal implies a slowdown in energy efficiency progress. Thus the baseline projects energy intensity improvement as low as 0.9% pa between 2000 and 2010, significantly down from 1.3% pa as projected in the 2007 Baseline scenario.

Power sector

The economic downturn and the energy efficiency policies included in the scenario analysis cause lower electricity demand than previously anticipated. Nevertheless, in addition to power plants to meet still increasing electricity demand, new power plants are needed to replace the obsolete ones and to substitute the ones not complying with the environmental regulations.

The changes in the ETS influence the power sector decisions: as the allowances will decrease over time some of the older power investment plans may be reconsidered.

For 2010 the fossil fuel power plant operating capacity is estimated at approx. 455GW (net) and nuclear capacity at 127GW (net). Coal and lignite account for 42% of the capacity and natural gas combined cycles for 26%; the remaining capacity is divided between open cycle and peak load gas and oil power plants. The generation park in 2015 is mainly determined through power plants under construction or under confirmed planning. Most new power plants will be natural gas fired power plants using the gas turbine combined cycle technology (GTCC). Additionally it is assumed that the planned investment for the construction of 5.4GW coal and lignite power plants with CCS will go ahead and that these will be operating by 2020. The short term trends, based on power plants under construction or under confirmed planning, show a decrease in nuclear and coal power capacities, a significant investment in Gas Turbine Com-

bined Cycle technology and an impressive development of RES projects.

Implications for Energy Consumption

The economic downturn, as explained above, implies in the short term less economic activity and consumption. This causes a reduction of energy consumption, but also a reduced investment and capital turnover which slows energy efficiency progress.

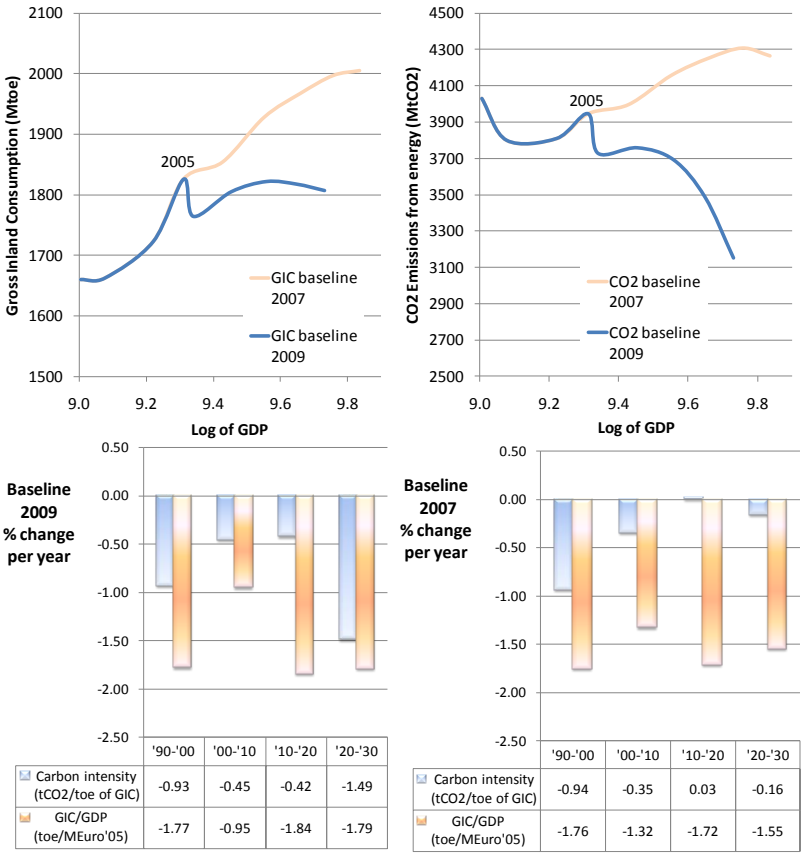
The economic recovery period implies a faster pace in equipment renewing, hence acceleration of energy efficiency progress takes place. But since the new Baseline scenario includes important new legislation aiming at higher energy efficiency, notably for energy in buildings as well as for cars, lighting and electric appliances, the energy efficiency improvement process further accelerates during the economic recovery period which coincides with the implementation of the new legislation. So, in the medium term, beyond 2010, energy efficiency progress (owing to new policies implemented) offsets the effects of GDP growth on energy demand and thus primary energy requirements stabilise, contrasting the increasing trends projected in the Baseline of 2007. Primary energy requirements in the 2009 Baseline are projected to become 7.4% lower in 2020 and 10% lower in 2030 than in the 2007 Baseline.

The Baseline of 2009 also includes significant new carbon emission reduction policies, notably the EU ETS and important bottom-up policies adopted by the Member States for promoting RES. The EU ETS involves the auctioning of emission allowances after 2013 (with some exemptions for new Member States until 2020); hence electricity prices increase in the Baseline 2009 reflecting the additional costs from auctioning, adding a price effect on demand which favours less consumption and more emission reduction. Although the achievement of RES targets is not imposed in the Baseline of 2009, the ongoing investments, subsidy schemes and other facilitation infrastructures, which are being developed in the Member States, are included in the scenario; thus RES deploys significantly more than in the Baseline of 2007, as driven both by the RES promoting policies and the relatively high ETS carbon prices.

Driven by the above mentioned policies and also because of the crisis, the new projection shows energy related CO_2 emissions declining continuously in the Baseline 2009 scenario until 2030. The reduction attains 8.4% in 2020 from 1990 levels and 21.8% in 2030 (contrasting an increase in CO_2 emissions, by 5.1% in 2020 and 5.4% in 2030 shown in the 2007 Baseline). The carbon capture technology and the carbon transport and underground storage infrastructure are assumed to develop and become gradually technologically and commercially mature after 2020, when the first demonstration CCS plants start to be commissioned. The development of CCS post 2020 depends on the ETS carbon prices. The Baseline 2009 findings show that carbon prices especially close to 2030 are likely to allow CCS expansion, on a market basis. Hence, CCS also contributes to emission reduction in the power generation sector.

The graphics in Figure 5 display a considerable decoupling of both energy consumption and carbon emissions from GDP growth. Although the Baseline 2009 does not include all the policy targets of the Climate and Energy package but only the policies implemented by spring 2009, the new projections show a remarkable turnaround of past trends, contrasting the Baseline of 2007.

FIGURE 5: ENERGY DEMAND AND CO_2 EMISSIONS IN RELATION TO GDP



	'90-'00	'00-'10	'10-'20	'20-'30
Carbon intensity (tCO2/toe of GIC)	-0.93	-0.45	-0.42	-1.49
GIC/GDP (toe/MEuro'05)	-1.77	-0.95	-1.84	-1.79

	'90-'00	'00-'10	'10-'20	'20-'30
Carbon intensity (tCO2/toe of GIC)	-0.94	-0.35	0.03	-0.16
GIC/GDP (toe/MEuro'05)	-1.76	-1.32	-1.72	-1.55

Based on this, the new Baseline should not be qualified as a business as usual scenario. A business as usual scenario would not display the decoupling of energy and carbon growth to the extent of the new baseline scenario and would have results that are more similar to the 2007 Baseline results. In Figure 5 the comparison between the Baselines 2007 and 2009 is shown.

The upper part of Figure 5 shows the projected relationship between total primary energy requirements in the EU27 (left hand side graphic), energy related CO2 emissions (right hand side graphic) and the logarithm of GDP. The effect of the economic crisis is obvious as a significant downturn in both graphics.

Regarding the relationship between energy consumption and GDP the graphic shows that the Baseline 2009 projection is by no means a continuation of past trends contrasting the Baseline 2007 scenario. Regarding emissions, the graphic shows a GDP decarbonisation pathway, which – although falling short of what is needed for climate change mitigation - is clearly bending downwards contrasting the trend expressed by the Baseline 2007 scenario.

Total final energy demand is projected to increase slightly by 4% between 2005 and 2030. Compared to the pre-crisis Baseline of 2007 with less energy policy measures included this means 16% less final energy consumption in 2030.

Figure 6 shows that energy demand growth is pretty small in all sectors, even in transport reflecting among other things the CO_2 from Cars Regulation. Demand growth for buildings (households and services) is smaller than for industry and transport.

FIGURE 6: FINAL ENERGY DEMAND BY SECTOR

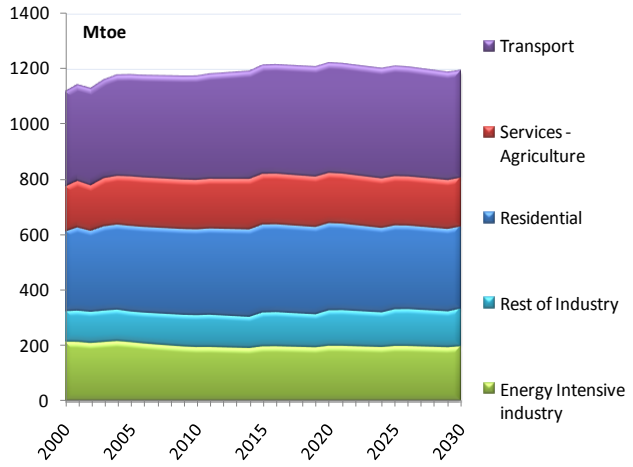


Figure 7 compares final energy demand projections of the Baseline 2009 scenario to projections of the Baseline 2007 and uses the term "energy savings" for the projected demand reductions, which are due both to the crisis and the energy efficiency measures included in the Baseline 2009.

The CO_2 from Cars Regulation and other structural changes reflected in Baseline 2009 imply considerable savings in the transport sector, especially close to 2030 (18% compared to 2007 Baseline).

Similarly, policies for buildings, appliances and lighting accelerate progress of energy efficiency in houses and buildings implying larger effects in terms of energy savings for heating and cooling uses (8% in 2020 and 14% in 2030 compared to 2007 Baseline).

Regarding appliances and lighting, the changes in the 2009 Baseline from the 2007 Baseline are rather small. Energy efficiency improvements from eco-design measures are somewhat masked by stronger increase of population living in more households than foreseen in the 2007 Baseline.

For industry, the lower 2009 Baseline energy demand projections (11% less than in the pre-crisis baseline in 2030) are mainly due to the effects from lower economic growth.

Figure 8 shows the projection of energy intensity indicators by sector for the Baseline scenario compared to previous projections for the Baseline 2007.

FIGURE 7: ENERGY SAVINGS IMPLIED IN BASELINE 2009

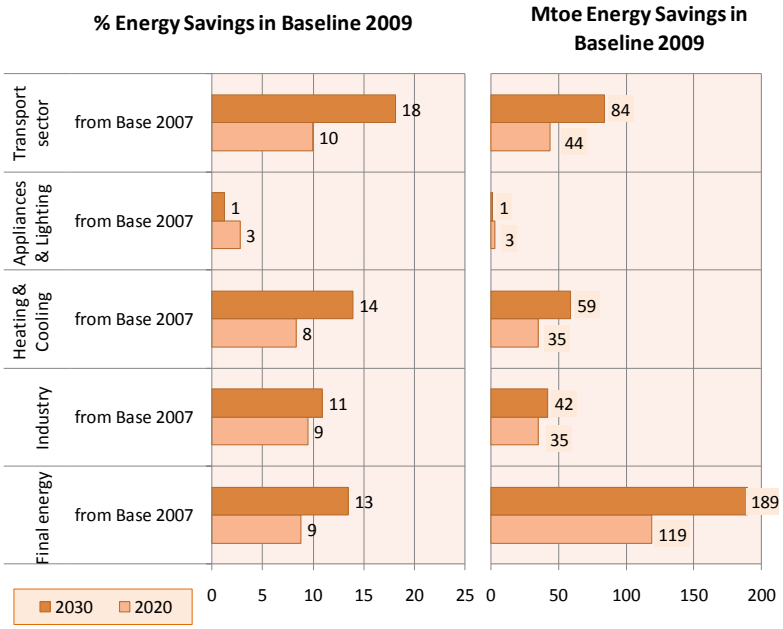
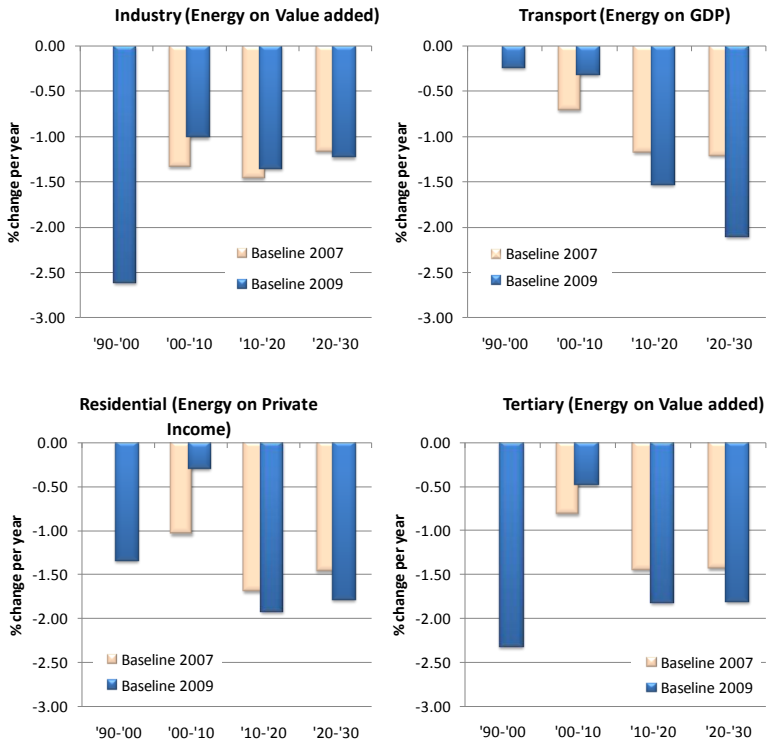


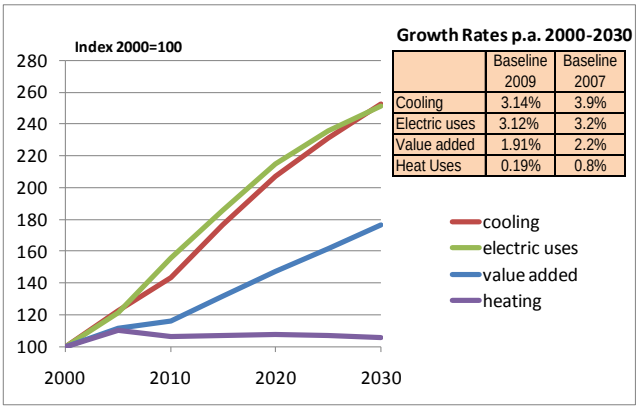
FIGURE 8: ENERGY INTENSITY INDICATORS



Energy efficiency in the residential and tertiary sectors can be improved by using better energy equipment (e.g. lighting, electric appliances, heating and cooling appliances), by improvements of buildings (e.g. thermal integrity of buildings) or by inducing changes in behaviour. In the Baseline 2009 scenario, for the residential and the services sector there is a general improvement in the energy efficiency of energy using equipment across the EU. This can be brought back to the effects of the implementation of the Eco-Design and Labelling Directives, which are applied in all Member States.

National policies are nonetheless taken into consideration. In the services sector the energy efficiency improvements are not sufficient to counteract the increase in absolute terms of useful energy demand, which continues rising.

FIGURE 9: USEFUL ENERGY IN THE SERVICES SECTOR

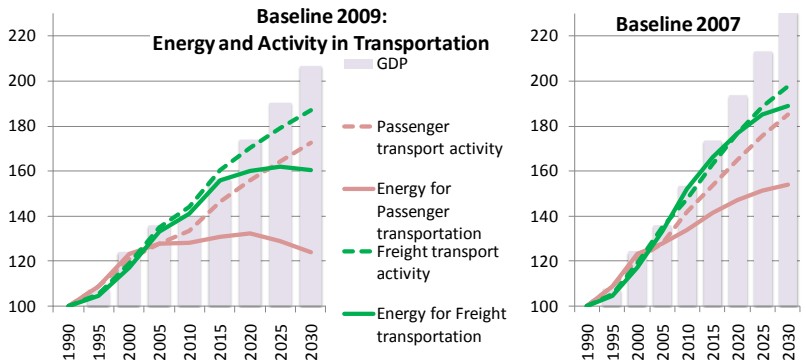


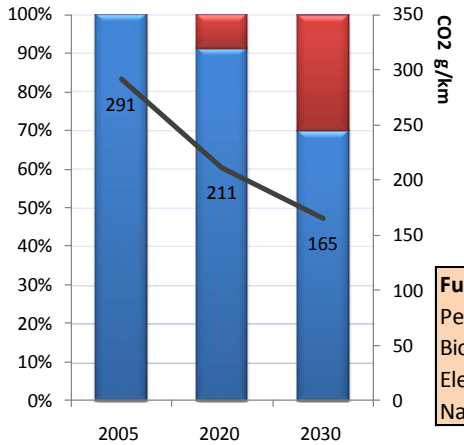
Growth Rates p.a. 2000-2030

	Baseline 2009	Baseline 2007
Cooling	3.14%	3.9%
Electric uses	3.12%	3.2%
Value added	1.91%	2.2%
Heat Uses	0.19%	0.8%

Energy efficiency improvements not related to energy equipment are more difficult to bring back to a specific element as there are several influencing factors such as increase in comfort levels (which generally increase energy use) or other behavioural change, influenced by public campaigns.

FIGURE 10: IMPACTS ON TRANSPORTATION



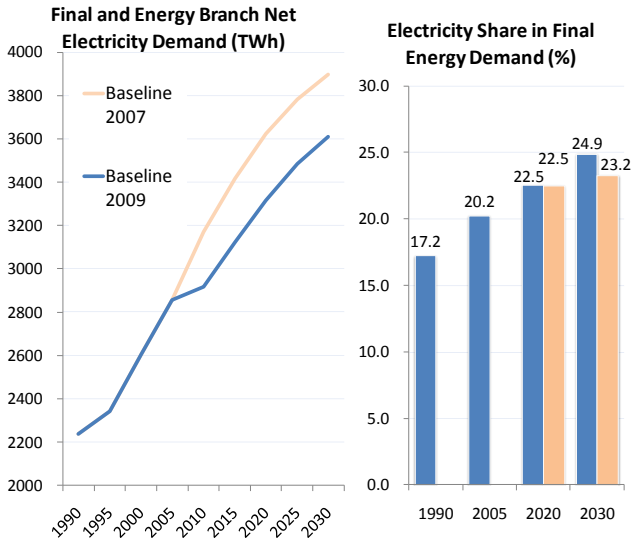


Fuel Mix Cars	2020	2030
Petroleum Fuels	92.8%	91.1%
Biofuels	6.6%	8.3%
Electricity	0.0%	0.0%
Natural Gas	0.6%	0.6%

The 2009 Baseline takes a conservative view regarding the possible changes in transport sector fuel mix: hybrid vehicles make significant inroads, but grid electricity is not penetrating the transport market; biofuels develop according to currently implemented policies (however not delivering the 10% target for RES in transport from the RES Directive).

The transport sector exhibits the highest energy savings in comparison to the 2007 Baseline. This is due to a less pronounced growth of transport activity as a result of lower GDP growth and to the effects of new policy measures included in the 2009 Baseline).

FIGURE 11: IMPACTS ON DEMAND FOR ELECTRICITY[4]



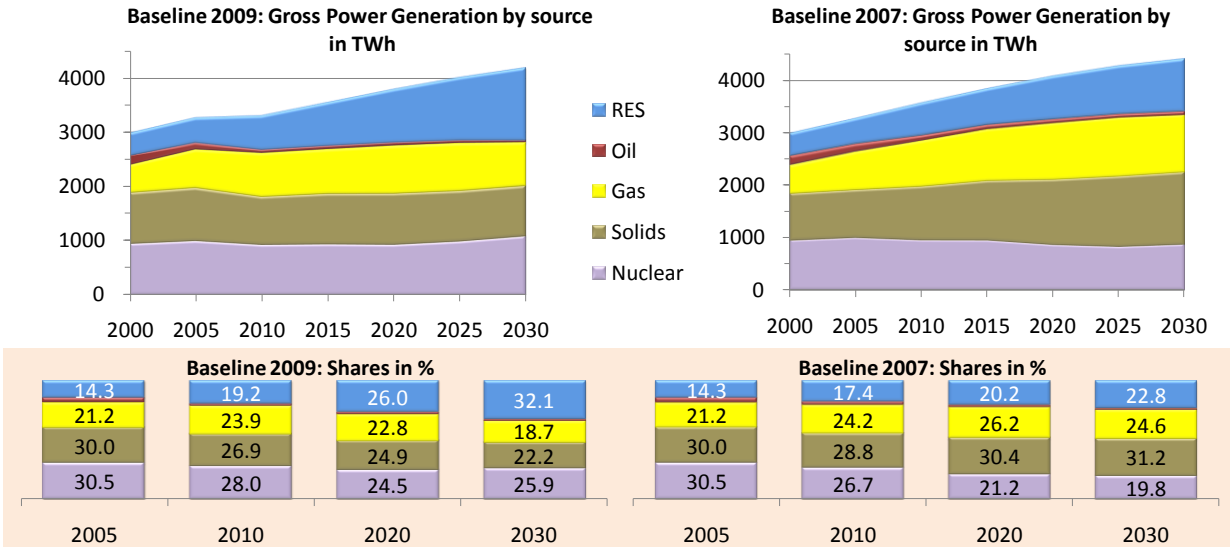
The economic crisis and the new efficiency policies included in the Baseline 2009 induce a significant slowdown of demand for electricity with cumulative electricity sales (2005-2030) being some 7% lower compared to the 2007 Baseline (see Figure 11). However, electrification in final energy demand continues to be a dominant trend with the share of electricity in final energy demand reaching 24.9% in 2030 (from 23.2% in the 2007 Baseline). Electrification could further intensify if electricity also penetrated in transportation

Impacts for Power Generation

As shown in Figure 12, the fuel mix in power generation also exhibits significant changes in comparison to the 2007 Baseline owing to the effects of the EU ETS carbon prices which increase the cost of fossil fuels. In addition more pronounced promoting policies for renewables pursued now in the Member States bring in more RES compared to the Baseline 2007.

In the new context of the EU ETS system, the model projects a significant decrease in coal/lignite generation, which accounts for 22.2% of total electricity generation in 2030 in the Baseline 2009, 9 percentage points down from the 2007 Baseline, despite significant penetration of CCS in the new scenario. Gas-based generation increases slightly from current levels in volume terms, but looses market share. The prospects for further penetration of gas based electricity generation are modest in Baseline 2009 contrasting past expectations. Nevertheless, the simulation of the power system reveals that gas will have to play a crucial role for balancing purposes, as according to these new projections more intermittent RES power operate (18.5% in 2030, significantly up from 5.6% in 2010).[5]

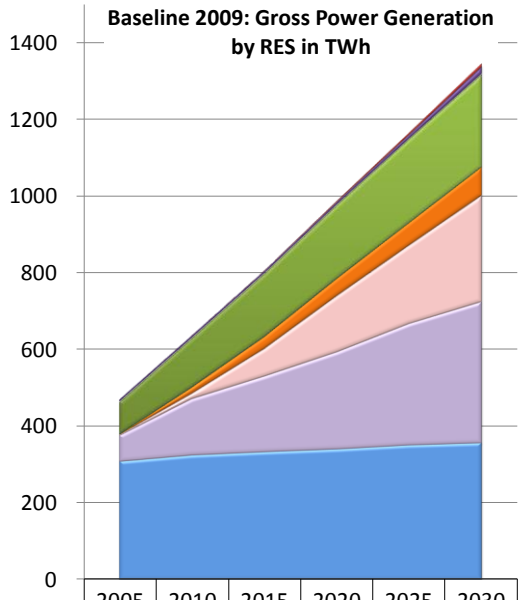
FIGURE 12: STRUCTURE OF POWER GENERATION



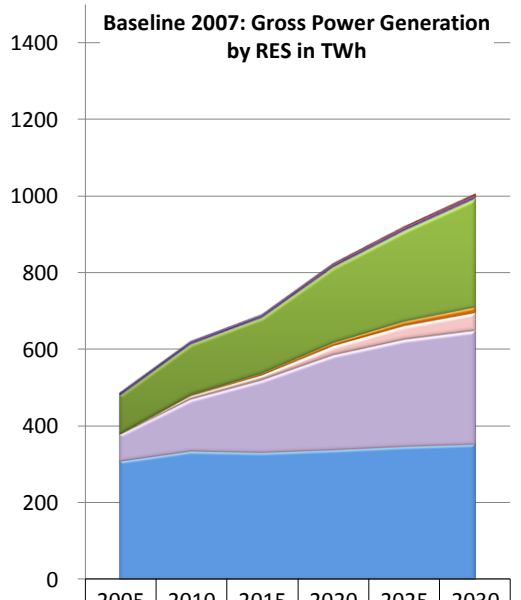
[4] Final energy demand sectors and energy branch net electricity demand includes consumption of electricity by final consumers and the energy branch; it excludes transmission and distribution losses, as well as own consumption by power plants.

[5] Intermittent resources are: wind (on-shore and off-shore), solar and tidal/wave. The shares are related to net electricity generation.

FIGURE 13: STRUCTURE OF RES POWER



	2005	2010	2015	2020	2025	2030
Tidal, etc.	0	0	1	3	6	9
Geothermal	5	6	6	7	11	19
Biomass/waste	84	127	164	191	218	241
Solar	1	17	32	46	60	75
Wind offshore	2	14	72	146	204	276
Wind onshore	68	147	197	253	316	368
Hydro	307	323	332	339	349	355



	2005	2010	2015	2020	2025	2030
Tidal, etc.	0	0	0	2	3	5
Geothermal	8	8	8	8	9	9
Biomass/waste	102	133	145	196	235	282
Solar	1	4	6	9	13	17
Wind offshore	0	9	13	24	36	46
Wind onshore	70	136	189	247	279	296
Hydro	307	333	329	336	345	351

Nuclear energy remains roughly stable relative to current levels over the projection period, as new nuclear plants are commissioned in some countries while decommissioning takes place either because of age or because of the phase-out which reflects the policies pursued in Germany and Belgium when the Baseline modelling was undertaken. The nuclear shares in Baseline 2009 are higher than in Baseline 2007, because of the ETS prices which drive higher nuclear investment and the revival of nuclear programs in the UK as well as the new nuclear investment foreseen in Italy and Poland.

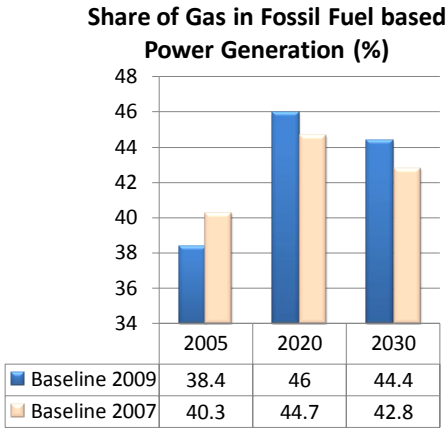
Renewable power generation makes impressive inroads in the 2009 Baseline scenario. Already in 2020, RES power gets the largest market share in total power generation (26.0% from 20.2% in the 2007 Baseline) and is projected to account for almost one third of total generation in 2030 (9.2 percentage points above 2007 Baseline levels).

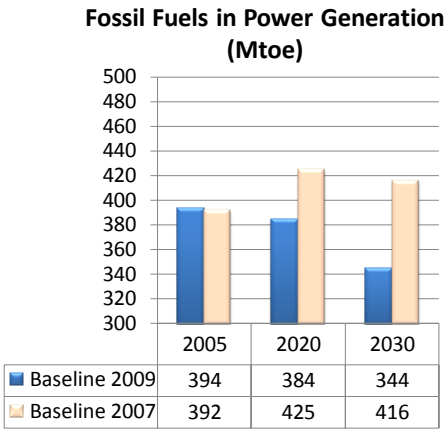
The bulk of the increase in RES power (see Figure 13) corresponds to the deployment of wind onshore, the rising investment in offshore wind and the considerable development of solar photovoltaics. Other forms of RES power also emerge, such as concentrated solar thermal and tidal/wave energy. Wind and the other RES are facilitated by assumed expansion of grids and new equipment for controlling grid operation, which entail additional costs that show up in the electricity prices.

Biomass and waste energy combustion for power generation develop significantly in the Baseline 2009 scenario, both in pure biomass plants (usually of relatively small size) and in co-firing applications in solid fuel plants. Biomass and waste input to power generation is projected to more than double in 2030 from current levels. The use of biomass and waste energy is wide-spread in CHP applications.

The increase in RES in the scenario compared to previous projections requires a higher amount of gas fired power plants to cope with the higher amount of intermittent energy sources. Although the absolute amount of gas used in the Baseline scenario diminishes, the share of gas fired power plants in fossil fuel power generation increases (see Figure 14).

FIGURE 14: SHARE OF GAS IN FOSSIL FUEL BASED POWER GENERATION AND FOSSIL FUEL INPUT TO POWER GENERATION





The EU ETS carbon prices, reaching 39 €'08/tCO_2 in 2030, drive CCS investment: from 5.4 GW (CCS demonstration plants) in 2020 CCS capacity increases to 35 GW in 2030. The share of CCS generation in total power generation is 8.7% by 2030, when 23.6% of CO_2 emissions from power generation are projected to be captured and sequestrated.

Cogeneration develops significantly in the new Baseline scenario, driven by new policies supporting CHP (including the cogeneration directive) and the ETS prices.

The share of electricity produced by CHP plants (normalized according to the standards of the CHP directive) attains a level around 17.5% throughout the period from 2015 until 2030, significantly up from 11.7% in 2005.

The above changes in the fuel mix of power generation with the penetration of carbon free sources imply a steady decrease in carbon intensity of power generation: the average emission of CO_2 per MWh produced halves in 2030 compared to 2005; this trend could not be displayed in the Baseline 2007.

FIGURE 15: CARBON INTENSITY AND OTHER INDICATORS FOR POWER GENERATION

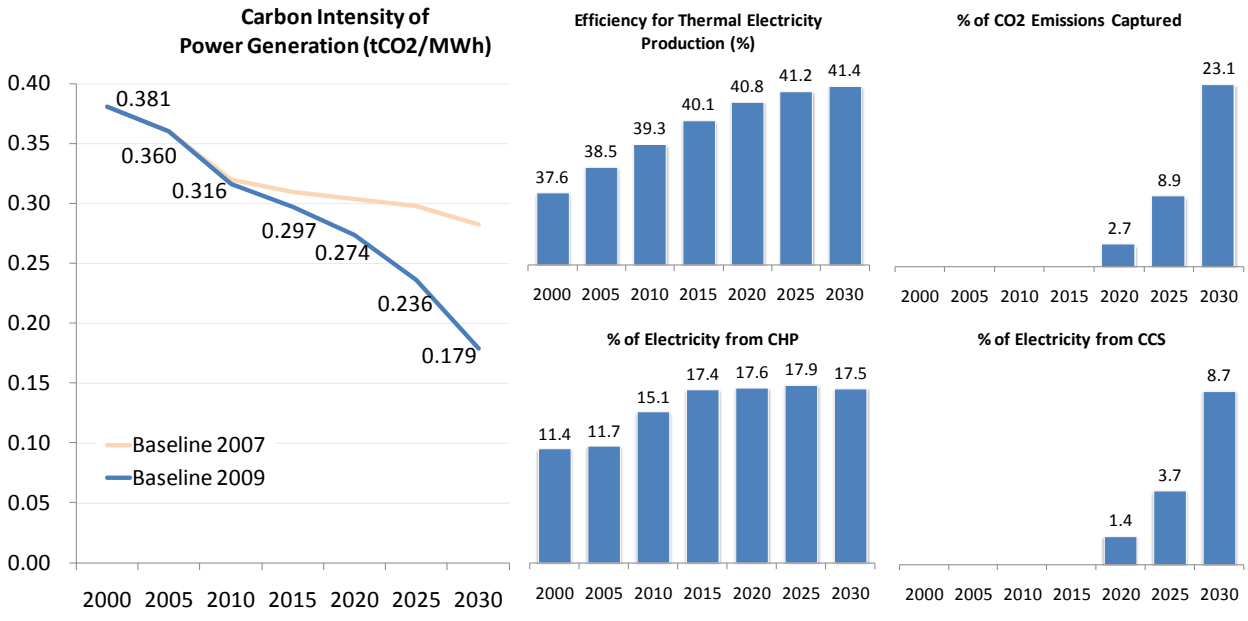
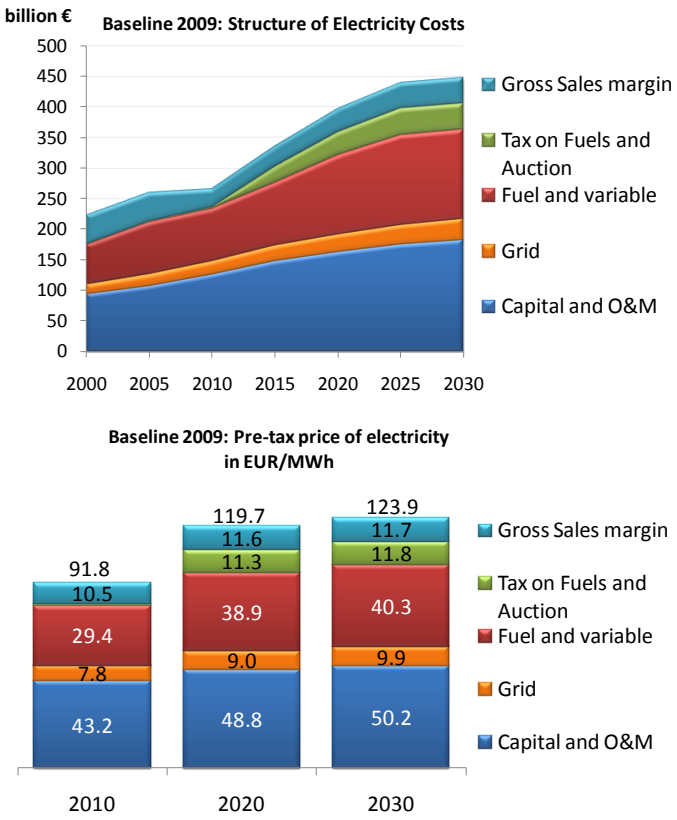
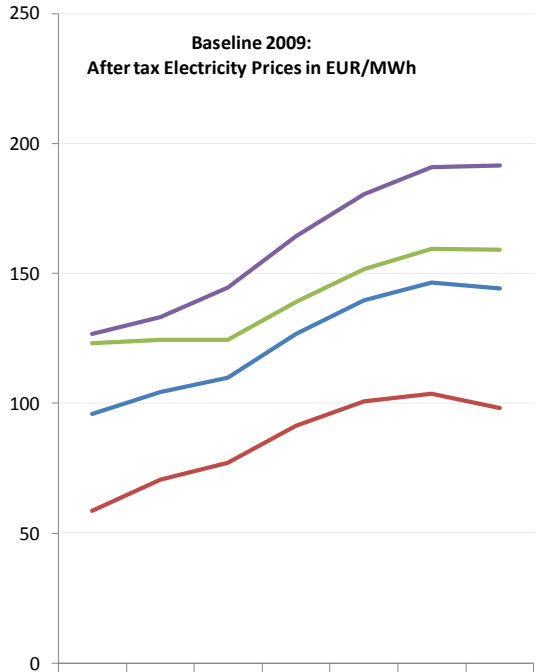


FIGURE 16: IMPACTS ON COSTS AND PRICES OF ELECTRICITY





	2000	2005	2010	2015	2020	2025	2030
Average	96	104	110	127	140	146	144
Industry	59	71	77	92	101	104	98
Services	123	124	124	139	152	159	159
Households	127	133	144	164	180	191	192

The projected changes in the EU27 power sector also have significant impacts on energy costs and electricity prices. Total cumulative investment expenditure for power generation in the period 2006-2030 are projected to reach 1.1 trillion €'08 with electricity prices increasing substantially both relative to present levels and in comparison to the 2007 Baseline. Auction payments and increasing fuel prices and higher capital costs (for RES and CCS) are the factors explaining the electricity price rise.

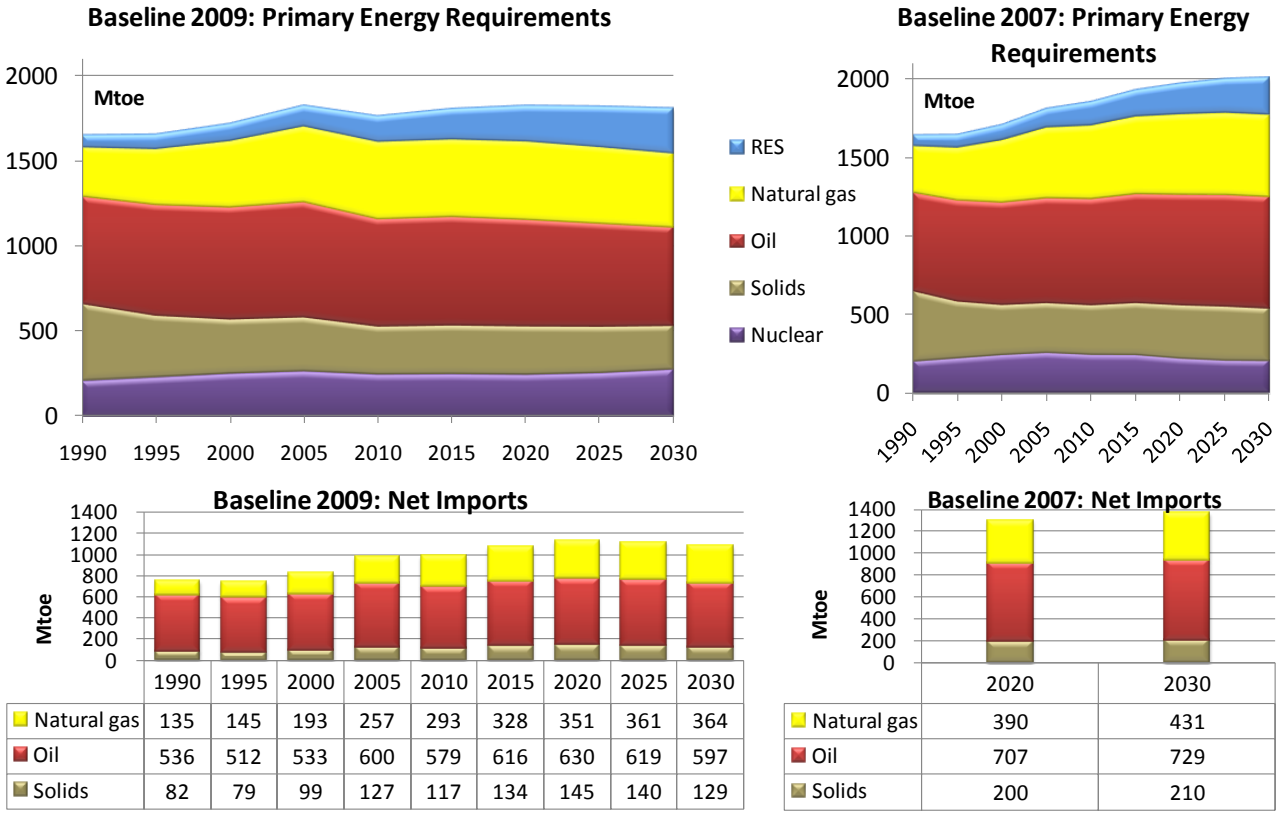
The average price of electricity, net of auction payments, increases to 108.4€/MWh in 2020 and 112.1€/MWh in 2030 (in real terms, i.e. in money of 2005), a consistent rise compared to current values due to higher capital and O&M costs, and higher fuel and variable costs. The auction payments account for 9.4% of the average pre-tax electricity price.

Impacts on Primary Energy Supply

As the new Baseline scenario involves lower total primary energy requirements and a restructuring away from fossil fuels, considerable benefits are obtained in terms of security of energy supply: dependence on energy imports increases much less than projected in the baseline scenario of 2007. Import dependency in 2030 in the latest Baseline amounts to 59% compared with 67% in the exercise undertaken in 2007.

The EU will require 40% more gas to be imported by 2030 compared with 2005 (the increment was 70% in the Baseline scenario of 2007). Oil and solid fuels imports are projected to be close to the 2005 levels in 2030 (contrasting an increase by 24% and 68% respectively in the Baseline scenario of 2007).

FIGURE 17: IMPACTS ON PRIMARY ENERGY



Baseline 2009: Net Imports

	1990	1995	2000	2005	2010	2015	2020	2025	2030
Natural gas	135	145	193	257	293	328	351	361	364
Oil	536	512	533	600	579	616	630	619	597
Solids	82	79	99	127	117	134	145	140	129

Baseline 2007: Net Imports

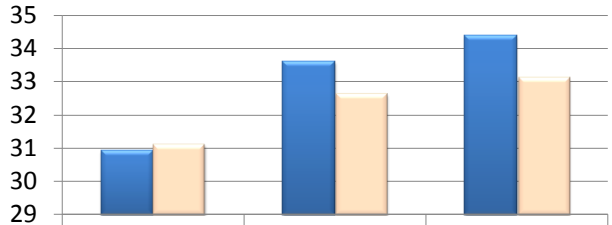
	2020	2030
Natural gas	390	431
Oil	707	729
Solids	200	210

The new scenario projects lower primary energy demand compared with the 2007 exercise. The new baseline projection shows stable gross energy consumption, which is a break of the historic trend for ever increasing energy demand.

Moreover, there is a change in the shares of the different fossil fuels. Although there is a substantial reduction of gas imports compared to previous projections, the share of gas among fossil fuels increases compared to the 2007 Baseline as can be seen in Figure 18, due to the carbon price. For natural gas the dependence on imports increases strongly over time reflecting strong demand and declining indigenous production.

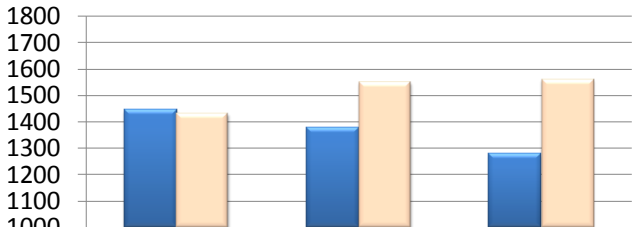
FIGURE 18: SHARES OF GAS IN FOSSIL FUEL CONSUMPTION AND DEVELOPMENT OF FOSSIL FUEL USE

Share of Gas in Total Fossil Fuel Consumption (%)



	2005	2020	2030
Baseline 2009	30.9	33.6	34.4
Baseline 2007	31.1	32.6	33.1

Fossil Fuels in Total Primary Energy (Mtoe)



	2005	2020	2030
Baseline 2009	1443	1377	1278
Baseline 2007	1430	1548	1560

Impacts on Emissions and RES Indicators

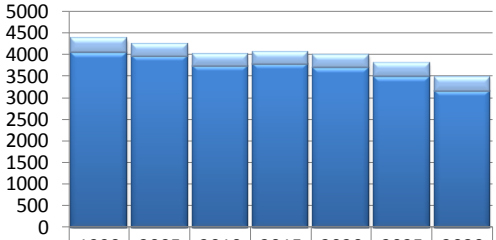
Total CO_2 emissions are projected to reduce by 8% in 2020 and by 20% in 2030 relative to 1990 levels. The reduction takes place for energy related CO_2 emissions, which even fall 22% between 1990 and 2030. On the contrary, non-energy related CO_2, emissions in 2030 are only slightly lower than they were in 1990 (-3%). The large part of the reduction in energy related CO_2 emissions is projected to occur in the ETS sectors (-30% from 2005 levels in 2030) whereas non ETS emissions of CO_2 are projected to remain at their 2005 levels in 2020 and decrease by 9% in 2030[6].

Total greenhouse gas emissions can be calculated by combining PRIMES results with results from non-CO2 projections based on the GAINS model[7]. The overall greenhouse gas emission reductions in the non-ETS sectors in the Baseline 2009 scenario, compared to 2005 levels, are 3.6% in 2020 and 9.2% in 2030. Compared to 1990, total EU greenhouse gas emissions based on implemented policy measures are projected to decrease by 14% in 2020.

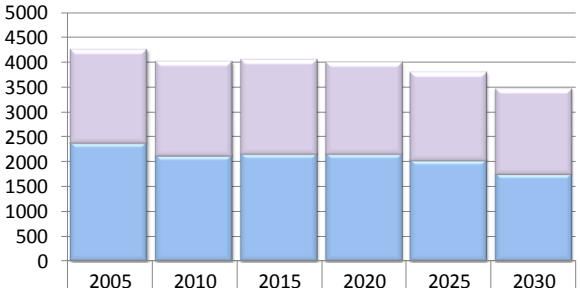
TABLE 2: GHG EMISSION CHANGES FROM 2005

	Baseline 2009	
Index (2005=100)	**2020**	**2030**
CO2 emissions (energy related)	94	80
CO2 emissions (non-energy related)	100	105
non-CO2 GHG emissions	87	86
Total GHG emissions	93	82
ETS emissions (all GHGs)	89	73
non ETS emissions (all GHGs)	96	91
	2008-2030	
Cumulative Emissions (MtCO2eq)	108085	

FIGURE 19: CO_2 EMISSIONS



	1990	2005	2010	2015	2020	2025	2030
CO2 Emissions (non-energy related)	330	304	280	291	306	315	318
CO2 Emissions (energy related)	4031	3947	3728	3759	3692	3486	3152
All CO2	4360	4251	4008	4050	3998	3801	3470



	2005	2010	2015	2020	2025	2030
non-ETS CO2	1872	1879	1891	1844	1777	1705
ETS CO2	2379	2129	2159	2154	2024	1765
Total CO2	4251	4008	4050	3998	3801	3470

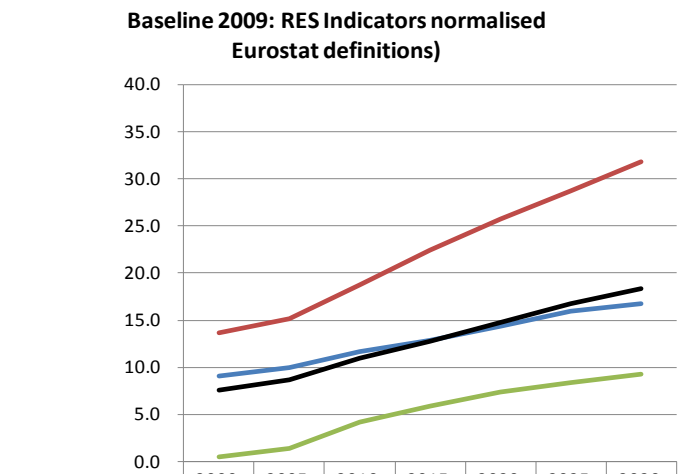
[6] For reasons of comparability over time, ETS emissions are calculated according to the enlarged ETS scope (including aviation and further processes) valid from 2012/13 onwards. Hence 2005 emissions as calculated in the model are higher as current verified ETS emissions.

[7] See Höglund-Isaksson, Lena et al. (2010): Potentials and costs for mitigation of non-CO2 greenhouse gas emissions in the European Union until 2030. Results. REPORT to the European Commission, DG Climate Action. Download: http://ec.europa.eu/environment/climat/pdf/climat_action/non_co2emissions_may2010.pdf

The share of renewable energy sources in gross final energy demand is projected to increase over time to reach 14.8% in 2020 and 18.4% in 2030 (up from 8.6% in 2005). These shares remain however well below the EU targets as the 2009 Baseline takes stock of the effects of already implemented policies rather than imposing the achievement of those targets.

Driven by the ETS and national RES supporting policies, the share of RES in electricity is projected to increase more than the RES share in other sectors (for heating and cooling and for transportation).

FIGURE 20: RES INDICATORS



	2000	2005	2010	2015	2020	2025	2030
RES-Heating and Cooling	9.0	10.0	11.7	12.8	14.3	15.9	16.8
RES-Electricity	13.7	15.2	18.8	22.4	25.8	28.8	31.9
RES-Transport	0.5	1.4	4.2	5.9	7.4	8.4	9.3
RES % Gross Final Demand	7.6	8.6	10.9	12.8	14.8	16.7	18.4

Conclusions

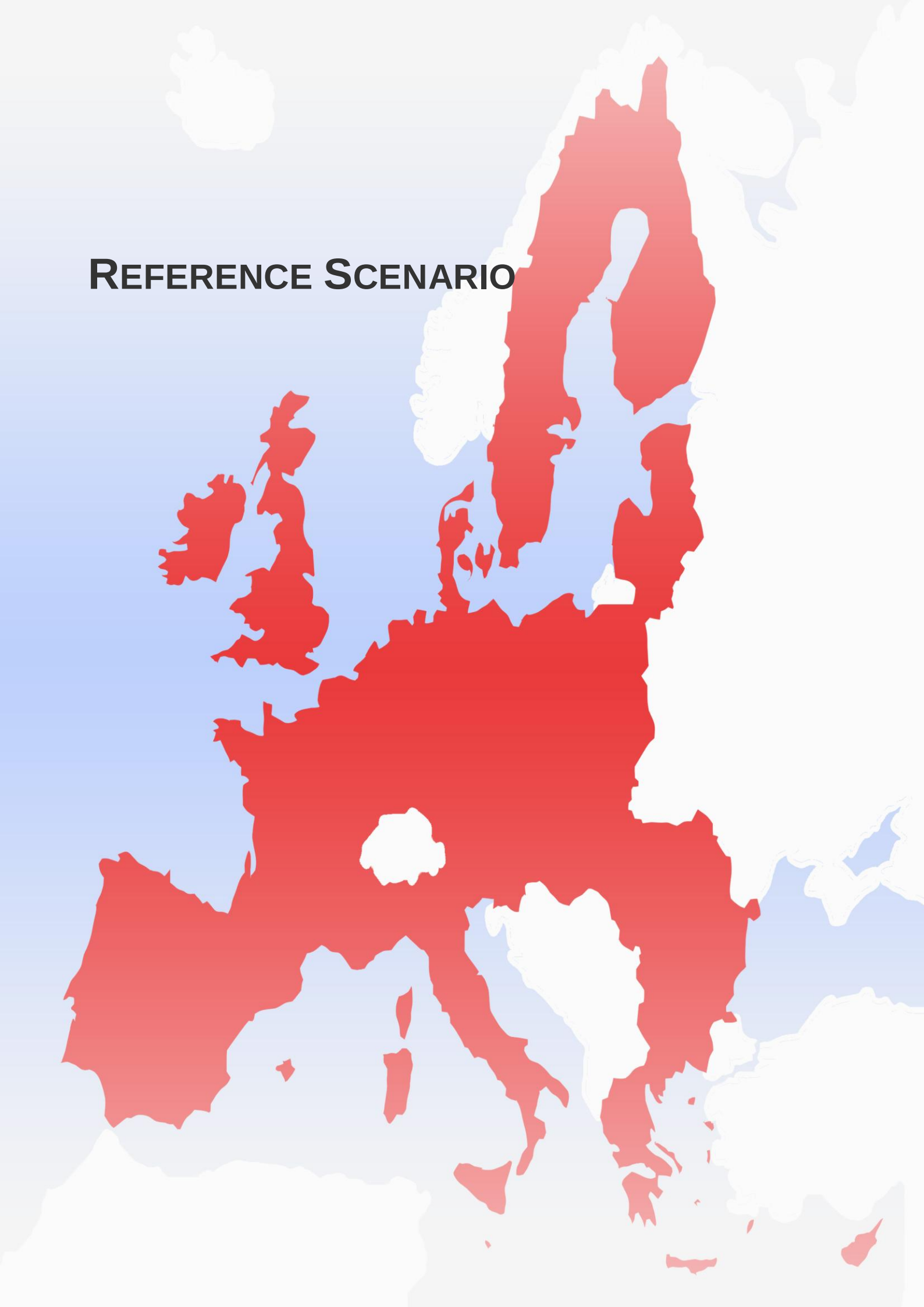
Summing up, the 2009 Baseline is substantially different from that of 2007, since it reflects the effects of the economic crisis and includes new policies for energy efficiency, the ETS, and support measures for RES penetration.

The policies included allow total energy demand to stabilise, RES to deploy considerably, nuclear to partly revive thereby reducing the use of fossil fuels. Contrasting the trends shown in the Baseline 2007, the new Baseline scenario shows power generation to embark on a gradual but steady decarbonisation pathway.

Evidently, emission reduction would be higher if the binding RES targets and the non ETS emission reduction constraints had already been implemented by policy measures, which is expected to happen during this decade. The Baseline, as a stock-taking exercise, shows that there is still a gap to be filled with further policy action.

The energy trends under the 2009 Baseline assumptions imply an impressively decreasing trajectory for CO_2 and remarkable energy intensity gains, trends which deliver considerable ancillary benefits in terms of security of supply and non climate related environmental pressures. However, again the results fall short of the agreed binding targets on greenhouse gases.

REFERENCE SCENARIO



4. Assumptions and drivers

The Reference scenario is based on the same macroeconomic, energy import price, technology and to a large extent also policy assumptions as the baseline. These assumptions are presented in the section on the Baseline 2009 scenario. In addition to these assumptions, the reference case includes more policies that have either been adopted after the Baseline modelling began or reflect the agreed legally binding targets on greenhouse gas reduction and renewables.

Policy assumptions

In addition to the measures already reflected in the baseline 2009 the Reference scenario includes policies adopted between April 2009 and December 2009: four Eco-design implementing measures, the Recast of the Energy Performance of Buildings Directive, Regulation on Labelling of Tyres and Regulation EURO 6 for heavy duty vehicles. The reference scenario assumes that the two binding targets for 2020 on the 20% RES share in the gross final energy consumption, and on 20% GHG reductions will be achieved**.** The 20% RES target includes the subtarget to have a 10% share of RES in transport. The 20% GHG reduction target following the unilateral EU commitment on cutting GHG by 20% below 1990 is achieved by full implementation of the ETS provisions (as in the Baseline) as well as by reaching the non-ETS targets of the Effort Sharing Decision at national levels.

TABLE 3: INVENTORY OF LEGAL MEASURES AND COMMUNITY FINANCIAL SUPPORT INCLUDED IN THE REFERENCE SCENARIO

	Measure	**How the measure is reflected in PRIMES**
	Eco-design implementing measures	
1	TVs (+labelling) Regulation 2009/642/EC	Adaptation of modelling parameters for different product groups for Eco-design and decrease of perceived costs by consumers for labelling (which reflects transparency and the effectiveness of price signals for consumer decisions). As requirements and labelling concern only new products, the effect will be gradual (marginal in 2010; rather small in 2015 up to full effect by 2030). The potential envisaged in the Eco-design supporting studies and the relationship between cost and efficiency improvements in the model's database were cross-checked.
2	Electric motors Regulation 2009/640/EC	
3	Circulators[8] Regulation 2009/641/EC	
4	Freezers/refrigerators (+labelling) Regulation 2009/643/EC	
5	Recast of the EPBD 2010/31/EU[9]	New building requirements are reflected in technical parameters of the model, in particular through better thermal integrity of buildings and requirements for new buildings after 2020.
6	Labelling regulation for tyres 2009/1222/EC	Decrease of perceived costs by consumers for labelling (which reflects transparency and the effectiveness of price signals for consumer decisions).
7	Regulation Euro VI for heavy duty vehicles 2009/595/EC	Emissions limits introduced for new heavy duty vehicles.
9	RES directive 2009/28/EC	Legally binding national targets for RES share in gross final energy consumption are achieved in 2020; 10% target for RES in transport is achieved for EU27, as biofuels can easily be traded among Member States; sustainability criteria for biomass and biofuels are respected; cooperation mechanisms according to the RES directive are allowed and respect Member States indications on their "seller" or "buyer" positions.
10	GHG Effort Sharing Decision 2009/406/EC	National targets for non-ETS sectors are achieved in 2020, taking full account of the flexibility provisions such as transfers between Member States. After 2020, stability of the provided policy impulse but no strengthening of targets is assumed.

[8] Circulator is an impeller pump designed for use in heating and cooling systems. Glandless standalone circulators and glandless circulators integrated in products are covered by this regulation.
[9] As political agreement on the recast of the Energy Performance of Buildings Directive was reached in November 2009, all the main provisions were taken into account for the Reference scenario modelling.

The additional policies and measures reflected in the reference scenario (in addition to the Baseline 2009) are described in Table 3 below. The Reference scenario can be used as benchmark to assess the effects of additional policies beyond the 2020 binding targets and as a benchmark for policy scenarios with long term targets.

Drivers

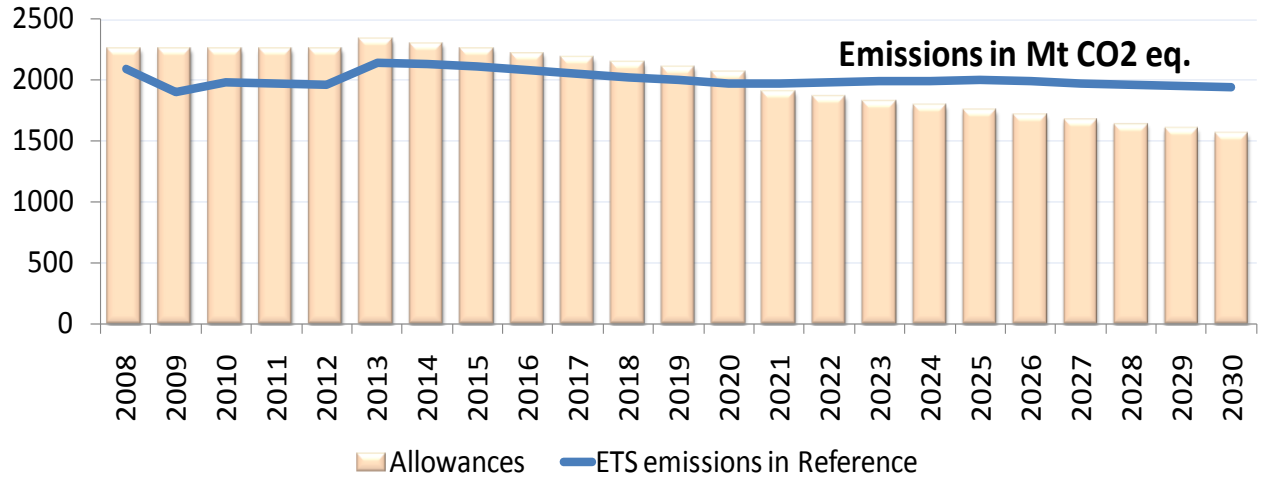
The Reference scenario is characterised by lower ETS carbon prices: 16.5 €'08/t CO_2 in 2020 and 18.7 €'08/t CO_2 in 2030 compared to baseline 2009 values of 25 €'08/t CO_2 in 2020 and 39 €'08/t CO_2 in 2030. Lower carbon prices result from the achievement of the RES target and additional energy efficiency policies agreed between April 2009 and December 2009 that lower energy consumption.

Subsequently, this leads to a decrease in emissions in the ETS sectors which reduce demand for carbon allowances. As the price for ETS carbon allowances is generated through the market equilibrium of demand and supply and demand is lower than in the baseline 2009 while supply remains at the same level, the price of ETS carbon allowances is lower than in the Baseline 2009. [10]

The Effort Sharing Decision stipulates national greenhouse gas reduction targets for the non-ETS sectors, aimed at leading to a reduction at EU level of around 10% in 2020 compared to 2005 levels. Several new sectoral policies will need to be deployed to reach the target. Drivers for these sectors and policies are determined in the model in the form of shadow prices of carbon (carbon value), which are taken into account by the agents in the model in their decision making as costs. The Effort Sharing Decision allows transfers between Member States to reach the national targets. It was assumed that Member States use this option if it is economically beneficial for them, so carbon values are assumed to be equal across Member States.

The shadow carbon value for the non-ETS sector reaching the aggregated EU level reduction was found equal to 5.3 €'08/ tCO_2 in 2020. This relatively low marginal cost for the non-ETS sector is due to: the inclusion of non-CO_2 abatement options which to a certain extent allow emission reductions at relatively low costs; the assumption of renewables support policies for heating and transport (see below) and to additional energy efficiency policies reflected in the Reference scenario.

FIGURE 21: ETS EMISSIONS AND ALLOWANCES (INCL. PERMISSIBLE USE OF INTERNATIONAL CREDITS)



[10] ETS emissions and allowances (the latter including the permissible use of international credits) are calculated based on the enlarged ETS scope as valid from 2012/13. For the period 2008 to 2012, aviation and non-CO2 process emissions are deducted to approximate the current ETS scope. Yearly emissions are interpolated, for 2008 and 2009, also taking account of recent trends in verified ETS emissions.

The marginal abatement cost curves for these non CO_2 options are taken from IIASA's GAINS model[11].

After 2020, as there is no target for non-ETS sectors, a conservative assumption has been taken in the modelling that a comparable level of efforts will be continued and therefore the carbon value remains constant.

Similarly to the non-ETS carbon value, the RES values represent shadow prices of RES obligations for electricity, heat and transport uses. The RES value is seen as a benefit by agents in the model as opposed to the non ETS carbon value. One uniform RES value has been computed for RES in electricity and for the heating and cooling sector.

A separate target has been agreed for RES in transport and therefore a specific RES-transport value has been calculated. The RES targets are assumed to be met in 2020 at Member States level.

Limited flexibility was assumed whereby a few countries with very high RES values (meaning great difficulty in meeting their RES targets) make use of co-operation mechanisms foreseen in the Directive by exchanges with countries that have low RES values. In doing so the modelling took account of the indications given by Member States to the Commission in early 2010 on how they intend to reach their national targets. Country specific RES values reflect differences in renewable potentials and already implemented policies.

The average RES value (across all RES uses) reaches 49.5 €'08/MWh in 2020 and 34.8 €'08/MWh in 2030. The higher RES value of 2020 is due to the need to achieve the RES target and to the limited recourse to co-operation mechanism (trading) among Member States. After 2020, there is no further target, but continuation of RES support policies with more trading among Member States has been assumed for the modelling.

5. Results for the Reference scenario

Implications for Energy Consumption

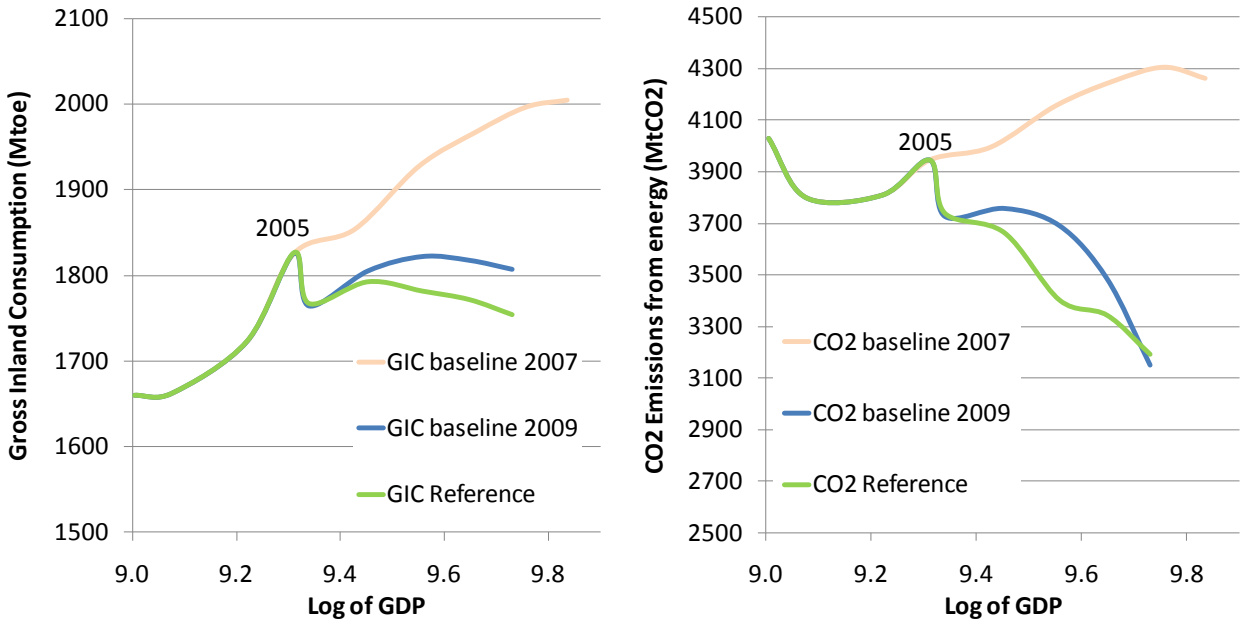
In the Reference scenario the economic downturn implies less economic activity and consumption in the short term, as is the case in the Baseline 2009. This causes a reduction of energy consumption, but also reduced investment and capital turnover which slows energy efficiency progress compared to previous projections.

The economic recovery period after the crisis implies a faster pace in equipment renewing, hence acceleration of energy efficiency progress takes place. In addition, the Reference scenario includes the entire Energy and Climate Package so the energy efficiency progress is higher in this scenario to achieve the 2020 targets. As in the Baseline 2009 scenario, GDP growth and energy demand are decoupling. The additional polices of the reference case decrease primary energy requirements further.

Gross inland consumption in the Reference case is projected to be 9.5% lower in 2020 and 12.5% lower in 2030 than in the 2007 Baseline. Compared with the 2009 Baseline this represents a reduction of 2% in 2020 and of 3% in 2030 (see Figure 22).

[11] Höglund-Isaksson, Lena et al. (2010): Potentials and costs for mitigation of non-CO2 greenhouse gas emissions in the European Union until 2030. Report to the European Commission, DG Climate Action. Available at http://ec.europa.eu/environment/climat/pdf/climat_action/non_co2emissions_may2010.pdf

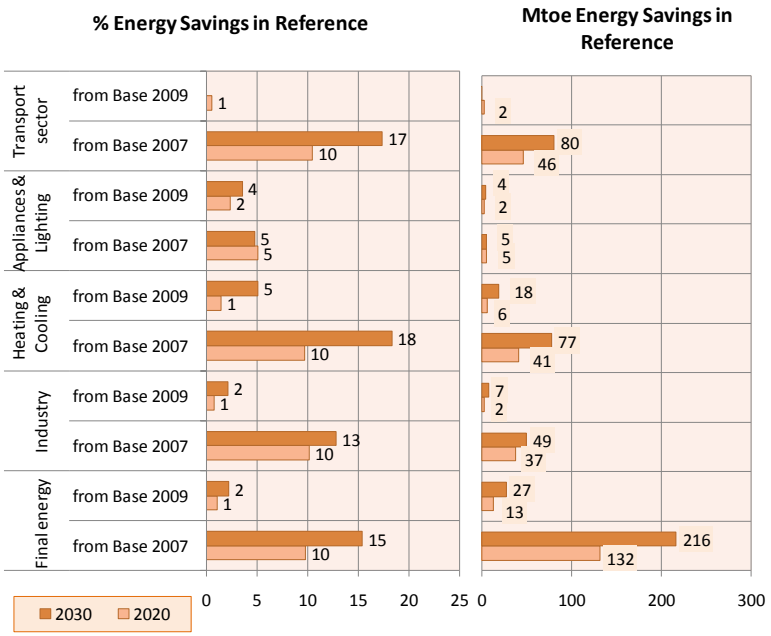
FIGURE 22: ENERGY DEMAND AND CO_2 EMISSIONS IN RELATION TO GDP



CO_2 emissions decrease faster than in the Baseline 2009 scenario up to 2020, because the reference scenario includes meeting the targets for GHG and RES in 2020. After the achievement of the 2020 targets the decline becomes less steep resulting in a convergence of the carbon intensity of GDP in the Reference and Baseline 2009 scenarios by the year 2030, represented in Figure 22 by the highest GDP levels given the macro-economic assumptions of ongoing GDP growth. The CO_2 emissions from energy decrease continuously but reach the same levels in the reference case as the Baseline 2009 in 2030, although the emissions decline faster before 2020. Nevertheless, given that GHG concentrations matter for climate change, the development of cumulative emissions is decisive. Therefore the Reference case is environmentally superior to the Baseline.

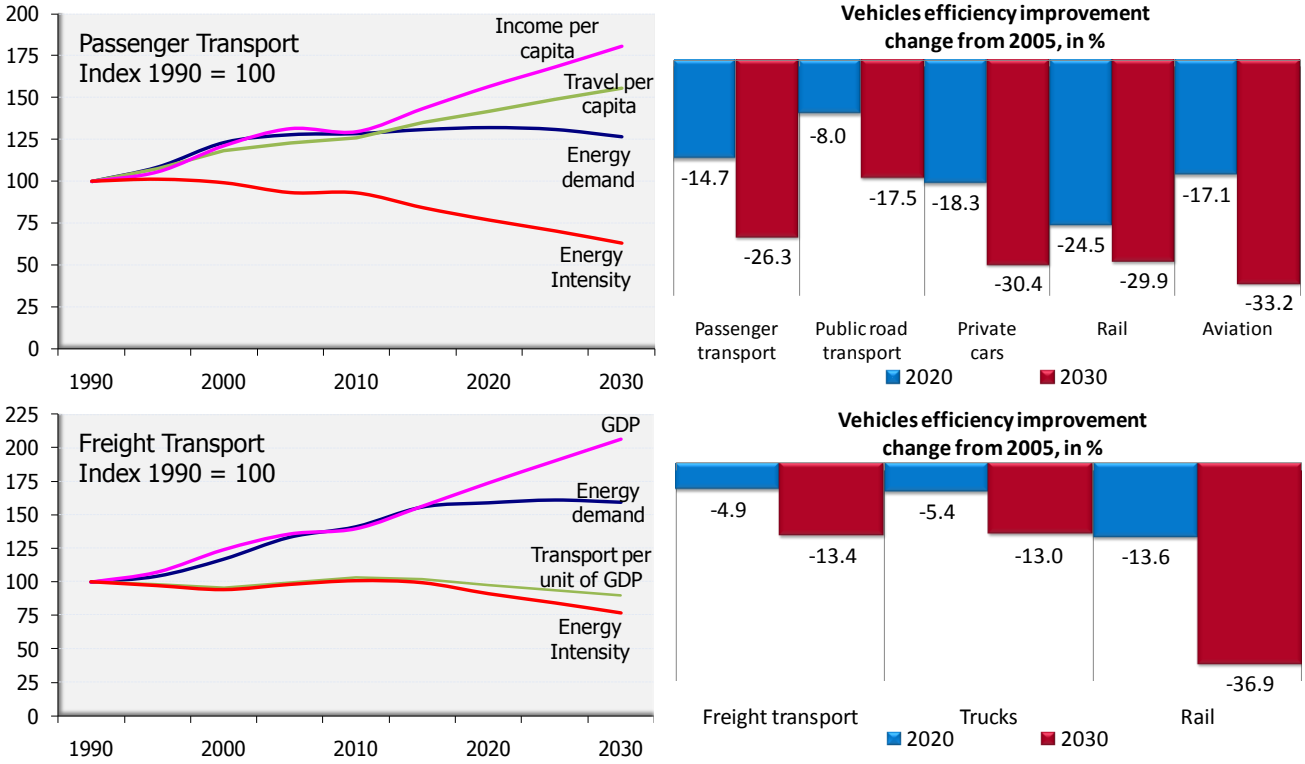
Total final energy demand changes for the tertiary and residential sectors that are particularly affected by the additional policies and measures implemented in the Reference scenario. Figure 23 shows that in the Reference scenario there are big reductions compared to the Baseline 2007 and also to a smaller extent compared to the Baseline 2009.

FIGURE 23: ENERGY SAVINGS IMPLIED IN THE REFERENCE SCENARIO



The residential and services sectors exhibit even stronger energy efficiency improvements than in the Baseline 2009 scenario. The additional legislation for refrigerators and freezers causes an improvement in energy efficiency for white appliances in the residential sector of approx. 20% compared to the Baseline 2009. The increased efficiency standards under the recast of

FIGURE 24: IMPACTS ON PASSENGER AND FREIGHT TRANSPORT

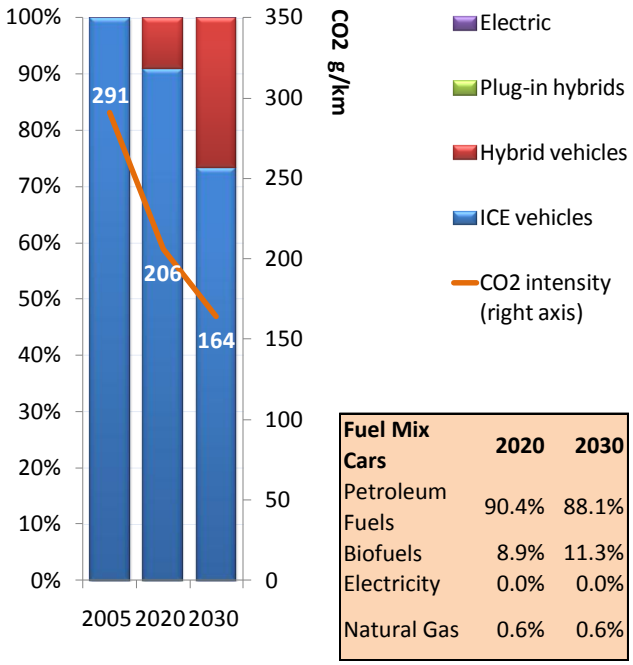


the Energy Performance of Buildings Directive, implemented in this scenario, cause a general downward trend across all Member States; the trends, due to national policies that were already visible in the Baseline 2009 scenario, are strengthened in the Reference scenario (see Figure 8).

In the transport sector, the policies included in the scenario lead to a near decoupling of the energy demand in transportation from the transport activity given that transport energy demand rises only slightly. Regarding changes in the fuel mix, however, changes in the reference scenario are rather limited. Nevertheless, the amount of renewable energy in transportation develops in line with the 10% RES target and hybrid cars make significant inroads, but there is no penetration of electricity in road transport sector. The CO_2 intensity decreases to 206 gCO_2/km in 2020 and to 164 gCO_2/km in 2030.

For passenger transport the decoupling of transport activity and economic growth is strong, given significant passenger transport activity and stability of energy demand for this purpose. The new regulations for cars, further electrification of the rail network and the inclusion of aviation in the ETS are the main drivers for the increased energy efficiency in the sector. The freight sector follows similar trends although the effects are less pronounced.

FIGURE 25: IMPACTS ON ROAD TRANSPORTATION



Fuel Mix Cars	2020	2030
Petroleum Fuels	90.4%	88.1%
Biofuels	8.9%	11.3%
Electricity	0.0%	0.0%
Natural Gas	0.6%	0.6%

Impacts on Power Generation

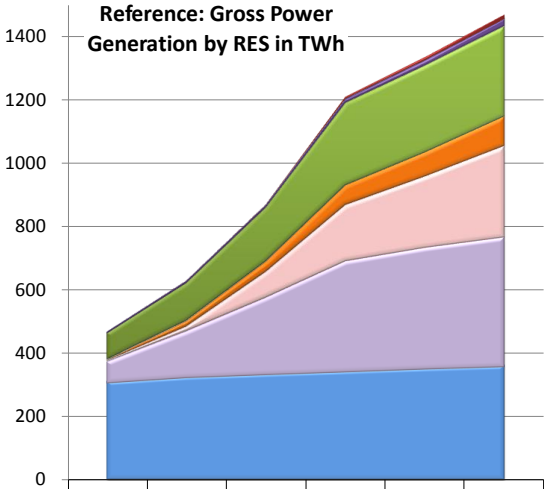
The overall trends of the Baseline 2009 compared to the Baseline 2007 come to the fore also in the Reference Scenario, both for 2020 and 2030. However the trends are somewhat more pronounced in the reference case. The results differ because of the different driving forces. The RES value applies in the Reference scenario but not in the Baseline scenario (given that RES values are derived with respect to the underlying Baseline), whereas the ETS carbon prices are significantly lower in the Reference scenario reflecting lower electricity production and more RES use.

The structure of power generation changes significantly. The RES target causes a major increase in generation from renewables, which continues up to 2030 and has a crowding out effect on other technologies.

Fossil fuel generation sees a major contraction: contrary to previous expectations gas generation decreases to a share of approx. 18% and also solids follow a much steeper decline than previously projected.

Nuclear energy reduces considerably in terms of share, but in absolute terms (TWh) nuclear production in 2030 amounts to almost the same levels as in 2005.

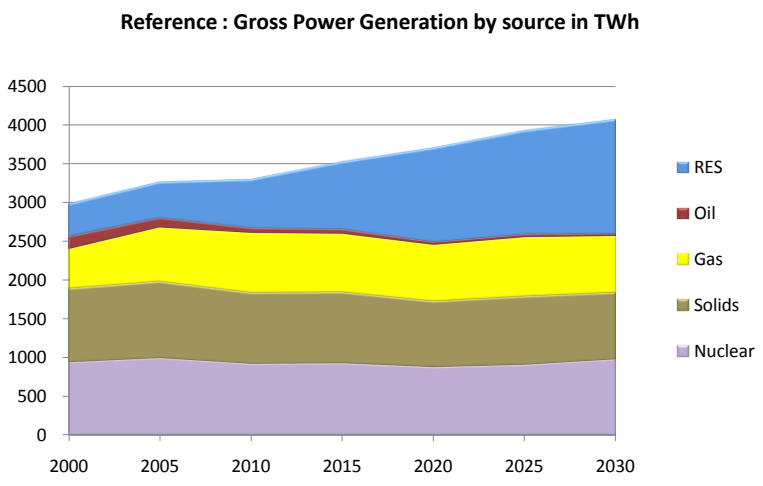
FIGURE 26: POWER GENERATION FROM RES



	2005	2010	2015	2020	2025	2030
Tidal, etc.	0	0	1	7	10	14
Geothermal	5	7	8	12	17	22
Biomass/waste	84	120	171	261	275	286
Solar	1	17	32	62	77	94
Wind offshore	2	14	81	177	224	287
Wind onshore	68	147	243	348	381	407
Hydro	307	323	333	341	350	358

Generation from RES sees a major expansion and sees a modification in the structure. Hydropower remains constant thus decreasing considerably in share. Wind onshore, wind offshore and solar photovoltaics see a major growth. Geothermal and tidal both expand but remain minor technologies. Biomass has a higher percentage than in the Baseline 2009 due to the further implementation of the cogeneration directive and as it represents a non-intermittent RES supply. The share of intermittent RES rises to 16.8%

FIGURE 27: POWER GENERATION STRUCTURE



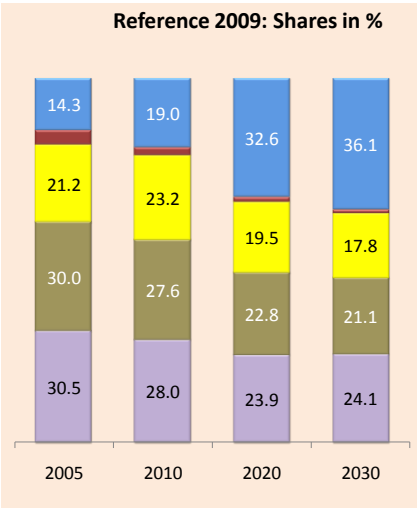
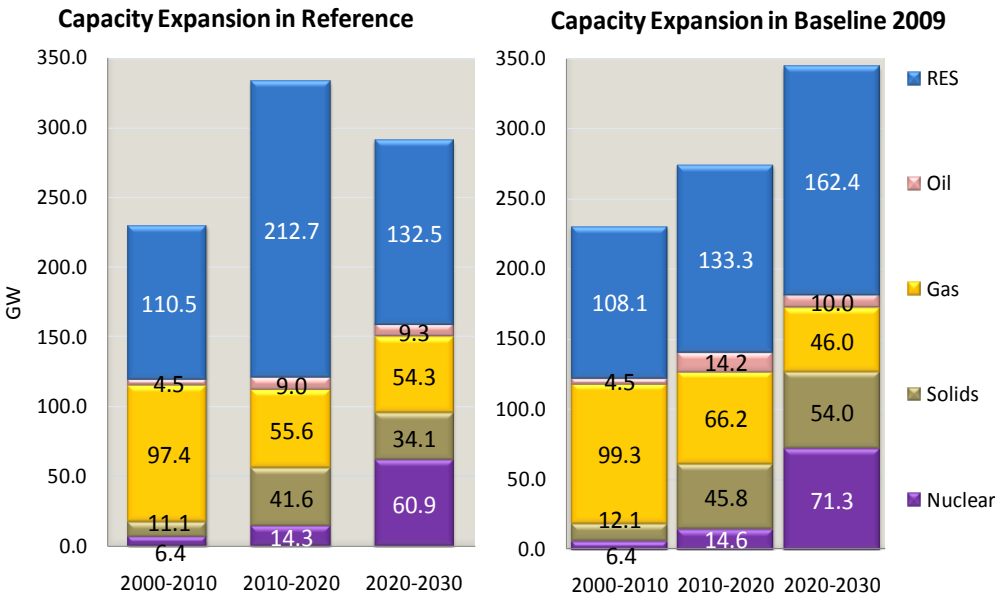


FIGURE 28: CAPACITY EXPANSION

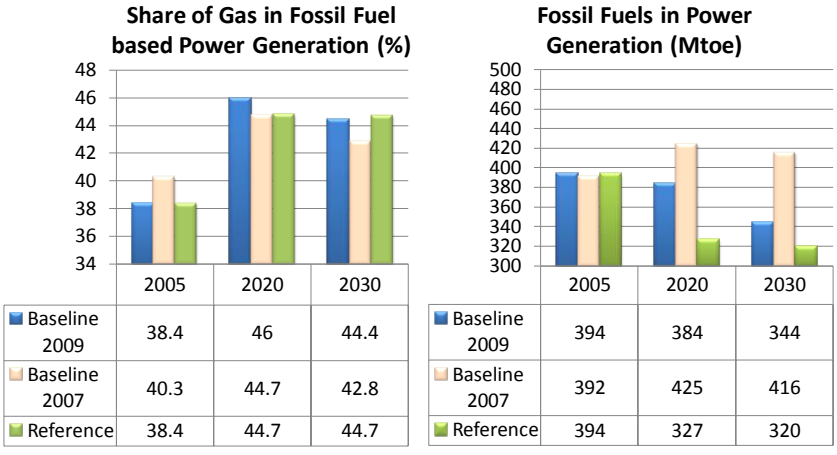


line 2009 scenario follows a continuously increasing trend, whereas the Reference scenario sees a peak between 2015 and 2020 in order to achieve the 2020 targets, followed by a reduction of investments between 2020 and 2025 and then a renewed growth after that time period.

in 2020 and 20.7% in 2030 of power generation, compared to 18.5% in 2030 of the Baseline 2009 scenario.[12] The system reserve margin[13] is 1.34 in 2020 and decreases to 1.27 in 2030; compared to the Baseline 2009 the values are higher in 2020 where the reserve margin is 1.3 while reserve margins are similar in both scenarios for 2030.

Due to the RES target the scenario experiences increased capacity expansion between 2010 and 2020; the capacity expansion slows down between 2020 and 2030 after the target has been met (see Figure 28). Between 2015 and 2020 renewable energies represent the bulk of overall investment in the capacity accounting for almost 80%, the largest amount of which being devoted to wind on-shore, followed by wind off-shore and solar. The power investment pattern in the Baseline 2009 scenario is different as the scenario does not have targets to be met in 2020. For RES power investment, the Baseline 2009 scenario sees a lower growth than previously projected in the Baseline 2007 scenario. Input into gas power plants also decreases due to the lower rate of use of gas fired power plants (see Table 4). Nonetheless gas power plants are necessary to balance for the high amount of intermittent RES in the system. Whereas in the Baseline scenario the capacity of gas power plants rises steadily over the time period, in the Reference scenario the increase to 2020 is lower and the rise faster after 2020. The percentage of peak load plants among gas power plant technologies is slightly higher in the Reference scenario compared to the Baseline 2009, both in 2020 and 2030.

FIGURE 29: SHARE OF GAS IN FOSSIL FUELS POWER GENERATION AND FOSSIL FUEL INPUT TO POWER GENERATION



	2005	2020	2030
Baseline 2009	38.4	46	44.4
Baseline 2007	40.3	44.7	42.8
Reference	38.4	44.7	44.7

	2005	2020	2030
Baseline 2009	394	384	344
Baseline 2007	392	425	416
Reference	394	327	320

[12] Intermittent resources are: wind (on-shore and off-shore), solar and tidal/wave. The shares are calculated based on net power generation.
[13] The ratio of total installed capacity to peak load.

TABLE 4: DETAILS ON GAS USE IN POWER GENERATION[14]

Baseline 2009					
	2010	2015	2020	2025	2030
Capacity [GWe] (net)	217.8	249.8	250.3	266.9	269.4
Rate of Use	40.1%	35.7%	38.3%	35.8%	32.3%
Fuel Input in Gas Power Plants [Mtoe]	143	142	151	150	137
		2010-2015	2015-2020	2020-2025	2025-2030
Capacity Investment [GW]		50.7	15.5	29.4	16.6
Reference					
	2010	2015	2020	2025	2030
Capacity [GWe] (net)	216.0	243.3	237.9	253.6	268.3
Rate of Use	39.1%	34.1%	33.6%	33.1%	29.9%
Fuel Input in Gas Power Plants [Mtoe]	139	131	123	129	124
		2010-2015	2015-2020	2020-2025	2025-2030
Capacity Investment [GW]		46	9.5	27.3	27

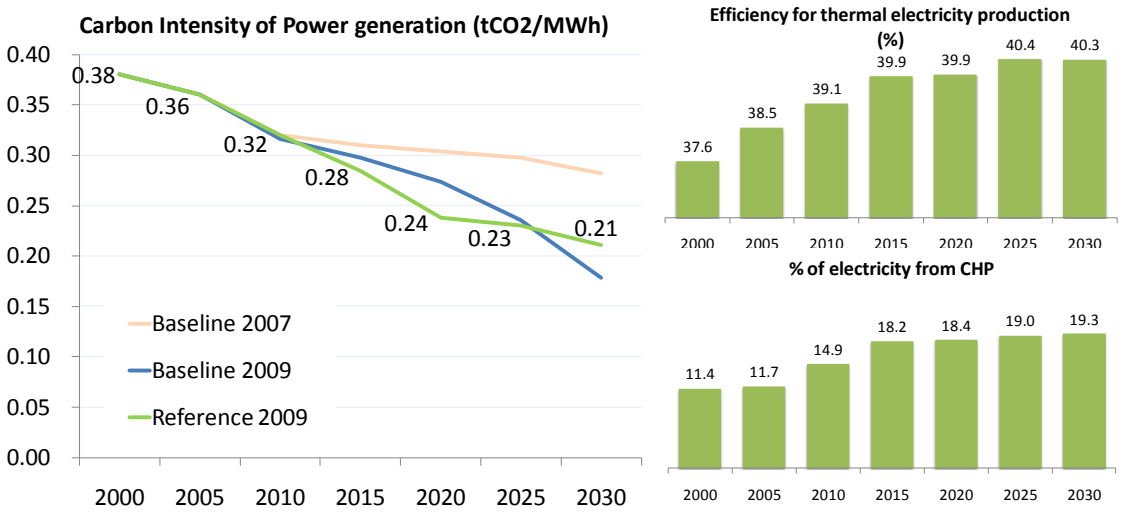
CCS power plant capacity in 2020 reflects construction of demonstration plants, but thereafter no large increase in capacity is seen up to 2030, contrasting the Baseline scenario. The carbon price of 16.5€'08/tCO_2 in 2020 and 18.7€'08/tCO_2 in 2030 does not provide a sufficient incentive for the development of this technology. This also explains why the Reference scenario has a higher carbon intensity value for power generation in 2030.

The share of electricity from CHP reaches 18% in 2015 and rises to 19% by 2025. This represents a large increase compared to the 2007 Baseline and a slight increase compared to the 2009 Baseline which can be brought back to two factors: the use of biomass in a CHP plant is more efficient than with other uses, so the increase in RES causes an increase in CHP; and the cogeneration directive is further implemented facilitating the construction of CHP power plants.

Due to the combination of these effects, the decarbonisation of power generation has a declining trend. Driven by the RES target the decarbonisation follows a steeper trajectory than the Baseline 2009 scenario up to 2020. After 2020 the decarbonisation slows down as the low carbon price does not drive a further fast decarbonisation (see Figure 30).

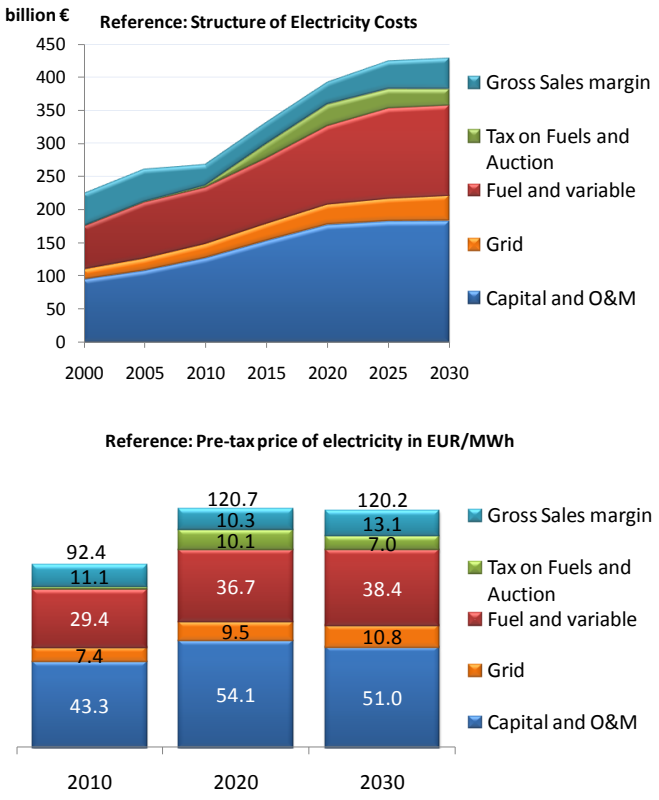
The price of electricity in the Reference scenario increases up to 2020. However, electricity prices remain approximately the same as in the Baseline 2009 (see Figure 31 and Figure 16). Lower auctioning expenditure as well as lower fuel and variable costs compensate for the higher capital costs, which are due to the larger amount of RES in the Reference case.

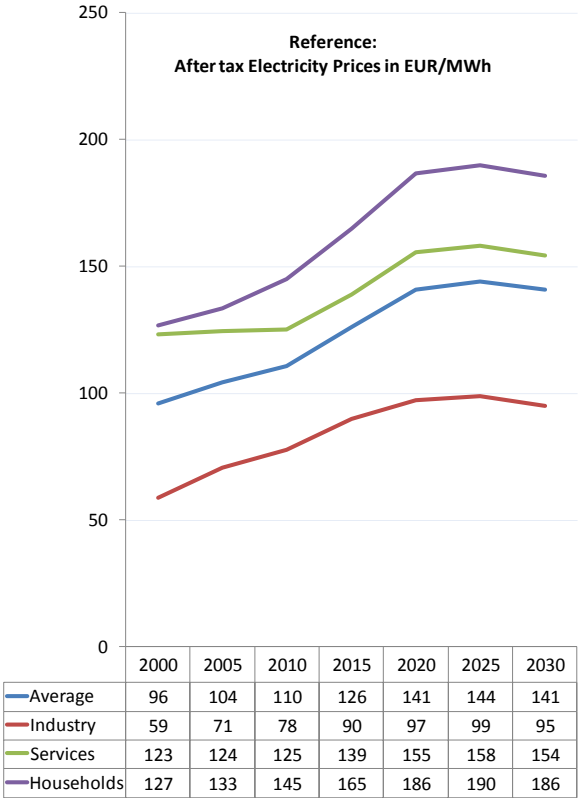
FIGURE 30: CARBON INTENSITY AND OTHER INDICATORS FOR POWER GENERATION



[14] Rate of use is calculated as net electricity generation divided by net capacity multiplied with the hours of a year (8760 hours).

FIGURE 31: IMPACTS ON COSTS AND PRICES OF ELECTRICITY





	2000	2005	2010	2015	2020	2025	2030
Average	96	104	110	126	141	144	141
Industry	59	71	78	90	97	99	95
Services	123	124	125	139	155	158	154
Households	127	133	145	165	186	190	186

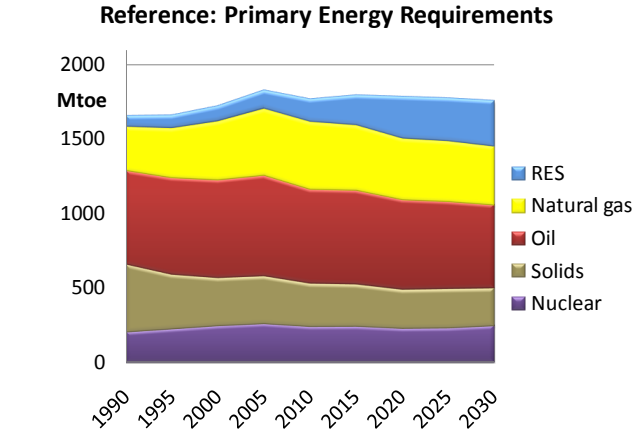
Impacts on Primary Energy Supply

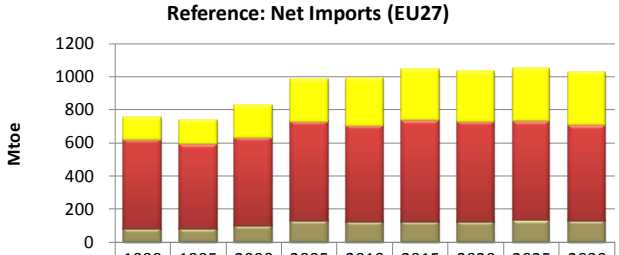
The primary energy demand in the Reference scenario decreases 4% between 2005 and 2030; this represents a major reduction from previous projections.

The amount of fossil fuels in total primary energy supply is lower compared to the Baseline 2007 and the Baseline 2009 scenarios, due to the achievement of the RES targets. This has positive impacts on security of supply as it reduces the imports compared to previous projections. Oil import dependency is decreased due to the reduced oil demand caused by the RES-transport target. The imports of solids in 2030 remain almost unchanged from the Baseline 2009 scenario.

In absolute terms the amount of natural gas is lower than in the new and old Baseline scenarios. This gives rise to lower gas import dependency; natural gas imports are only 24% higher in this scenario compared to 2005 levels, which is a considerable decrease from the Baseline 2007 as well as from the Baseline 2009 projections.

FIGURE 32: PRIMARY ENERGY REQUIREMENTS AND NET IMPORTS OF FOSSIL FUELS

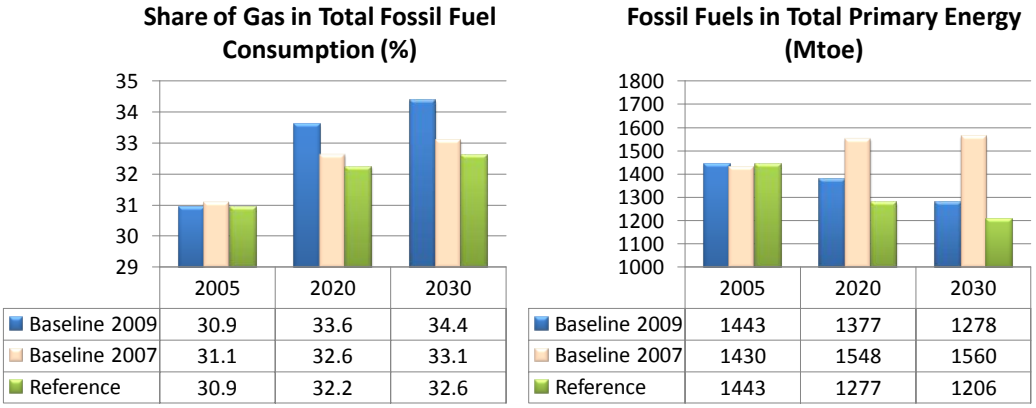




	1990	1995	2000	2005	2010	2015	2020	2025	2030
Natural gas	135	145	193	257	288	307	301	315	318
Oil	536	512	533	600	580	610	608	600	578
Solids	82	79	99	127	122	125	122	133	129

The share of gas in the reference case is lower than in the Baseline due to the lower ETS carbon prices and the higher share of RES. This leads to a flat gas share in the medium term followed by a slight decline from 2020 onwards, contrary to Baseline developments.

FIGURE 33: SHARE OF GAS IN FOSSIL FUELS AND DEVELOPMENT OF FOSSIL FUEL USE



	2005	2020	2030
Baseline 2009	30.9	33.6	34.4
Baseline 2007	31.1	32.6	33.1
Reference	30.9	32.2	32.6

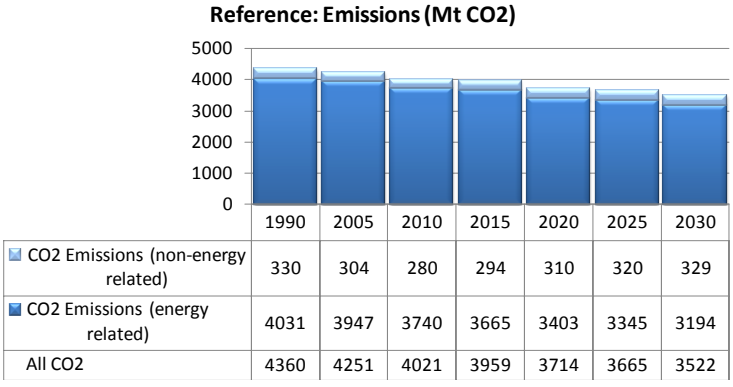
	2005	2020	2030
Baseline 2009	1443	1377	1278
Baseline 2007	1430	1548	1560
Reference	1443	1277	1206

Impacts on Emissions and RES Indicators

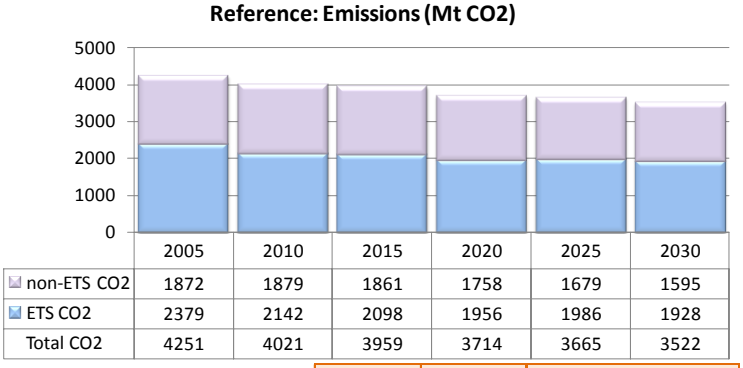
CO_2 emission reductions reach 13% compared to 2005 levels in 2020 and they further decrease by 17% in 2030. As in the Baseline scenario reductions occur for energy related CO_2 emissions, but not for non-energy related CO_2. It is interesting to note that the EU green-house gas emission target of -20% in 2020 compared to 1990 is met internally, although the ETS cap includes in the modelling and in reality the flexibility to use a certain amount of CDM.

Emissions in this scenario decrease in the ETS and the non-ETS sectors due to the non-ETS obligations. EU internal emissions from the ETS sectors, including aviation, reduce approx. 19% by 2020 and 20% by 2030 compared to 2005 levels. The non-ETS sectors reduce by 9.4% in 2020, thereby achieving the aggregated national non-ETS targets at EU level. Non-ETS emissions are projected to further decrease 15.7% by 2030, largely due to the energy efficiency policies.

FIGURE 34: CO_2 EMISSIONS



	1990	2005	2010	2015	2020	2025	2030
CO2 Emissions (non-energy related)	330	304	280	294	310	320	329
CO2 Emissions (energy related)	4031	3947	3740	3665	3403	3345	3194
All CO2	4360	4251	4021	3959	3714	3665	3522

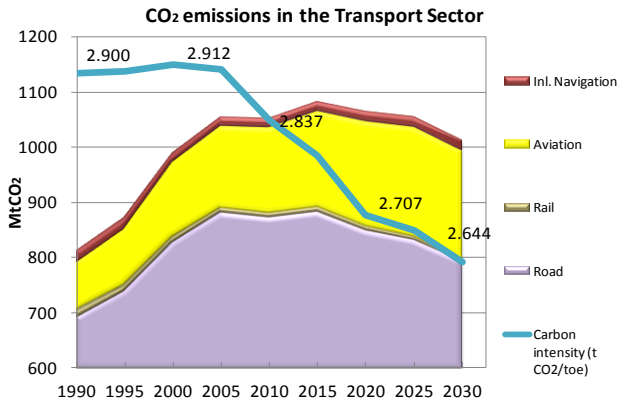


	2005	2010	2015	2020	2025	2030
non-ETS CO2	1872	1879	1861	1758	1679	1595
ETS CO2	2379	2142	2098	1956	1986	1928
Total CO2	4251	4021	3959	3714	3665	3522

	Reference		Baseline 2009	
Index (2005=100)	2020	2030	2020	2030
CO2 emissions (energy related)	86	81	94	80
CO2 emissions (non-energy related)	102	108	100	105
non-CO2 GHG emissions	79	78	87	86
Total GHG emissions	86	82	93	82
ETS emissions (all GHGs)	81	80	89	73
non ETS emissions (all GHGs)	91	84	96	91
	2008-2030		2008-2030	
Cumulative Emissions (MtCO2eq)	104685		108085	

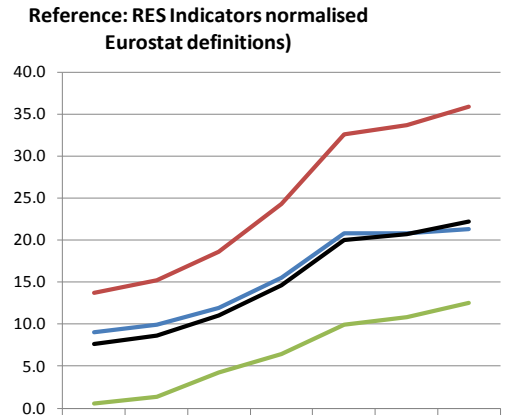
The transport sector experiences a large reduction in emissions compared to previous projections. Reference case emissions related to transport peak in 2015 and decline thereafter reaching values below the 2005 level by 2030. The main drivers to achieve this reduction are technological improvements, the CO_2 from cars regulation, and the increased RES contribution.

FIGURE 35: CO_2 EMISSIONS IN THE TRANSPORT SECTOR



Renewable energy sources in 2020 reach the 20% share in gross final energy demand according to the target for that year, and the 10% renewable energy in the transport sector target is also met. The share of biofuels in petrol and diesel consumption amounts to 9.4%. To achieve the 20% overall target the percentage of RES in heating and cooling increases to about 21% rising above the levels projected in the Baseline 2009. The share of RES further increases to 22.2% by 2030, driven mainly by a continued rise in the electricity sector and a slight increase in the transport sector.

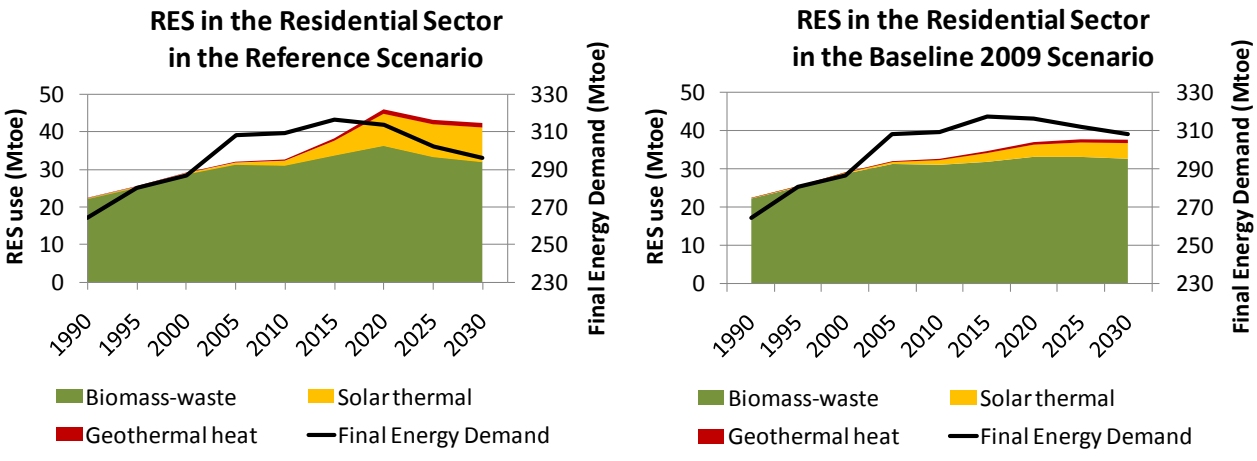
FIGURE 36: RES INDICATORS



	2000	2005	2010	2015	2020	2025	2030
RES-Heating and Cooling	9.0	10.0	11.9	15.5	20.8	20.8	21.3
RES-Electricity	13.7	15.2	18.7	24.3	32.5	33.7	35.9
RES-Transport	0.5	1.4	4.2	6.5	10.0	10.9	12.5
RES % Gross Final Demand	7.6	8.6	11.0	14.6	20.0	20.7	22.2

Member States have declared that they expect to achieve their RES target for 2020 largely through national developments making only limited use of the co-operation mechanism among Member States; this is reflected in the model. The RES in heating and cooling is driven by the direct use of RES for these purposes. The main type of RES used for heating purposes is biomass and this source rises continuously until 2020, but experiences a slowdown thereafter due to increased substitution with electricity (heat pumps) and reduced final energy demand. The technology that experiences a major increase is solar thermal, which almost doubles, as can be seen in Figure 37.

FIGURE 37: DIRECT USE OF RES IN THE RESIDENTIAL SECTOR



Conclusions

The Reference Scenario confirms the more favourable trends of the Baseline 2009 scenario compared to the Baseline 2007 scenario. Furthermore it depicts considerable changes relative to the Baseline 2009 scenario because of the additional policies considered.

The RES target and additional energy efficiency measures cause a reduction in the use of fossil fuels that allow the ETS cap to be reached through lower carbon prices. The achievement of the RES and non-ETS targets imply that emissions decrease faster until 2020, when the targets are met and start converging to the values of the Baseline 2009 between 2020 and 2030; cumulative emissions however remain significantly lower.

Electricity prices remain almost unchanged compared to the Baseline 2009 scenario, as the increase in capital costs is compensated by the decrease in auctioning payments as well as in fuel and variable costs. The lower carbon price does not allow a competitive marketing of CCS; the already planned demonstration power plants will be constructed and only marginal further development is projected until 2030. The carbon intensity of the power sector in this scenario in 2030 is therefore higher than in the Baseline 2009.

The major difference between the two scenarios is the lower ETS carbon price induced by the RES target and the increased energy efficiency policies in the presence of oversupply of allowances following the crisis and the possibility to bank allowances. The lower carbon price has implications on the power generation development and for the structure of primary energy demand.

6. General Conclusions

The new Baseline 2009 and the Reference scenarios both show a very different picture than the Baseline 2007 scenario. The main reasons for this are the inclusion of many more policies and the economic crisis starting in autumn 2008 that has been taken into account.

Both scenarios due to the economic crisis and to the implementation of energy efficiency policies see a decrease in primary energy consumption and a decrease in the use of fossil fuels which has a positive effect on security of supply reducing the necessity of imports from outside the EU including from geopolitical unstable regions. The Reference scenario due to the RES target shows lower fossil fuel consumption than the Baseline 2009 scenario which has implications on the carbon price.

Both scenarios include the EU-Emissions Trading Scheme, which due to the facility to bank allowances can be treated modelling-wise as a cumulative cap 2008-2030 for the sectors covered by the scheme. The inclusion of the amended ETS Directive together with more policies on energy efficiency and RES implies that emissions are lower than the Baseline 2007 scenario.

The carbon prices resulting from the scheme are different in the two scenarios.

- The Baseline 2009 scenario results in carbon prices of 25€/tCO_2 in 2020 and 39€/tCO_2 in 2030; this price, under the technological and economic assumptions of the model is likely to give enough security to investors to undertake investments in CCS technology.
- In the Reference scenario the carbon price is projected to be 16.5€/tCO_2 in 2020 and 18.7€/tCO_2 in 2030.

This lower price of carbon is due to the larger amount of RES in the power sector and lower electricity demand following eco-design measures. In the reference scenario this ETS price is not sufficient to allow additional investments in CCS technology.

The price of electricity in the two scenarios increases considerably compared to current levels following structural change of capacity, higher fuel prices and costs for purchasing allowances. In the Reference scenario the higher capital costs caused by the investments in RES technologies are compensated by the lower ETS auction purchase, fuel and variable costs, so that electricity prices in the reference case are similar to those of the Baseline. It should be noted, however, that a corollary of the auction purchase costs are government revenues.

Summarizing the scenarios both imply lower primary energy consumption, therefore higher security of supply compared to previous projections, lower emissions, but considerably higher costs of electricity. The implementation of the RES target and the additional energy efficiency measures causes very different carbon prices in the two scenarios.

GLOSSARY

Aviation: Aviation activity includes only intra EU air transportation. Energy consumption in aviation reflects sales of fuels at the point of refuelling, irrespectively of airplane destination.

Bio-fuels: Bio-fuels include ethanol and biodiesel

Carbon capture and storage (CCS): Carbon capture and geological storage is a technique for trapping carbon dioxide emitted from large point sources, compressing it, and transporting it to a suitable storage site where it is injected into the ground.

Carbon intensity: The amount of CO_2 emitted per unit of energy consumed or produced (t of CO_2/tonne of oil equivalent (toe) or MWh).

Clean coal technologies: These innovative technologies are designed to enhance the efficiency and environmental acceptability of coal extraction, preparation and use. Among the most promising technologies are fluidised-bed combustion (PFBC), integrated gasification combined cycle (IGCC) and coal gasification.

CO_2 Emissions to GDP: The amount of CO_2 emitted per unit of GDP (carbon intensity of GDP - t of CO_2/M Euro).

Cogeneration thermal plant: A system using a common energy source to produce both electricity and steam for other uses, resulting in increased fuel efficiency (see also: CHP).

Combined Cycle Gas Turbine plant (CCGT): A technology which combines gas turbines and steam turbines, connected to one or more electrical generators at the same plant. The gas turbine (usually fuelled by natural gas or oil) produces mechanical power, which drives the generator, and heat in the form of hot exhaust gases. These gases are fed to a boiler, where steam is raised at pressure to drive a conventional steam turbine, which is also connected to an electrical generator. This has the effect of producing additional electricity from the same fuel compared to an open cycle turbine.

Combined Heat and Power (CHP): This means cogeneration of useful heat and power (electricity) in a single process. In contrast to conventional power plants that convert only a limited part of the primary energy into electricity with the remainder of this energy being discharged as waste heat, CHP makes use of large parts of this energy for e.g. industrial processes, district heating, and space heating. CHP therefore improves energy efficiency (see also: cogeneration thermal plant).

Efficiency for thermal electricity production: It measures efficiency of fuel conversion into electricity and useful heat. It is calculated as heat and electricity output divided by the calorific value of input fuel.

Efficiency indicator in freight transport (activity related): Energy efficiency in freight transport is computed on the basis of energy use per tonne-km. Given the existence of inconsistencies between transport and energy statistics, absolute numbers (especially at the level of individual Member States) might be misleading in some cases. For that reason, the numbers given are only illustrative of the trends in certain cases.

Efficiency indicator in passenger transport (activity related): Energy efficiency in passenger transport is computed on the basis of energy use per passenger-km travelled. Issues related to consistency of transport and energy statistics also apply to passenger transport (see also: Efficiency indicator in freight transport).

Energy branch consumption: Energy consumed in refineries, electricity and steam generation and in other transformation processes.

Energy intensity: energy consumption/GDP or another indicator for economic activity.

Energy intensive industries: Iron and steel, non-ferrous, chemicals, non-metallic minerals, and paper and pulp industries.

EU Emission Trading Scheme (EU-ETS): A scheme for greenhouse gas emission allowance trading within the Community established by Directive 2003/87/EC in order to promote reductions of greenhouse gas emissions in a cost-effective and economically efficient manner. Installations included in the scheme are combustion plants, oil refineries, coke ovens, iron and steel plants, and factories producing cement, glass, lime, brick, ceramics, pulp and paper. Recent amendments (2008/101/EC and 2009/29/EC) have enlarged its scope, including aviation and further process emissions.

Feed-in tariff: The price per unit of electricity that a utility or supplier has to pay for renewable electricity.

Final energy demand: Energy finally consumed in the transport, industrial, household, services and agriculture sectors; the latter two sectors are sometimes aggregated and named "tertiary". It excludes deliveries to the energy transformation sector (e.g. power plants) and to the energy branch. It includes electricity consumption in the above mentioned final demand sectors.

Freight transport activity: Includes energy consuming transportation of commodities on roads, by rail and by inland navigation.

Fuel cells: A fuel cell is an electrochemical energy conversion device converting hydrogen and oxygen into electricity and heat with the help of catalysts. The fuel cell provides a direct current voltage that can be used to power various electrical devices including motors and lights.

Fuel input to power generation: Fuel use in power plants and CHP plants.

Gas: Includes natural gas, blast furnace gas, coke-oven gas and gasworks gas.

Gas to liquids (GTL): A refinery process to convert natural gas or other gaseous hydrocarbons into longer-chain hydrocarbons.

Generation capacity: The maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer.

Geothermal plant: A plant in which the prime mover is a steam turbine, which is driven either by steam produced from hot water or by natural steam that derives its energy from heat in rocks or fluids beneath the surface of the earth. The energy is extracted by drilling and/or pumping.

Gross Inland Consumption (or primary energy consumption): Quantity of energy consumed within the borders of a country. It is calculated as primary production + recovered products + imports +/- stock changes – exports – bunkers (i.e. quantities supplied to international sea-shipping).

Gross Inland Consumption/GDP: Energy intensity indicator calculated as the ratio of total energy consumption to GDP – (toe/M Euro).

Hydro power plant: A plant producing energy with the use of moving water. In this report, hydro excludes pumped storage plants that generate electricity during peak load periods by using water previously pumped into an elevated storage reservoir during off-peak periods when excess generating capacity is available. Energy losses in pumping are accounted for separately.

Inland navigation: It includes both waterborne inland transport activity and domestic sea shipping. However, international short sea shipping is not included in the above category as, according to EUROSTAT energy balances, energy needs for international shipping are allocated to bunkers.

Import dependency: It shows the extent to which a country relies upon imports in order to meet its energy needs.

Non fossil fuels: Nuclear and renewable energy sources.

Non-energy uses: Non-energy consumption of energy carriers in petrochemicals and other sectors, such as chemical feed-stocks, lubricants and asphalt for road construction.

Nuclear power plant: A plant in which a nuclear fission chain reaction can be initiated, controlled, and sustained at a specific rate.

Oil: Includes crude oil, feed-stocks, refinery gas, liquefied petroleum gas, kerosene, gasoline, diesel oil, fuel oil, naphtha and other petroleum products.

Peak devices: Gas turbines, internal combustion engines and other small scale thermal power plants which are usually used to supply electricity in peak hours.

Passenger transport activity: Passenger transport activity includes energy consuming passenger transport on roads (public and private), by rail, in airplanes and on ships as far as this takes place on rivers, canals, lakes and as domestic sea shipping; international short sea shipping is not included as, according to EUROSTAT energy balances, energy needs for international shipping are allocated to bunkers.

Primary production: Total indigenous production. In Primes result sheets it also includes recovered products.

Renewable energy sources: Energy resources that are naturally replenishing but flow-limited. They are

virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Renewable energy resources include: biomass, waste energy, hydro, wind, geothermal, solar, wave and tidal energy.

Solar power plant: A plant producing energy with the use of radiant energy from the sun; includes solar thermal and photovoltaic (direct conversion of solar energy into electricity) plants.

Solids: Include both primary products (hard coal and lignite) and derived fuels (patent fuels, coke, tar, pitch and benzol).

Supercritical polyvalent units: A power plant for which the evaporator part of the boiler operates at pressures above 22.1 Mega Pascals (MPa). The cycle-medium in this case is a single phase fluid with homogenous properties and thus there is no need to separate steam from water in a drum, allowing for higher efficiency in power generation.

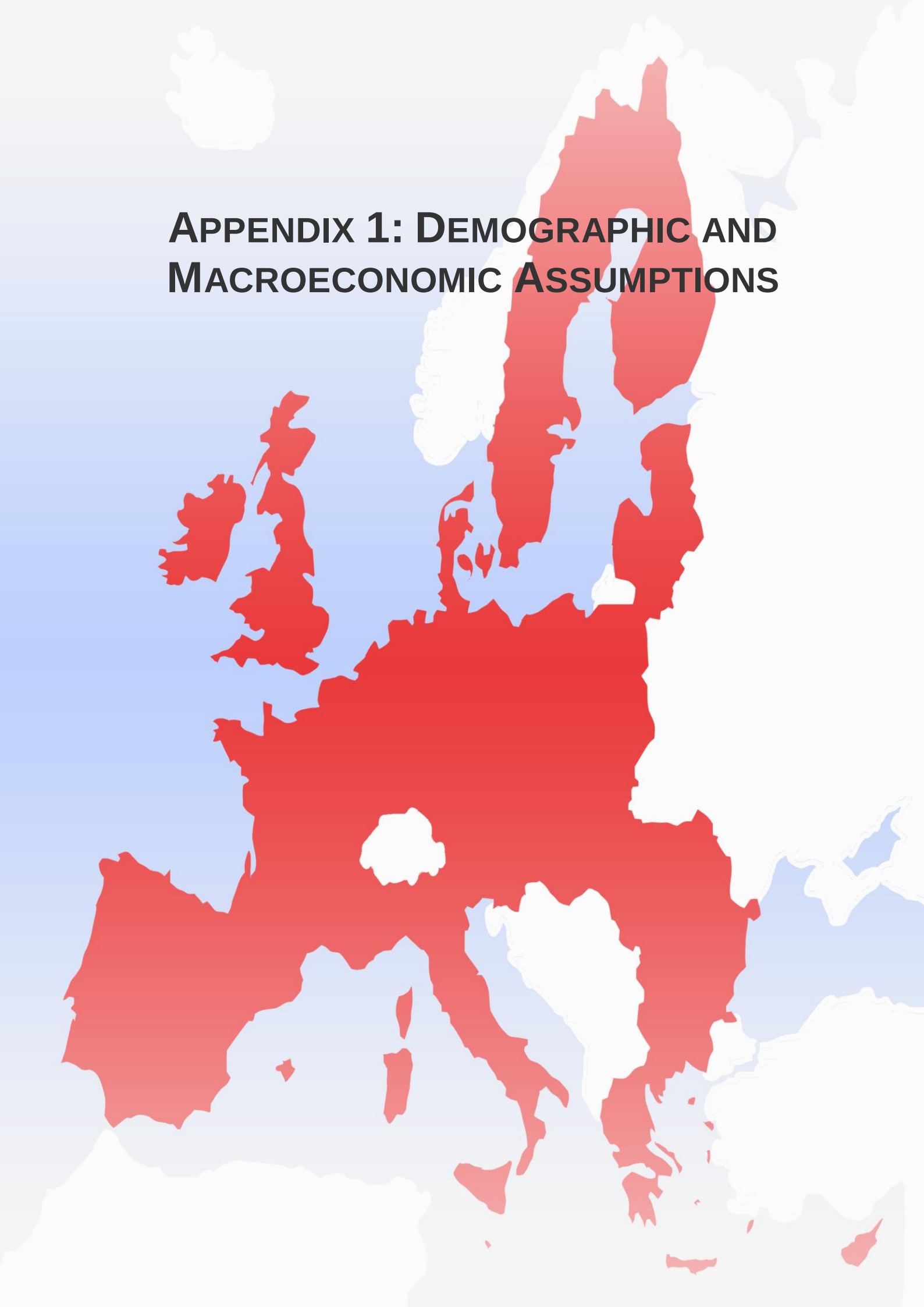
Thermal power plants: Type of electric generating station in which the source of energy for the prime mover is heat (nuclear power plants are excluded).

Useful energy: The portion of final energy which is actually available after final conversion to the consumer for the respective use. In final conversion, electricity becomes for instance light, mechanical energy or heat.

Windfall profit: An unexpected profit received by the profiting party without any particular performance.

Wind power plant: Typically a group of wind turbines supplying electricity directly to a consumer or interconnected to a common transmission or distribution system. Offshore wind includes windmills located at sea (coastal wind mills are usually included in onshore wind).

Appendix 1: Demographic and Macroeconomic Assumptions



BASELINE SCENARIO

EU-27: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	470.4	481.1	499.4	513.8	519.9	0.2	0.4	0.3	0.1					
Average household size (persons)	2.7	2.5	2.3	2.2	2.2	-0.8	-0.7	-0.4	-0.3					
Number of households (Million)	176.2	195.1	216.8	231.3	240.8	1.0	1.1	0.6	0.4					
Gross Domestic product (in 000 M€05)	**8142.7**	**10107.2**	**11385.6**	**14164.0**	**16824.7**	**2.2**	**1.2**	**2.2**	**1.7**					
Households expenditure (in 000 M€05)	**4714.3**	**5853.9**	**6495.6**	**8077.2**	**9423.1**	**2.2**	**1.0**	**2.2**	**1.6**					
Gross Value Added (in 000 M€05)	**7304.8**	**9017.0**	**10135.9**	**12655.5**	**15051.1**	**2.1**	**1.2**	**2.2**	**1.7**					
Industry	1370.8	1597.2	1690.2	2059.6	2409.1	1.5	0.6	2.0	1.6	18.8	17.7	16.7	16.3	16.0
iron and steel	54.1	56.4	53.8	61.7	68.5	0.4	-0.5	1.4	1.0	0.7	0.6	0.5	0.5	0.5
non ferrous metals	23.4	33.1	28.9	34.2	39.1	3.5	-1.3	1.7	1.4	0.3	0.4	0.3	0.3	0.3
chemicals	116.2	154.8	186.3	229.0	271.9	2.9	1.9	2.1	1.7	1.6	1.7	1.8	1.8	1.8
pharmaceuticals and cosmetics	39.5	57.4	79.3	106.4	137.2	3.8	3.3	3.0	2.6	0.5	0.6	0.8	0.8	0.9
non metallic minerals	65.6	73.9	71.4	83.9	96.3	1.2	-0.4	1.6	1.4	0.9	0.8	0.7	0.7	0.6
paper, pulp, printing	126.9	146.8	143.2	170.6	199.8	1.5	-0.2	1.8	1.6	1.7	1.6	1.4	1.3	1.3
printing and publishing	80.2	91.0	94.1	115.7	139.6	1.3	0.3	2.1	1.9	1.1	1.0	0.9	0.9	0.9
food, drink, tobacco	180.5	203.3	214.9	263.1	316.2	1.2	0.6	2.0	1.9	2.5	2.3	2.1	2.1	2.1
textiles and leather	99.8	86.1	64.7	63.6	60.9	-1.5	-2.8	-0.2	-0.4	1.4	1.0	0.6	0.5	0.4
engineering	524.1	648.0	722.5	905.7	1060.5	2.1	1.1	2.3	1.6	7.2	7.2	7.1	7.2	7.0
other industries	180.2	194.9	204.7	247.9	295.9	0.8	0.5	1.9	1.8	2.5	2.2	2.0	2.0	2.0
Construction	542.7	554.0	561.7	707.6	829.8	0.2	0.1	2.3	1.6	7.4	6.1	5.5	5.6	5.5
Services	4963.3	6365.3	7398.6	9359.8	11235.8	2.5	1.5	2.4	1.8	67.9	70.6	73.0	74.0	74.7
Agriculture	175.4	190.7	182.3	197.6	217.4	0.8	-0.5	0.8	1.0	2.4	2.1	1.8	1.6	1.4
Energy sector	252.7	309.8	303.1	330.8	358.9	2.1	-0.2	0.9	0.8	3.5	3.4	3.0	2.6	2.4

EU15: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	363.5	375.5	396.4	411.9	420.9	0.3	0.5	0.4	0.2					
Average household size (persons)	2.6	2.4	2.3	2.2	2.1	-0.7	-0.7	-0.4	-0.3					
Number of households (Million)	140.3	155.9	175.7	189.1	198.5	1.1	1.2	0.7	0.5					
Gross Domestic product (in 000 M€05)	**7662.1**	**9563.2**	**10618.8**	**13109.5**	**15518.3**	**2.2**	**1.1**	**2.1**	**1.7**					
Households expenditure (in 000 M€05)	**4457.8**	**5535.7**	**6047.8**	**7463.8**	**8663.8**	**2.2**	**0.9**	**2.1**	**1.5**					
Gross Value Added (in 000 M€05)	**6881.7**	**8535.9**	**9466.0**	**11714.3**	**13877.4**	**2.2**	**1.0**	**2.2**	**1.7**					
Industry	1287.0	1505.8	1549.1	1866.5	2184.2	1.6	0.3	1.9	1.6	18.7	17.6	16.4	15.9	15.7
iron and steel	48.9	52.1	49.5	57.0	63.7	0.6	-0.5	1.4	1.1	0.7	0.6	0.5	0.5	0.5
non ferrous metals	22.7	31.8	27.1	32.1	36.9	3.4	-1.6	1.7	1.4	0.3	0.4	0.3	0.3	0.3
chemicals	110.1	147.9	176.9	216.2	255.9	3.0	1.8	2.0	1.7	1.6	1.7	1.9	1.8	1.8
pharmaceuticals and cosmetics	37.9	54.5	75.0	99.9	128.3	3.7	3.2	2.9	2.5	0.6	0.6	0.8	0.9	0.9
non metallic minerals	60.8	68.2	63.7	73.9	84.8	1.2	-0.7	1.5	1.4	0.9	0.8	0.7	0.6	0.6
paper, pulp, printing	122.1	141.2	134.7	159.3	186.6	1.5	-0.5	1.7	1.6	1.8	1.7	1.4	1.4	1.3
printing and publishing	77.9	87.6	88.9	108.5	130.9	1.2	0.1	2.0	1.9	1.1	1.0	0.9	0.9	0.9
food, drink, tobacco	165.2	184.0	190.7	229.0	275.0	1.1	0.4	1.8	1.8	2.4	2.2	2.0	2.0	2.0
textiles and leather	89.9	78.8	58.2	56.3	53.8	-1.3	-3.0	-0.3	-0.5	1.3	0.9	0.6	0.5	0.4
engineering	498.2	619.4	669.2	829.1	971.3	2.2	0.8	2.2	1.6	7.2	7.3	7.1	7.1	7.0
other industries	169.1	182.4	179.2	213.6	256.1	0.8	-0.2	1.8	1.8	2.5	2.1	1.9	1.8	1.8
Construction	506.1	520.7	517.8	643.5	754.4	0.3	-0.1	2.2	1.6	7.4	6.1	5.5	5.5	5.4
Services	4725.1	6062.4	6975.4	8748.5	10443.1	2.5	1.4	2.3	1.8	68.7	71.0	73.7	74.7	75.3
Agriculture	145.7	167.3	152.2	161.0	176.3	1.4	-0.9	0.6	0.9	2.1	2.0	1.6	1.4	1.3
Energy sector	217.7	279.7	271.6	294.8	319.5	2.5	-0.3	0.8	0.8	3.2	3.3	2.9	2.5	2.3

NM-12: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	106.9	105.5	103.0	102.0	99.1	-0.1	-0.2	-0.1	-0.3					
Average household size (persons)	3.0	2.7	2.5	2.4	2.3	-1.0	-0.7	-0.3	-0.3					
Number of households (Million)	35.9	39.2	41.2	42.2	42.3	0.9	0.5	0.2	0.0					
Gross Domestic product (in 000 M€05)	**480.5**	**543.9**	**766.8**	**1054.5**	**1306.4**	**1.2**	**3.5**	**3.2**	**2.2**					
Households expenditure (in 000 M€05)	**256.4**	**318.2**	**447.8**	**613.4**	**759.3**	**2.2**	**3.5**	**3.2**	**2.2**					
Gross Value Added (in 000 M€05)	**423.1**	**481.1**	**669.9**	**941.2**	**1173.7**	**1.3**	**3.4**	**3.5**	**2.2**					
Industry	83.7	91.4	141.2	193.1	224.9	0.9	4.4	3.2	1.5	19.8	19.0	21.1	20.5	19.2
iron and steel	5.2	4.3	4.3	4.7	4.7	-1.9	0.0	0.9	0.2	1.2	0.9	0.6	0.5	0.4
non ferrous metals	0.6	1.3	1.8	2.1	2.2	7.4	3.3	1.4	0.4	0.2	0.3	0.3	0.2	0.2
chemicals	6.1	6.8	9.4	12.7	16.0	1.2	3.2	3.1	2.3	1.4	1.4	1.4	1.4	1.4
pharmaceuticals and cosmetics	1.6	2.9	4.3	6.5	8.9	6.2	4.0	4.2	3.3	0.4	0.6	0.6	0.7	0.8
non metallic minerals	4.8	5.7	7.7	10.1	11.5	1.8	3.1	2.7	1.4	1.1	1.2	1.1	1.1	1.0
paper, pulp, printing	4.8	5.6	8.5	11.3	13.2	1.4	4.3	2.9	1.6	1.1	1.2	1.3	1.2	1.1
printing and publishing	2.3	3.4	5.2	7.2	8.7	4.0	4.3	3.3	2.0	0.5	0.7	0.8	0.8	0.7
food, drink, tobacco	15.3	19.3	24.2	34.1	41.2	2.3	2.3	3.5	1.9	3.6	4.0	3.6	3.6	3.5
textiles and leather	9.9	7.2	6.5	7.3	7.1	-3.1	-1.0	1.1	-0.3	2.3	1.5	1.0	0.8	0.6
engineering	25.9	28.6	53.3	76.6	89.2	1.0	6.4	3.7	1.5	6.1	6.0	7.9	8.1	7.6
other industries	11.1	12.5	25.5	34.3	39.8	1.2	7.4	3.0	1.5	2.6	2.6	3.8	3.6	3.4
Construction	36.5	33.3	44.0	64.1	75.5	-0.9	2.8	3.8	1.6	8.6	6.9	6.6	6.8	6.4
Services	238.1	302.9	423.2	611.3	792.8	2.4	3.4	3.7	2.6	56.3	63.0	63.2	64.9	67.5
Agriculture	29.7	23.4	30.1	36.6	41.1	-2.4	2.6	2.0	1.2	7.0	4.9	4.5	3.9	3.5
Energy sector	35.0	30.1	31.5	36.1	39.4	-1.5	0.5	1.4	0.9	8.3	6.3	4.7	3.8	3.4

Source: GEM-E3

BASELINE SCENARIO

AUSTRIA: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	7.6	8.0	8.4	8.7	9.0	0.5	0.5	0.4	0.3					
Average household size (persons)	2.6	2.5	2.3	2.2	2.1	-0.3	-1.0	-0.4	-0.4					
Number of households (Million)	3.0	3.2	3.7	4.0	4.3	0.8	1.5	0.8	0.7					
Gross Domestic product (in 000 M€05)	**174.5**	**225.0**	**254.5**	**310.4**	**363.5**	**2.6**	**1.2**	**2.0**	**1.6**					
Households expenditure (in 000 M€05)	**101.2**	**123.5**	**137.7**	**167.1**	**192.8**	**2.0**	**1.1**	**1.9**	**1.4**					
Gross Value Added (in 000 M€05)	**154.4**	**201.4**	**228.4**	**279.9**	**328.6**	**2.7**	**1.3**	**2.1**	**1.6**					
Industry	31.1	38.8	44.8	54.7	64.3	2.2	1.5	2.0	1.6	20.1	19.2	19.6	19.5	19.6
iron and steel	1.6	2.0	2.1	2.5	2.8	2.0	0.7	1.6	1.1	1.1	1.0	0.9	0.9	0.9
non ferrous metals	0.9	1.3	1.0	1.2	1.4	3.3	-2.4	2.1	1.6	0.6	0.6	0.4	0.4	0.4
chemicals	1.6	2.4	3.5	4.5	5.4	4.3	3.8	2.6	1.9	1.0	1.2	1.5	1.6	1.6
pharmaceuticals and cosmetics	0.4	1.0	1.5	2.3	3.2	9.2	4.4	4.2	3.3	0.3	0.5	0.7	0.8	1.0
non metallic minerals	2.6	2.5	2.4	2.9	3.3	-0.5	-0.2	1.7	1.5	1.7	1.2	1.1	1.0	1.0
paper, pulp, printing	2.4	3.4	3.6	4.1	4.6	3.2	0.6	1.3	1.1	1.6	1.7	1.6	1.5	1.4
printing and publishing	1.1	1.5	1.8	2.0	2.1	2.6	1.7	1.1	0.9	0.7	0.7	0.8	0.7	0.7
food, drink, tobacco	3.5	4.2	4.8	5.8	6.8	1.7	1.3	2.0	1.7	2.3	2.1	2.1	2.1	2.1
textiles and leather	1.9	1.4	1.2	1.2	1.1	-3.1	-1.8	0.1	-0.4	1.2	0.7	0.5	0.4	0.3
engineering	11.6	15.5	19.8	24.9	29.9	3.0	2.5	2.3	1.8	7.5	7.7	8.7	8.9	9.1
other industries	4.9	6.2	6.4	7.7	8.9	2.4	0.5	1.8	1.5	3.1	3.1	2.8	2.7	2.7
Construction	11.7	15.0	14.9	17.8	21.0	2.5	0.0	1.8	1.7	7.6	7.4	6.5	6.4	6.4
Services	104.2	138.4	158.6	196.0	230.4	2.9	1.4	2.1	1.6	67.5	68.8	69.4	70.0	70.1
Agriculture	3.9	3.7	3.3	3.5	3.9	-0.5	-1.1	0.7	1.0	2.5	1.8	1.5	1.3	1.2
Energy sector	3.5	5.5	6.8	7.8	9.0	4.6	2.1	1.5	1.4	2.3	2.7	3.0	2.8	2.8

BELGIUM: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	9.9	10.2	10.8	11.3	11.7	0.3	0.5	0.5	0.4					
Average household size (persons)	2.6	2.4	2.3	2.2	2.1	-0.6	-0.5	-0.4	-0.4					
Number of households (Million)	3.9	4.2	4.7	5.1	5.5	0.9	1.0	0.9	0.7					
Gross Domestic product (in 000 M€05)	**221.2**	**278.8**	**311.4**	**389.5**	**458.5**	**2.3**	**1.1**	**2.3**	**1.6**					
Households expenditure (in 000 M€05)	**121.3**	**150.7**	**160.1**	**188.3**	**215.9**	**2.2**	**0.6**	**1.6**	**1.4**					
Gross Value Added (in 000 M€05)	**208.0**	**248.0**	**272.9**	**346.2**	**407.6**	**1.8**	**1.0**	**2.4**	**1.6**					
Industry	38.5	44.0	43.4	57.6	66.0	1.3	-0.1	2.9	1.4	18.5	17.8	15.9	16.6	16.2
iron and steel	3.6	2.8	2.3	2.8	2.9	-2.2	-2.2	1.9	0.5	1.7	1.1	0.8	0.8	0.7
non ferrous metals	1.8	1.6	1.3	1.5	1.6	-1.2	-2.4	2.0	0.6	0.9	0.6	0.5	0.4	0.4
chemicals	5.5	8.7	8.4	11.1	12.9	4.6	-0.3	2.8	1.6	2.7	3.5	3.1	3.2	3.2
pharmaceuticals and cosmetics	1.7	2.4	3.0	4.6	6.2	3.5	2.4	4.4	3.0	0.8	1.0	1.1	1.3	1.5
non metallic minerals	2.4	2.4	2.2	3.0	3.3	0.1	-0.7	3.0	1.1	1.1	1.0	0.8	0.9	0.8
paper, pulp, printing	2.9	3.2	3.7	5.1	6.0	0.8	1.5	3.5	1.6	1.4	1.3	1.3	1.5	1.5
printing and publishing	1.1	1.9	2.3	3.4	4.1	5.9	1.8	4.1	1.9	0.5	0.8	0.8	1.0	1.0
food, drink, tobacco	5.7	5.6	6.5	8.6	9.7	-0.2	1.5	2.8	1.2	2.8	2.3	2.4	2.5	2.4
textiles and leather	2.3	2.3	1.5	1.7	1.6	0.0	-3.7	1.2	-0.6	1.1	0.9	0.6	0.5	0.4
engineering	10.9	13.5	12.8	17.5	20.6	2.2	-0.5	3.1	1.6	5.2	5.4	4.7	5.0	5.0
other industries	3.5	4.0	4.7	6.3	7.3	1.4	1.6	3.0	1.4	1.7	1.6	1.7	1.8	1.8
Construction	10.8	12.1	14.4	16.6	18.3	1.2	1.8	1.4	1.0	5.2	4.9	5.3	4.8	4.5
Services	151.3	182.1	206.0	261.6	312.3	1.9	1.2	2.4	1.8	72.8	73.4	75.5	75.6	76.6
Agriculture	1.9	2.6	2.1	2.5	2.6	3.2	-2.1	1.7	0.1	0.9	1.1	0.8	0.7	0.6
Energy sector	5.4	7.2	6.9	7.8	8.5	2.8	-0.3	1.2	0.8	2.6	2.9	2.5	2.3	2.1

BULGARIA: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	8.8	8.2	7.6	7.2	6.8	-0.7	-0.8	-0.5	-0.6					
Average household size (persons)	2.9	2.7	2.6	2.5	2.4	-0.7	-0.3	-0.3	-0.3					
Number of households (Million)	3.1	3.1	2.9	2.9	2.8	0.0	-0.5	-0.2	-0.3					
Gross Domestic product (in 000 M€05)	**20.1**	**16.9**	**25.8**	**34.7**	**42.2**	**-1.7**	**4.3**	**3.0**	**2.0**					
Households expenditure (in 000 M€05)	**12.8**	**11.5**	**17.9**	**20.7**	**21.1**	**-1.1**	**4.5**	**1.4**	**0.2**					
Gross Value Added (in 000 M€05)	**18.4**	**14.3**	**20.8**	**29.1**	**35.4**	**-2.5**	**3.8**	**3.4**	**2.0**					
Industry	3.8	2.2	3.7	6.0	7.7	-5.4	5.5	4.8	2.5	20.9	15.4	18.0	20.6	21.7
iron and steel	0.2	0.2	0.1	0.1	0.1	-4.0	-4.1	2.6	0.0	1.3	1.1	0.5	0.5	0.4
non ferrous metals	0.1	0.1	0.2	0.2	0.2	1.3	3.7	2.8	0.3	0.5	0.8	0.8	0.7	0.6
chemicals	0.3	0.2	0.2	0.4	0.5	-2.3	1.1	4.3	3.3	1.4	1.5	1.1	1.2	1.4
pharmaceuticals and cosmetics	0.0	0.1	0.1	0.2	0.3	10.4	0.0	5.6	4.5	0.2	0.8	0.5	0.6	0.8
non metallic minerals	0.1	0.1	0.3	0.5	0.5	-0.1	13.8	4.2	1.4	0.5	0.6	1.5	1.6	1.5
paper, pulp, printing	0.2	0.1	0.2	0.4	0.5	-7.5	8.7	5.0	2.2	1.2	0.7	1.1	1.3	1.4
printing and publishing	0.1	0.1	0.2	0.3	0.4	-4.5	9.6	6.0	3.0	0.5	0.4	0.7	0.9	1.0
food, drink, tobacco	0.5	0.5	0.7	1.2	1.6	0.7	2.9	5.7	2.9	2.6	3.5	3.2	4.0	4.4
textiles and leather	0.2	0.3	0.6	0.9	0.9	4.2	7.7	3.1	0.2	1.1	2.1	3.0	2.9	2.5
engineering	0.9	0.5	0.8	1.5	2.2	-6.1	6.0	5.9	4.0	4.7	3.2	4.0	5.0	6.1
other industries	1.4	0.3	0.6	1.0	1.2	-15.3	8.0	5.2	2.5	7.6	1.9	2.8	3.3	3.5
Construction	1.1	0.7	1.0	1.4	1.6	-4.5	3.7	3.4	1.1	6.1	4.9	4.9	4.9	4.5
Services	8.6	8.5	12.9	17.8	22.0	-0.2	4.3	3.3	2.1	46.9	59.1	61.7	61.0	62.0
Agriculture	3.9	1.7	1.8	1.9	1.6	-7.9	0.4	0.6	-1.6	21.0	11.9	8.5	6.5	4.5
Energy sector	0.9	1.2	1.4	2.0	2.6	3.0	1.5	3.6	2.5	5.0	8.6	6.8	7.0	7.3

Source: GEM-E3

BASELINE SCENARIO

CYPRUS: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	0.6	0.7	0.8	1.0	1.1	1.9	1.7	1.5	1.2					
Average household size (persons)	3.3	3.1	2.8	2.5	2.3	-0.5	-1.0	-0.9	-0.8					
Number of households (Million)	0.2	0.2	0.3	0.4	0.5	2.4	2.8	2.5	2.0					
Gross Domestic product (in 000 M€05)	**7.5**	**11.7**	**15.6**	**22.5**	**30.9**	**4.6**	**2.9**	**3.8**	**3.2**					
Households expenditure (in 000 M€05)	**4.1**	**7.4**	**9.9**	**14.6**	**20.1**	**6.0**	**3.0**	**3.9**	**3.3**					
Gross Value Added (in 000 M€05)	**6.7**	**10.5**	**14.0**	**20.3**	**27.8**	**4.6**	**2.9**	**3.8**	**3.2**					
Industry	0.9	1.1	1.3	1.7	2.2	1.4	1.5	3.2	2.6	14.1	10.3	8.9	8.4	7.9
iron and steel	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
non ferrous metals	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
chemicals	0.0	0.1	0.1	0.1	0.1	5.9	0.7	3.6	3.0	0.6	0.6	0.5	0.5	0.5
pharmaceuticals and cosmetics	0.0	0.0	0.1	0.1	0.1	6.6	1.2	3.8	3.2	0.4	0.5	0.4	0.4	0.4
non metallic minerals	0.1	0.1	0.2	0.2	0.3	-1.5	3.9	2.5	1.8	1.9	1.1	1.2	1.0	0.9
paper, pulp, printing	0.0	0.1	0.1	0.1	0.2	28.8	1.4	3.8	3.2	0.1	0.8	0.7	0.7	0.7
printing and publishing	0.0	0.1	0.1	0.1	0.2	41.2	2.0	4.1	3.6	0.0	0.6	0.5	0.6	0.6
food, drink, tobacco	0.2	0.4	0.5	0.8	1.1	4.6	2.4	4.4	3.8	3.7	3.7	3.5	3.7	4.0
textiles and leather	0.2	0.1	0.0	0.0	0.1	-8.6	-6.6	2.2	1.3	2.9	0.7	0.3	0.2	0.2
engineering	0.1	0.1	0.2	0.2	0.2	0.0	2.0	2.2	1.3	2.1	1.4	1.2	1.1	0.9
other industries	0.2	0.2	0.2	0.2	0.2	0.8	0.4	1.1	-0.5	2.8	1.9	1.5	1.1	0.8
Construction	0.9	0.8	1.1	1.6	2.0	-0.9	3.7	3.3	2.8	12.8	7.4	8.0	7.7	7.4
Services	4.4	8.1	11.0	16.1	22.4	6.3	3.1	3.9	3.4	65.4	77.0	78.3	79.5	80.6
Agriculture	0.3	0.4	0.4	0.5	0.6	0.2	0.5	2.6	2.0	5.2	3.4	2.7	2.4	2.1
Energy sector	0.2	0.2	0.3	0.4	0.6	2.0	4.0	3.6	3.0	2.4	1.9	2.1	2.0	2.0

CZECH REPUBLIC: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	10.4	10.3	10.4	10.5	10.4	-0.1	0.1	0.1	-0.1					
Average household size (persons)	2.9	2.6	2.3	2.2	2.2	-0.9	-1.1	-0.4	-0.3					
Number of households (Million)	3.6	3.9	4.5	4.7	4.8	0.8	1.2	0.6	0.1					
Gross Domestic product (in 000 M€05)	**81.3**	**83.4**	**114.3**	**154.2**	**182.5**	**0.3**	**3.2**	**3.0**	**1.7**					
Households expenditure (in 000 M€05)	**38.0**	**42.1**	**55.2**	**73.8**	**86.7**	**1.0**	**2.7**	**2.9**	**1.6**					
Gross Value Added (in 000 M€05)	**66.4**	**74.6**	**101.4**	**138.0**	**163.4**	**1.2**	**3.1**	**3.1**	**1.7**					
Industry	15.1	17.7	27.6	36.5	42.1	1.6	4.5	2.8	1.4	22.8	23.8	27.2	26.4	25.7
iron and steel	1.3	1.4	1.5	1.6	1.7	0.9	0.4	1.0	0.3	1.9	1.9	1.4	1.2	1.0
non ferrous metals	0.1	0.2	0.2	0.2	0.2	3.4	0.3	1.2	0.5	0.2	0.3	0.2	0.2	0.2
chemicals	1.1	0.9	1.5	2.2	2.8	-2.4	5.6	3.7	2.8	1.7	1.2	1.5	1.6	1.7
pharmaceuticals and cosmetics	0.3	0.3	0.6	1.0	1.4	1.8	6.4	4.9	3.9	0.4	0.4	0.6	0.7	0.9
non metallic minerals	1.0	1.4	1.8	2.2	2.5	3.1	2.8	2.3	1.0	1.5	1.8	1.8	1.6	1.5
paper, pulp, printing	1.6	1.1	1.4	1.9	2.2	-4.1	2.9	2.8	1.6	2.4	1.4	1.4	1.3	1.3
printing and publishing	0.8	0.5	0.8	1.2	1.4	-3.8	4.3	3.4	2.1	1.2	0.7	0.8	0.8	0.9
food, drink, tobacco	2.6	3.0	3.2	4.4	5.3	1.3	0.7	3.3	1.9	3.9	4.0	3.1	3.2	3.3
textiles and leather	2.0	0.8	0.9	1.0	0.9	-8.5	1.1	1.0	-0.6	3.0	1.1	0.9	0.7	0.6
engineering	3.5	6.8	13.0	17.5	20.0	7.0	6.7	3.0	1.4	5.2	9.1	12.8	12.7	12.2
other industries	2.0	2.3	4.2	5.5	6.4	1.5	6.3	2.8	1.5	2.9	3.1	4.1	4.0	3.9
Construction	11.1	5.6	6.0	8.3	9.7	-6.6	0.7	3.2	1.6	16.7	7.5	5.9	6.0	5.9
Services	29.0	43.9	60.2	84.7	102.5	4.2	3.2	3.5	1.9	43.6	58.9	59.4	61.3	62.7
Agriculture	1.3	2.2	2.9	3.5	3.7	5.1	2.9	1.8	0.7	2.0	2.9	2.8	2.5	2.3
Energy sector	9.9	5.1	4.7	5.1	5.5	-6.4	-1.0	1.0	0.6	15.0	6.9	4.6	3.7	3.3

DENMARK: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	5.1	5.3	5.5	5.7	5.8	0.4	0.3	0.3	0.3					
Average household size (persons)	2.3	2.2	2.1	2.1	2.0	-0.4	-0.4	-0.4	-0.4					
Number of households (Million)	2.2	2.4	2.6	2.8	2.9	0.7	0.7	0.7	0.7					
Gross Domestic product (in 000 M€05)	**150.8**	**194.8**	**209.0**	**245.9**	**289.6**	**2.6**	**0.7**	**1.6**	**1.7**					
Households expenditure (in 000 M€05)	**74.3**	**89.6**	**97.4**	**112.9**	**133.2**	**1.9**	**0.8**	**1.5**	**1.7**					
Gross Value Added (in 000 M€05)	**132.4**	**168.0**	**177.5**	**210.1**	**247.5**	**2.4**	**0.6**	**1.7**	**1.7**					
Industry	20.6	23.5	24.7	28.2	33.0	1.3	0.5	1.3	1.6	15.6	14.0	13.9	13.4	13.3
iron and steel	0.4	0.5	0.2	0.2	0.2	1.0	-7.2	-0.3	0.3	0.3	0.3	0.1	0.1	0.1
non ferrous metals	0.1	0.2	0.1	0.1	0.2	3.4	-3.7	0.3	0.8	0.1	0.1	0.1	0.1	0.1
chemicals	1.1	2.6	3.5	4.2	5.1	9.2	3.0	1.8	2.0	0.8	1.6	2.0	2.0	2.1
pharmaceuticals and cosmetics	0.7	2.2	3.1	3.7	4.6	11.5	3.6	1.9	2.1	0.6	1.3	1.7	1.8	1.9
non metallic minerals	1.0	1.1	1.0	1.1	1.3	0.7	-0.8	1.2	1.5	0.8	0.6	0.6	0.5	0.5
paper, pulp, printing	2.1	2.2	2.2	2.6	3.0	0.3	0.4	1.3	1.6	1.6	1.3	1.3	1.2	1.2
printing and publishing	1.3	1.6	1.7	2.0	2.4	2.5	0.5	1.4	1.7	1.0	1.0	1.0	0.9	1.0
food, drink, tobacco	4.9	4.5	4.4	5.0	5.9	-0.9	-0.2	1.3	1.7	3.7	2.7	2.5	2.4	2.4
textiles and leather	0.8	0.6	0.4	0.3	0.3	-2.2	-5.6	-1.0	-1.0	0.6	0.4	0.2	0.2	0.1
engineering	7.0	8.5	9.3	10.7	12.4	2.0	0.9	1.4	1.4	5.3	5.1	5.2	5.1	5.0
other industries	3.1	3.3	3.5	3.9	4.6	0.5	0.7	1.0	1.5	2.4	2.0	2.0	1.9	1.8
Construction	8.9	9.9	8.9	10.6	12.7	1.1	-1.1	1.8	1.8	6.7	5.9	5.0	5.1	5.1
Services	97.2	122.5	131.6	157.5	186.4	2.3	0.7	1.8	1.7	73.5	72.9	74.2	75.0	75.3
Agriculture	1.8	2.7	2.6	2.8	3.1	4.3	-0.6	0.9	1.0	1.3	1.6	1.4	1.3	1.2
Energy sector	3.9	9.4	9.7	11.0	12.3	9.2	0.3	1.2	1.1	2.9	5.6	5.5	5.2	5.0

Source: GEM-E3

BASELINE SCENARIO

ESTONIA: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	1.6	1.4	1.3	1.3	1.3	-1.3	-0.3	-0.2	-0.3					
Average household size (persons)	2.6	2.4	2.2	2.1	2.0	-0.6	-0.9	-0.4	-0.4					
Number of households (Million)	0.6	0.6	0.6	0.6	0.6	-0.7	0.6	0.2	0.1					
Gross Domestic product (in 000 M€05)	**8.3**	**7.6**	**11.2**	**15.4**	**19.4**	**-0.9**	**3.9**	**3.3**	**2.3**					
Households expenditure (in 000 M€05)	**3.9**	**3.9**	**5.3**	**6.7**	**8.0**	**-0.1**	**3.1**	**2.4**	**1.7**					
Gross Value Added (in 000 M€05)	**7.1**	**6.7**	**9.2**	**13.4**	**16.8**	**-0.6**	**3.2**	**3.8**	**2.3**					
Industry	1.6	1.0	2.0	3.0	3.9	-4.7	7.7	4.0	2.6	21.9	14.3	22.0	22.5	23.0
iron and steel	0.0	0.0	0.0	0.0	0.0	-8.9	-18.3	-2.5	-6.6	0.1	0.0	0.0	0.0	0.0
non ferrous metals	0.0	0.0	0.0	0.0	0.0			2.3	1.5	0.0	0.0	0.0	0.0	0.0
chemicals	0.0	0.0	0.1	0.2	0.2	8.0	8.0	6.5	3.3	0.3	0.6	1.0	1.3	1.5
pharmaceuticals and cosmetics	0.0	0.0	0.0	0.0	0.0	15.0	23.5	8.1	4.7	0.0	0.0	0.1	0.2	0.3
non metallic minerals	0.0	0.1	0.1	0.2	0.2	14.3	8.4	3.2	1.5	0.2	0.9	1.4	1.3	1.2
paper, pulp, printing	0.0	0.0	0.0	0.1	0.1	-6.5	5.3	3.6	1.9	0.6	0.4	0.4	0.4	0.4
printing and publishing	0.0	0.0	0.0	0.0	0.1	-5.6	6.6	3.8	2.1	0.4	0.2	0.3	0.3	0.3
food, drink, tobacco	0.3	0.2	0.3	0.4	0.6	-5.0	4.8	3.9	2.9	4.3	2.7	3.1	3.2	3.4
textiles and leather	0.5	0.2	0.2	0.3	0.3	-11.6	4.3	2.2	1.1	7.5	2.3	2.6	2.2	2.0
engineering	0.1	0.3	0.6	1.0	1.3	8.1	9.3	4.5	2.4	1.7	3.9	6.9	7.4	7.5
other industries	0.5	0.2	0.6	0.9	1.2	-7.5	9.6	4.0	3.1	7.2	3.5	6.5	6.6	7.1
Construction	0.2	0.5	0.6	1.0	1.1	6.4	2.6	4.8	1.5	3.5	6.8	6.4	7.1	6.6
Services	3.6	4.5	5.9	8.7	11.0	2.4	2.7	3.8	2.4	50.0	67.2	64.4	64.6	65.5
Agriculture	0.8	0.4	0.3	0.3	0.3	-6.6	-3.6	0.4	0.8	10.6	5.7	2.9	2.0	1.8
Energy sector	1.0	0.4	0.4	0.5	0.5	-8.6	-0.1	2.3	0.5	14.0	6.0	4.3	3.8	3.1

FINLAND: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	5.0	5.2	5.3	5.5	5.6	0.4	0.3	0.3	0.1					
Average household size (persons)	2.5	2.3	2.1	2.0	1.9	-0.8	-0.8	-0.4	-0.4					
Number of households (Million)	2.0	2.3	2.5	2.7	2.9	1.2	1.1	0.7	0.5					
Gross Domestic product (in 000 M€05)	**114.0**	**138.8**	**165.5**	**201.4**	**233.5**	**2.0**	**1.8**	**2.0**	**1.5**					
Households expenditure (in 000 M€05)	**61.6**	**69.4**	**82.5**	**97.6**	**113.3**	**1.2**	**1.7**	**1.7**	**1.5**					
Gross Value Added (in 000 M€05)	**99.4**	**122.1**	**142.7**	**175.5**	**203.4**	**2.1**	**1.6**	**2.1**	**1.5**					
Industry	15.2	25.6	32.6	40.1	44.9	5.3	2.4	2.1	1.1	15.3	21.0	22.8	22.9	22.1
iron and steel	0.5	1.1	1.4	1.6	1.8	7.8	2.7	1.6	0.7	0.5	0.9	1.0	0.9	0.9
non ferrous metals	0.4	0.7	0.6	0.7	0.7	4.6	-1.5	1.7	0.8	0.4	0.5	0.4	0.4	0.4
chemicals	1.2	1.8	2.0	2.2	2.3	3.8	1.1	1.1	0.2	1.2	1.5	1.4	1.3	1.1
pharmaceuticals and cosmetics	0.2	0.3	0.4	0.5	0.6	3.6	2.3	2.1	1.1	0.2	0.3	0.3	0.3	0.3
non metallic minerals	0.8	0.9	1.1	1.3	1.4	0.3	2.3	1.7	0.9	0.9	0.7	0.8	0.7	0.7
paper, pulp, printing	3.8	5.6	5.5	6.6	7.4	3.9	-0.3	1.9	1.2	3.9	4.6	3.8	3.8	3.7
printing and publishing	1.4	1.1	1.6	2.2	2.7	-2.2	3.6	3.2	1.9	1.4	0.9	1.1	1.3	1.3
food, drink, tobacco	1.4	1.6	2.4	3.0	3.4	1.9	3.9	2.1	1.3	1.4	1.4	1.7	1.7	1.7
textiles and leather	0.8	0.6	0.5	0.5	0.4	-3.4	-2.1	0.1	-0.8	0.8	0.5	0.3	0.3	0.2
engineering	3.9	10.1	15.7	20.3	23.3	9.9	4.5	2.6	1.4	4.0	8.3	11.0	11.5	11.5
other industries	2.3	3.2	3.5	3.9	4.2	3.5	0.8	1.3	0.5	2.3	2.6	2.4	2.2	2.0
Construction	10.1	7.7	7.9	9.6	11.0	-2.6	0.2	2.0	1.3	10.1	6.3	5.5	5.5	5.4
Services	67.4	81.7	94.7	117.1	138.2	1.9	1.5	2.1	1.7	67.8	66.9	66.3	66.7	68.0
Agriculture	4.4	4.0	3.8	4.3	4.4	-1.0	-0.4	1.0	0.4	4.4	3.3	2.7	2.4	2.2
Energy sector	2.3	3.1	3.7	4.4	4.9	2.9	2.0	1.7	1.0	2.3	2.5	2.6	2.5	2.4

FRANCE: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	56.6	58.8	62.6	65.6	68.0	0.4	0.6	0.5	0.4					
Average household size (persons)	2.6	2.4	2.3	2.2	2.1	-0.8	-0.5	-0.5	-0.3					
Number of households (Million)	21.8	24.7	27.7	30.5	32.4	1.2	1.2	1.0	0.6					
Gross Domestic product (in 000 M€05)	**1302.7**	**1589.7**	**1759.1**	**2144.4**	**2550.1**	**2.0**	**1.0**	**2.0**	**1.7**					
Households expenditure (in 000 M€05)	**734.7**	**871.6**	**975.2**	**1165.1**	**1346.9**	**1.7**	**1.1**	**1.8**	**1.5**					
Gross Value Added (in 000 M€05)	**1169.9**	**1429.0**	**1581.4**	**1926.3**	**2290.9**	**2.0**	**1.0**	**2.0**	**1.7**					
Industry	146.0	189.6	201.5	238.4	282.7	2.7	0.6	1.7	1.7	12.5	13.3	12.7	12.4	12.3
iron and steel	4.9	7.7	6.3	6.6	7.3	4.6	-2.0	0.4	1.1	0.4	0.5	0.4	0.3	0.3
non ferrous metals	1.9	4.6	3.4	3.6	4.1	9.3	-3.0	0.6	1.3	0.2	0.3	0.2	0.2	0.2
chemicals	15.8	18.5	20.4	24.1	28.7	1.6	1.0	1.7	1.8	1.3	1.3	1.3	1.3	1.3
pharmaceuticals and cosmetics	6.6	9.6	12.0	15.6	20.2	3.8	2.2	2.6	2.6	0.6	0.7	0.8	0.8	0.9
non metallic minerals	6.2	8.6	7.9	8.9	10.2	3.3	-0.9	1.2	1.4	0.5	0.6	0.5	0.5	0.4
paper, pulp, printing	13.7	16.5	15.9	17.4	19.3	1.9	-0.4	0.9	1.0	1.2	1.2	1.0	0.9	0.8
printing and publishing	8.7	10.2	10.6	12.2	14.1	1.7	0.4	1.3	1.5	0.7	0.7	0.7	0.6	0.6
food, drink, tobacco	21.9	27.1	30.1	35.9	42.6	2.2	1.1	1.8	1.7	1.9	1.9	1.9	1.9	1.9
textiles and leather	10.1	8.4	7.5	7.1	6.5	-1.8	-1.2	-0.5	-1.0	0.9	0.6	0.5	0.4	0.3
engineering	56.0	77.4	84.8	105.0	128.6	3.3	0.9	2.2	2.0	4.8	5.4	5.4	5.5	5.6
other industries	15.5	20.8	25.1	29.8	35.3	3.0	1.9	1.7	1.7	1.3	1.5	1.6	1.5	1.5
Construction	88.6	82.8	82.1	94.2	108.8	-0.7	-0.1	1.4	1.4	7.6	5.8	5.2	4.9	4.7
Services	882.7	1094.2	1233.5	1523.0	1822.2	2.2	1.2	2.1	1.8	75.5	76.6	78.0	79.1	79.5
Agriculture	29.6	35.6	32.9	32.6	34.3	1.9	-0.8	-0.1	0.5	2.5	2.5	2.1	1.7	1.5
Energy sector	23.0	26.9	31.3	38.0	42.9	1.6	1.5	1.9	1.2	2.0	1.9	2.0	2.0	1.9

Source: GEM-E3

BASELINE SCENARIO

GERMANY: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	79.1	82.2	82.1	81.5	80.2	0.4	0.0	-0.1	-0.2					
Average household size (persons)	2.4	2.2	2.1	2.0	2.0	-0.5	-0.9	-0.2	-0.1					
Number of households (Million)	33.7	36.7	40.0	40.5	40.3	0.9	0.9	0.1	-0.1					
Gross Domestic product (in 000 M€05)	**1830.3**	**2177.2**	**2281.5**	**2723.6**	**3008.8**	**1.8**	**0.5**	**1.8**	**1.0**					
Households expenditure (in 000 M€05)	**1084.6**	**1305.7**	**1325.8**	**1570.4**	**1733.4**	**1.9**	**0.2**	**1.7**	**1.0**					
Gross Value Added (in 000 M€05)	**1611.4**	**1943.1**	**2063.5**	**2440.9**	**2696.5**	**1.9**	**0.6**	**1.7**	**1.0**					
Industry	395.0	425.1	463.9	544.8	593.2	0.7	0.9	1.6	0.9	24.5	21.9	22.5	22.3	22.0
iron and steel	14.3	14.6	14.5	16.7	18.0	0.2	-0.1	1.4	0.8	0.9	0.8	0.7	0.7	0.7
non ferrous metals	5.5	10.0	8.9	10.4	11.5	6.2	-1.1	1.6	1.0	0.3	0.5	0.4	0.4	0.4
chemicals	32.1	39.5	50.6	58.9	65.0	2.1	2.5	1.5	1.0	2.0	2.0	2.5	2.4	2.4
pharmaceuticals and cosmetics	7.9	11.2	18.3	24.3	30.1	3.5	5.0	2.9	2.2	0.5	0.6	0.9	1.0	1.1
non metallic minerals	12.5	14.7	12.3	13.5	14.3	1.7	-1.8	0.9	0.6	0.8	0.8	0.6	0.6	0.5
paper, pulp, printing	31.6	34.2	30.5	34.6	38.1	0.8	-1.1	1.3	1.0	2.0	1.8	1.5	1.4	1.4
printing and publishing	22.1	21.3	19.2	22.5	25.5	-0.3	-1.1	1.6	1.3	1.4	1.1	0.9	0.9	0.9
food, drink, tobacco	38.9	39.1	37.5	43.8	49.4	0.0	-0.4	1.6	1.2	2.4	2.0	1.8	1.8	1.8
textiles and leather	15.6	9.6	6.7	6.7	6.4	-4.8	-3.5	0.0	-0.6	1.0	0.5	0.3	0.3	0.2
engineering	189.6	219.2	261.5	312.6	337.9	1.5	1.8	1.8	0.8	11.8	11.3	12.7	12.8	12.5
other industries	54.9	44.2	41.4	47.6	52.7	-2.2	-0.6	1.4	1.0	3.4	2.3	2.0	2.0	2.0
Construction	104.2	101.2	70.7	81.9	89.4	-0.3	-3.5	1.5	0.9	6.5	5.2	3.4	3.4	3.3
Services	1045.8	1349.8	1459.7	1740.6	1937.2	2.6	0.8	1.8	1.1	64.9	69.5	70.7	71.3	71.8
Agriculture	15.4	17.3	17.1	19.0	19.9	1.2	-0.1	1.1	0.4	1.0	0.9	0.8	0.8	0.7
Energy sector	50.9	49.7	52.0	54.5	56.7	-0.2	0.5	0.5	0.4	3.2	2.6	2.5	2.2	2.1

GREECE: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	10.1	10.9	11.3	11.6	11.6	0.7	0.4	0.2	0.0					
Average household size (persons)	3.0	2.8	2.7	2.5	2.4	-0.7	-0.5	-0.6	-0.5					
Number of households (Million)	3.3	3.9	4.2	4.6	4.8	1.5	0.9	0.9	0.5					
Gross Domestic product (in 000 M€05)	**127.6**	**160.9**	**219.4**	**290.6**	**351.6**	**2.3**	**3.2**	**2.9**	**1.9**					
Households expenditure (in 000 M€05)	**98.1**	**114.7**	**152.4**	**200.1**	**238.7**	**1.6**	**2.9**	**2.8**	**1.8**					
Gross Value Added (in 000 M€05)	**107.9**	**142.8**	**194.7**	**258.7**	**312.8**	**2.8**	**3.1**	**2.9**	**1.9**					
Industry	14.8	14.1	18.8	24.0	27.9	-0.5	2.9	2.5	1.5	13.7	9.8	9.7	9.3	8.9
iron and steel	0.3	0.3	0.6	0.8	0.9	1.4	7.2	2.4	1.2	0.2	0.2	0.3	0.3	0.3
non ferrous metals	0.8	0.6	0.6	0.8	0.9	-3.6	0.8	2.8	1.6	0.7	0.4	0.3	0.3	0.3
chemicals	1.7	0.7	1.2	1.7	2.0	-8.9	6.3	3.0	1.8	1.6	0.5	0.6	0.6	0.6
pharmaceuticals and cosmetics	0.6	0.4	0.7	1.0	1.2	-4.2	6.3	3.6	2.3	0.5	0.3	0.3	0.4	0.4
non metallic minerals	0.9	1.2	1.3	1.7	1.9	3.3	0.9	2.3	1.4	0.8	0.8	0.7	0.6	0.6
paper, pulp, printing	1.1	0.9	1.6	1.9	2.1	-1.7	5.3	1.9	1.0	1.0	0.7	0.8	0.7	0.7
printing and publishing	0.8	0.7	1.3	1.6	1.8	-1.6	6.6	2.1	1.2	0.7	0.5	0.7	0.6	0.6
food, drink, tobacco	3.6	4.7	5.8	7.6	9.0	2.5	2.3	2.6	1.7	3.4	3.3	3.0	2.9	2.9
textiles and leather	3.0	2.0	1.6	1.7	1.6	-4.1	-2.3	0.7	-0.5	2.8	1.4	0.8	0.6	0.5
engineering	1.6	1.7	3.7	5.0	6.1	0.8	7.8	3.1	2.0	1.5	1.2	1.9	1.9	2.0
other industries	1.8	2.0	2.3	2.9	3.4	0.9	1.5	2.3	1.4	1.7	1.4	1.2	1.1	1.1
Construction	6.6	9.4	13.9	18.6	22.2	3.6	4.0	3.0	1.8	6.1	6.6	7.1	7.2	7.1
Services	71.5	104.2	146.9	199.8	244.9	3.8	3.5	3.1	2.1	66.2	73.0	75.5	77.2	78.3
Agriculture	10.0	9.4	8.7	9.4	10.5	-0.7	-0.7	0.7	1.1	9.3	6.6	4.5	3.6	3.4
Energy sector	4.9	5.7	6.3	6.9	7.4	1.5	1.0	0.9	0.6	4.6	4.0	3.2	2.7	2.4

HUNGARY: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	10.4	10.2	10.0	9.9	9.7	-0.1	-0.2	-0.1	-0.2					
Average household size (persons)	2.6	2.4	2.3	2.2	2.1	-1.0	-0.5	-0.4	-0.4					
Number of households (Million)	4.0	4.3	4.4	4.6	4.6	0.9	0.3	0.3	0.2					
Gross Domestic product (in 000 M€05)	**66.0**	**72.0**	**87.6**	**114.8**	**141.2**	**0.9**	**2.0**	**2.7**	**2.1**					
Households expenditure (in 000 M€05)	**35.6**	**36.2**	**46.4**	**63.5**	**79.1**	**0.2**	**2.5**	**3.2**	**2.2**					
Gross Value Added (in 000 M€05)	**58.5**	**62.1**	**73.9**	**98.0**	**120.6**	**0.6**	**1.8**	**2.9**	**2.1**					
Industry	9.6	12.6	15.2	18.3	20.9	2.8	1.9	1.8	1.3	16.3	20.3	20.6	18.6	17.3
iron and steel	0.6	0.4	0.3	0.4	0.4	-5.1	-0.7	1.6	1.2	1.0	0.6	0.4	0.4	0.4
non ferrous metals	0.0	0.3	0.3	0.3	0.4	29.7	-1.5	1.7	1.3	0.0	0.5	0.4	0.3	0.3
chemicals	0.9	1.3	1.4	1.6	1.8	4.3	0.5	1.4	1.1	1.5	2.2	1.9	1.7	1.5
pharmaceuticals and cosmetics	0.2	0.5	0.7	0.9	1.1	8.6	2.6	2.3	2.0	0.4	0.9	1.0	0.9	0.9
non metallic minerals	0.5	0.6	0.6	0.7	0.8	2.7	-0.6	1.7	1.5	0.8	1.0	0.8	0.7	0.6
paper, pulp, printing	0.3	0.6	0.8	0.9	1.0	8.4	1.7	1.7	1.4	0.5	1.0	1.0	0.9	0.9
printing and publishing	0.1	0.4	0.5	0.6	0.7	9.5	3.0	1.9	1.7	0.3	0.6	0.7	0.6	0.6
food, drink, tobacco	1.6	2.6	1.8	2.1	2.5	5.1	-3.5	1.6	1.6	2.7	4.2	2.5	2.2	2.1
textiles and leather	1.4	0.8	0.4	0.4	0.4	-5.4	-6.9	0.4	0.3	2.4	1.3	0.5	0.4	0.4
engineering	3.1	4.9	8.2	10.2	11.7	4.8	5.3	2.2	1.4	5.3	7.9	11.1	10.4	9.7
other industries	1.2	1.0	1.4	1.6	1.8	-2.3	3.4	1.2	1.2	2.1	1.6	1.9	1.6	1.5
Construction	2.6	2.9	3.5	5.3	6.5	1.3	1.9	4.1	2.0	4.4	4.7	4.8	5.4	5.3
Services	41.5	40.0	48.8	66.6	83.7	-0.4	2.0	3.2	2.3	70.9	64.5	66.0	67.9	69.4
Agriculture	3.2	2.1	3.3	3.8	4.3	-4.3	4.8	1.6	1.3	5.5	3.3	4.4	3.9	3.6
Energy sector	1.6	4.5	3.1	4.1	5.2	10.5	-3.5	2.7	2.5	2.8	7.2	4.2	4.2	4.3

Source: GEM-E3

BASELINE SCENARIO

IRELAND: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	3.5	3.8	4.6	5.4	5.9	0.7	2.0	1.6	0.8					
Average household size (persons)	3.4	3.0	2.8	2.7	2.5	-1.3	-0.6	-0.6	-0.5					
Number of households (Million)	1.0	1.3	1.6	2.0	2.3	2.1	2.7	2.2	1.4					
Gross Domestic product (in 000 M€05)	**61.2**	**123.7**	**158.8**	**221.7**	**285.9**	**7.3**	**2.5**	**3.4**	**2.6**					
Households expenditure (in 000 M€05)	**34.2**	**59.2**	**78.2**	**99.5**	**119.4**	**5.6**	**2.8**	**2.4**	**1.8**					
Gross Value Added (in 000 M€05)	**57.2**	**107.8**	**140.5**	**195.7**	**252.4**	**6.5**	**2.7**	**3.4**	**2.6**					
Industry	7.6	22.8	32.2	43.5	54.2	11.6	3.5	3.1	2.2	13.3	21.1	22.9	22.2	21.5
iron and steel	0.1	0.1	0.0	0.0	0.0	5.2				0.1	0.1	0.0	0.0	0.0
non ferrous metals	0.1	0.1	0.2	0.3	0.3	-0.7	9.8	1.4	2.1	0.2	0.1	0.2	0.1	0.1
chemicals	1.4	8.2	13.6	17.1	20.0	19.6	5.2	2.3	1.6	2.4	7.6	9.7	8.7	7.9
pharmaceuticals and cosmetics	0.4	1.9	3.2	4.4	5.6	16.5	5.1	3.2	2.4	0.7	1.8	2.3	2.2	2.2
non metallic minerals	0.5	1.0	0.5	0.6	0.7	6.3	-6.2	1.8	1.3	0.9	0.9	0.4	0.3	0.3
paper, pulp, printing	0.2	1.2	3.7	4.7	5.7	22.0	11.7	2.5	2.0	0.3	1.1	2.6	2.4	2.3
printing and publishing	0.1	1.1	3.5	4.4	5.4	23.3	11.9	2.5	2.0	0.2	1.0	2.5	2.3	2.2
food, drink, tobacco	2.0	3.5	4.8	7.1	9.5	5.7	3.4	4.0	2.9	3.5	3.2	3.4	3.6	3.7
textiles and leather	0.7	0.4	0.2	0.2	0.2	-5.9	-5.0	0.7	-1.7	1.2	0.3	0.2	0.1	0.1
engineering	2.2	7.1	7.5	11.3	15.2	12.6	0.5	4.2	3.0	3.8	6.6	5.3	5.8	6.0
other industries	0.5	1.2	1.5	2.1	2.6	8.6	2.7	3.3	2.2	0.9	1.1	1.1	1.1	1.0
Construction	4.4	9.9	7.5	10.4	12.3	8.4	-2.8	3.3	1.8	7.8	9.2	5.3	5.3	4.9
Services	42.4	71.7	96.9	137.2	180.8	5.4	3.1	3.5	2.8	74.2	66.4	68.9	70.1	71.6
Agriculture	2.4	2.6	2.7	3.2	3.4	0.9	0.3	1.7	0.6	4.2	2.4	1.9	1.6	1.3
Energy sector	0.3	0.9	1.3	1.5	1.7	10.3	4.1	1.2	1.3	0.6	0.8	0.9	0.8	0.7

ITALY: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	56.7	56.9	60.0	61.4	61.9	0.0	0.5	0.2	0.1					
Average household size (persons)	2.6	2.4	2.2	2.1	2.1	-1.1	-0.9	-0.2	-0.3					
Number of households (Million)	21.5	24.0	27.8	29.1	30.1	1.1	1.5	0.4	0.3					
Gross Domestic product (in 000 M€05)	**1168.7**	**1367.8**	**1403.5**	**1678.7**	**1974.0**	**1.6**	**0.3**	**1.8**	**1.6**					
Households expenditure (in 000 M€05)	**688.6**	**812.5**	**846.3**	**1036.0**	**1192.1**	**1.7**	**0.4**	**2.0**	**1.4**					
Gross Value Added (in 000 M€05)	**1062.8**	**1227.6**	**1264.7**	**1518.2**	**1792.4**	**1.5**	**0.3**	**1.8**	**1.7**					
Industry	211.7	244.4	220.5	259.7	320.4	1.4	-1.0	1.7	2.1	19.9	19.9	17.4	17.1	17.9
iron and steel	7.6	8.6	8.5	9.5	10.7	1.2	-0.1	1.1	1.2	0.7	0.7	0.7	0.6	0.6
non ferrous metals	2.9	4.7	4.1	5.1	6.4	5.0	-1.3	2.2	2.3	0.3	0.4	0.3	0.3	0.4
chemicals	14.8	16.9	15.9	19.4	24.3	1.3	-0.6	2.0	2.3	1.4	1.4	1.3	1.3	1.4
pharmaceuticals and cosmetics	6.9	7.1	7.2	9.5	12.9	0.2	0.2	2.8	3.1	0.7	0.6	0.6	0.6	0.7
non metallic minerals	13.4	13.7	12.4	13.2	14.6	0.2	-1.0	0.7	1.0	1.3	1.1	1.0	0.9	0.8
paper, pulp, printing	13.2	15.1	14.2	17.7	23.0	1.3	-0.6	2.2	2.6	1.2	1.2	1.1	1.2	1.3
printing and publishing	7.9	8.7	9.1	11.9	16.0	1.0	0.4	2.7	3.1	0.7	0.7	0.7	0.8	0.9
food, drink, tobacco	21.5	25.7	23.8	28.4	36.7	1.8	-0.7	1.8	2.6	2.0	2.1	1.9	1.9	2.0
textiles and leather	29.1	30.6	23.8	22.2	21.5	0.5	-2.5	-0.7	-0.3	2.7	2.5	1.9	1.5	1.2
engineering	82.1	96.1	89.6	110.1	137.9	1.6	-0.7	2.1	2.3	7.7	7.8	7.1	7.3	7.7
other industries	27.0	33.1	28.0	34.1	45.1	2.0	-1.6	2.0	2.8	2.5	2.7	2.2	2.2	2.5
Construction	70.1	67.6	71.6	79.9	85.9	-0.4	0.6	1.1	0.7	6.6	5.5	5.7	5.3	4.8
Services	729.7	856.3	913.6	1115.5	1316.3	1.6	0.7	2.0	1.7	68.7	69.8	72.2	73.5	73.4
Agriculture	22.3	28.3	26.1	27.1	29.3	2.4	-0.8	0.4	0.8	2.1	2.3	2.1	1.8	1.6
Energy sector	29.0	31.0	33.0	35.9	40.5	0.7	0.6	0.9	1.2	2.7	2.5	2.6	2.4	2.3

LATVIA: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	2.7	2.4	2.2	2.2	2.0	-1.1	-0.6	-0.4	-0.6					
Average household size (persons)	2.7	2.6	2.5	2.4	2.3	-0.5	-0.4	-0.4	-0.4					
Number of households (Million)	1.0	0.9	0.9	0.9	0.9	-0.6	-0.2	0.0	-0.2					
Gross Domestic product (in 000 M€05)	**12.5**	**8.8**	**12.9**	**17.4**	**21.0**	**-3.5**	**3.9**	**3.0**	**1.9**					
Households expenditure (in 000 M€05)	**7.5**	**5.3**	**7.5**	**10.8**	**13.3**	**-3.4**	**3.5**	**3.6**	**2.1**					
Gross Value Added (in 000 M€05)	**10.1**	**7.7**	**11.1**	**15.3**	**18.4**	**-2.6**	**3.7**	**3.2**	**1.9**					
Industry	2.2	1.0	1.4	1.6	1.7	-7.6	3.1	1.4	1.0	22.1	13.1	12.3	10.3	9.5
iron and steel	0.0	0.0	0.0	0.0	0.0	-7.3	7.0	-3.6	-1.2	0.4	0.3	0.4	0.2	0.1
non ferrous metals	0.0	0.0	0.0	0.0	0.0		10.0	-3.3	-0.9	0.0	0.1	0.3	0.1	0.1
chemicals	0.1	0.0	0.1	0.1	0.1	-8.3	8.3	3.8	2.4	0.7	0.4	0.6	0.6	0.7
pharmaceuticals and cosmetics	0.0	0.0	0.0	0.1	0.1	47.0	11.1	4.3	2.9	0.0	0.2	0.4	0.5	0.5
non metallic minerals	0.1	0.0	0.0	0.0	0.0	-6.6	4.0	1.3	0.2	0.6	0.4	0.4	0.3	0.3
paper, pulp, printing	0.4	0.1	0.1	0.2	0.2	-13.6	4.2	2.1	1.1	3.7	1.1	1.2	1.1	1.0
printing and publishing	0.3	0.1	0.1	0.1	0.2	-13.6	4.9	2.3	1.2	2.9	0.9	1.0	0.9	0.8
food, drink, tobacco	0.6	0.3	0.3	0.3	0.4	-7.4	0.6	1.6	1.6	6.0	3.6	2.6	2.3	2.2
textiles and leather	0.3	0.1	0.1	0.1	0.1	-10.1	0.5	0.2	0.1	3.3	1.5	1.1	0.8	0.7
engineering	0.6	0.2	0.2	0.3	0.3	-11.3	0.6	3.4	0.6	5.8	2.3	1.7	1.7	1.5
other industries	0.2	0.3	0.5	0.5	0.5	5.3	5.6	0.8	0.8	1.6	3.5	4.1	3.3	2.9
Construction	1.9	0.4	0.5	0.8	0.9	-14.5	3.0	3.9	0.9	19.1	5.2	4.9	5.2	4.7
Services	4.9	5.7	8.6	12.3	15.2	1.5	4.2	3.6	2.1	48.7	73.7	77.4	80.7	82.6
Agriculture	0.6	0.4	0.4	0.3	0.4	-4.5	-0.6	-0.7	0.8	5.9	4.8	3.2	2.1	1.9
Energy sector	0.4	0.2	0.2	0.2	0.2	-5.3	0.2	-0.1	0.0	4.2	3.2	2.2	1.6	1.3

Source: GEM-E3

BASELINE SCENARIO

LITHUANIA: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	3.7	3.5	3.3	3.2	3.1	-0.5	-0.5	-0.4	-0.4					
Average household size (persons)	2.9	2.8	2.6	2.5	2.4	-0.4	-0.7	-0.4	-0.4					
Number of households (Million)	1.3	1.3	1.3	1.3	1.3	-0.1	0.2	0.0	0.0					
Gross Domestic product (in 000 M€05)	**19.4**	**14.3**	**21.5**	**30.3**	**36.3**	**-3.0**	**4.1**	**3.5**	**1.8**					
Households expenditure (in 000 M€05)	**11.7**	**8.8**	**13.0**	**18.1**	**21.4**	**-2.8**	**4.0**	**3.3**	**1.7**					
Gross Value Added (in 000 M€05)	**17.1**	**13.0**	**19.4**	**27.4**	**32.8**	**-2.7**	**4.1**	**3.5**	**1.8**					
Industry	3.9	2.4	4.3	6.0	6.6	-4.9	6.1	3.3	1.0	22.9	18.3	22.2	21.8	20.1
iron and steel	0.0	0.0	0.0	0.0	0.0	3.8	-1.7	-1.0	-2.2	0.0	0.1	0.1	0.0	0.0
non ferrous metals	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
chemicals	0.2	0.2	0.3	0.4	0.4	-1.0	4.6	2.3	1.7	1.2	1.4	1.5	1.3	1.3
pharmaceuticals and cosmetics	0.0	0.0	0.0	0.0	0.1	-7.0	4.2	3.6	2.9	0.2	0.1	0.2	0.2	0.2
non metallic minerals	0.1	0.1	0.2	0.2	0.3	-3.1	7.2	3.0	0.4	0.7	0.7	0.9	0.9	0.8
paper, pulp, printing	0.3	0.2	0.2	0.3	0.3	-5.9	2.5	3.2	0.6	1.9	1.4	1.2	1.2	1.0
printing and publishing	0.2	0.1	0.2	0.2	0.3	-3.6	3.0	3.4	0.8	1.1	1.0	0.9	0.9	0.8
food, drink, tobacco	1.1	0.6	0.9	1.2	1.4	-5.6	3.9	2.9	1.2	6.5	4.8	4.7	4.4	4.2
textiles and leather	1.1	0.5	0.5	0.5	0.5	-7.5	-0.6	0.9	-1.2	6.6	4.0	2.5	1.9	1.4
engineering	0.6	0.4	1.0	1.7	1.8	-4.8	10.7	5.0	0.9	3.5	2.8	5.2	6.0	5.5
other industries	0.4	0.4	1.2	1.6	1.9	-0.2	11.5	3.4	1.6	2.3	3.0	6.0	5.9	5.8
Construction	2.0	0.8	1.3	2.0	2.2	-8.5	5.0	4.4	0.7	11.6	6.3	6.8	7.4	6.6
Services	7.8	8.4	12.0	17.5	22.1	0.8	3.6	3.9	2.4	45.6	64.9	61.7	63.8	67.4
Agriculture	1.3	0.8	0.8	0.8	0.7	-4.5	0.1	-0.3	-1.0	7.5	6.2	4.2	2.9	2.2
Energy sector	2.1	0.6	1.0	1.1	1.2	-12.4	5.6	1.5	0.7	12.5	4.4	5.1	4.2	3.7

LUXEMBOURG: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	0.4	0.4	0.5	0.6	0.6	1.3	1.3	1.1	1.0					
Average household size (persons)	2.7	2.5	2.4	2.3	2.2	-0.6	-0.5	-0.4	-0.4					
Number of households (Million)	0.1	0.2	0.2	0.2	0.3	2.0	1.8	1.5	1.3					
Gross Domestic product (in 000 M€05)	**13.6**	**25.4**	**32.6**	**47.3**	**59.4**	**6.5**	**2.5**	**3.8**	**2.3**					
Households expenditure (in 000 M€05)	**6.9**	**9.9**	**11.4**	**16.8**	**21.1**	**3.7**	**1.4**	**4.0**	**2.3**					
Gross Value Added (in 000 M€05)	**14.2**	**22.6**	**29.1**	**42.3**	**53.1**	**4.8**	**2.6**	**3.8**	**2.3**					
Industry	1.7	2.4	2.6	3.6	4.3	3.7	0.8	3.3	1.7	11.7	10.5	8.9	8.5	8.0
iron and steel	0.4	0.7	0.6	0.8	0.9	4.9	-1.3	2.7	1.0	3.1	3.2	2.2	1.9	1.7
non ferrous metals	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
chemicals	0.0	0.1	0.1	0.2	0.2	10.3	2.6	3.3	1.8	0.2	0.4	0.4	0.4	0.4
pharmaceuticals and cosmetics	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
non metallic minerals	0.1	0.2	0.2	0.3	0.3	2.3	2.6	2.6	1.0	1.0	0.8	0.8	0.7	0.6
paper, pulp, printing	0.1	0.1	0.2	0.3	0.4	2.7	4.0	4.3	2.8	0.8	0.6	0.7	0.8	0.8
printing and publishing	0.1	0.1	0.2	0.3	0.4	2.7	4.0	4.3	2.8	0.8	0.6	0.7	0.8	0.8
food, drink, tobacco	0.2	0.2	0.3	0.4	0.5	-1.8	3.3	3.8	2.3	1.7	0.9	0.9	0.9	1.0
textiles and leather	0.1	0.1	0.2	0.2	0.2	4.0	3.3	1.6	-0.5	0.6	0.6	0.7	0.5	0.4
engineering	0.4	0.6	0.5	0.7	0.9	3.3	-1.7	3.3	1.8	3.1	2.7	1.8	1.7	1.6
other industries	0.2	0.3	0.4	0.6	0.8	7.1	3.1	4.1	2.6	1.1	1.4	1.5	1.5	1.6
Construction	0.9	1.3	1.8	2.6	3.2	3.2	3.5	3.7	2.2	6.5	5.6	6.1	6.1	6.0
Services	11.3	18.6	24.3	35.6	45.0	5.1	2.7	3.9	2.4	79.7	82.1	83.4	84.0	84.6
Agriculture	0.1	0.2	0.1	0.2	0.2	1.5	-2.9	3.4	1.9	1.0	0.7	0.4	0.4	0.4
Energy sector	0.2	0.2	0.3	0.5	0.5	4.2	3.3	2.9	1.3	1.2	1.1	1.2	1.1	1.0

MALTA: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	0.4	0.4	0.4	0.4	0.4	0.8	0.8	0.3	0.1					
Average household size (persons)	3.2	2.9	2.6	2.4	2.2	-0.8	-1.0	-0.9	-0.8					
Number of households (Million)	0.1	0.1	0.2	0.2	0.2	1.6	1.9	1.3	1.0					
Gross Domestic product (in 000 M€05)	**2.9**	**4.5**	**5.2**	**6.8**	**8.3**	**4.6**	**1.3**	**2.7**	**2.0**					
Households expenditure (in 000 M€05)	**1.8**	**2.9**	**3.3**	**4.4**	**5.4**	**4.7**	**1.4**	**2.9**	**2.1**					
Gross Value Added (in 000 M€05)	**2.6**	**4.0**	**4.4**	**5.8**	**7.1**	**4.5**	**1.0**	**2.7**	**2.0**					
Industry	0.6	0.9	0.8	1.0	1.2	4.9	-1.6	2.7	2.0	21.9	22.6	17.5	17.4	17.3
iron and steel	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
non ferrous metals	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
chemicals	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
pharmaceuticals and cosmetics	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
non metallic minerals	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
paper, pulp, printing	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
printing and publishing	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
food, drink, tobacco	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
textiles and leather	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
engineering	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
other industries	0.6	0.9	0.8	1.0	1.2	4.9	-1.6	2.7	2.0	21.9	22.6	17.5	17.4	17.3
Construction	0.1	0.2	0.2	0.2	0.3	2.6	0.5	2.7	2.0	4.9	4.1	3.9	3.9	3.9
Services	1.8	2.8	3.3	4.4	5.4	4.6	1.8	2.8	2.1	68.8	69.1	75.0	75.5	75.9
Agriculture	0.1	0.1	0.1	0.1	0.1	2.5	1.7	1.4	0.5	2.9	2.3	2.5	2.2	1.9
Energy sector	0.0	0.1	0.0	0.1	0.1	6.5	-4.2	2.4	1.7	1.5	1.8	1.1	1.0	1.0

Source: GEM-E3

BASELINE SCENARIO

THE NETHERLANDS: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	14.9	15.9	16.5	16.9	17.2	0.6	0.4	0.2	0.2					
Average household size (persons)	2.5	2.4	2.2	2.1	2.1	-0.6	-0.7	-0.3	-0.1					
Number of households (Million)	6.0	6.8	7.6	8.0	8.3	1.2	1.1	0.6	0.3					
Gross Domestic product (in 000 M€05)	**347.5**	**480.8**	**539.5**	**637.9**	**726.3**	**3.3**	**1.2**	**1.7**	**1.3**					
Households expenditure (in 000 M€05)	**173.0**	**239.3**	**257.4**	**313.1**	**357.6**	**3.3**	**0.7**	**2.0**	**1.3**					
Gross Value Added (in 000 M€05)	**317.2**	**425.8**	**475.5**	**565.6**	**644.0**	**3.0**	**1.1**	**1.8**	**1.3**					
Industry	53.5	61.7	62.6	69.6	75.3	1.4	0.1	1.1	0.8	16.9	14.5	13.2	12.3	11.7
iron and steel	0.3	0.3	0.3	0.4	0.4	0.4	1.1	1.2	0.6	0.1	0.1	0.1	0.1	0.1
non ferrous metals	1.0	0.9	0.9	1.0	1.1	-1.4	-0.5	1.3	0.6	0.3	0.2	0.2	0.2	0.2
chemicals	6.9	8.2	11.2	11.9	12.9	1.6	3.2	0.6	0.8	2.2	1.9	2.4	2.1	2.0
pharmaceuticals and cosmetics	0.8	1.7	1.7	1.9	2.2	8.1	-0.4	1.4	1.4	0.2	0.4	0.3	0.3	0.3
non metallic minerals	2.3	2.2	1.9	2.0	2.2	-0.9	-1.5	0.8	1.0	0.7	0.5	0.4	0.4	0.3
paper, pulp, printing	7.3	8.0	7.1	7.8	8.7	1.0	-1.2	0.9	1.1	2.3	1.9	1.5	1.4	1.3
printing and publishing	5.0	5.7	5.1	5.6	6.3	1.3	-1.1	1.0	1.1	1.6	1.3	1.1	1.0	1.0
food, drink, tobacco	9.8	11.5	12.2	13.4	14.4	1.5	0.6	0.9	0.7	3.1	2.7	2.6	2.4	2.2
textiles and leather	1.5	1.4	1.1	1.0	0.9	-0.9	-2.3	-0.6	-1.0	0.5	0.3	0.2	0.2	0.1
engineering	17.3	21.0	19.1	22.6	24.8	2.0	-0.9	1.7	0.9	5.4	4.9	4.0	4.0	3.9
other industries	7.0	8.4	8.8	9.5	10.0	1.7	0.5	0.7	0.5	2.2	2.0	1.9	1.7	1.6
Construction	24.7	26.4	23.3	27.8	31.7	0.7	-1.3	1.8	1.3	7.8	6.2	4.9	4.9	4.9
Services	215.1	310.2	356.9	434.3	501.7	3.7	1.4	2.0	1.5	67.8	72.8	75.1	76.8	77.9
Agriculture	7.5	9.3	9.4	9.4	9.8	2.2	0.1	0.0	0.4	2.4	2.2	2.0	1.7	1.5
Energy sector	16.4	18.2	23.2	24.5	25.4	1.0	2.5	0.5	0.4	5.2	4.3	4.9	4.3	4.0

POLAND: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	38.0	38.7	38.1	38.0	37.0	0.2	-0.1	0.0	-0.3					
Average household size (persons)	3.1	2.8	2.6	2.5	2.4	-1.0	-0.9	-0.3	-0.3					
Number of households (Million)	12.2	13.8	14.8	15.2	15.3	1.2	0.7	0.3	0.0					
Gross Domestic product (in 000 M€05)	**144.7**	**210.0**	**298.1**	**406.1**	**515.8**	**3.8**	**3.6**	**3.1**	**2.4**					
Households expenditure (in 000 M€05)	**76.3**	**134.3**	**181.2**	**249.4**	**322.6**	**5.8**	**3.0**	**3.2**	**2.6**					
Gross Value Added (in 000 M€05)	**130.9**	**186.4**	**258.6**	**359.4**	**456.5**	**3.6**	**3.3**	**3.3**	**2.4**					
Industry	20.7	31.1	51.2	69.3	79.4	4.1	5.1	3.1	1.4	15.8	16.7	19.8	19.3	17.4
iron and steel	1.5	1.2	1.5	1.5	1.5	-2.1	2.5	0.0	-0.3	1.1	0.6	0.6	0.4	0.3
non ferrous metals	0.2	0.3	0.4	0.4	0.4	4.5	5.5	-0.5	-0.8	0.1	0.1	0.2	0.1	0.1
chemicals	1.9	2.6	3.7	5.0	6.5	3.0	3.7	3.2	2.6	1.5	1.4	1.4	1.4	1.4
pharmaceuticals and cosmetics	0.5	1.2	1.7	2.6	3.7	9.1	3.5	4.2	3.5	0.4	0.7	0.7	0.7	0.8
non metallic minerals	1.1	2.2	2.9	3.9	4.5	6.7	2.9	2.9	1.6	0.9	1.2	1.1	1.1	1.0
paper, pulp, printing	0.9	2.3	3.7	4.8	5.5	10.2	5.0	2.5	1.3	0.7	1.2	1.4	1.3	1.2
printing and publishing	0.4	1.6	2.2	2.9	3.4	14.7	3.1	2.8	1.6	0.3	0.9	0.9	0.8	0.8
food, drink, tobacco	3.8	7.2	9.5	13.1	15.4	6.6	2.8	3.3	1.6	2.9	3.9	3.7	3.6	3.4
textiles and leather	1.7	2.2	1.8	2.0	1.8	2.4	-2.2	1.1	-0.8	1.3	1.2	0.7	0.5	0.4
engineering	7.9	9.1	16.8	24.4	27.9	1.5	6.3	3.8	1.3	6.0	4.9	6.5	6.8	6.1
other industries	1.7	4.1	10.8	14.2	15.9	9.0	10.3	2.7	1.1	1.3	2.2	4.2	4.0	3.5
Construction	10.4	14.7	15.8	22.6	27.8	3.5	0.7	3.6	2.1	7.9	7.9	6.1	6.3	6.1
Services	83.8	121.6	167.2	239.9	318.9	3.8	3.2	3.7	2.9	64.0	65.2	64.6	66.8	69.9
Agriculture	7.7	8.5	11.3	13.6	16.0	0.9	2.9	1.9	1.6	5.9	4.5	4.4	3.8	3.5
Energy sector	8.3	10.6	13.2	14.0	14.4	2.5	2.2	0.6	0.3	6.3	5.7	5.1	3.9	3.2

PORTUGAL: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	10.0	10.2	10.7	11.1	11.3	0.2	0.5	0.4	0.2					
Average household size (persons)	3.0	2.8	2.6	2.5	2.3	-0.9	-0.6	-0.6	-0.5					
Number of households (Million)	3.3	3.7	4.1	4.5	4.9	1.1	1.1	1.0	0.7					
Gross Domestic product (in 000 M€05)	**102.0**	**142.8**	**147.9**	**179.6**	**221.5**	**3.4**	**0.4**	**2.0**	**2.1**					
Households expenditure (in 000 M€05)	**60.4**	**90.1**	**94.1**	**116.0**	**140.0**	**4.1**	**0.4**	**2.1**	**1.9**					
Gross Value Added (in 000 M€05)	**91.2**	**121.9**	**128.5**	**158.7**	**199.1**	**2.9**	**0.5**	**2.1**	**2.3**					
Industry	18.0	19.5	17.6	19.9	24.1	0.8	-1.0	1.2	1.9	19.7	16.0	13.7	12.6	12.1
iron and steel	0.5	0.4	0.4	0.4	0.4	-1.8	-0.9	0.8	1.1	0.5	0.3	0.3	0.3	0.2
non ferrous metals	0.1	0.2	0.1	0.1	0.2	4.6	-2.5	1.0	1.3	0.1	0.1	0.1	0.1	0.1
chemicals	1.2	1.1	1.0	1.2	1.6	-1.0	-1.0	2.1	2.7	1.3	0.9	0.8	0.8	0.8
pharmaceuticals and cosmetics	0.5	0.4	0.3	0.4	0.7	-3.4	-2.1	3.8	4.1	0.6	0.3	0.2	0.3	0.3
non metallic minerals	0.9	1.7	1.4	1.5	1.7	6.6	-2.1	0.5	1.3	1.0	1.4	1.1	0.9	0.8
paper, pulp, printing	1.7	1.8	1.5	1.7	2.2	0.9	-2.0	1.5	2.3	1.8	1.5	1.2	1.1	1.1
printing and publishing	0.9	0.9	0.8	1.0	1.4	0.9	-1.8	2.5	3.1	0.9	0.8	0.6	0.6	0.7
food, drink, tobacco	4.1	2.9	3.0	3.4	4.2	-3.5	0.3	1.3	2.1	4.5	2.4	2.3	2.1	2.1
textiles and leather	4.9	4.0	3.0	2.8	2.8	-2.0	-2.9	-0.6	-0.1	5.3	3.3	2.3	1.8	1.4
engineering	2.2	4.4	4.4	5.3	6.7	7.3	-0.2	1.9	2.3	2.4	3.6	3.4	3.3	3.3
other industries	2.4	2.9	2.9	3.5	4.4	2.1	-0.1	1.7	2.5	2.6	2.4	2.3	2.2	2.2
Construction	7.7	10.1	7.4	9.3	11.2	2.7	-3.1	2.4	1.9	8.5	8.3	5.7	5.9	5.6
Services	60.4	85.5	96.6	122.2	155.8	3.5	1.2	2.4	2.5	66.2	70.2	75.2	77.0	78.3
Agriculture	3.3	3.7	3.4	3.6	4.1	1.2	-1.1	0.8	1.2	3.6	3.1	2.6	2.3	2.1
Energy sector	1.8	3.0	3.5	3.6	3.8	5.2	1.5	0.3	0.5	2.0	2.5	2.7	2.3	1.9

Source: GEM-E3

BASELINE SCENARIO

ROMANIA: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	23.2	22.5	21.3	20.8	20.0	-0.3	-0.5	-0.2	-0.4					
Average household size (persons)	3.3	2.9	2.7	2.6	2.5	-1.3	-0.6	-0.3	-0.3					
Number of households (Million)	7.1	7.9	7.9	8.0	7.9	1.0	0.1	0.1	-0.1					
Gross Domestic product (in 000 M€05)	**71.6**	**60.4**	**93.8**	**135.0**	**166.1**	**-1.7**	**4.5**	**3.7**	**2.1**					
Households expenditure (in 000 M€05)	**37.0**	**34.6**	**66.4**	**92.5**	**109.2**	**-0.7**	**6.7**	**3.4**	**1.7**					
Gross Value Added (in 000 M€05)	**60.4**	**53.7**	**87.7**	**131.2**	**169.1**	**-1.2**	**5.0**	**4.1**	**2.6**					
Industry	16.7	12.1	17.0	25.0	31.8	-3.2	3.5	3.9	2.4	27.7	22.5	19.3	19.0	18.8
iron and steel	1.1	0.4	0.3	0.4	0.4	-8.7	-2.5	1.9	0.2	1.8	0.8	0.4	0.3	0.2
non ferrous metals	0.0	0.1	0.1	0.2	0.2	19.0	1.4	1.3	-0.4	0.0	0.2	0.2	0.1	0.1
chemicals	1.0	0.6	0.7	1.0	1.3	-4.3	1.2	3.0	2.9	1.6	1.2	0.8	0.7	0.8
pharmaceuticals and cosmetics	0.3	0.2	0.3	0.5	0.8	-4.4	4.2	5.7	5.0	0.5	0.4	0.3	0.4	0.5
non metallic minerals	1.2	0.6	0.8	1.0	1.2	-6.6	3.1	2.2	1.4	2.0	1.1	0.9	0.8	0.7
paper, pulp, printing	0.4	0.4	0.8	1.1	1.5	0.1	6.6	3.4	2.6	0.7	0.8	0.9	0.9	0.9
printing and publishing	0.1	0.3	0.6	0.9	1.2	8.6	9.0	3.9	3.0	0.2	0.5	0.7	0.7	0.7
food, drink, tobacco	3.0	3.4	5.7	8.7	10.9	1.3	5.4	4.2	2.2	4.9	6.3	6.5	6.6	6.4
textiles and leather	1.5	1.4	1.2	1.2	1.3	-0.2	-2.0	0.5	0.3	2.4	2.7	1.3	0.9	0.8
engineering	6.7	3.3	4.7	7.7	10.3	-6.7	3.6	5.0	3.0	11.1	6.2	5.4	5.9	6.1
other industries	1.9	1.7	2.5	3.7	4.8	-1.2	3.9	3.9	2.8	3.2	3.2	2.8	2.8	2.9
Construction	3.2	3.3	9.2	13.7	14.8	0.3	10.9	4.0	0.8	5.3	6.1	10.5	10.4	8.8
Services	29.2	29.4	51.0	78.6	106.3	0.1	5.7	4.4	3.1	48.3	54.7	58.1	59.9	62.9
Agriculture	8.1	5.4	6.8	9.0	10.3	-4.0	2.3	2.9	1.4	13.5	10.0	7.7	6.8	6.1
Energy sector	3.2	3.6	3.8	5.0	5.9	1.3	0.6	2.7	1.6	5.2	6.7	4.3	3.8	3.5

SLOVAKIA: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	5.3	5.4	5.4	5.4	5.3	0.2	0.0	0.0	-0.2					
Average household size (persons)	2.5	2.2	2.0	2.0	2.0	-1.3	-0.6	-0.2	-0.2					
Number of households (Million)	2.1	2.5	2.6	2.7	2.7	1.6	0.6	0.2	0.0					
Gross Domestic product (in 000 M€05)	**26.2**	**30.3**	**48.2**	**73.3**	**91.9**	**1.5**	**4.8**	**4.3**	**2.3**					
Households expenditure (in 000 M€05)	**17.2**	**17.5**	**24.4**	**36.1**	**45.1**	**0.1**	**3.4**	**4.0**	**2.3**					
Gross Value Added (in 000 M€05)	**27.7**	**27.2**	**41.0**	**64.9**	**81.4**	**-0.1**	**4.2**	**4.7**	**2.3**					
Industry	4.0	4.6	9.8	15.8	17.9	1.4	7.9	4.8	1.3	14.5	16.8	23.9	24.3	22.0
iron and steel	0.3	0.6	0.2	0.3	0.3	5.7	-9.0	1.7	0.2	1.2	2.0	0.5	0.4	0.3
non ferrous metals	0.0	0.2	0.4	0.5	0.5	21.0	8.9	2.1	0.6	0.1	0.6	1.0	0.7	0.6
chemicals	0.4	0.3	0.4	0.6	0.8	-3.2	1.3	4.8	2.6	1.6	1.2	0.9	0.9	0.9
pharmaceuticals and cosmetics	0.1	0.1	0.1	0.3	0.4	0.1	2.1	6.3	3.9	0.4	0.4	0.3	0.4	0.5
non metallic minerals	0.3	0.3	0.5	0.7	0.9	1.3	3.9	4.2	1.5	1.0	1.2	1.2	1.1	1.0
paper, pulp, printing	0.3	0.4	0.6	0.9	1.1	1.6	4.9	4.6	1.9	1.1	1.3	1.4	1.4	1.3
printing and publishing	0.1	0.1	0.2	0.4	0.5	3.5	7.1	5.2	2.4	0.3	0.4	0.6	0.6	0.6
food, drink, tobacco	0.9	0.7	0.8	1.2	1.3	-3.5	2.2	3.8	1.0	3.4	2.4	2.0	1.8	1.6
textiles and leather	0.3	0.3	0.4	0.4	0.4	0.6	1.6	0.0	-0.1	1.2	1.3	1.0	0.6	0.5
engineering	0.9	1.4	4.8	8.4	9.5	4.2	13.3	5.8	1.2	3.3	5.1	11.8	13.0	11.7
other industries	0.4	0.5	1.7	2.8	3.2	0.6	14.4	4.8	1.4	1.5	1.7	4.2	4.3	3.9
Construction	1.7	2.0	2.8	4.5	5.1	1.7	3.3	5.0	1.3	6.1	7.3	6.7	6.9	6.3
Services	13.9	16.9	24.5	40.1	54.0	2.0	3.8	5.1	3.0	50.2	62.0	59.7	61.8	66.4
Agriculture	1.7	0.9	1.5	2.1	2.1	-6.1	5.2	3.1	0.4	6.2	3.4	3.7	3.2	2.6
Energy sector	6.4	2.9	2.4	2.5	2.3	-7.7	-1.6	0.2	-1.0	23.0	10.5	5.9	3.8	2.8

SLOVENIA: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	2.0	2.0	2.0	2.1	2.0	0.0	0.2	0.1	-0.2					
Average household size (persons)	3.3	2.9	2.7	2.6	2.6	-1.4	-0.5	-0.4	-0.3					
Number of households (Million)	0.6	0.7	0.7	0.8	0.8	1.4	0.7	0.5	0.2					
Gross Domestic product (in 000 M€05)	**20.0**	**24.0**	**32.7**	**44.0**	**50.7**	**1.9**	**3.1**	**3.0**	**1.4**					
Households expenditure (in 000 M€05)	**10.5**	**13.6**	**17.2**	**23.0**	**27.3**	**2.7**	**2.3**	**3.0**	**1.7**					
Gross Value Added (in 000 M€05)	**17.3**	**20.8**	**28.3**	**38.3**	**44.2**	**1.8**	**3.1**	**3.1**	**1.4**					
Industry	4.5	4.8	6.9	9.1	9.6	0.6	3.7	2.8	0.6	26.1	23.0	24.3	23.6	21.8
iron and steel	0.1	0.1	0.2	0.3	0.3	1.0	5.4	3.0	0.6	0.7	0.7	0.8	0.8	0.8
non ferrous metals	0.2	0.1	0.1	0.2	0.2	-4.2	3.7	3.4	1.0	0.9	0.5	0.5	0.5	0.5
chemicals	0.1	0.6	0.9	1.3	1.4	14.6	4.7	3.2	0.8	0.9	2.8	3.2	3.3	3.1
pharmaceuticals and cosmetics	0.1	0.3	0.6	0.8	0.9	18.3	6.1	3.5	1.2	0.3	1.5	2.0	2.1	2.1
non metallic minerals	0.3	0.2	0.3	0.4	0.4	-1.0	2.1	2.7	0.4	1.5	1.1	1.0	1.0	0.9
paper, pulp, printing	0.4	0.3	0.5	0.6	0.7	-1.3	3.5	3.2	1.0	2.2	1.6	1.7	1.7	1.6
printing and publishing	0.1	0.2	0.3	0.4	0.4	1.1	5.6	3.7	1.4	0.8	0.7	0.9	1.0	1.0
food, drink, tobacco	0.7	0.6	0.5	0.7	0.8	-2.3	-0.6	3.1	1.1	4.0	2.7	1.9	1.9	1.8
textiles and leather	0.6	0.5	0.3	0.4	0.3	-2.2	-2.8	0.9	-1.2	3.3	2.2	1.2	1.0	0.8
engineering	1.5	1.6	2.9	3.8	4.0	0.6	5.7	2.9	0.6	8.9	7.9	10.1	9.9	9.1
other industries	0.6	0.7	1.1	1.4	1.5	1.5	4.0	2.4	0.5	3.7	3.5	3.8	3.6	3.3
Construction	1.4	1.5	1.9	2.8	3.5	0.9	2.5	4.1	2.1	7.9	7.2	6.7	7.4	7.9
Services	9.8	13.1	18.0	24.6	29.1	3.0	3.2	3.2	1.7	56.6	63.1	63.6	64.2	66.0
Agriculture	0.7	0.7	0.7	0.8	0.9	-0.4	0.0	2.1	0.6	4.1	3.2	2.4	2.2	2.0
Energy sector	0.9	0.7	0.9	1.0	1.0	-2.5	1.8	1.2	0.1	5.4	3.5	3.1	2.6	2.2

Source: GEM-E3

BASELINE SCENARIO

SPAIN: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	38.8	40.0	46.7	51.1	52.7	0.3	1.5	0.9	0.3					
Average household size (persons)	3.2	2.9	2.7	2.5	2.4	-1.0	-0.6	-0.6	-0.5					
Number of households (Million)	12.2	14.0	17.3	20.2	21.9	1.3	2.1	1.6	0.8					
Gross Domestic product (in 000 M€05)	**574.9**	**773.9**	**949.4**	**1285.2**	**1635.8**	**3.0**	**2.1**	**3.1**	**2.4**					
Households expenditure (in 000 M€05)	**332.4**	**441.8**	**538.5**	**701.4**	**841.0**	**2.9**	**2.0**	**2.7**	**1.8**					
Gross Value Added (in 000 M€05)	**542.3**	**698.9**	**844.5**	**1156.2**	**1471.5**	**2.6**	**1.9**	**3.2**	**2.4**					
Industry	95.7	120.2	129.9	181.6	240.0	2.3	0.8	3.4	2.8	17.7	17.2	15.4	15.7	16.3
iron and steel	6.2	5.3	5.3	6.9	8.7	-1.4	0.0	2.6	2.3	1.1	0.8	0.6	0.6	0.6
non ferrous metals	1.5	2.6	2.5	3.3	4.2	5.6	-0.5	2.8	2.4	0.3	0.4	0.3	0.3	0.3
chemicals	8.3	11.2	13.5	20.1	27.7	3.1	1.9	4.0	3.3	1.5	1.6	1.6	1.7	1.9
pharmaceuticals and cosmetics	3.4	4.5	6.8	10.7	15.5	2.7	4.3	4.6	3.8	0.6	0.6	0.8	0.9	1.1
non metallic minerals	7.2	9.0	10.1	13.5	17.3	2.2	1.2	2.9	2.5	1.3	1.3	1.2	1.2	1.2
paper, pulp, printing	6.6	10.4	12.3	17.0	22.6	4.7	1.7	3.3	2.9	1.2	1.5	1.5	1.5	1.5
printing and publishing	4.3	6.2	8.6	12.3	16.8	3.8	3.3	3.6	3.2	0.8	0.9	1.0	1.1	1.1
food, drink, tobacco	13.3	16.9	18.6	25.7	34.5	2.4	1.0	3.3	3.0	2.5	2.4	2.2	2.2	2.3
textiles and leather	6.3	8.1	5.7	6.2	6.3	2.6	-3.5	0.9	0.1	1.2	1.2	0.7	0.5	0.4
engineering	33.6	41.2	44.0	64.3	85.9	2.1	0.7	3.9	2.9	6.2	5.9	5.2	5.6	5.8
other industries	12.8	15.5	17.8	24.5	32.8	1.9	1.4	3.2	3.0	2.4	2.2	2.1	2.1	2.2
Construction	56.4	70.6	93.3	129.8	164.2	2.3	2.8	3.4	2.4	10.4	10.1	11.0	11.2	11.2
Services	353.0	460.6	576.8	792.8	1004.7	2.7	2.3	3.2	2.4	65.1	65.9	68.3	68.6	68.3
Agriculture	25.1	29.6	23.4	25.9	31.5	1.6	-2.3	1.0	2.0	4.6	4.2	2.8	2.2	2.1
Energy sector	12.1	17.8	21.2	26.1	31.1	3.9	1.7	2.1	1.8	2.2	2.6	2.5	2.3	2.1

SWEDEN: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	8.5	8.9	9.3	9.9	10.3	0.4	0.5	0.6	0.4					
Average household size (persons)	2.2	2.1	2.1	2.0	2.0	-0.4	-0.4	-0.2	-0.2					
Number of households (Million)	3.8	4.1	4.5	4.9	5.2	0.8	0.8	0.8	0.6					
Gross Domestic product (in 000 M€05)	**210.0**	**259.7**	**304.3**	**380.3**	**456.7**	**2.2**	**1.6**	**2.3**	**1.8**					
Households expenditure (in 000 M€05)	**109.1**	**129.3**	**136.7**	**173.9**	**204.4**	**1.7**	**0.6**	**2.4**	**1.6**					
Gross Value Added (in 000 M€05)	**186.4**	**226.9**	**261.6**	**330.1**	**396.5**	**2.0**	**1.4**	**2.4**	**1.8**					
Industry	22.9	40.8	51.9	66.5	79.6	6.0	2.4	2.5	1.8	12.3	18.0	19.9	20.2	20.1
iron and steel	1.7	2.3	2.3	3.0	3.2	3.6	-0.3	2.7	0.9	0.9	1.0	0.9	0.9	0.8
non ferrous metals	0.6	0.8	0.9	1.2	1.3	2.8	1.8	2.4	0.6	0.3	0.3	0.4	0.4	0.3
chemicals	1.9	4.7	6.8	8.4	10.3	9.3	3.6	2.2	2.0	1.0	2.1	2.6	2.6	2.6
pharmaceuticals and cosmetics	0.7	2.5	4.1	5.6	7.3	14.0	5.2	3.0	2.8	0.4	1.1	1.6	1.7	1.8
non metallic minerals	0.9	0.9	1.0	1.0	1.2	0.3	0.5	0.6	1.3	0.5	0.4	0.4	0.3	0.3
paper, pulp, printing	5.2	6.2	5.6	6.3	7.6	1.8	-1.0	1.2	1.9	2.8	2.7	2.2	1.9	1.9
printing and publishing	2.6	2.3	2.2	2.6	3.3	-1.2	-0.5	1.8	2.4	1.4	1.0	0.8	0.8	0.8
food, drink, tobacco	2.9	3.7	3.8	4.3	5.1	2.4	0.3	1.3	1.7	1.6	1.6	1.5	1.3	1.3
textiles and leather	0.8	0.6	0.4	0.4	0.4	-2.8	-3.6	-0.6	-0.6	0.4	0.3	0.2	0.1	0.1
engineering	6.3	16.1	24.9	34.8	42.3	9.8	4.4	3.4	2.0	3.4	7.1	9.5	10.6	10.7
other industries	2.5	5.3	6.2	7.0	8.2	7.8	1.5	1.2	1.6	1.3	2.4	2.4	2.1	2.1
Construction	12.5	10.6	11.1	14.1	16.5	-1.6	0.4	2.5	1.6	6.7	4.7	4.2	4.3	4.2
Services	138.0	165.2	188.6	238.9	288.8	1.8	1.3	2.4	1.9	74.1	72.8	72.1	72.4	72.9
Agriculture	2.8	2.6	2.6	2.7	3.0	-0.7	0.1	0.5	1.0	1.5	1.1	1.0	0.8	0.8
Energy sector	10.2	7.7	7.3	7.9	8.4	-2.8	-0.5	0.7	0.7	5.5	3.4	2.8	2.4	2.1

UNITED KINGDOM: Key Demographic and Economic Assumptions

	1990	2000	2010	2020	2030	'90-'00	'00-'10	'10-'20	'20-'30	1990	2000	2010	2020	2030
						Annual % Change				% Structure of total value added				
Main Demographic Assumptions														
Population (Million)	57.2	58.8	62.0	65.7	69.2	0.3	0.5	0.6	0.5					
Average household size (persons)	2.6	2.4	2.3	2.2	2.1	-0.7	-0.4	-0.4	-0.3					
Number of households (Million)	22.3	24.5	27.0	29.9	32.5	0.9	1.0	1.0	0.8					
Gross Domestic product (in 000 M€05)	**1263.3**	**1623.9**	**1882.4**	**2373.0**	**2903.1**	**2.5**	**1.5**	**2.3**	**2.0**					
Households expenditure (in 000 M€05)	**777.3**	**1028.4**	**1154.0**	**1505.6**	**1813.9**	**2.8**	**1.2**	**2.7**	**1.9**					
Gross Value Added (in 000 M€05)	**1127.0**	**1450.0**	**1660.5**	**2109.8**	**2581.1**	**2.6**	**1.4**	**2.4**	**2.0**					
Industry	214.7	233.3	202.0	234.1	274.3	0.8	-1.4	1.5	1.6	19.0	16.1	12.2	11.1	10.6
iron and steel	6.5	5.3	4.6	4.9	5.4	-2.2	-1.4	0.7	1.1	0.6	0.4	0.3	0.2	0.2
non ferrous metals	5.0	3.6	2.5	2.7	3.0	-3.3	-3.8	0.8	1.2	0.4	0.2	0.1	0.1	0.1
chemicals	16.5	23.4	25.2	31.5	37.7	3.6	0.8	2.3	1.8	1.5	1.6	1.5	1.5	1.5
pharmaceuticals and cosmetics	6.9	9.4	12.7	15.5	18.0	3.1	3.0	2.0	1.6	0.6	0.6	0.8	0.7	0.7
non metallic minerals	9.0	8.3	7.9	9.4	11.0	-0.9	-0.4	1.7	1.6	0.8	0.6	0.5	0.4	0.4
paper, pulp, printing	30.2	32.3	27.0	31.3	35.8	0.7	-1.8	1.5	1.4	2.7	2.2	1.6	1.5	1.4
printing and publishing	20.7	24.1	20.9	24.6	28.5	1.5	-1.4	1.6	1.5	1.8	1.7	1.3	1.2	1.1
food, drink, tobacco	31.2	32.9	32.6	36.7	43.3	0.5	-0.1	1.2	1.7	2.8	2.3	2.0	1.7	1.7
textiles and leather	12.1	8.7	4.4	3.9	3.5	-3.2	-6.7	-1.0	-1.2	1.1	0.6	0.3	0.2	0.1
engineering	73.5	86.8	71.6	83.9	99.0	1.7	-1.9	1.6	1.7	6.5	6.0	4.3	4.0	3.8
other industries	30.6	32.0	26.3	29.9	35.7	0.4	-1.9	1.3	1.8	2.7	2.2	1.6	1.4	1.4
Construction	88.7	86.1	89.0	120.2	146.0	-0.3	0.3	3.1	2.0	7.9	5.9	5.4	5.7	5.7
Services	754.9	1021.5	1290.7	1676.3	2078.2	3.1	2.4	2.6	2.2	67.0	70.5	77.7	79.5	80.5
Agriculture	15.1	15.7	13.9	14.9	16.3	0.4	-1.2	0.7	0.9	1.3	1.1	0.8	0.7	0.6
Energy sector	53.6	93.4	64.9	64.3	66.3	5.7	-3.6	-0.1	0.3	4.8	6.4	3.9	3.0	2.6

Source: GEM-E3

APPENDIX 2A: SUMMARY ENERGY BALANCES AND INDICATORS (BASELINE 2009 SCENARIO)

EU27: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**936047**	**950181**	**941860**	**900326**	**821985**	**773570**	**741237**	**740892**	**761416**	**0.1**	**-1.4**	**-1.0**	**0.3**
Solids	366477	277810	213423	196277	167556	155202	142314	135565	130849	-5.3	-2.4	-1.6	-0.8
Oil	129551	171052	173006	134290	102864	74348	49906	40875	37276	2.9	-5.1	-7.0	-2.9
Natural gas	162447	188965	207559	188677	164144	129067	111437	91972	75504	2.5	-2.3	-3.8	-3.8
Nuclear	202589	223028	243761	257360	238990	241310	237685	247463	268042	1.9	-0.2	-0.1	1.2
Renewable energy sources	74984	89326	104111	123722	148430	173644	199895	225016	249745	3.3	3.6	3.0	2.3
Hydro	25101	28054	30374	26395	27808	28531	29145	30041	30533	1.9	-0.9	0.5	0.5
Biomass & Waste	46473	57201	67982	85129	97599	109508	120092	128067	132313	3.9	3.7	2.1	1.0
Wind	67	350	1913	6061	13862	23145	34332	44744	55375	39.8	21.9	9.5	4.9
Solar and others	153	274	421	807	3259	6238	9054	11542	13804	10.7	22.7	10.8	4.3
Geothermal	3190	3447	3421	5331	5903	6222	7271	10622	17719	0.7	5.6	2.1	9.3
Net Imports	**756079**	**738600**	**826299**	**986048**	**992533**	**1083628**	**1133555**	**1130508**	**1100891**	**0.9**	**1.8**	**1.3**	**-0.3**
Solids	81846	79338	98645	126639	117225	133831	144964	139939	129086	1.9	1.7	2.1	-1.2
Oil	535645	512185	533039	599851	578981	616263	629909	619167	596780	0.0	0.8	0.8	-0.5
- Crude oil and Feedstocks	508460	494000	513725	581995	577908	617339	635745	628717	611939	0.1	1.2	1.0	-0.4
- Oil products	27185	18185	19314	17856	1073	-1076	-5836	-9550	-15159	-3.4	-25.1		
Natural gas	135121	145288	192531	257366	292834	328261	351250	361451	363741	3.6	4.3	1.8	0.4
Electricity	3323	1508	1686	971	99	-613	-1684	-1781	-1867	-6.6	-24.7		
Gross Inland Consumption	**1660159**	**1662517**	**1723099**	**1825989**	**1764466**	**1805307**	**1822157**	**1817670**	**1807226**	**0.4**	**0.2**	**0.3**	**-0.1**
Solids	452940	364248	321007	319922	284781	289033	287278	275504	259935	-3.4	-1.2	0.1	-1.0
Oil	631058	650858	658727	676859	631793	638720	627180	606313	578976	0.4	-0.4	-0.1	-0.8
Natural gas	294905	333268	393417	445998	456978	457327	462688	453423	439245	2.9	1.5	0.1	-0.5
Nuclear	202589	223028	243761	257360	238990	241310	237685	247463	268042	1.9	-0.2	-0.1	1.2
Electricity	3323	1508	1686	971	99	-613	-1684	-1781	-1867	-6.6	-24.7		
Renewable energy forms	75343	89606	104501	124880	151825	179530	209011	236749	262896	3.3	3.8	3.2	2.3
as % in Gross Inland Consumption													
Solids	27.3	21.9	18.6	17.5	16.1	16.0	15.8	15.2	14.4				
Oil	38.0	39.1	38.2	37.1	35.8	35.4	34.4	33.4	32.0				
Natural gas	17.8	20.0	22.8	24.4	25.9	25.3	25.4	24.9	24.3				
Nuclear	12.2	13.4	14.1	14.1	13.5	13.4	13.0	13.6	14.8				
Renewable energy forms	4.5	5.4	6.1	6.8	8.6	9.9	11.5	13.0	14.5				
Gross Electricity Generation in GWh_e	**2562823**	**2712209**	**2991720**	**3274121**	**3311797**	**3553832**	**3795425**	**4012917**	**4191941**	**1.6**	**1.0**	**1.4**	**1.0**
Self consumption and grid losses	358053	383048	408040	429777	397688	423813	459082	508456	559012	1.3	-0.3	1.4	2.0
Fuel Inputs for Thermal Power Generation	**383492**	**362334**	**382613**	**424208**	**412202**	**424846**	**438317**	**436371**	**421050**	**0.0**	**0.7**	**0.6**	**-0.4**
Solids	263837	230040	223012	229245	215200	220489	217961	207758	195041	-1.7	-0.4	0.1	-1.1
Oil (including refinery gas)	54404	51463	39294	29780	14439	15668	15338	14881	11627	-3.2	-9.5	0.6	-2.7
Gas	56754	67806	102408	134637	143087	142250	151161	149621	137481	6.1	3.4	0.6	-0.9
Biomass & Waste	5724	10033	14960	25901	34378	41212	47833	54980	60675	10.1	8.7	3.4	2.4
Geothermal heat	2774	2992	2939	4645	5098	5227	6024	9131	16226	0.6	5.7	1.7	10.4
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**839073**	**814654**	**827098**	**842975**	**792479**	**806731**	**803472**	**785038**	**761688**	**-0.1**	**-0.4**	**0.1**	**-0.5**
Refineries	679426	705954	735244	758152	715356	727057	719440	701980	680140	0.8	-0.3	0.1	-0.6
Biofuels and hydrogen production	2	202	610	3129	11802	17450	22015	24357	25886	79.6	34.5	6.4	1.6
District heating	32960	23240	19323	16212	17469	16126	16308	15050	14118	-5.2	-1.0	-0.7	-1.4
Others	126685	85258	71921	65482	47853	46097	45710	43651	41543	-5.5	-4.0	-0.5	-1.0
Energy Branch Consumption	**82379**	**88696**	**88176**	**96033**	**92143**	**90907**	**90850**	**90911**	**90395**	**0.7**	**0.4**	**-0.1**	**-0.1**
Non-Energy Uses	**97931**	**110541**	**112495**	**117477**	**111394**	**114997**	**117035**	**117712**	**118706**	**1.4**	**-0.1**	**0.5**	**0.1**
Final Energy Demand	**1068710**	**1069989**	**1112989**	**1173676**	**1168588**	**1210934**	**1229094**	**1226560**	**1216372**	**0.4**	**0.5**	**0.5**	**-0.1**
by sector													
Industry	365650	328513	326949	326308	312835	322764	332858	338776	344251	-1.1	-0.4	0.6	0.3
- energy intensive industries	234722	214526	213112	210991	193474	196112	199186	198981	199197	-1.0	-1.0	0.3	0.0
- other industrial sectors	130928	113987	113837	115317	119361	126652	133672	139796	145053	-1.4	0.5	1.1	0.8
Residential	264307	280418	286784	308104	309162	317167	316393	312180	308327	0.8	0.8	0.2	-0.3
Tertiary	158484	160442	159866	176859	176247	182813	184951	185570	184652	0.1	1.0	0.5	0.0
Transport	280269	300617	339389	362405	370345	388190	394892	390035	379143	1.9	0.9	0.6	-0.4
by fuel													
Solids	125031	84977	61454	54486	43786	43604	44549	43790	41747	-6.9	-3.3	0.2	-0.6
Oil	444429	456959	478880	495857	475706	482351	474707	459585	440902	0.7	-0.1	0.0	-0.7
Gas	227902	245996	265552	283524	284203	285314	279405	269861	264868	1.5	0.7	-0.2	-0.5
Electricity	184145	193367	216403	237537	241167	260056	276708	291201	302437	1.6	1.1	1.4	0.9
Heat (from CHP and District Heating) [A]	48610	44616	40061	44441	59596	66270	71982	75208	77637	-1.9	4.1	1.9	0.8
Renewable energy forms	38592	44073	50639	57830	64103	73290	81679	86850	88719	2.8	2.4	2.5	0.8
Other	0	0	0	0	27	48	64	65	64			9.2	-0.1
RES in Gross Final Energy Consumption [B]			**87370**	**104626**	**131767**	**159658**	**187413**	**212017**	**231888**		**4.2**	**3.6**	**2.2**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**5532.3**		**5063.6**	**5129.6**	**4823.4**	**4833.1**	**4764.0**	**4563.1**	**4225.4**	**-0.9**	**-0.5**	**-0.1**	**-1.2**
of which ETS sectors GHGs emissions				2438.2	2166.5	2176.8	2168.5	2038.9	1780.5			0.0	-2.0
CO_2 Emissions (energy related)	**4030.6**	**3800.1**	**3810.6**	**3946.6**	**3728.4**	**3759.1**	**3692.0**	**3486.2**	**3151.8**	**-0.6**	**-0.2**	**-0.1**	**-1.6**
Power generation/District heating	1484.3	1321.2	1320.8	1381.1	1292.7	1311.8	1285.1	1159.9	911.3	-1.2	-0.2	-0.1	-3.4
Energy Branch	152.2	171.0	170.2	181.6	158.2	148.5	141.5	132.7	123.4	1.1	-0.7	-1.1	-1.4
Industry	781.4	678.1	623.0	581.9	492.4	488.0	488.2	475.9	468.0	-2.2	-2.3	-0.1	-0.4
Residential	499.4	481.6	466.2	486.7	481.0	476.7	450.9	425.6	406.1	-0.7	0.3	-0.6	-1.0
Tertiary	300.5	275.3	242.0	262.2	253.4	246.8	233.5	221.8	212.2	-2.1	0.5	-0.8	-1.0
Transport	812.7	872.9	988.5	1053.1	1050.6	1087.2	1092.8	1070.4	1030.8	2.0	0.6	0.4	-0.6
CO_2 Emissions (non energy related)	**329.5**	**306.8**	**299.3**	**304.5**	**279.6**	**291.1**	**306.0**	**314.6**	**318.2**	**-1.0**	**-0.7**	**0.9**	**0.4**
Non-CO_2 GHGs Emissions	**1172.1**		**953.7**	**878.5**	**815.4**	**782.9**	**766.1**	**762.2**	**755.4**	**-2.0**	**-1.6**	**-0.6**	**-0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**91.5**	**92.7**	**87.2**	**87.4**	**86.1**	**82.5**	**76.4**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													EU27: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	470.388	477.010	481.072	489.211	499.389	507.727	513.838	517.811	519.942	0.2	0.4	0.3	0.1
GDP (in 000 MEuro'05)	8142.7	8748.4	10107.2	11063.1	11385.6	12750.3	14164.0	15503.7	16824.7	2.2	1.2	2.2	1.7
Gross Inl. Cons./GDP (toe/MEuro'05)	203.9	190.0	170.5	165.1	155.0	141.6	128.6	117.2	107.4	-1.8	-0.9	-1.8	-1.8
Carbon intensity (t of CO_2/toe of GIC)	2.43	2.29	2.21	2.16	2.11	2.08	2.03	1.92	1.74	-0.9	-0.5	-0.4	-1.5
Import Dependency %	44.6	43.5	46.8	52.5	54.7	58.3	60.5	60.4	59.1				
Total Energy-related Costs (C) (in 000 M€05)			994.8	1160.9	1214.0	1409.7	1687.2	1871.2	1934.4		2.0	3.3	1.4
as % of GDP			9.8	10.5	10.7	11.1	11.9	12.1	11.5				
Energy intensity indicators													
Industry (Energy on Value added)	130.3	115.2	100.0	95.1	90.4	84.5	79.0	73.9	69.8	-2.6	-1.0	-1.3	-1.2
Residential (Energy on Private Income)	114.4	113.2	100.0	97.5	97.2	88.6	80.0	72.9	66.8	-1.3	-0.3	-1.9	-1.8
Tertiary (Energy on Value added)	126.5	117.0	100.0	99.4	95.3	87.5	79.4	72.4	66.1	-2.3	-0.5	-1.8	-1.8
Passenger transport (toe/Mpkm)	39.6	39.5	40.3	39.5	38.0	35.4	33.6	31.1	28.4	0.2	-0.6	-1.2	-1.7
Freight transport (toe/Mtkm)	47.1	46.8	46.3	46.5	46.1	45.8	44.3	42.6	40.3	-0.2	-0.1	-0.4	-0.9
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.46	0.40	0.37	0.35	0.31	0.29	0.27	0.23	0.17	-2.1	-1.9	-1.5	-4.2
Final energy demand (t of CO_2/toe)	2.24	2.16	2.08	2.03	1.95	1.90	1.84	1.79	1.74	-0.7	-0.7	-0.6	-0.6
Industry	2.14	2.06	1.91	1.78	1.57	1.51	1.47	1.40	1.36	-1.1	-1.9	-0.7	-0.8
Residential	1.89	1.72	1.63	1.58	1.56	1.50	1.43	1.36	1.32	-1.5	-0.4	-0.9	-0.8
Tertiary	1.90	1.72	1.51	1.48	1.44	1.35	1.26	1.20	1.15	-2.2	-0.5	-1.3	-0.9
Transport	2.90	2.90	2.91	2.91	2.84	2.80	2.77	2.74	2.72	0.0	-0.3	-0.2	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			7.6	8.6	10.9	12.8	14.8	16.7	18.4				
RES in transport (%)			0.5	1.4	4.2	5.9	7.4	8.4	9.3				
Gross Electricity generation by fuel type (in GWh)			**2991720**	**3274121**	**3311797**	**3553832**	**3795425**	**4012917**	**4191941**		**1.0**	**1.4**	**1.0**
Nuclear energy			944823	997519	926827	937076	928666	988723	1083694		-0.2	0.0	1.6
Coal and lignite			944939	980774	890887	935613	946907	935050	931460		-0.6	0.6	-0.2
Petroleum products			169709	133406	67162	72349	69690	63637	49457		-8.9	0.4	-3.4
Gas (including derived gases)			507154	693902	791522	804857	864690	862066	783674		4.6	0.9	-1.0
Biomass & waste			44772	84256	127487	163885	191352	217775	241293		11.0	4.1	2.3
Hydro			353183	306916	323347	331760	338900	349313	355032		-0.9	0.5	0.5
Wind			22246	70473	161188	269127	399210	520277	643895		21.9	9.5	4.9
Solar, tidal etc.			116	1447	16933	31941	45802	59649	75070		64.6	10.5	5.1
Geothermal and other renewables			4778	5427	6445	7225	10209	16427	28365		3.0	4.7	10.8
Net Generation Capacity in MW_e			**654125**	**715734**	**816095**	**901048**	**944473**	**1011270**	**1098178**		**2.2**	**1.5**	**1.5**
Nuclear energy			133923	134409	127038	126752	123566	122895	134278		-0.5	-0.3	0.8
Renewable energy			112878	147262	206951	265009	326186	384504	443051		6.2	4.7	3.1
Hydro (pumping excluded)			99714	104505	107334	110498	113356	114943	116323		0.7	0.5	0.3
Wind			12793	40584	84096	126192	172303	216847	260783		20.7	7.4	4.2
Solar			371	2172	15272	27744	38885	49721	61073		45.0	9.8	4.6
Other renewables (tidal etc.)			0	1	249	575	1642	2993	4873			20.8	11.5
Thermal power			407324	434063	482106	509286	494720	503870	520849		1.7	0.3	0.5
of which cogeneration units			77070	84892	100061	110539	114967	122882	125821		2.6	1.4	0.9
of which CCS units			0	0	0	0	5394	13967	35253				20.6
Solids fired			194165	186620	183740	182938	165993	154522	165236		-0.6	-1.0	0.0
Gas fired			129444	167173	217761	249765	250328	266936	269382		5.3	1.4	0.7
Oil fired			71058	62082	55837	45963	41813	38933	35750		-2.4	-2.9	-1.6
Biomass-waste fired			12051	17502	24041	29882	35767	42262	48322		7.1	4.1	3.1
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			605	686	727	738	820	1216	2158		1.9	1.2	10.2
Load factor for net electric capacities (%)			49.1	49.1	44.1	42.9	43.7	42.9	41.0				
Efficiency for thermal electricity production (%)			37.6	38.5	39.3	40.1	40.8	41.2	41.4				
CHP indicator (% of electricity from CHP)			11.4	11.7	15.1	17.4	17.6	17.9	17.5				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	1.4	3.7	8.7				
Non fossil fuels in electricity generation (%)			45.8	44.8	47.2	49.0	50.4	53.6	57.9				
- nuclear			31.6	30.5	28.0	26.4	24.5	24.6	25.9				
- renewable energy forms and industrial waste			14.2	14.3	19.2	22.6	26.0	29.0	32.1				
Transport sector													
Passenger transport activity (Gpkm)	**4880.7**	**5307.7**	**5892.2**	**6240.3**	**6511.3**	**7136.1**	**7598.9**	**8018.2**	**8424.4**	**1.9**	**1.0**	**1.6**	**1.0**
Public road transport	544.0	504.0	517.6	526.0	545.0	574.9	602.2	624.6	643.0	-0.5	0.5	1.0	0.7
Private cars and motorcycles	3501.1	3986.3	4428.1	4686.5	4866.1	5300.8	5576.3	5809.6	6041.2	2.4	0.9	1.4	0.8
Rail	472.5	421.7	447.9	461.0	482.5	522.5	563.9	603.9	641.7	-0.5	0.7	1.6	1.3
Aviation	317.3	351.3	456.9	527.3	576.9	695.6	812.7	935.0	1052.1	3.7	2.4	3.5	2.6
Inland navigation	45.8	44.4	41.7	39.5	40.8	42.4	43.8	45.1	46.3	-0.9	-0.2	0.7	0.6
Freight transport activity (Gtkm)	**1848.4**	**1942.4**	**2195.7**	**2494.6**	**2662.6**	**2965.0**	**3149.5**	**3311.4**	**3460.1**	**1.7**	**1.9**	**1.7**	**0.9**
Trucks	1060.4	1288.7	1518.7	1800.3	1940.3	2178.6	2308.6	2426.1	2538.2	3.7	2.5	1.8	1.0
Rail	526.3	386.1	403.7	414.1	440.5	487.9	525.2	554.6	579.0	-2.6	0.9	1.8	1.0
Inland navigation	261.6	267.6	273.3	280.2	281.9	298.6	315.7	330.7	342.9	0.4	0.3	1.1	0.8
Energy demand in transport (ktoe)	**280269**	**300617**	**339389**	**362405**	**370345**	**388190**	**394892**	**390035**	**379143**	**1.9**	**0.9**	**0.6**	**-0.4**
Public road transport	5197	4732	4914	5039	5179	5318	5306	5215	5086	-0.6	0.5	0.2	-0.4
Private cars and motorcycles	154395	166321	182974	187736	186470	185222	182702	174691	164762	1.7	0.2	-0.2	-1.0
Trucks	74969	79037	90951	105104	111593	123875	127520	129191	128901	2.0	2.1	1.3	0.1
Rail	9560	9452	9600	9436	9653	10185	10056	9698	8523	0.0	0.1	0.4	-1.6
Aviation	29038	34112	45395	49703	51984	57901	63353	65037	65485	4.6	1.4	2.0	0.3
Inland navigation	7110	6963	5555	5386	5466	5688	5954	6203	6385	-2.4	-0.2	0.9	0.7

Source: PRIMES

Austria: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**8207**	**8711**	**9820**	**9653**	**10295**	**10438**	**10312**	**10297**	**10711**	**1.8**	**0.5**	**0.0**	**0.4**
Solids	644	305	293	0	0	0	0	0	0	-7.6			
Oil	1295	1108	1116	986	957	850	620	280	230	-1.5	-1.5	-4.2	-9.4
Natural gas	1097	1261	1533	1403	1480	1270	740	670	600	3.4	-0.4	-6.7	-2.1
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	5172	6037	6879	7263	7858	8318	8952	9347	9881	2.9	1.3	1.3	1.0
Hydro	2709	3187	3598	3085	3238	3425	3572	3676	3873	2.9	-1.0	1.0	0.8
Biomass & Waste	2445	2809	3189	3937	4225	4328	4733	4928	5040	2.7	2.9	1.1	0.6
Wind	0	0	6	114	218	302	328	381	568		43.8	4.2	5.7
Solar and others	15	36	64	92	164	250	303	345	382	15.7	9.9	6.3	2.3
Geothermal	4	5	23	35	13	13	16	17	19	20.3	-5.8	2.2	1.9
Net Imports	**17306**	**18028**	**19106**	**24658**	**23656**	**24067**	**24440**	**24463**	**23757**	**1.0**	**2.2**	**0.3**	**-0.3**
Solids	3112	2550	3019	3959	3506	3250	3190	3117	3209	-0.3	1.5	-0.9	0.1
Oil	9741	10264	11001	13322	12747	12906	12572	12371	11707	1.2	1.5	-0.1	-0.7
- Crude oil and Feedstocks	8043	8309	7975	8225	8215	8355	8394	8547	8344	-0.1	0.3	0.2	-0.1
- Oil products	1699	1955	3026	5098	4532	4551	4177	3824	3362	5.9	4.1	-0.8	-2.1
Natural gas	4443	5404	5253	7203	7145	7807	8560	8736	8539	1.7	3.1	1.8	0.0
Electricity	-40	-212	-118	229	279	38	-13	-20	-4				
Gross Inland Consumption	**25258**	**27054**	**29046**	**34105**	**33950**	**34504**	**34752**	**34760**	**34468**	**1.4**	**1.6**	**0.2**	**-0.1**
Solids	4042	3344	3592	4039	3506	3250	3190	3117	3209	-1.2	-0.2	-0.9	0.1
Oil	10863	11485	12223	14455	13704	13756	13192	12651	11937	1.2	1.1	-0.4	-1.0
Natural gas	5184	6374	6519	8178	8625	9077	9300	9406	9139	2.3	2.8	0.8	-0.2
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	-40	-212	-118	229	279	38	-13	-20	-4				
Renewable energy forms	5208	6063	6829	7204	7837	8383	9084	9607	10187	2.7	1.4	1.5	1.2
as % in Gross Inland Consumption													
Solids	16.0	12.4	12.4	11.8	10.3	9.4	9.2	9.0	9.3				
Oil	43.0	42.5	42.1	42.4	40.4	39.9	38.0	36.4	34.6				
Natural gas	20.5	23.6	22.4	24.0	25.4	26.3	26.8	27.1	26.5				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	20.6	22.4	23.5	21.1	23.1	24.3	26.1	27.6	29.6				
Gross Electricity Generation in GWh_e	**49287**	**55170**	**59854**	**62963**	**63544**	**71325**	**76615**	**79890**	**82910**	**2.0**	**0.6**	**1.9**	**0.8**
Self consumption and grid losses	5257	5042	5269	7556	7675	8494	9107	9325	10077	0.0	3.8	1.7	1.0
Fuel Inputs for Thermal Power Generation	**4007**	**4309**	**3901**	**5473**	**4976**	**5464**	**6072**	**6635**	**6493**	**-0.3**	**2.5**	**2.0**	**0.7**
Solids	1510	1055	1239	1510	1379	1160	1173	1140	1104	-2.0	1.1	-1.6	-0.6
Oil (including refinery gas)	488	489	279	270	155	157	108	111	203	-5.4	-5.7	-3.6	6.5
Gas	1776	2321	1961	2901	2556	2942	3280	3720	3430	1.0	2.7	2.5	0.4
Biomass & Waste	233	444	421	790	879	1198	1504	1658	1749	6.1	7.6	5.5	1.5
Geothermal heat	0	0	0	2	7	7	7	7	8			0.0	1.3
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**11637**	**11680**	**11550**	**12088**	**11910**	**12001**	**11877**	**11509**	**11223**	**-0.1**	**0.3**	**0.0**	**-0.6**
Refineries	9317	9445	9077	9374	9173	9206	9015	8828	8574	-0.3	0.1	-0.2	-0.5
Biofuels and hydrogen production	2	5	9	42	245	369	511	595	684	17.5	39.6	7.6	3.0
District heating	347	439	554	663	769	769	769	564	380	4.8	3.3	0.0	-6.8
Others	1971	1790	1910	2009	1723	1656	1583	1522	1584	-0.3	-1.0	-0.8	0.0
Energy Branch Consumption	**1774**	**1883**	**1924**	**2375**	**2218**	**2161**	**2112**	**2037**	**1995**	**0.8**	**1.4**	**-0.5**	**-0.6**
Non-Energy Uses	**1554**	**1318**	**1576**	**1591**	**1527**	**1581**	**1612**	**1629**	**1648**	**0.1**	**-0.3**	**0.5**	**0.2**
Final Energy Demand	**19124**	**21062**	**23122**	**27107**	**27533**	**28394**	**28652**	**28577**	**28494**	**1.9**	**1.8**	**0.4**	**-0.1**
by sector													
Industry	6366	6684	7757	8601	8649	8593	8730	8896	9072	2.0	1.1	0.1	0.4
- energy intensive industries	4194	4189	5033	5447	5126	4992	5028	5072	5130	1.8	0.2	-0.2	0.2
- other industrial sectors	2172	2495	2723	3154	3523	3601	3701	3824	3942	2.3	2.6	0.5	0.6
Residential	5801	6244	5995	6657	6907	7236	7199	7094	6968	0.3	1.4	0.4	-0.3
Tertiary	2412	2934	3290	3814	3849	4162	4300	4367	4465	3.2	1.6	1.1	0.4
Transport	4545	5200	6081	8034	8128	8403	8423	8220	7989	3.0	2.9	0.4	-0.5
by fuel													
Solids	1785	1582	1399	1497	1216	1229	1179	1139	1082	-2.4	-1.4	-0.3	-0.9
Oil	7929	8779	9465	11829	11367	11575	11160	10694	10204	1.8	1.8	-0.2	-0.9
Gas	2968	3607	4265	4788	5498	5459	5373	5058	5087	3.7	2.6	-0.2	-0.5
Electricity	3629	3952	4417	4831	4931	5285	5638	5897	6109	2.0	1.1	1.3	0.8
Heat (from CHP and District Heating) [A]	612	848	1025	1324	1459	1837	2083	2206	2238	5.3	3.6	3.6	0.7
Renewable energy forms	2201	2294	2552	2838	3061	3008	3217	3581	3773	1.5	1.8	0.5	1.6
Other	0	0	0	0	1	1	1	2	2			8.9	0.2
RES in Gross Final Energy Consumption [B]			**6012**	**6593**	**7023**	**8058**	**8674**	**9066**	**9558**		**1.6**	**2.1**	**1.0**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**80.7**		**84.6**	**97.2**	**92.8**	**93.0**	**92.0**	**90.6**	**85.9**	**0.5**	**0.9**	**-0.1**	**-0.7**
of which ETS sectors GHGs emissions				37.0	32.8	32.7	33.6	34.4	31.4			0.2	-0.7
CO_2 Emissions (energy related)	**55.7**	**58.9**	**61.3**	**74.1**	**70.8**	**70.8**	**69.3**	**67.6**	**62.8**	**1.0**	**1.4**	**-0.2**	**-1.0**
Power generation/District heating	12.8	12.3	11.5	15.0	13.2	13.3	14.0	14.8	11.6	-1.1	1.4	0.6	-1.9
Energy Branch	4.0	4.4	4.5	5.0	4.4	3.9	3.5	3.3	3.1	1.1	-0.1	-2.4	-1.2
Industry	13.1	13.9	15.6	17.4	16.7	16.4	16.1	15.5	15.6	1.8	0.7	-0.3	-0.4
Residential	9.9	9.7	8.5	9.1	9.4	9.7	8.9	8.3	8.0	-1.4	1.0	-0.5	-1.1
Tertiary	3.3	4.0	3.9	4.4	4.2	4.3	4.0	3.8	3.7	1.6	0.8	-0.5	-0.6
Transport	12.7	14.6	17.3	23.2	22.8	23.2	22.8	21.9	20.9	3.1	2.8	0.0	-0.9
CO_2 Emissions (non energy related)	**8.0**	**7.7**	**8.1**	**9.1**	**8.5**	**8.8**	**9.3**	**9.7**	**9.9**	**0.2**	**0.4**	**0.9**	**0.6**
Non-CO_2 GHGs Emissions	**17.0**		**15.2**	**14.0**	**13.5**	**13.3**	**13.4**	**13.4**	**13.2**	**-1.1**	**-1.1**	**-0.1**	**-0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**104.8**	**120.5**	**115.0**	**115.2**	**114.0**	**112.3**	**106.5**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Austria: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	7.645	7.943	8.002	8.207	8.405	8.570	8.723	8.866	8.988	0.5	0.5	0.4	0.3
GDP (in 000 MEuro'05)	174.5	194.2	225.0	244.5	254.5	281.9	310.4	337.7	363.5	2.6	1.2	2.0	1.6
Gross Inl. Cons./GDP (toe/MEuro'05)	144.8	139.3	129.1	139.5	133.4	122.4	112.0	102.9	94.8	-1.1	0.3	-1.7	-1.6
Carbon intensity (t of CO_2/toe of GIC)	2.21	2.18	2.11	2.17	2.08	2.05	1.99	1.94	1.82	-0.4	-0.1	-0.4	-0.9
Import Dependency %	68.5	66.6	65.8	72.3	69.7	69.7	70.3	70.4	68.9				
Total Energy-related Costs [C] (in 000 M€05)			19.2	24.8	27.1	31.9	37.3	40.6	42.1		3.5	3.3	1.2
as % of GDP			8.5	10.1	10.6	11.3	12.0	12.0	11.6				
Energy intensity indicators													
Industry (Energy on Value added)	102.4	102.2	100.0	100.8	96.5	86.2	79.8	74.5	70.5	-0.2	-0.4	-1.9	-1.2
Residential (Energy on Private Income)	118.1	114.6	100.0	102.5	103.3	97.8	88.8	81.1	74.5	-1.7	0.3	-1.5	-1.7
Tertiary (Energy on Value added)	96.4	103.2	100.0	106.0	102.7	99.6	93.1	86.7	82.3	0.4	0.3	-1.0	-1.2
Passenger transport (toe/Mpkm)	37.1	36.2	37.9	45.8	44.3	40.7	38.0	34.7	32.2	0.2	1.6	-1.5	-1.7
Freight transport (toe/Mtkm)	44.2	46.3	45.4	59.0	57.1	56.4	53.7	51.0	48.0	0.3	2.3	-0.6	-1.1
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.22	0.19	0.16	0.19	0.16	0.14	0.13	0.13	0.10	-3.5	0.2	-1.8	-2.6
Final energy demand (t of CO_2/toe)	2.04	2.01	1.96	2.00	1.93	1.89	1.81	1.73	1.69	-0.4	-0.2	-0.6	-0.7
Industry	2.06	2.08	2.02	2.02	1.93	1.91	1.85	1.74	1.72	-0.2	-0.4	-0.4	-0.7
Residential	1.70	1.55	1.42	1.36	1.37	1.34	1.24	1.17	1.14	-1.8	-0.4	-0.9	-0.8
Tertiary	1.36	1.37	1.17	1.16	1.09	1.03	0.93	0.87	0.84	-1.5	-0.8	-1.6	-1.0
Transport	2.80	2.81	2.85	2.89	2.80	2.76	2.71	2.67	2.62	0.2	-0.2	-0.3	-0.3
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			25.4	23.7	24.8	27.5	29.3	30.7	32.4				
RES in transport (%)			3.7	2.9	6.0	8.0	10.0	11.6	13.6				
Gross Electricity generation by fuel type (in GWh)			**59854**	**62963**	**63544**	**71325**	**76615**	**79890**	**82910**		**0.6**	**1.9**	**0.8**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			5924	6964	5899	4988	5371	5347	4659		0.0	-0.9	-1.4
Petroleum products			1096	1130	805	822	563	198	842		-3.0	-3.5	4.1
Gas (including derived gases)			9407	15163	13534	16438	18423	20059	18139		3.7	3.1	-0.2
Biomass & waste			1524	2494	3056	5570	6600	6635	6948		7.2	8.0	0.5
Hydro			41832	35868	37651	39820	41538	42746	45033		-1.0	1.0	0.8
Wind			67	1328	2538	3508	3812	4429	6608		43.8	4.2	5.7
Solar, tidal etc.			3	14	49	169	296	464	668		32.3	19.6	8.5
Geothermal and other renewables			0	3	11	11	11	11	12			0.0	1.0
Net Generation Capacity in MW_e			**14171**	**15139**	**16864**	**19311**	**19459**	**19204**	**20883**		**1.8**	**1.4**	**0.7**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			7951	8568	9814	11570	12365	12932	14312		2.1	2.3	1.5
Hydro (pumping excluded)			7892	7719	8360	9724	10257	10400	10778		0.6	2.1	0.5
Wind			54	827	1388	1703	1861	2146	2977		38.4	3.0	4.8
Solar			5	22	66	143	247	386	557		29.4	14.2	8.5
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			6220	6571	7051	7741	7095	6272	6571		1.3	0.1	-0.8
of which cogeneration units			2284	2668	2229	2875	3028	3655	3650		-0.2	3.1	1.9
of which CCS units			0	0	0	0	0	0	306				
Solids fired			1865	1708	1618	1604	1596	730	668		-1.4	-0.1	-8.3
Gas fired			3102	3441	4131	4598	3992	4049	4522		2.9	-0.3	1.3
Oil fired			951	950	885	629	349	250	173		-0.7	-8.9	-6.7
Biomass-waste fired			301	471	416	910	1156	1243	1206		3.3	10.8	0.4
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			1	1	1	1	1	1	1		0.0	0.0	1.0
Load factor for net electric capacities (%)			46.8	44.8	40.6	39.8	42.4	44.8	42.6				
Efficiency for thermal electricity production (%)			39.6	40.5	40.3	43.8	43.9	41.8	40.5				
CHP indicator (% of electricity from CHP)			11.3	17.0	15.4	20.2	23.9	23.6	21.9				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	3.8				
Non fossil fuels in electricity generation (%)			72.6	63.1	68.1	68.8	68.2	68.0	71.5				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			72.6	63.1	68.1	68.8	68.2	68.0	71.5				
Transport sector													
Passenger transport activity (Gpkm)	**80.3**	**90.3**	**95.6**	**101.1**	**104.9**	**113.6**	**120.1**	**126.4**	**132.4**	**1.8**	**0.9**	**1.4**	**1.0**
Public road transport	7.9	8.7	9.2	9.3	9.9	10.6	11.2	11.7	12.1	1.5	0.6	1.3	0.8
Private cars and motorcycles	56.4	63.0	67.8	71.9	73.5	78.5	81.2	83.8	86.6	1.9	0.8	1.0	0.6
Rail	11.7	13.4	12.3	12.8	13.4	14.5	15.6	16.5	17.3	0.5	0.8	1.5	1.0
Aviation	4.2	5.0	6.1	7.0	8.1	10.0	12.1	14.4	16.4	3.9	2.8	4.1	3.1
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.3	-0.5	0.9	0.6
Freight transport activity (Gtkm)	**35.4**	**41.7**	**54.2**	**57.8**	**61.0**	**67.2**	**71.8**	**75.0**	**77.7**	**4.4**	**1.2**	**1.7**	**0.8**
Trucks	21.6	26.5	35.1	37.0	37.7	41.5	44.0	45.6	47.2	5.0	0.7	1.6	0.7
Rail	12.2	13.2	16.6	19.0	21.5	23.7	25.7	27.2	28.1	3.2	2.6	1.8	0.9
Inland navigation	1.7	2.0	2.4	1.8	1.8	2.0	2.2	2.3	2.4	3.9	-3.0	1.8	1.2
Energy demand in transport (ktoe)	**4545**	**5200**	**6081**	**8034**	**8128**	**8403**	**8423**	**8220**	**7989**	**3.0**	**2.9**	**0.4**	**-0.5**
Public road transport	74	79	82	82	85	89	90	89	87	1.0	0.4	0.5	-0.4
Private cars and motorcycles	2570	2699	2922	3839	3762	3607	3450	3182	2968	1.3	2.6	-0.9	-1.5
Trucks	1301	1646	2152	3118	3160	3441	3506	3480	3412	5.2	3.9	1.0	-0.3
Rail	283	309	333	311	342	363	369	365	336	1.6	0.3	0.8	-0.9
Aviation	310	461	586	675	769	893	998	1092	1174	6.6	2.8	2.6	1.6
Inland navigation	7	6	6	9	9	10	11	11	12	-1.5	4.4	1.5	1.0

Source: PRIMES

Belgium: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**13112**	**12734**	**15509**	**15450**	**15749**	**16237**	**16506**	**9787**	**4651**	**1.7**	**0.2**	**0.5**	**-11.9**
Solids	1085	269	191	57	13	12	13	15	14	-16.0	-23.5	0.0	0.9
Oil	0	0	0	6	0	0	0	0	0				
Natural gas	10	0	2	0	0	0	0	0	0	-14.3			
Nuclear	10707	10340	12422	12277	12382	12531	12405	5391	0	1.5	0.0	0.0	
Renewable energy sources	1310	2125	2894	3110	3353	3694	4087	4382	4637	8.2	1.5	2.0	1.3
Hydro	23	29	39	25	31	33	35	37	38	5.6	-2.2	1.1	0.9
Biomass & Waste	1285	2093	2848	3061	3090	3248	3413	3480	3484	8.3	0.8	1.0	0.2
Wind	1	1	1	20	213	380	599	816	1062	7.9	66.7	10.9	5.9
Solar and others	1	1	1	3	17	30	36	44	47	2.1	32.5	7.8	2.6
Geothermal	1	1	4	1	2	2	3	4	5	14.0	-7.6	6.7	3.4
Net Imports	**39625**	**46863**	**50812**	**53775**	**48989**	**51039**	**51660**	**54611**	**57060**	**2.5**	**-0.4**	**0.5**	**1.0**
Solids	9493	9343	7566	5511	4278	4654	4956	6572	8321	-2.2	-5.5	1.5	5.3
Oil	22236	26667	29491	32623	29695	30207	29465	28548	27662	2.9	0.1	-0.1	-0.6
- Crude oil and Feedstocks	26896	26573	34067	32206	31702	32218	31574	30788	30013	2.4	-0.7	0.0	-0.5
- Oil products	-4660	94	-4576	417	-2006	-2010	-2110	-2241	-2351				
Natural gas	8217	10418	13278	14817	14110	15111	15811	17839	19474	4.9	0.6	1.1	2.1
Electricity	-320	350	372	542	672	785	997	1178	1173		6.1	4.0	1.6
Gross Inland Consumption	**48607**	**54940**	**61461**	**61147**	**57354**	**59694**	**60477**	**56517**	**53573**	**2.4**	**-0.7**	**0.5**	**-1.2**
Solids	10244	8551	8200	5450	4292	4666	4969	6586	8336	-2.2	-6.3	1.5	5.3
Oil	18497	22877	24100	24747	22312	22625	21776	20667	19524	2.7	-0.8	-0.2	-1.1
Natural gas	8169	10611	13369	14740	14110	15111	15811	17839	19474	5.0	0.5	1.1	2.1
Nuclear	10707	10340	12422	12277	12382	12531	12405	5391	0	1.5	0.0	0.0	
Electricity	-320	350	372	542	672	785	997	1178	1173		6.1	4.0	1.6
Renewable energy forms	1310	2210	2998	3391	3586	3977	4519	4856	5067	8.6	1.8	2.3	1.2
as % in Gross Inland Consumption													
Solids	21.1	15.6	13.3	8.9	7.5	7.8	8.2	11.7	15.6				
Oil	38.1	41.6	39.2	40.5	38.9	37.9	36.0	36.6	36.4				
Natural gas	16.8	19.3	21.8	24.1	24.6	25.3	26.1	31.6	36.3				
Nuclear	22.0	18.8	20.2	20.1	21.6	21.0	20.5	9.5	0.0				
Renewable energy forms	2.7	4.0	4.9	5.5	6.3	6.7	7.5	8.6	9.5				
Gross Electricity Generation in GWh_e	**70202**	**73524**	**82639**	**85695**	**84965**	**90265**	**95166**	**98165**	**101016**	**1.6**	**0.3**	**1.1**	**0.6**
Self consumption and grid losses	7382	7800	7825	8266	8134	8607	9221	9685	10414	0.6	0.4	1.3	1.2
Fuel Inputs for Thermal Power Generation	**6544**	**7182**	**7493**	**7733**	**6640**	**7142**	**7861**	**12044**	**14919**	**1.4**	**-1.2**	**1.7**	**6.6**
Solids	3875	3764	3025	1889	1624	1862	2160	3919	5708	-2.4	-6.0	2.9	10.2
Oil (including refinery gas)	318	232	186	411	167	272	581	591	565	-5.2	-1.1	13.3	-0.3
Gas	1983	2721	3790	4612	3919	4069	3769	5763	6718	6.7	0.3	-0.4	6.0
Biomass & Waste	368	465	492	821	931	938	1352	1771	1928	2.9	6.6	3.8	3.6
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**35940**	**33857**	**42146**	**40638**	**37805**	**38732**	**37937**	**36484**	**35296**	**1.6**	**-1.1**	**0.0**	**-0.7**
Refineries	29821	29532	38492	37438	35112	35665	34714	33386	32176	2.6	-0.9	-0.1	-0.8
Biofuels and hydrogen production	0	0	0	0	175	381	568	637	679			12.5	1.8
District heating	10	5	41	27	4	4	4	0	0	15.3	-21.4	0.0	
Others	6109	4320	3612	3173	2515	2682	2651	2460	2441	-5.1	-3.6	0.5	-0.8
Energy Branch Consumption	**2307**	**2270**	**2367**	**2125**	**1880**	**1917**	**1880**	**1802**	**1779**	**0.3**	**-2.3**	**0.0**	**-0.5**
Non-Energy Uses	**2749**	**5513**	**6865**	**7495**	**6296**	**6767**	**7124**	**7107**	**7329**	**9.6**	**-0.9**	**1.2**	**0.3**
Final Energy Demand	**32071**	**36073**	**39131**	**38443**	**37073**	**38867**	**39269**	**38396**	**37781**	**2.0**	**-0.5**	**0.6**	**-0.4**
by sector													
Industry	12591	13612	15762	13563	12077	13209	13692	13338	13421	2.3	-2.6	1.3	-0.2
- energy intensive industries	9987	10689	12028	10578	8829	9459	9641	9304	9218	1.9	-3.0	0.9	-0.4
- other industrial sectors	2604	2923	3734	2986	3248	3750	4051	4034	4204	3.7	-1.4	2.2	0.4
Residential	8360	9320	9491	9938	10011	10256	10203	10062	9866	1.3	0.5	0.2	-0.3
Tertiary	3390	4631	4167	5017	5146	5438	5518	5521	5495	2.1	2.1	0.7	0.0
Transport	7730	8511	9710	9926	9839	9964	9856	9475	8999	2.3	0.1	0.0	-0.9
by fuel													
Solids	3787	3306	3378	2080	1678	1722	1748	1713	1669	-1.1	-6.8	0.4	-0.5
Oil	14927	16434	16130	16529	15749	15820	15115	14289	13405	0.8	-0.2	-0.4	-1.2
Gas	7249	8517	10010	10009	9736	10331	10573	10331	10635	3.3	-0.3	0.8	0.1
Electricity	4986	5885	6667	6894	6999	7523	8107	8516	8703	2.9	0.5	1.5	0.7
Heat (from CHP and District Heating) [A]	213	220	490	427	510	861	1210	1332	1350	8.7	0.4	9.0	1.1
Renewable energy forms	909	1710	2454	2503	2400	2608	2514	2213	2018	10.4	-0.2	0.5	-2.2
Other	0	0	0	0	1	1	2	2	2			8.7	-0.3
RES in Gross Final Energy Consumption [B]			**535**	**910**	**1319**	**2084**	**2647**	**3086**	**3402**		**9.4**	**7.2**	**2.5**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**139.9**		**146.5**	**135.8**	**125.8**	**128.6**	**129.0**	**137.3**	**144.0**	**0.5**	**-1.5**	**0.3**	**1.1**
of which ETS sectors GHGs emissions				61.4	50.7	52.7	55.0	65.7	74.6			0.8	3.1
CO_2 Emissions (energy related)	**106.4**	**112.6**	**115.0**	**107.7**	**97.9**	**101.4**	**100.9**	**109.0**	**115.0**	**0.8**	**-1.6**	**0.3**	**1.3**
Power generation/District heating	21.8	23.0	22.6	20.6	17.0	18.6	19.9	31.5	39.9	0.3	-2.8	1.6	7.2
Energy Branch	5.3	5.1	5.3	4.1	2.9	2.8	2.6	2.4	2.3	0.0	-5.9	-1.1	-1.3
Industry	30.3	28.8	30.1	22.7	18.6	20.1	20.6	20.0	20.7	-0.1	-4.7	1.0	0.0
Residential	18.7	20.1	20.1	20.4	20.1	20.2	19.2	18.1	17.1	0.7	0.0	-0.4	-1.2
Tertiary	7.6	10.5	8.2	10.5	10.7	11.2	11.0	10.8	10.5	0.8	2.7	0.3	-0.5
Transport	22.7	25.0	28.8	29.5	28.7	28.5	27.5	26.2	24.6	2.4	0.0	-0.4	-1.1
CO_2 Emissions (non energy related)	**9.0**	**10.0**	**10.2**	**9.8**	**9.1**	**10.3**	**11.0**	**11.2**	**11.7**	**1.2**	**-1.2**	**2.0**	**0.6**
Non-CO_2 GHGs Emissions	**24.4**		**21.3**	**18.3**	**18.8**	**17.0**	**17.1**	**17.1**	**17.3**	**-1.4**	**-1.3**	**-0.9**	**0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**104.7**	**97.1**	**89.9**	**91.9**	**92.2**	**98.2**	**102.9**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Belgium: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	9.948	10.131	10.239	10.446	10.784	11.070	11.322	11.547	11.745	0.3	0.5	0.5	0.4
GDP (in 000 MEuro'05)	221.2	244.0	278.8	302.1	311.4	351.5	389.5	423.2	458.5	2.3	1.1	2.3	1.6
Gross Inl. Cons./GDP (toe/MEuro'05)	219.7	225.2	220.4	202.4	184.2	169.8	155.3	133.5	116.8	0.0	-1.8	-1.7	-2.8
Carbon intensity (t of CO_2/toe of GIC)	2.19	2.05	1.87	1.76	1.71	1.70	1.67	1.93	2.15	-1.6	-0.9	-0.2	2.6
Import Dependency %	75.2	79.6	76.1	78.2	75.7	75.9	75.8	84.8	92.5				
Total Energy-related Costs [C] (in 000 M€05)			31.6	35.0	35.0	39.9	48.4	53.8	55.4		1.0	3.3	1.4
as % of GDP			11.3	11.6	11.2	11.4	12.4	12.7	12.1				
Energy intensity indicators													
Industry (Energy on Value added)	91.3	100.2	100.0	85.7	77.7	72.0	66.4	61.3	56.8	0.9	-2.5	-1.6	-1.5
Residential (Energy on Private Income)	109.5	110.3	100.0	99.3	99.3	93.5	86.1	79.0	72.6	-0.9	-0.1	-1.4	-1.7
Tertiary (Energy on Value added)	98.1	124.2	100.0	108.9	109.6	101.2	92.6	84.4	77.4	0.2	0.9	-1.7	-1.8
Passenger transport (toe/Mpkm)	45.4	44.2	46.5	46.4	44.4	40.6	38.0	34.3	30.3	0.3	-0.5	-1.5	-2.2
Freight transport (toe/Mtkm)	50.6	49.1	50.5	52.4	51.8	51.4	49.5	47.6	45.2	0.0	0.3	-0.5	-0.9
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.30	0.30	0.25	0.22	0.18	0.18	0.18	0.27	0.33	-1.6	-3.3	-0.2	6.5
Final energy demand (t of CO_2/toe)	2.47	2.34	2.23	2.16	2.11	2.06	2.00	1.96	1.93	-1.0	-0.6	-0.5	-0.3
Industry	2.41	2.11	1.91	1.67	1.54	1.52	1.51	1.50	1.54	-2.3	-2.1	-0.2	0.2
Residential	2.24	2.16	2.11	2.05	2.01	1.97	1.89	1.80	1.73	-0.6	-0.5	-0.6	-0.8
Tertiary	2.23	2.26	1.96	2.09	2.07	2.06	2.00	1.95	1.91	-1.3	0.6	-0.4	-0.4
Transport	2.94	2.94	2.96	2.97	2.92	2.86	2.79	2.76	2.73	0.1	-0.1	-0.4	-0.2
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			1.3	2.3	3.5	5.3	6.6	7.9	8.8				
RES in transport (%)			0.0	0.0	2.2	4.7	7.1	8.4	9.5				
Gross Electricity generation by fuel type (in GWh)			**82639**	**85695**	**84965**	**90265**	**95166**	**98165**	**101016**		**0.3**	**1.1**	**0.6**
Nuclear energy			48148	47586	48002	48578	48092	20899	0		0.0	0.0	
Coal and lignite			13089	7774	6127	7595	8895	19723	32353		-7.3	3.8	13.8
Petroleum products			586	1734	894	1275	2888	2934	2819		4.3	12.4	-0.2
Gas (including derived gases)			19024	25013	22613	23470	21777	36244	43896		1.7	-0.4	7.3
Biomass & waste			1317	3071	4363	4365	5946	8235	8923		12.7	3.1	4.1
Hydro			459	288	366	388	408	428	447		-2.2	1.1	0.9
Wind			15	227	2481	4422	6967	9492	12354		66.7	10.9	5.9
Solar, tidal etc.			0	1	118	172	192	210	225			5.0	1.6
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**13941**	**14716**	**17347**	**18476**	**20617**	**21966**	**23444**		**2.2**	**1.7**	**1.3**
Nuclear energy			5801	5817	5941	5941	5941	2516	0		0.2	0.0	
Renewable energy			117	285	1308	1989	2825	3869	4986		27.4	8.0	5.8
Hydro (pumping excluded)			103	116	116	125	138	148	150		1.2	1.8	0.8
Wind			14	167	1039	1686	2487	3503	4603		53.8	9.1	6.3
Solar			0	2	153	178	200	218	233			2.7	1.6
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			8024	8615	10098	10546	11851	15580	18458		2.3	1.6	4.5
of which cogeneration units			1394	1680	2191	2716	2695	2933	2811		4.6	2.1	0.4
of which CCS units			0	0	0	0	0	0	133				
Solids fired			1964	1709	1476	1076	1153	2484	4670		-2.8	-2.4	15.0
Gas fired			4891	5710	7166	7473	7338	9899	10838		3.9	0.2	4.0
Oil fired			632	639	653	849	1844	1480	1473		0.3	10.9	-2.2
Biomass-waste fired			537	556	803	1147	1515	1717	1478		4.1	6.5	-0.2
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			64.6	63.6	53.7	53.6	50.6	49.0	47.1				
Efficiency for thermal electricity production (%)			39.0	41.8	44.0	44.2	43.2	47.9	50.7				
CHP indicator (% of electricity from CHP)			6.8	8.8	12.6	16.0	17.8	19.8	19.1				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	1.3				
Non fossil fuels in electricity generation (%)			60.4	59.7	65.1	64.2	64.7	40.0	21.7				
- nuclear			58.3	55.5	56.5	53.8	50.5	21.3	0.0				
- renewable energy forms and industrial waste			2.2	4.2	8.6	10.4	14.2	18.7	21.7				
Transport sector													
Passenger transport activity (Gpkm)	**116.4**	**127.3**	**137.1**	**145.6**	**152.3**	**165.3**	**172.6**	**178.7**	**185.5**	**1.6**	**1.1**	**1.3**	**0.7**
Public road transport	11.4	13.1	13.3	17.5	18.9	20.1	20.8	21.3	21.6	1.6	3.6	1.0	0.4
Private cars and motorcycles	90.5	99.1	106.5	110.1	113.6	122.8	126.4	129.9	134.2	1.6	0.6	1.1	0.6
Rail	7.3	7.6	8.6	10.1	11.1	12.5	13.5	14.2	14.8	1.7	2.6	2.0	0.9
Aviation	6.6	7.0	8.4	7.6	8.3	9.7	11.5	13.1	14.7	2.4	-0.1	3.3	2.5
Inland navigation	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	-7.4	-0.1	0.5	0.2
Freight transport activity (Gtkm)	**48.3**	**58.6**	**65.9**	**60.5**	**59.3**	**63.2**	**66.6**	**70.4**	**74.6**	**3.2**	**-1.1**	**1.2**	**1.1**
Trucks	34.6	45.6	51.0	43.8	42.4	45.4	47.9	51.1	54.8	4.0	-1.8	1.2	1.4
Rail	8.4	7.3	7.7	8.1	8.3	9.0	9.6	9.8	10.0	-0.9	0.8	1.4	0.5
Inland navigation	5.4	5.7	7.2	8.6	8.6	8.8	9.1	9.5	9.8	3.0	1.8	0.6	0.7
Energy demand in transport (ktoe)	**7730**	**8511**	**9710**	**9926**	**9839**	**9964**	**9856**	**9475**	**8999**	**2.3**	**0.1**	**0.0**	**-0.9**
Public road transport	104	118	118	153	164	169	166	161	154	1.3	3.3	0.1	-0.7
Private cars and motorcycles	4157	4474	4677	5260	5209	5067	4820	4402	3954	1.2	1.1	-0.8	-2.0
Trucks	2210	2523	3065	2827	2726	2889	2929	2986	3020	3.3	-1.2	0.7	0.3
Rail	178	202	184	186	187	196	192	185	165	0.3	0.2	0.3	-1.5
Aviation	952	945	1530	1281	1334	1420	1519	1504	1464	4.9	-1.4	1.3	-0.4
Inland navigation	130	248	136	218	220	223	230	236	242	0.5	4.9	0.4	0.5

Source: PRIMES

Bulgaria: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**9136**	**10191**	**9846**	**10612**	**9707**	**9829**	**11792**	**12240**	**12632**	**0.8**	**-0.1**	**2.0**	**0.7**
Solids	5121	5287	4310	4178	4376	4374	4362	2849	3070	-1.7	0.2	0.0	-3.5
Oil	60	43	43	30	26	25	24	23	22	-3.4	-4.8	-0.8	-0.9
Natural gas	11	40	12	384	237	200	169	143	122	1.3	34.4	-3.3	-3.2
Nuclear	3783	4453	4689	4812	3792	3792	5624	7404	7404	2.2	-2.1	4.0	2.8
Renewable energy sources	161	369	792	1207	1277	1439	1613	1820	2013	17.2	4.9	2.4	2.2
Hydro	161	151	230	373	350	354	359	365	375	3.6	4.3	0.3	0.4
Biomass & Waste	0	219	562	801	848	921	1018	1140	1249		4.2	1.8	2.1
Wind	0	0	0	0	35	91	132	169	205			14.2	4.5
Solar and others	0	0	0	0	3	15	33	48	64			26.5	6.9
Geothermal	0	0	0	33	41	58	71	97	121			5.7	5.4
Net Imports	**17836**	**13484**	**8718**	**9516**	**9526**	**10451**	**9946**	**9932**	**9646**	**-6.9**	**0.9**	**0.4**	**-0.3**
Solids	3527	2424	2258	2550	2713	3418	2990	2885	2767	-4.4	1.9	1.0	-0.8
Oil	8553	6519	4118	5186	4689	5029	5081	5065	4896	-7.0	1.3	0.8	-0.4
- Crude oil and Feedstocks	8264	8021	5389	6423	6289	6730	6803	6793	6606	-4.2	1.6	0.8	-0.3
- Oil products	289	-1502	-1271	-1237	-1599	-1702	-1722	-1728	-1709				
Natural gas	5430	4563	2742	2458	2524	2601	2840	3144	3173	-6.6	-0.8	1.2	1.1
Electricity	326	-14	-397	-652	-359	-536	-887	-1087	-1120				
Gross Inland Consumption	**27981**	**23312**	**18647**	**19984**	**19121**	**20156**	**21609**	**22038**	**22139**	**-4.0**	**0.3**	**1.2**	**0.2**
Solids	8706	7673	6417	6892	7089	7792	7352	5734	5837	-3.0	1.0	0.4	-2.3
Oil	9609	6253	4218	4947	4603	4930	4976	4955	4780	-7.9	0.9	0.8	-0.4
Natural gas	5395	4584	2932	2804	2761	2801	3009	3288	3295	-5.9	-0.6	0.9	0.9
Nuclear	3783	4453	4689	4812	3792	3792	5624	7404	7404	2.2	-2.1	4.0	2.8
Electricity	326	-14	-397	-652	-359	-536	-887	-1087	-1120				
Renewable energy forms	161	363	788	1182	1236	1378	1535	1743	1943	17.2	4.6	2.2	2.4
as % in Gross Inland Consumption													
Solids	31.1	32.9	34.4	34.5	37.1	38.7	34.0	26.0	26.4				
Oil	34.3	26.8	22.6	24.8	24.1	24.5	23.0	22.5	21.6				
Natural gas	19.3	19.7	15.7	14.0	14.4	13.9	13.9	14.9	14.9				
Nuclear	13.5	19.1	25.1	24.1	19.8	18.8	26.0	33.6	33.4				
Renewable energy forms	0.6	1.6	4.2	5.9	6.5	6.8	7.1	7.9	8.8				
Gross Electricity Generation in GWh_e	**42133**	**41219**	**40639**	**43964**	**39691**	**43278**	**49667**	**56005**	**58098**	**-0.4**	**-0.2**	**2.3**	**1.6**
Self consumption and grid losses	9435	11161	10721	9679	8123	7823	7828	9754	9935	1.3	-2.7	-0.4	2.4
Fuel Inputs for Thermal Power Generation	**10103**	**9160**	**6281**	**6520**	**6261**	**7038**	**6561**	**5081**	**5250**	**-4.6**	**0.0**	**0.5**	**-2.2**
Solids	6800	6734	5245	5670	5592	6276	5851	4340	4516	-2.6	0.6	0.5	-2.6
Oil (including refinery gas)	951	612	170	172	44	31	28	42	52	-15.8	-12.6	-4.4	6.4
Gas	2352	1813	863	676	582	628	578	538	461	-9.5	-3.9	-0.1	-2.2
Biomass & Waste	0	0	3	2	42	103	97	130	167		29.1	8.6	5.5
Geothermal heat	0	0	0	0	0	0	8	30	53				21.6
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**13098**	**11654**	**7655**	**8936**	**7764**	**8083**	**8056**	**7962**	**7659**	**-5.2**	**0.1**	**0.4**	**-0.5**
Refineries	8358	8040	5449	6683	6467	6906	6954	6930	6728	-4.2	1.7	0.7	-0.3
Biofuels and hydrogen production	0	0	0	0	23	43	57	101	166			9.5	11.3
District heating	2781	1544	324	370	374	224	168	141	33	-19.3	1.4	-7.7	-15.0
Others	1960	2069	1882	1883	900	910	877	790	732	-0.4	-7.1	-0.3	-1.8
Energy Branch Consumption	**1357**	**1457**	**1145**	**1278**	**1317**	**1325**	**1339**	**1524**	**1518**	**-1.7**	**1.4**	**0.2**	**1.3**
Non-Energy Uses	**1427**	**1236**	**1264**	**1067**	**928**	**1007**	**1099**	**1168**	**1198**	**-1.2**	**-3.0**	**1.7**	**0.9**
Final Energy Demand	**16102**	**11409**	**8602**	**9595**	**9802**	**10539**	**11136**	**11539**	**11721**	**-6.1**	**1.3**	**1.3**	**0.5**
by sector													
Industry	8969	6034	3652	3720	3848	4221	4556	4701	4774	-8.6	0.5	1.7	0.5
- energy intensive industries	5579	4891	2829	2851	2825	2943	3034	3018	2966	-6.6	0.0	0.7	-0.2
- other industrial sectors	3390	1143	824	870	1023	1278	1523	1684	1808	-13.2	2.2	4.1	1.7
Residential	2228	2257	2165	2145	2132	2141	2160	2192	2145	-0.3	-0.2	0.1	-0.1
Tertiary	2382	1139	962	1130	1174	1220	1248	1283	1309	-8.7	2.0	0.6	0.5
Transport	2523	1980	1823	2599	2648	2957	3172	3364	3494	-3.2	3.8	1.8	1.0
by fuel													
Solids	1477	1280	860	951	1128	1155	1156	1080	1026	-5.3	2.8	0.2	-1.2
Oil	4983	2900	3004	3672	3649	3977	4099	4126	4033	-4.9	2.0	1.2	-0.2
Gas	2066	1787	1231	1025	1120	1245	1433	1681	1827	-5.0	-0.9	2.5	2.5
Electricity	3033	2467	2075	2208	2265	2418	2616	2797	2930	-3.7	0.9	1.4	1.1
Heat (from CHP and District Heating) [A]	4543	2798	877	939	830	915	898	816	776	-15.2	-0.5	0.8	-1.5
Renewable energy forms	0	178	555	800	809	828	933	1039	1129		3.8	1.4	1.9
Other	0	0	0	0	0	0	1	1	1			12.0	1.4
RES in Gross Final Energy Consumption [B]			**737**	**958**	**1117**	**1245**	**1457**	**1637**	**1826**		**4.2**	**2.7**	**2.3**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**111.5**		**65.4**	**67.0**	**66.5**	**69.0**	**67.9**	**54.9**	**53.0**	**-5.2**	**0.2**	**0.2**	**-2.5**
of which ETS sectors GHGs emissions				41.2	40.9	43.5	42.3	29.2	27.1			0.3	-4.4
CO_2 Emissions (energy related)	**72.5**	**58.0**	**42.1**	**45.1**	**45.2**	**48.9**	**47.8**	**34.8**	**32.6**	**-5.3**	**0.7**	**0.6**	**-3.8**
Power generation/District heating	44.9	38.1	24.9	26.1	25.4	27.9	25.9	12.6	10.6	-5.7	0.2	0.2	-8.5
Energy Branch	1.6	1.4	1.3	1.6	1.6	1.6	1.6	1.6	1.5	-2.1	2.5	-0.2	-0.6
Industry	11.2	9.4	8.3	7.5	8.1	8.5	8.9	9.0	8.7	-3.0	-0.2	0.9	-0.2
Residential	3.0	2.2	1.2	1.2	1.2	1.3	1.2	1.1	1.1	-8.9	0.2	0.0	-1.0
Tertiary	4.8	1.4	1.2	1.1	1.1	1.2	1.1	1.0	1.0	-13.0	-0.4	-0.2	-1.3
Transport	7.1	5.6	5.2	7.6	7.6	8.5	9.0	9.5	9.7	-3.0	3.8	1.8	0.7
CO_2 Emissions (non energy related)	**7.6**	**7.0**	**4.6**	**5.1**	**5.6**	**6.1**	**6.6**	**6.8**	**6.9**	**-4.9**	**2.0**	**1.6**	**0.5**
Non-CO_2 GHGs Emissions	**31.4**		**18.7**	**16.8**	**15.8**	**13.9**	**13.5**	**13.3**	**13.4**	**-5.0**	**-1.7**	**-1.5**	**-0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**58.7**	**60.1**	**59.7**	**61.9**	**60.9**	**49.2**	**47.5**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Bulgaria: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	8.767	8.427	8.191	7.761	7.564	7.382	7.188	6.974	6.753	-0.7	-0.8	-0.5	-0.6
GDP (in 000 MEuro'05)	20.1	17.6	16.9	21.9	25.8	30.5	34.7	38.4	42.2	-1.7	4.3	3.0	2.0
Gross Inl. Cons./GDP (toe/MEuro'05)	1390.6	1322.4	1102.5	913.3	742.5	661.9	623.6	573.2	524.9	-2.3	-3.9	-1.7	-1.7
Carbon intensity (t of CO_2/toe of GIC)	2.59	2.49	2.26	2.26	2.36	2.43	2.21	1.58	1.47	-1.4	0.5	-0.7	-4.0
Import Dependency %	63.6	57.2	46.6	47.4	49.5	51.5	45.8	44.8	43.3				
Total Energy-related Costs [C] (in 000 M€05)			5.2	6.6	7.1	8.8	11.1	13.3	14.3		3.1	4.6	2.6
as % of GDP			30.9	30.1	27.4	29.0	31.9	34.5	33.9				
Energy intensity indicators													
Industry (Energy on Value added)	140.7	112.0	100.0	72.1	61.9	52.0	45.8	41.1	37.4	-3.4	-4.7	-3.0	-2.0
Residential (Energy on Private Income)	92.4	105.2	100.0	74.2	63.2	56.9	55.5	54.9	53.9	0.8	-4.5	-1.3	-0.3
Tertiary (Energy on Value added)	201.6	112.3	100.0	93.9	84.9	73.1	67.2	63.0	58.7	-6.8	-1.6	-2.3	-1.3
Passenger transport (toe/Mpkm)	35.8	32.3	28.0	31.2	29.3	28.3	27.8	27.5	26.7	-2.4	0.4	-0.5	-0.4
Freight transport (toe/Mtkm)	34.2	44.4	50.3	55.0	50.1	49.3	48.7	48.0	47.0	3.9	0.0	-0.3	-0.4
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.45	0.49	0.46	0.44	0.46	0.46	0.39	0.17	0.14	0.2	0.1	-1.7	-9.5
Final energy demand (t of CO_2/toe)	1.62	1.62	1.85	1.81	1.85	1.85	1.82	1.79	1.75	1.3	0.0	-0.1	-0.4
Industry	1.25	1.55	2.27	2.02	2.12	2.02	1.95	1.91	1.83	6.2	-0.7	-0.8	-0.7
Residential	1.35	0.97	0.55	0.56	0.57	0.59	0.56	0.52	0.51	-8.7	0.4	-0.1	-0.9
Tertiary	2.00	1.22	1.23	0.96	0.97	1.01	0.90	0.80	0.75	-4.7	-2.4	-0.8	-1.8
Transport	2.81	2.84	2.87	2.91	2.87	2.86	2.85	2.82	2.76	0.2	0.0	-0.1	-0.3
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			7.6	9.1	10.5	10.9	12.2	13.1	14.4				
RES in transport (%)			0.2	0.1	1.4	2.2	2.8	4.4	6.8				
Gross Electricity generation by fuel type (in GWh)			**40639**	**43964**	**39691**	**43278**	**49667**	**56005**	**58098**		**-0.2**	**2.3**	**1.6**
Nuclear energy			18175	18650	14700	14700	22350	30000	30000		-2.1	4.3	3.0
Coal and lignite			16820	18056	17264	19639	18259	16390	17848		0.3	0.6	-0.2
Petroleum products			590	600	153	90	80	103	138		-12.6	-6.3	5.6
Gas (including derived gases)			2374	2312	2919	3228	2795	2622	2486		2.1	-0.4	-1.2
Biomass & waste			8	5	180	426	412	538	660		36.7	8.6	4.8
Hydro			2673	4336	4065	4116	4169	4242	4357		4.3	0.3	0.4
Wind			0	5	406	1056	1535	1970	2381			14.2	4.5
Solar, tidal etc.			0	0	3	24	58	105	164			33.4	10.9
Geothermal and other renewables			0	0	0	0	9	35	62				21.6
Net Generation Capacity in MW_e			**10934**	**10174**	**9634**	**10314**	**10331**	**12290**	**12889**		**-1.3**	**0.7**	**2.2**
Nuclear energy			3473	2678	1885	1910	2870	3817	3817		-5.9	4.3	2.9
Renewable energy			1908	1975	2489	3076	3521	3986	4521		2.7	3.5	2.5
Hydro (pumping excluded)			1908	1967	2097	2122	2136	2191	2340		0.9	0.2	0.9
Wind			0	8	389	929	1324	1686	2011			13.0	4.3
Solar			0	0	3	25	61	109	170			33.4	10.9
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			5554	5521	5260	5327	3940	4487	4551		-0.5	-2.8	1.5
of which cogeneration units			972	1108	1198	1325	1377	1329	1342		2.1	1.4	-0.3
of which CCS units			0	0	0	0	0	745	1015				
Solids fired			4430	4376	4179	4362	3086	3750	3890		-0.6	-3.0	2.3
Gas fired			812	834	794	671	560	447	417		-0.2	-3.4	-2.9
Oil fired			271	271	276	279	253	213	144		0.2	-0.9	-5.5
Biomass-waste fired			40	40	11	15	41	72	93		-12.2	14.2	8.6
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	1	4	7				21.6
Load factor for net electric capacities (%)			38.0	44.1	43.2	44.5	51.5	47.3	46.7				
Efficiency for thermal electricity production (%)			27.1	27.7	28.2	28.6	28.3	33.3	34.7				
CHP indicator (% of electricity from CHP)			8.5	6.8	14.8	17.6	15.1	13.2	13.5				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	15.4	19.4				
Non fossil fuels in electricity generation (%)			51.3	52.3	48.8	47.0	57.4	65.9	64.8				
- nuclear			44.7	42.4	37.0	34.0	45.0	53.6	51.6				
- renewable energy forms and industrial waste			6.6	9.9	11.7	13.0	12.4	12.3	13.1				
Transport sector													
Passenger transport activity (Gpkm)	**51.9**	**41.6**	**43.0**	**47.5**	**54.5**	**61.7**	**66.4**	**70.6**	**74.6**	**-1.9**	**2.4**	**2.0**	**1.2**
Public road transport	25.9	15.7	13.9	11.4	11.4	11.9	12.1	12.3	12.3	-6.0	-1.9	0.6	0.1
Private cars and motorcycles	14.8	18.6	23.6	29.7	35.6	40.3	42.7	44.4	46.4	4.8	4.2	1.8	0.8
Rail	8.1	5.0	3.9	2.8	3.0	3.1	3.4	3.7	3.9	-7.1	-2.7	1.4	1.5
Aviation	2.8	2.1	1.7	3.6	4.5	6.4	8.2	10.3	12.0	-5.3	10.5	6.2	3.8
Inland navigation	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-22.7	-1.7	0.6	0.3
Freight transport activity (Gtkm)	**19.3**	**14.3**	**12.3**	**20.3**	**21.0**	**24.6**	**27.2**	**29.6**	**32.0**	**-4.5**	**5.5**	**2.6**	**1.6**
Trucks	3.6	5.2	6.4	14.4	14.8	17.7	19.5	21.1	22.8	5.9	8.8	2.8	1.6
Rail	14.1	8.6	5.5	5.2	5.3	6.0	6.7	7.4	8.0	-8.9	-0.4	2.4	1.8
Inland navigation	1.6	0.5	0.3	0.8	0.8	0.9	1.0	1.1	1.2	-15.1	9.8	2.1	1.7
Energy demand in transport (ktoe)	**2523**	**1980**	**1823**	**2599**	**2648**	**2957**	**3172**	**3364**	**3494**	**-3.2**	**3.8**	**1.8**	**1.0**
Public road transport	293	127	108	87	85	87	85	82	78	-9.5	-2.4	0.0	-0.9
Private cars and motorcycles	1266	923	982	1186	1259	1314	1350	1389	1398	-2.5	2.5	0.7	0.3
Trucks	452	504	551	1058	993	1147	1255	1346	1437	2.0	6.1	2.4	1.4
Rail	217	144	78	65	65	70	75	78	69	-9.8	-1.8	1.5	-0.9
Aviation	276	276	101	200	243	335	403	464	507	-9.6	9.2	5.2	2.3
Inland navigation	18	6	3	4	4	4	4	5	5	-16.9	2.6	1.7	1.4

Source: PRIMES

Cyprus: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**6**	**42**	**45**	**49**	**86**	**174**	**257**	**325**	**387**	**23.2**	**6.6**	**11.6**	**4.2**
Solids	0	0	0	0	0	0	0	0	0				
Oil	0	0	0	0	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	6	42	45	49	86	174	257	325	387	23.2	6.6	11.6	4.2
Hydro	0	0	0	0	0	0	0	0	0				
Biomass & Waste	6	11	10	7	18	37	54	73	84	5.8	6.0	12.0	4.4
Wind	0	0	0	0	0	26	60	82	95				4.8
Solar and others	0	31	35	41	68	111	143	170	208		6.7	7.7	3.9
Geothermal	0	0	0	0	0	0	0	0	1			15.2	23.2
Net Imports	**1638**	**2024**	**2547**	**2816**	**3088**	**3068**	**3188**	**3273**	**3233**	**4.5**	**1.9**	**0.3**	**0.1**
Solids	68	17	36	43	37	42	49	48	52	-6.3	0.4	2.9	0.5
Oil	1570	2007	2511	2773	3050	2660	2713	2761	2664	4.8	2.0	-1.2	-0.2
- Crude oil and Feedstocks	631	797	1153	0	0	0	0	0	0	6.2	-60.7	-0.5	0.0
- Oil products	939	1210	1358	2773	3050	2660	2713	2761	2664	3.8	8.4	-1.2	-0.2
Natural gas	0	0	0	0	0	365	423	458	506			144.8	1.8
Electricity	0	0	0	0	0	0	0	0	0				
Gross Inland Consumption	**1519**	**1976**	**2390**	**2466**	**2856**	**2910**	**3105**	**3247**	**3259**	**4.6**	**1.8**	**0.8**	**0.5**
Solids	60	13	35	36	37	42	49	48	52	-5.3	0.6	2.9	0.5
Oil	1453	1920	2310	2382	2733	2327	2373	2411	2303	4.7	1.7	-1.4	-0.3
Natural gas	0	0	0	0	0	365	423	458	506			144.8	1.8
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	0	0	0	0	0	0	0	0	0				
Renewable energy forms	6	42	45	49	86	176	260	330	399	23.2	6.6	11.7	4.4
as % in Gross Inland Consumption													
Solids	4.0	0.7	1.5	1.4	1.3	1.4	1.6	1.5	1.6				
Oil	95.7	97.2	96.6	96.6	95.7	80.0	76.4	74.2	70.7				
Natural gas	0.0	0.0	0.0	0.0	0.0	12.5	13.6	14.1	15.5				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	0.4	2.1	1.9	2.0	3.0	6.0	8.4	10.2	12.2				
Gross Electricity Generation in GWh_e	**1974**	**2473**	**3369**	**4377**	**4709**	**5398**	**6224**	**6902**	**7414**	**5.5**	**3.4**	**2.8**	**1.8**
Self consumption and grid losses	207	236	353	417	421	410	462	505	509	5.5	1.8	0.9	1.0
Fuel Inputs for Thermal Power Generation	**516**	**641**	**884**	**1077**	**1093**	**942**	**999**	**1052**	**997**	**5.5**	**2.1**	**-0.9**	**0.0**
Solids	0	0	0	0	0	0	0	0	0				
Oil (including refinery gas)	516	641	884	1077	1085	557	545	548	437	5.5	2.1	-6.7	-2.2
Gas	0	0	0	0	0	365	423	458	505				1.8
Biomass & Waste	0	0	0	0	7	21	31	46	55			16.0	5.7
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**643**	**828**	**1171**	**0**	**4**	**11**	**18**	**25**	**33**	**6.2**	**-44.0**	**17.5**	**6.4**
Refineries	643	828	1171	0	0	0	0	0	0	6.2	-60.7	-0.5	0.0
Biofuels and hydrogen production	0	0	0	0	3	10	18	25	33			17.8	6.5
District heating	0	0	0	0	0	0	0	0	0				
Others	0	0	0	0	0	0	0	0	0				
Energy Branch Consumption	**41**	**43**	**54**	**22**	**21**	**17**	**18**	**19**	**16**	**2.7**	**-9.1**	**-1.5**	**-1.0**
Non-Energy Uses	**31**	**62**	**84**	**71**	**61**	**60**	**61**	**63**	**67**	**10.6**	**-3.1**	**-0.1**	**1.0**
Final Energy Demand	**1099**	**1414**	**1640**	**1809**	**2072**	**2311**	**2477**	**2589**	**2661**	**4.1**	**2.4**	**1.8**	**0.7**
by sector													
Industry	277	391	442	316	326	350	370	389	399	4.8	-3.0	1.3	0.8
- energy intensive industries	127	220	225	196	205	223	236	249	257	5.9	-0.9	1.4	0.9
- other industrial sectors	150	171	217	120	120	127	134	140	143	3.7	-5.7	1.1	0.6
Residential	110	179	215	319	363	404	450	469	489	6.9	5.4	2.2	0.8
Tertiary	82	91	129	203	314	399	454	505	537	4.6	9.3	3.8	1.7
Transport	629	752	854	972	1070	1157	1203	1226	1236	3.1	2.3	1.2	0.3
by fuel													
Solids	76	13	35	36	37	42	49	48	52	-7.5	0.6	2.9	0.5
Oil	867	1167	1302	1385	1586	1710	1767	1800	1799	4.2	2.0	1.1	0.2
Gas	0	0	0	0	0	0	0	0	0			5.4	-0.8
Electricity	151	191	258	340	369	429	496	550	594	5.5	3.7	3.0	1.8
Heat (from CHP and District Heating) [A]	0	0	0	0	2	3	4	5	4			9.1	0.4
Renewable energy forms	6	42	45	49	78	127	160	186	212	23.2	5.6	7.5	2.9
Other	0	0	0	0	0	0	0	0	0			10.1	0.3
RES in Gross Final Energy Consumption [B]			**44**	**48**	**82**	**167**	**242**	**306**	**369**		**6.4**	**11.4**	**4.3**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**5.5**		**9.5**	**9.4**	**9.9**	**9.5**	**9.8**	**10.2**	**10.0**	**5.7**	**0.4**	**-0.1**	**0.2**
of which ETS sectors GHGs emissions				4.9	5.1	4.4	4.7	4.9	4.8			-0.8	0.2
CO_2 Emissions (energy related)	**4.6**	**5.7**	**7.0**	**7.7**	**8.3**	**7.9**	**8.2**	**8.4**	**8.1**	**4.2**	**1.8**	**-0.2**	**0.0**
Power generation/District heating	1.7	2.1	2.8	3.5	3.5	2.6	2.7	2.8	2.6	5.5	2.1	-2.4	-0.6
Energy Branch	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.8			
Industry	0.8	1.1	1.3	0.9	0.9	0.9	1.0	1.0	1.0	4.3	-3.7	1.2	0.5
Residential	0.2	0.2	0.2	0.5	0.5	0.5	0.5	0.4	0.4	2.4	7.9	0.2	-1.4
Tertiary	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.5	0.5			3.0	1.5
Transport	1.9	2.2	2.5	2.9	3.2	3.4	3.5	3.6	3.6	3.1	2.2	1.1	0.2
CO_2 Emissions (non energy related)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**				
Non-CO_2 GHGs Emissions	**0.8**		**2.5**	**1.7**	**1.6**	**1.7**	**1.6**	**1.8**	**1.9**	**11.7**	**-4.5**	**0.3**	**1.5**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**174.1**	**173.2**	**181.8**	**175.2**	**180.1**	**186.6**	**184.2**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Cyprus: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	0.573	0.645	0.690	0.749	0.821	0.888	0.955	1.017	1.072	1.9	1.7	1.5	1.2
GDP (in 000 MEuro'05)	7.5	9.7	11.7	13.7	15.6	18.7	22.5	26.7	30.9	4.6	2.9	3.8	3.2
Gross Inl. Cons./GDP (toe/MEuro'05)	203.6	204.4	205.1	180.5	183.6	155.8	137.8	121.5	105.4	0.1	-1.1	-2.8	-2.7
Carbon intensity (t of CO_2/toe of GIC)	3.04	2.88	2.92	3.13	2.92	2.71	2.64	2.58	2.50	-0.4	0.0	-1.0	-0.5
Import Dependency %	103.9	99.1	98.7	100.8	97.3	94.6	92.5	91.0	89.3				
Total Energy-related Costs [C] (in 000 M€05)			1.2	1.8	2.2	2.6	3.3	3.9	4.2		6.1	4.4	2.4
as % of GDP			10.4	13.2	14.0	13.7	14.8	14.7	13.7				
Energy intensity indicators													
Industry (Energy on Value added)	71.9	89.2	100.0	68.2	63.4	58.4	52.7	48.1	44.0	3.4	-4.4	-1.8	-1.8
Residential (Energy on Private Income)	92.3	102.4	100.0	124.2	126.1	115.8	106.3	93.3	83.9	0.8	2.3	-1.7	-2.3
Tertiary (Energy on Value added)	113.7	89.3	100.0	134.4	181.9	191.5	179.6	167.5	153.1	-1.3	6.2	-0.1	-1.6
Passenger transport (toe/Mpkm)	50.5	48.7	46.1	47.4	46.7	44.0	40.6	36.8	33.5	-0.9	0.1	-1.4	-1.9
Freight transport (toe/Mtkm)	216.8	219.8	225.2	226.3	226.1	224.5	216.5	206.6	195.4	0.4	0.0	-0.4	-1.0
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.84	0.83	0.84	0.79	0.74	0.49	0.44	0.41	0.35	0.0	-1.3	-5.1	-2.3
Final energy demand (t of CO_2/toe)	2.62	2.51	2.46	2.36	2.34	2.27	2.20	2.14	2.09	-0.6	-0.5	-0.6	-0.5
Industry	3.00	2.86	2.87	2.71	2.67	2.65	2.63	2.60	2.57	-0.4	-0.7	-0.1	-0.3
Residential	1.60	1.11	1.05	1.42	1.33	1.21	1.10	0.95	0.87	-4.2	2.4	-1.9	-2.3
Tertiary	0.00	0.00	0.00	0.42	1.10	1.08	1.02	1.04	1.01			-0.7	-0.2
Transport	2.97	2.97	2.98	2.96	2.95	2.94	2.92	2.91	2.89	0.0	-0.1	-0.1	-0.1
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			3.1	3.0	4.5	8.2	11.1	13.5	16.0				
RES in transport (%)			0.0	0.0	0.5	1.4	2.3	3.3	4.6				
Gross Electricity generation by fuel type (in GWh)			**3369**	**4377**	**4709**	**5398**	**6224**	**6902**	**7414**		**3.4**	**2.8**	**1.8**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			0	0	0	0	0	0	0				
Petroleum products			3369	4376	4670	2652	2606	2614	2089		3.3	-5.7	-2.2
Gas (including derived gases)			0	0	0	2323	2693	2928	3532				2.7
Biomass & waste			0	0	28	88	136	218	262			17.0	6.8
Hydro			0	0	0	0	0	0	0				
Wind			0	0	0	300	693	949	1104				4.8
Solar, tidal etc.			0	1	11	34	97	192	428			23.9	16.0
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**940**	**1105**	**1473**	**1816**	**1978**	**2079**	**2624**		**4.6**	**3.0**	**2.9**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			0	1	7	179	390	564	766			48.6	7.0
Hydro (pumping excluded)			0	0	0	0	0	0	0				
Wind			0	0	0	158	330	445	510				4.4
Solar			0	1	7	21	60	119	256			23.2	15.7
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			940	1103	1466	1637	1588	1515	1858		4.5	0.8	1.6
of which cogeneration units			0	0	2	5	6	7	9			12.4	4.2
of which CCS units			0	0	0	0	0	0	0				
Solids fired			0	0	0	0	0	0	0				
Gas fired			0	0	0	566	566	600	1054				6.4
Oil fired			940	1103	1462	1059	1004	889	775		4.5	-3.7	-2.5
Biomass-waste fired			0	0	4	12	19	25	29			17.2	4.7
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			38.9	42.6	34.6	32.7	34.7	36.7	31.4				
Efficiency for thermal electricity production (%)			32.8	35.0	37.0	46.2	46.8	47.1	50.7				
CHP indicator (% of electricity from CHP)			0.0	0.0	0.3	0.5	0.6	0.6	0.6				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			0.0	0.0	0.8	7.8	14.9	19.7	24.2				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			0.0	0.0	0.8	7.8	14.9	19.7	24.2				
Transport sector													
Passenger transport activity (Gpkm)	**8.6**	**10.0**	**12.1**	**13.9**	**16.4**	**18.7**	**21.1**	**23.6**	**26.1**	**3.5**	**3.1**	**2.5**	**2.2**
Public road transport	0.9	1.0	1.1	1.3	1.3	1.4	1.5	1.6	1.7	2.8	1.8	1.4	1.1
Private cars and motorcycles	3.1	3.6	4.1	4.9	6.1	6.6	6.9	7.2	7.5	2.8	4.2	1.2	0.9
Rail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Aviation	4.7	5.4	6.9	7.7	8.9	10.7	12.7	14.8	16.8	4.0	2.5	3.6	2.9
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**0.9**	**1.2**	**1.3**	**1.4**	**1.3**	**1.5**	**1.6**	**1.7**	**1.9**	**3.9**	**0.3**	**1.8**	**1.5**
Trucks	0.9	1.2	1.3	1.4	1.3	1.5	1.6	1.7	1.9	3.9	0.3	1.8	1.5
Rail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Energy demand in transport (ktoe)	**629**	**752**	**854**	**972**	**1070**	**1157**	**1203**	**1226**	**1236**	**3.1**	**2.3**	**1.2**	**0.3**
Public road transport	18	21	24	26	28	29	30	30	30	2.6	1.6	0.7	0.0
Private cars and motorcycles	175	200	246	331	393	398	391	370	342	3.5	4.8	0.0	-1.3
Trucks	194	264	295	315	305	335	347	358	362	4.3	0.3	1.3	0.4
Rail	0	0	0	0	0	0	0	0	0				
Aviation	242	267	290	299	344	395	434	468	501	1.8	1.7	2.4	1.4
Inland navigation	0	0	0	0	0	0	0	0	0				

Source: PRIMES

Czech Republic: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**40090**	**32221**	**29911**	**32845**	**30291**	**30750**	**31895**	**33277**	**34050**	**-2.9**	**0.1**	**0.5**	**0.7**
Solids	36321	27946	25049	23570	20250	19512	19034	17796	17504	-3.6	-2.1	-0.6	-0.8
Oil	223	296	461	600	200	200	200	200	198	7.5	-8.0	0.0	-0.1
Natural gas	201	198	169	154	162	166	163	157	153	-1.7	-0.4	0.1	-0.6
Nuclear	3246	3155	3506	6379	6834	7675	8841	11040	11988	0.8	6.9	2.6	3.1
Renewable energy sources	100	626	727	2142	2844	3197	3656	4085	4208	22.0	14.6	2.5	1.4
Hydro	100	172	151	205	195	198	203	206	209	4.2	2.6	0.4	0.3
Biomass & Waste	0	454	576	1933	2583	2850	3232	3614	3683		16.2	2.3	1.3
Wind	0	0	0	2	30	61	93	108	122			12.0	2.8
Solar and others	0	0	0	2	36	88	128	157	193			13.5	4.2
Geothermal	0	0	0	0	0	0	0	0	0			2.1	0.1
Net Imports	**7684**	**8716**	**9448**	**12896**	**14056**	**14802**	**14934**	**14435**	**13731**	**2.1**	**4.1**	**0.6**	**-0.8**
Solids	-5690	-5762	-4765	-3179	-3077	-3403	-3497	-3577	-3733				
Oil	8648	8019	7593	9813	10202	11180	11415	11504	11213	-1.3	3.0	1.1	-0.2
- Crude oil and Feedstocks	7440	7071	5655	7857	8251	9000	9179	9247	9127	-2.7	3.8	1.1	-0.1
- Oil products	1209	948	1937	1956	1951	2180	2236	2258	2086	4.8	0.1	1.4	-0.7
Natural gas	4786	6424	7482	7535	7940	8136	8008	7666	7510	4.6	0.6	0.1	-0.6
Electricity	-60	36	-861	-1086	-818	-945	-839	-1019	-1152				
Gross Inland Consumption	**48992**	**41605**	**40506**	**45319**	**44347**	**45552**	**46829**	**47712**	**47781**	**-1.9**	**0.9**	**0.5**	**0.2**
Solids	31433	23062	21598	20300	17174	16109	15538	14219	13771	-3.7	-2.3	-1.0	-1.2
Oil	9025	8174	8036	10068	10402	11380	11615	11704	11410	-1.2	2.6	1.1	-0.2
Natural gas	5248	6552	7500	7703	8102	8303	8172	7823	7664	3.6	0.8	0.1	-0.6
Nuclear	3246	3155	3506	6379	6834	7675	8841	11040	11988	0.8	6.9	2.6	3.1
Electricity	-60	36	-861	-1086	-818	-945	-839	-1019	-1152				
Renewable energy forms	100	626	727	1955	2653	3031	3502	3946	4100	22.0	13.8	2.8	1.6
as % in Gross Inland Consumption													
Solids	64.2	55.4	53.3	44.8	38.7	35.4	33.2	29.8	28.8				
Oil	18.4	19.6	19.8	22.2	23.5	25.0	24.8	24.5	23.9				
Natural gas	10.7	15.7	18.5	17.0	18.3	18.2	17.5	16.4	16.0				
Nuclear	6.6	7.6	8.7	14.1	15.4	16.8	18.9	23.1	25.1				
Renewable energy forms	0.2	1.5	1.8	4.3	6.0	6.7	7.5	8.3	8.6				
Gross Electricity Generation in GWh_e	**62260**	**60564**	**72898**	**81916**	**80425**	**89581**	**94634**	**103594**	**109713**	**1.6**	**1.0**	**1.6**	**1.5**
Self consumption and grid losses	8840	9047	10756	11776	11085	12310	13085	15363	16769	2.0	0.3	1.7	2.5
Fuel Inputs for Thermal Power Generation	**15255**	**11006**	**15753**	**15729**	**15049**	**14238**	**14066**	**13080**	**12928**	**0.3**	**-0.5**	**-0.7**	**-0.8**
Solids	14213	10002	13911	14061	13393	12258	12040	10877	10584	-0.2	-0.4	-1.1	-1.3
Oil (including refinery gas)	741	311	203	152	41	51	39	35	30	-12.2	-14.7	-0.5	-2.7
Gas	300	573	1270	1292	1205	1350	1240	1233	1221	15.5	-0.5	0.3	-0.2
Biomass & Waste	0	119	369	224	410	578	748	935	1093		1.0	6.2	3.9
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**18077**	**14555**	**11640**	**13441**	**12155**	**12670**	**12760**	**12795**	**12576**	**-4.3**	**0.4**	**0.5**	**-0.1**
Refineries	8005	7299	6218	8278	8519	9291	9480	9551	9432	-2.5	3.2	1.1	-0.1
Biofuels and hydrogen production	0	11	0	3	238	349	464	518	554			6.9	1.8
District heating	1830	1361	966	922	798	688	675	708	635	-6.2	-1.9	-1.7	-0.6
Others	8242	5885	4456	4239	2599	2341	2140	2018	1955	-6.0	-5.2	-1.9	-0.9
Energy Branch Consumption	**2116**	**1673**	**1919**	**1944**	**2040**	**2139**	**2151**	**2279**	**2353**	**-1.0**	**0.6**	**0.5**	**0.9**
Non-Energy Uses	**1713**	**2379**	**2090**	**2939**	**2856**	**3203**	**3341**	**3509**	**3564**	**2.0**	**3.2**	**1.6**	**0.6**
Final Energy Demand	**32224**	**25067**	**23562**	**25846**	**26638**	**28471**	**29199**	**29482**	**29247**	**-3.1**	**1.2**	**0.9**	**0.0**
by sector													
Industry	16258	12339	9723	9593	9311	10042	10137	10153	10108	-5.0	-0.4	0.9	0.0
- energy intensive industries	6961	5795	5990	6654	6058	6376	6295	6240	6150	-1.5	0.1	0.4	-0.2
- other industrial sectors	9297	6544	3733	2939	3252	3666	3841	3913	3959	-8.7	-1.4	1.7	0.3
Residential	7848	5433	5301	6019	6265	6452	6637	6637	6546	-3.8	1.7	0.6	-0.1
Tertiary	5306	4438	4161	4070	4181	4332	4501	4717	4827	-2.4	0.0	0.7	0.7
Transport	2812	2857	4377	6164	6881	7645	7924	7976	7766	4.5	4.6	1.4	-0.2
by fuel													
Solids	13719	5797	4778	3636	2505	2706	2484	2356	2212	-10.0	-6.3	-0.1	-1.2
Oil	6257	5048	5397	6940	7313	7939	8024	7976	7677	-1.5	3.1	0.9	-0.4
Gas	5146	6119	6419	6581	6805	6856	6784	6366	6205	2.2	0.6	0.0	-0.9
Electricity	4142	4129	4243	4750	4957	5512	5987	6379	6652	0.2	1.6	1.9	1.1
Heat (from CHP and District Heating) [A]	2959	3664	2624	2478	3124	3367	3579	3803	3897	-1.2	1.8	1.4	0.9
Renewable energy forms	0	308	102	1461	1934	2091	2339	2600	2602		34.2	1.9	1.1
Other	0	0	0	0	1	1	1	2	2			10.8	0.5
RES in Gross Final Energy Consumption [B]			**454**	**1663**	**2370**	**2731**	**3210**	**3657**	**3810**		**18.0**	**3.1**	**1.7**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**207.5**		**150.8**	**149.5**	**140.1**	**137.7**	**135.1**	**125.0**	**117.9**	**-3.1**	**-0.7**	**-0.4**	**-1.4**
of which ETS sectors GHGs emissions				86.5	77.7	73.1	71.9	63.4	58.1			-0.8	-2.1
CO_2 Emissions (energy related)	**158.4**	**104.2**	**117.9**	**118.5**	**110.9**	**109.0**	**106.7**	**96.5**	**89.4**	**-2.9**	**-0.6**	**-0.4**	**-1.8**
Power generation/District heating	67.0	48.0	64.0	64.2	60.4	55.7	54.5	46.0	40.8	-0.4	-0.6	-1.0	-2.9
Energy Branch	2.3	1.6	2.2	2.4	1.9	1.9	1.8	1.7	1.7	-0.4	-1.3	-0.8	-0.4
Industry	46.9	27.6	24.5	21.6	16.9	17.9	16.8	15.8	15.0	-6.3	-3.6	-0.1	-1.2
Residential	21.6	9.9	8.1	6.9	6.9	7.0	6.9	6.4	6.3	-9.3	-1.6	0.0	-0.9
Tertiary	13.2	9.3	6.7	5.6	5.5	5.3	5.1	4.9	4.8	-6.5	-1.9	-0.8	-0.6
Transport	7.5	7.8	12.4	17.8	19.3	21.2	21.7	21.7	20.9	5.1	4.5	1.2	-0.4
CO_2 Emissions (non energy related)	**18.3**	**13.5**	**12.4**	**11.3**	**10.2**	**11.0**	**11.5**	**11.9**	**12.0**	**-3.8**	**-1.9**	**1.2**	**0.5**
Non-CO_2 GHGs Emissions	**30.8**		**20.5**	**19.7**	**19.0**	**17.7**	**16.9**	**16.6**	**16.5**	**-4.0**	**-0.8**	**-1.2**	**-0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**72.7**	**72.0**	**67.5**	**66.4**	**65.1**	**60.2**	**56.8**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)									Czech Republic: Baseline 2009				
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	10.362	10.333	10.278	10.221	10.394	10.497	10.543	10.516	10.420	-0.1	0.1	0.1	-0.1
GDP (in 000 MEuro'05)	81.3	77.5	83.4	100.2	114.3	134.8	154.2	169.4	182.5	0.3	3.2	3.0	1.7
Gross Inl. Cons./GDP (toe/MEuro'05)	602.6	537.1	485.7	452.3	388.0	337.9	303.8	281.7	261.8	-2.1	-2.2	-2.4	-1.5
Carbon intensity (t of CO_2/toe of GIC)	3.23	2.50	2.91	2.62	2.50	2.39	2.28	2.02	1.87	-1.0	-1.5	-0.9	-2.0
Import Dependency %	15.7	21.0	23.3	28.5	31.7	32.5	31.9	30.3	28.7				
Total Energy-related Costs (C) (in 000 M€05)			15.3	18.1	19.9	24.7	30.7	34.7	36.1		2.6	4.4	1.6
as % of GDP			18.4	18.1	17.4	18.3	19.9	20.5	19.8				
Energy intensity indicators													
Industry (Energy on Value added)	196.2	170.1	100.0	73.8	61.5	56.2	50.7	46.9	43.9	-6.5	-4.7	-1.9	-1.4
Residential (Energy on Private Income)	163.9	117.2	100.0	97.2	90.2	79.3	71.4	65.2	60.0	-4.8	-1.0	-2.3	-1.7
Tertiary (Energy on Value added)	194.0	113.2	100.0	80.7	73.4	63.3	56.6	53.4	50.3	-6.4	-3.0	-2.6	-1.2
Passenger transport (toe/Mpkm)	19.6	19.5	25.5	31.2	30.7	28.6	26.9	25.4	23.4	2.6	1.9	-1.3	-1.4
Freight transport (toe/Mtkm)	18.9	18.1	31.8	45.8	46.1	45.9	44.1	42.1	39.7	5.4	3.8	-0.4	-1.0
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.64	0.44	0.57	0.53	0.46	0.38	0.35	0.28	0.24	-1.0	-2.2	-2.5	-3.9
Final energy demand (t of CO_2/toe)	2.77	2.18	2.19	2.01	1.82	1.80	1.73	1.66	1.60	-2.3	-1.8	-0.5	-0.7
Industry	2.88	2.24	2.52	2.25	1.82	1.78	1.66	1.56	1.48	-1.3	-3.2	-0.9	-1.1
Residential	2.75	1.83	1.53	1.15	1.10	1.08	1.04	0.96	0.96	-5.7	-3.3	-0.6	-0.8
Tertiary	2.48	2.09	1.61	1.37	1.32	1.22	1.13	1.05	0.99	-4.2	-2.0	-1.5	-1.3
Transport	2.68	2.71	2.83	2.89	2.80	2.77	2.74	2.72	2.69	0.6	-0.1	-0.2	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			1.8	6.1	8.4	9.0	10.3	11.6	12.1				
RES in transport (%)			0.2	0.2	3.9	5.1	6.6	7.4	8.2				
Gross Electricity generation by fuel type (in GWh)			**72898**	**81916**	**80425**	**89581**	**94634**	**103594**	**109713**		**1.0**	**1.6**	**1.5**
Nuclear energy			13588	24724	26495	29753	34627	44076	48207		6.9	2.7	3.4
Coal and lignite			52069	48848	43057	46004	46070	44677	46059		-1.9	0.7	0.0
Petroleum products			421	416	203	264	205	184	157		-7.0	0.1	-2.6
Gas (including derived gases)			3893	4714	6384	7679	6957	6900	6529		5.1	0.9	-0.6
Biomass & waste			1170	814	1606	2690	3109	3848	4638		3.2	6.8	4.1
Hydro			1758	2380	2263	2306	2361	2390	2433		2.6	0.4	0.3
Wind			0	21	348	713	1077	1256	1418			12.0	2.8
Solar, tidal etc.			0	0	70	172	228	261	273			12.6	1.8
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**13222**	**15228**	**14760**	**17262**	**18014**	**19298**	**20304**		**1.1**	**2.0**	**1.2**
Nuclear energy			1706	3621	3636	3651	4259	5406	5908		7.9	1.6	3.3
Renewable energy			948	1045	1508	1966	2421	2664	2854		4.7	4.8	1.7
Hydro (pumping excluded)			947	1016	1045	1053	1065	1083	1088		1.0	0.2	0.2
Wind			1	29	364	734	1119	1310	1483		80.3	11.9	2.9
Solar			0	0	99	179	236	271	283			9.1	1.8
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			10568	10563	9616	11645	11334	11227	11542		-0.9	1.7	0.2
of which cogeneration units			3510	3621	4092	5306	5661	6008	6273		1.5	3.3	1.0
of which CCS units			0	0	0	0	0	439	933				
Solids fired			9090	8987	7985	9858	9502	9298	9522		-1.3	1.8	0.0
Gas fired			1207	1300	1333	1324	1326	1324	1342		1.0	-0.1	0.1
Oil fired			129	133	136	271	200	173	154		0.6	3.9	-2.6
Biomass-waste fired			143	143	162	191	307	431	524		1.3	6.6	5.5
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			58.1	56.5	57.8	55.1	55.9	56.4	56.4				
Efficiency for thermal electricity production (%)			31.4	30.0	29.3	34.2	34.4	36.6	38.2				
CHP indicator (% of electricity from CHP)			19.4	18.1	26.5	39.6	39.4	39.0	39.0				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	4.6	8.7				
Non fossil fuels in electricity generation (%)			22.7	34.1	38.3	39.8	43.7	50.0	51.9				
- nuclear			18.6	30.2	32.9	33.2	36.6	42.5	43.9				
- renewable energy forms and industrial waste			4.0	3.9	5.3	6.6	7.2	7.5	8.0				
Transport sector													
Passenger transport activity (Gpkm)	**85.3**	**96.3**	**103.4**	**111.9**	**122.0**	**139.2**	**151.6**	**160.8**	**168.7**	**1.9**	**1.7**	**2.2**	**1.1**
Public road transport	14.1	18.6	16.2	15.6	16.3	17.2	17.9	18.4	18.8	1.4	0.1	1.0	0.5
Private cars and motorcycles	45.7	58.1	66.8	71.8	79.8	91.9	98.7	101.9	105.7	3.9	1.8	2.2	0.7
Rail	20.9	15.7	15.4	14.6	14.7	15.3	16.0	16.7	17.2	-3.0	-0.4	0.8	0.7
Aviation	4.6	3.9	5.0	9.9	11.3	14.8	19.0	23.8	27.1	0.7	8.6	5.3	3.6
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**60.3**	**54.2**	**54.9**	**58.4**	**68.1**	**79.7**	**87.3**	**92.6**	**96.3**	**-0.9**	**2.2**	**2.5**	**1.0**
Trucks	18.6	31.3	37.3	43.4	51.3	60.6	66.4	70.4	73.4	7.2	3.2	2.6	1.0
Rail	38.0	22.6	17.5	14.9	16.7	19.0	20.9	22.1	22.8	-7.5	-0.4	2.2	0.9
Inland navigation	3.7	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-31.8	-1.0	1.8	0.5
Energy demand in transport (ktoe)	**2812**	**2857**	**4377**	**6164**	**6881**	**7645**	**7924**	**7976**	**7766**	**4.5**	**4.6**	**1.4**	**-0.2**
Public road transport	100	131	112	107	110	114	113	111	107	1.1	-0.1	0.3	-0.6
Private cars and motorcycles	1351	1518	2249	2961	3172	3312	3315	3239	3058	5.2	3.5	0.4	-0.8
Trucks	768	783	1509	2476	2915	3412	3604	3655	3620	7.0	6.8	2.1	0.0
Rail	272	200	304	272	290	312	305	295	259	1.1	-0.5	0.5	-1.6
Aviation	174	185	197	344	388	488	579	669	715	1.3	7.0	4.1	2.1
Inland navigation	147	40	5	5	6	6	7	7	7	-28.6	1.2	1.7	0.4

Source: PRIMES

Denmark: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**10062**	**15593**	**27665**	**31280**	**25952**	**22971**	**19361**	**17572**	**15448**	**10.6**	**-0.6**	**-2.9**	**-2.2**
Solids	0	0	0	0	0	0	0	0	0				
Oil	6093	9357	18189	18942	14670	12500	9500	8500	7500	11.6	-2.1	-4.3	-2.3
Natural gas	2770	4702	7412	9383	8100	6980	6040	4800	3500	10.3	0.9	-2.9	-5.3
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	1199	1534	2065	2955	3182	3491	3821	4272	4448	5.6	4.4	1.8	1.5
Hydro	2	3	3	2	2	2	2	2	2	1.1	-3.5	2.4	-0.1
Biomass & Waste	1140	1423	1687	2371	2460	2526	2662	2799	2895	4.0	3.8	0.8	0.8
Wind	52	101	365	569	686	888	1034	1280	1322	21.4	6.5	4.2	2.5
Solar and others	2	5	8	10	33	75	122	190	229	12.9	15.3	13.9	6.5
Geothermal	2	2	3	3	0	0	0	0	0	1.9	-36.1	1.0	0.4
Net Imports	**8621**	**7544**	**-7259**	**-10433**	**-6143**	**-3306**	**501**	**2152**	**3994**				**23.1**
Solids	6216	7664	3784	3540	3311	2906	2712	2536	2435	-4.8	-1.3	-2.0	-1.1
Oil	2727	1439	-8277	-9388	-6466	-4421	-1530	-678	-77				
- Crude oil and Feedstocks	2036	804	-9803	-11214	-7199	-5096	-2156	-1233	-431				
- Oil products	691	635	1526	1826	733	675	625	555	354	8.3	-7.1	-1.6	-5.5
Natural gas	-928	-1496	-2882	-5010	-3584	-2670	-1746	-934	353				
Electricity	606	-68	57	118	92	118	136	185	184	-21.0	4.9	3.9	3.1
Gross Inland Consumption	**17893**	**20283**	**19522**	**19702**	**19049**	**18879**	**19061**	**18904**	**18601**	**0.9**	**-0.2**	**0.0**	**-0.2**
Solids	6088	6498	3987	3751	3311	2906	2712	2536	2435	-4.1	-1.8	-2.0	-1.1
Oil	8181	9143	8905	8171	7444	7294	7169	7002	6581	0.9	-1.8	-0.4	-0.9
Natural gas	1818	3170	4449	4399	4516	4310	4294	3866	3853	9.4	0.1	-0.5	-1.1
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	608	-68	57	118	92	118	136	185	184	-21.0	4.9	3.9	3.1
Renewable energy forms	1199	1540	2124	3262	3685	4251	4750	5315	5547	5.9	5.7	2.6	1.6
as % in Gross Inland Consumption													
Solids	34.0	32.0	20.4	19.0	17.4	15.4	14.2	13.4	13.1				
Oil	45.7	45.1	45.6	41.5	39.1	38.6	37.6	37.0	35.4				
Natural gas	10.2	15.6	22.8	22.3	23.7	22.8	22.5	20.5	20.7				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	6.7	7.6	10.9	16.6	19.3	22.5	24.9	28.1	29.8				
Gross Electricity Generation in GWh_e	**25733**	**36648**	**36043**	**36348**	**36656**	**37969**	**39018**	**40545**	**41859**	**3.4**	**0.2**	**0.6**	**0.7**
Self consumption and grid losses	3289	4389	3708	3457	3323	3243	3318	3807	3938	1.2	-1.1	0.0	1.7
Fuel Inputs for Thermal Power Generation	**6016**	**8423**	**7821**	**7165**	**6364**	**6344**	**6319**	**6247**	**6359**	**2.7**	**-2.0**	**-0.1**	**0.1**
Solids	5541	6061	3667	3444	3102	2709	2520	2347	2237	-4.0	-1.7	-2.1	-1.2
Oil (including refinery gas)	237	1008	1344	344	69	62	58	75	33	19.0	-25.7	-1.7	-5.5
Gas	174	975	2112	2003	1757	1813	1887	1607	1567	28.4	-1.8	0.7	-1.8
Biomass & Waste	65	378	699	1374	1436	1759	1854	2219	2522	26.9	7.5	2.6	3.1
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**9099**	**10781**	**9008**	**8362**	**8395**	**8229**	**8340**	**8257**	**8035**	**-0.1**	**-0.7**	**-0.1**	**-0.4**
Refineries	8048	9985	8472	7841	7471	7404	7344	7267	7069	0.5	-1.2	-0.2	-0.4
Biofuels and hydrogen production	0	0	0	0	134	221	315	343	370			8.9	1.6
District heating	1009	766	519	508	790	604	681	647	596	-6.4	4.3	-1.5	-1.3
Others	42	31	17	13	0	0	0	0	0	-8.4			
Energy Branch Consumption	**733**	**1010**	**1157**	**1264**	**1246**	**1167**	**1135**	**1078**	**1031**	**4.7**	**0.7**	**-0.9**	**-1.0**
Non-Energy Uses	**299**	**298**	**298**	**285**	**263**	**277**	**287**	**301**	**317**	**0.0**	**-1.2**	**0.9**	**1.0**
Final Energy Demand	**13522**	**14750**	**14638**	**15457**	**15064**	**15304**	**15469**	**15447**	**15214**	**0.8**	**0.3**	**0.3**	**-0.2**
by sector													
Industry	2715	3031	2941	2866	2612	2503	2527	2575	2621	0.8	-1.2	-0.3	0.4
- energy intensive industries	1078	1125	1149	1117	979	932	936	949	961	0.6	-1.6	-0.4	0.3
- other industrial sectors	1637	1906	1792	1749	1633	1572	1590	1626	1660	0.9	-0.9	-0.3	0.4
Residential	3954	4474	4158	4462	4520	4721	4781	4786	4779	0.5	0.8	0.6	0.0
Tertiary	2829	2786	2807	2861	2832	2870	2924	2990	3013	-0.1	0.1	0.3	0.3
Transport	4024	4460	4732	5269	5100	5210	5238	5096	4802	1.6	0.8	0.3	-0.9
by fuel													
Solids	396	405	290	253	207	196	191	187	198	-3.1	-3.3	-0.8	0.4
Oil	7127	7162	6979	7234	6613	6498	6365	6196	5849	-0.2	-0.5	-0.4	-0.8
Gas	1159	1691	1667	1702	1785	1752	1637	1553	1493	3.7	0.7	-0.9	-0.9
Electricity	2517	2655	2791	2877	2895	3042	3143	3282	3385	1.0	0.4	0.8	0.7
Heat (from CHP and District Heating) [A]	1758	2242	2255	2444	2449	2665	2726	2821	2841	2.5	0.8	1.1	0.4
Renewable energy forms	566	595	657	947	1114	1151	1407	1407	1447	1.5	5.4	2.4	0.3
Other	0	0	0	0	0	1	1	1	1			8.3	0.5
RES in Gross Final Energy Consumption [B]			**1812**	**2774**	**3131**	**3790**	**4282**	**4828**	**5068**		**5.6**	**3.2**	**1.7**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**69.5**		**69.4**	**64.5**	**59.8**	**57.1**	**56.0**	**53.8**	**52.0**	**0.0**	**-1.5**	**-0.7**	**-0.7**
of which ETS sectors GHGs emissions				29.2	25.1	23.3	23.3	22.1	21.3			-0.8	-0.9
CO_2 Emissions (energy related)	**51.7**	**59.3**	**52.3**	**48.9**	**44.6**	**42.1**	**41.0**	**38.8**	**37.0**	**0.1**	**-1.6**	**-0.9**	**-1.0**
Power generation/District heating	24.5	30.2	24.0	19.7	17.4	15.5	15.1	13.9	13.3	-0.2	-3.2	-1.4	-1.3
Energy Branch	1.5	2.0	2.4	2.5	2.4	2.3	2.2	2.0	1.9	4.9	0.3	-1.0	-1.6
Industry	5.4	5.9	5.2	4.9	4.1	3.6	3.5	3.5	3.4	-0.3	-2.4	-1.5	-0.2
Residential	4.9	4.9	3.9	3.5	3.6	3.6	3.2	2.9	2.8	-2.3	-0.7	-1.3	-1.2
Tertiary	3.6	3.1	2.9	2.7	2.4	2.4	2.4	2.4	2.5	-2.0	-1.9	-0.1	0.4
Transport	11.9	13.2	13.9	15.6	14.7	14.8	14.6	14.1	13.1	1.6	0.5	-0.1	-1.1
CO_2 Emissions (non energy related)	**1.5**	**1.9**	**2.4**	**2.2**	**2.1**	**2.2**	**2.2**	**2.3**	**2.3**	**4.8**	**-1.3**	**0.4**	**0.4**
Non-CO_2 GHGs Emissions	**16.3**		**14.7**	**13.4**	**13.1**	**12.8**	**12.8**	**12.7**	**12.7**	**-1.0**	**-1.2**	**-0.2**	**-0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**99.9**	**92.7**	**86.0**	**82.1**	**80.5**	**77.3**	**74.8**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Denmark: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	5.135	5.216	5.330	5.411	5.512	5.591	5.661	5.736	5.808	0.4	0.3	0.3	0.3
GDP (in 000 MEuro'05)	150.8	169.2	194.8	207.4	209.0	226.9	245.9	268.3	289.6	2.6	0.7	1.6	1.7
Gross Inl. Cons./GDP (toe/MEuro'05)	118.7	119.8	100.2	95.0	91.2	83.2	77.5	70.5	64.2	-1.7	-0.9	-1.6	-1.9
Carbon intensity (t of CO_2/toe of GIC)	2.89	2.92	2.68	2.48	2.34	2.23	2.15	2.05	1.99	-0.7	-1.3	-0.9	-0.8
Import Dependency %	45.7	34.5	-34.8	-50.8	-31.0	-16.8	2.5	10.9	20.5				
Total Energy-related Costs [C] (in 000 M€05)			16.9	18.2	18.6	21.1	24.5	26.8	27.8		1.0	2.8	1.3
as % of GDP			8.7	8.8	8.9	9.3	10.0	10.0	9.6				
Energy intensity indicators													
Industry (Energy on Value added)	105.2	105.9	100.0	91.7	84.4	75.8	71.6	66.9	63.6	-0.5	-1.7	-1.6	-1.2
Residential (Energy on Private Income)	114.7	115.7	100.0	96.2	100.0	97.2	91.3	84.2	77.4	-1.4	0.0	-0.9	-1.6
Tertiary (Energy on Value added)	127.4	113.7	100.0	97.5	94.1	86.7	81.3	76.1	70.9	-2.4	-0.6	-1.5	-1.4
Passenger transport (toe/Mpkm)	36.5	37.6	38.1	41.0	39.7	36.8	35.5	32.4	28.7	0.4	0.4	-1.1	-2.1
Freight transport (toe/Mtkm)	69.2	66.4	66.6	74.5	74.0	73.5	70.4	66.9	61.9	-0.4	1.1	-0.5	-1.3
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.48	0.43	0.35	0.27	0.24	0.20	0.19	0.17	0.16	-3.1	-3.7	-2.2	-1.7
Final energy demand (t of CO_2/toe)	1.91	1.84	1.77	1.73	1.65	1.59	1.53	1.49	1.43	-0.7	-0.7	-0.7	-0.6
Industry	1.98	1.95	1.77	1.70	1.57	1.43	1.39	1.37	1.31	-1.1	-1.2	-1.2	-0.5
Residential	1.24	1.09	0.94	0.79	0.80	0.76	0.67	0.61	0.59	-2.8	-1.6	-1.8	-1.2
Tertiary	1.27	1.12	1.04	0.94	0.85	0.82	0.82	0.81	0.83	-1.9	-2.0	-0.4	0.1
Transport	2.96	2.95	2.95	2.96	2.88	2.84	2.78	2.76	2.72	0.0	-0.2	-0.3	-0.2
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			11.7	16.9	19.6	23.4	26.3	29.8	31.5				
RES in transport (%)			0.1	0.2	3.5	5.7	8.3	9.5	11.1				
Gross Electricity generation by fuel type (in GWh)			**36043**	**36348**	**36656**	**37969**	**39018**	**40545**	**41859**		**0.2**	**0.6**	**0.7**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			15757	15052	13764	12061	11159	9839	9636		-1.3	-2.1	-1.5
Petroleum products			4920	1371	317	252	232	284	133		-24.0	-3.1	-5.4
Gas (including derived gases)			9246	9308	9327	8954	9182	7690	7523		0.1	-0.2	-2.0
Biomass & waste			1849	3982	5239	6318	6334	7740	9063		11.0	1.9	3.6
Hydro			30	23	21	27	27	25	26		-3.5	2.4	-0.1
Wind			4240	6613	7981	10321	12027	14887	15374		6.5	4.2	2.5
Solar, tidal etc.			0	0	6	36	57	78	104			24.5	6.2
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**12431**	**13128**	**13199**	**12853**	**12092**	**12987**	**13456**		**0.6**	**-0.9**	**1.1**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			2403	3143	3746	4251	4811	5783	5983		4.5	2.5	2.2
Hydro (pumping excluded)			10	11	11	11	11	11	11		1.0	0.0	0.0
Wind			2392	3129	3719	4202	4741	5690	5864		4.5	2.5	2.1
Solar			1	3	16	38	60	81	109		32.0	14.0	6.2
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			10028	9985	9452	8603	7281	7204	7473		-0.6	-2.6	0.3
of which cogeneration units			4488	4691	4692	5044	4955	5063	5354		0.4	0.5	0.8
of which CCS units			0	0	0	0	0	0	41				
Solids fired			6232	5752	5269	4451	3503	3466	3459		-1.7	-4.0	-0.1
Gas fired			2092	2257	2227	2232	2376	2371	2552		0.6	0.6	0.7
Oil fired			1124	1099	1022	982	387	228	117		-0.9	-9.2	-11.3
Biomass-waste fired			581	877	934	937	1015	1138	1345		4.9	0.8	2.9
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			31.6	30.0	30.3	32.4	35.5	34.0	33.9				
Efficiency for thermal electricity production (%)			34.9	35.7	38.7	37.4	36.6	35.2	35.6				
CHP indicator (% of electricity from CHP)			55.4	59.0	65.9	66.4	62.0	57.4	57.9				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.8				
Non fossil fuels in electricity generation (%)			17.0	29.2	36.1	44.0	47.3	56.1	58.7				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			17.0	29.2	36.1	44.0	47.3	56.1	58.7				
Transport sector													
Passenger transport activity (Gpkm)	**68.9**	**71.6**	**76.1**	**79.5**	**82.8**	**88.9**	**92.6**	**96.8**	**100.5**	**1.0**	**0.8**	**1.1**	**0.8**
Public road transport	6.4	7.3	7.4	7.3	7.4	7.8	8.0	8.3	8.5	1.4	0.0	0.8	0.6
Private cars and motorcycles	48.0	49.1	51.9	53.7	56.1	59.6	60.4	61.4	62.1	0.8	0.8	0.7	0.3
Rail	5.1	4.9	5.5	6.1	6.4	6.8	7.3	7.8	8.3	0.9	1.4	1.4	1.2
Aviation	5.2	6.5	7.9	9.3	9.8	11.5	13.5	15.7	17.9	4.3	2.2	3.2	2.9
Inland navigation	4.2	3.8	3.3	3.0	3.1	3.2	3.4	3.6	3.7	-2.5	-0.6	0.9	0.9
Freight transport activity (Gtkm)	**21.7**	**26.7**	**27.5**	**27.0**	**24.5**	**26.3**	**27.6**	**29.3**	**30.9**	**2.4**	**-1.1**	**1.2**	**1.1**
Trucks	18.1	22.4	24.0	23.3	21.0	22.6	23.8	25.2	26.6	2.9	-1.3	1.2	1.1
Rail	1.7	2.0	2.0	2.0	1.8	1.9	2.0	2.1	2.3	1.6	-1.2	1.1	1.4
Inland navigation	1.9	2.3	1.5	1.7	1.7	1.8	1.9	2.0	2.0	-2.4	1.5	0.8	0.7
Energy demand in transport (ktoe)	**4024**	**4460**	**4732**	**5269**	**5100**	**5210**	**5238**	**5096**	**4802**	**1.6**	**0.8**	**0.3**	**-0.9**
Public road transport	59	74	76	75	75	77	76	74	71	2.6	-0.1	0.1	-0.6
Private cars and motorcycles	1627	1776	1882	2100	2098	1994	1857	1657	1484	1.5	1.1	-1.2	-2.2
Trucks	1383	1636	1735	1908	1719	1836	1852	1868	1858	2.3	-0.1	0.7	0.0
Rail	114	118	103	107	97	100	95	90	55	-1.0	-0.6	-0.3	-5.3
Aviation	690	675	820	943	971	1057	1207	1250	1171	1.7	1.7	2.2	-0.3
Inland navigation	150	182	116	136	139	145	151	158	163	-2.6	1.9	0.8	0.7

Source: PRIMES

Estonia: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**5500**	**3354**	**3186**	**4210**	**3307**	**3838**	**4108**	**4124**	**4179**	**-5.3**	**0.4**	**2.2**	**0.2**
Solids	5050	2868	2672	3176	2438	2763	2797	2752	2761	-6.2	-0.9	1.4	-0.1
Oil	0	0	2	354	120	90	74	60	38		51.3	-4.7	-6.4
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	450	487	512	680	749	985	1237	1312	1379	1.3	3.9	5.2	1.1
Hydro	0	0	0	2	1	1	2	2	2		13.2	1.7	1.0
Biomass & Waste	450	486	512	674	728	919	1119	1172	1178	1.3	3.6	4.4	0.5
Wind	0	0	0	5	18	62	112	133	193		70.7	20.0	5.5
Solar and others	0	0	0	0	1	3	4	5	6			11.4	4.6
Geothermal	0	0	0	0	0	0	0	0	0			1.9	1.6
Net Imports	**4470**	**1995**	**1593**	**1471**	**1693**	**1713**	**1566**	**1619**	**1645**	**-9.8**	**0.6**	**-0.8**	**0.5**
Solids	697	293	272	30	87	84	82	76	75	-9.0	-10.7	-0.6	-0.9
Oil	3153	1185	744	873	1088	1259	1287	1324	1298	-13.4	3.9	1.7	0.1
- Crude oil and Feedstocks	0	0	0	0	1	1	1	1	1			1.1	0.0
- Oil products	3153	1185	744	873	1087	1258	1286	1322	1297	-13.4	3.9	1.7	0.1
Natural gas	1222	583	662	800	813	847	889	909	938	-5.9	2.1	0.9	0.5
Electricity	-602	-65	-80	-138	-150	-223	-296	-300	-300				
Gross Inland Consumption	**9919**	**5347**	**4696**	**5559**	**4873**	**5415**	**5531**	**5592**	**5665**	**-7.2**	**0.4**	**1.3**	**0.2**
Solids	5967	3310	2974	3191	2526	2847	2879	2829	2836	-6.7	-1.6	1.3	-0.2
Oil	2872	1039	627	1118	1082	1211	1218	1233	1178	-14.1	5.6	1.2	-0.3
Natural gas	1222	583	662	800	813	847	889	909	938	-5.9	2.1	0.9	0.5
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	-602	-65	-80	-138	-150	-223	-296	-300	-300				
Renewable energy forms	460	481	513	589	603	732	840	921	1014	1.1	1.6	3.4	1.9
as % in Gross Inland Consumption													
Solids	60.2	61.9	63.3	57.4	51.8	52.6	52.1	50.6	50.1				
Oil	28.9	19.4	13.4	20.1	22.2	22.4	22.0	22.1	20.8				
Natural gas	12.3	10.9	14.1	14.4	16.7	15.6	16.1	16.3	16.6				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	4.6	9.0	10.9	10.6	12.4	13.5	15.2	16.5	17.9				
Gross Electricity Generation in GWh_e	**17178**	**8691**	**8511**	**10203**	**10687**	**12759**	**14281**	**14871**	**15578**	**-6.8**	**2.3**	**2.9**	**0.9**
Self consumption and grid losses	2879	2858	2162	2194	2252	2456	2528	2503	2449	-2.8	0.4	1.2	-0.3
Fuel Inputs for Thermal Power Generation	**5654**	**2673**	**2439**	**2539**	**2560**	**2907**	**2935**	**2903**	**2910**	**-8.1**	**0.5**	**1.4**	**-0.1**
Solids	5085	2491	2200	2294	2367	2661	2657	2597	2600	-8.0	0.7	1.2	-0.2
Oil (including refinery gas)	210	80	12	10	0	2	3	2	2	-25.2			-2.9
Gas	357	100	226	227	167	168	146	139	116	-4.5	-2.9	-1.4	-2.3
Biomass & Waste	2	2	2	8	25	77	128	164	192	-0.3	28.5	17.6	4.1
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**1906**	**788**	**662**	**725**	**473**	**501**	**500**	**497**	**490**	**-10.0**	**-3.3**	**0.6**	**-0.2**
Refineries	1	1	1	1	1	1	1	1	1	0.0	-0.1	1.1	0.0
Biofuels and hydrogen production	0	0	0	0	18	26	34	41	49			6.4	3.6
District heating	1607	501	456	495	448	470	462	453	439	-11.8	-0.2	0.3	-0.5
Others	299	287	206	229	6	3	2	2	1	-3.7	-30.2	-8.8	-4.2
Energy Branch Consumption	**295**	**148**	**172**	**196**	**186**	**201**	**208**	**207**	**203**	**-5.3**	**0.8**	**1.1**	**-0.2**
Non-Energy Uses	**170**	**230**	**220**	**231**	**210**	**263**	**301**	**330**	**336**	**2.6**	**-0.4**	**3.6**	**1.1**
Final Energy Demand	**6018**	**2496**	**2365**	**2783**	**2807**	**3098**	**3262**	**3391**	**3483**	**-8.9**	**1.7**	**1.5**	**0.7**
by sector													
Industry	2735	787	529	645	695	844	927	995	1068	-15.2	2.8	2.9	1.4
- energy intensive industries	666	429	200	192	189	220	237	245	252	-11.3	-0.5	2.2	0.6
- other industrial sectors	2069	358	328	453	505	624	691	750	816	-16.8	4.4	3.2	1.7
Residential	1277	966	928	889	880	913	935	944	939	-3.1	-0.5	0.6	0.0
Tertiary	1166	252	329	479	443	496	518	537	545	-11.9	3.0	1.6	0.5
Transport	841	492	579	769	789	845	882	914	931	-3.7	3.1	1.1	0.5
by fuel													
Solids	703	193	117	98	101	132	166	179	177	-16.4	-1.5	5.1	0.7
Oil	1808	858	750	965	977	1062	1069	1085	1052	-8.4	2.7	0.9	-0.2
Gas	439	202	134	207	230	254	291	298	322	-11.2	5.5	2.4	1.0
Electricity	585	386	427	518	546	636	688	738	803	-3.1	2.5	2.3	1.6
Heat (from CHP and District Heating) [A]	2086	593	511	547	518	574	602	622	631	-13.1	0.1	1.5	0.5
Renewable energy forms	397	265	425	447	436	440	445	468	496	0.7	0.3	0.2	1.1
Other	0	0	0	0	0	0	0	0	0			11.0	3.0
RES in Gross Final Energy Consumption [B]			**426**	**548**	**577**	**696**	**781**	**860**	**951**		**3.1**	**3.1**	**2.0**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**43.7**		**17.6**	**18.4**	**18.2**	**20.0**	**20.4**	**20.3**	**20.3**	**-8.7**	**0.4**	**1.1**	**0.0**
of which ETS sectors GHGs emissions				12.5	12.3	13.8	13.9	13.7	13.8			1.2	-0.1
CO_2 Emissions (energy related)	**37.1**	**16.0**	**13.9**	**15.0**	**15.1**	**16.8**	**17.0**	**16.8**	**16.7**	**-9.4**	**0.9**	**1.2**	**-0.2**
Power generation/District heating	27.3	12.1	10.7	11.1	11.1	12.3	12.3	12.0	11.9	-8.9	0.3	1.0	-0.3
Energy Branch	0.4	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	-11.7	0.9	0.4	-1.2
Industry	4.6	1.7	0.8	0.8	1.0	1.3	1.4	1.5	1.5	-16.1	2.1	4.0	0.1
Residential	1.2	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	-13.5	-3.1	-1.1	-0.6
Tertiary	1.2	0.3	0.3	0.5	0.4	0.4	0.5	0.5	0.5	-14.1	4.8	0.6	0.6
Transport	2.4	1.4	1.7	2.3	2.3	2.4	2.5	2.6	2.5	-3.6	3.0	1.0	0.1
CO_2 Emissions (non energy related)	**0.9**	**0.6**	**0.6**	**0.6**	**0.6**	**0.7**	**0.8**	**0.9**	**1.0**	**-4.7**	**-0.3**	**3.7**	**1.9**
Non-CO_2 GHGs Emissions	**5.6**		**3.1**	**2.8**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**-5.7**	**-2.0**	**0.1**	**0.0**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**40.2**	**42.2**	**41.7**	**45.8**	**46.6**	**46.4**	**46.4**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Estonia: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	1.571	1.448	1.372	1.348	1.333	1.323	1.311	1.292	1.267	-1.3	-0.3	-0.2	-0.3
GDP (in 000 MEuro'05)	8.3	5.7	7.6	11.1	11.2	13.5	15.4	17.4	19.4	-0.9	3.9	3.3	2.3
Gross Inl. Cons./GDP (toe/MEuro'05)	1196.0	943.4	618.0	501.2	435.5	402.5	358.3	322.3	292.2	-6.4	-3.4	-1.9	-2.0
Carbon intensity (t of CO_2/toe of GIC)	3.74	2.99	2.96	2.70	3.10	3.11	3.07	3.00	2.95	-2.3	0.5	-0.1	-0.4
Import Dependency %	44.3	36.7	33.2	25.9	33.9	30.9	27.6	28.2	28.2				
Total Energy-related Costs (C) (in 000 M€05)			1.3	1.8	2.0	2.4	3.0	3.4	3.6		4.6	4.1	2.0
as % of GDP			16.7	16.2	17.8	18.0	19.3	19.8	18.7				
Energy intensity indicators													
Industry (Energy on Value added)	319.4	219.8	100.0	69.4	62.6	59.1	56.2	53.1	50.4	-11.0	-4.6	-1.1	-1.1
Residential (Energy on Private Income)	136.3	146.4	100.0	60.7	69.8	63.0	58.4	54.4	49.5	-3.1	-3.5	-1.8	-1.6
Tertiary (Energy on Value added)	402.7	106.6	100.0	104.0	106.8	95.0	86.6	79.6	71.9	-13.0	0.7	-2.1	-1.8
Passenger transport (toe/Mpkm)	37.6	42.8	33.8	32.2	31.5	29.4	28.5	27.4	25.8	-1.1	-0.7	-1.0	-1.0
Freight transport (toe/Mtkm)	40.4	26.9	19.1	19.0	22.4	22.2	22.1	22.1	21.7	-7.2	1.6	-0.1	-0.2
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.64	0.70	0.67	0.62	0.62	0.59	0.54	0.51	0.50	0.5	-0.9	-1.3	-0.9
Final energy demand (t of CO_2/toe)	1.56	1.55	1.28	1.36	1.38	1.40	1.41	1.39	1.34	-2.0	0.8	0.2	-0.5
Industry	1.66	2.18	1.50	1.27	1.40	1.52	1.55	1.48	1.37	-1.1	-0.7	1.1	-1.3
Residential	0.93	0.48	0.30	0.25	0.23	0.19	0.20	0.18	0.18	-10.6	-2.6	-1.7	-0.7
Tertiary	1.05	1.00	0.82	0.98	0.96	0.90	0.88	0.90	0.89	-2.5	1.7	-0.9	0.1
Transport	2.89	2.90	2.92	2.95	2.89	2.87	2.84	2.82	2.73	0.1	-0.1	-0.2	-0.4
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			16.0	17.9	18.7	20.4	21.9	23.3	25.2				
RES in transport (%)			0.0	0.0	2.5	3.4	4.4	5.3	7.0				
Gross Electricity generation by fuel type (in GWh)			**8511**	**10203**	**10687**	**12759**	**14281**	**14871**	**15578**		**2.3**	**2.9**	**0.9**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			7604	9261	9764	10811	11544	11744	11755		2.5	1.7	0.2
Petroleum products			37	32	0	7	13	11	10				-2.9
Gas (including derived gases)			859	809	576	890	840	813	697		-3.9	3.8	-1.9
Biomass & waste			6	25	118	314	554	735	847		34.7	16.7	4.3
Hydro			5	22	17	17	20	22	22		13.2	1.7	1.0
Wind			1	54	210	717	1307	1543	2242		70.7	20.0	5.5
Solar, tidal etc.			0	0	1	2	2	3	5			11.1	8.6
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**2575**	**2293**	**2428**	**2777**	**3107**	**3361**	**3690**		**-0.6**	**2.5**	**1.7**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			3	36	115	400	643	756	1001		45.2	18.8	4.5
Hydro (pumping excluded)			2	5	5	5	6	6	6		9.6	1.3	0.0
Wind			1	31	108	393	635	747	990		64.2	19.4	4.5
Solar			0	0	2	2	2	3	6			2.1	8.6
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			2572	2257	2313	2378	2464	2605	2689		-1.1	0.6	0.9
of which cogeneration units			486	345	394	357	434	476	497		-2.1	1.0	1.4
of which CCS units			0	0	0	0	0	0	0				
Solids fired			2348	2023	2056	1926	2105	2092	2092		-1.3	0.2	-0.1
Gas fired			205	205	206	390	287	429	491		0.0	3.4	5.5
Oil fired			12	12	13	13	3	3	2		0.1	-14.4	-3.5
Biomass-waste fired			7	16	39	49	69	81	104		19.5	5.7	4.2
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			33.7	45.4	44.8	47.1	47.3	45.7	43.8				
Efficiency for thermal electricity production (%)			30.0	34.3	35.1	35.6	38.0	39.4	39.3				
CHP indicator (% of electricity from CHP)			11.7	11.0	16.4	15.7	19.8	20.6	21.1				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			0.1	1.0	3.2	8.2	13.2	15.5	20.0				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			0.1	1.0	3.2	8.2	13.2	15.5	20.0				
Transport sector													
Passenger transport activity (Gpkm)	**10.0**	**8.1**	**10.3**	**14.2**	**14.4**	**15.5**	**16.1**	**16.8**	**17.4**	**0.3**	**3.4**	**1.2**	**0.8**
Public road transport	4.5	2.0	2.6	2.7	2.7	2.7	2.8	2.8	2.9	-5.1	0.1	0.3	0.4
Private cars and motorcycles	3.1	5.2	6.8	10.0	10.1	11.0	11.1	11.1	11.2	8.0	4.1	0.9	0.1
Rail	1.6	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.4	-13.8	-0.2	1.0	0.4
Aviation	0.4	0.1	0.2	0.7	0.8	1.1	1.5	2.0	2.5	-6.7	16.8	6.0	5.3
Inland navigation	0.4	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	-1.6	-0.3	0.6	0.4
Freight transport activity (Gtkm)	**11.5**	**5.4**	**12.0**	**16.5**	**15.1**	**17.4**	**19.1**	**20.6**	**22.2**	**0.5**	**2.3**	**2.4**	**1.5**
Trucks	4.5	1.5	3.9	5.8	6.6	7.6	8.4	9.2	10.2	-1.4	5.2	2.5	2.0
Rail	7.0	3.8	8.1	10.6	8.5	9.8	10.7	11.4	12.0	1.5	0.5	2.3	1.2
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Energy demand in transport (ktoe)	**841**	**492**	**579**	**769**	**789**	**845**	**882**	**914**	**931**	**-3.7**	**3.1**	**1.1**	**0.5**
Public road transport	59	13	15	16	16	16	15	15	14	-12.5	0.2	-0.3	-0.6
Private cars and motorcycles	267	308	305	385	375	368	356	340	310	1.4	2.1	-0.5	-1.4
Trucks	407	104	180	266	299	345	378	409	440	-7.8	5.2	2.4	1.5
Rail	66	45	52	49	39	44	45	46	43	-2.4	-2.8	1.5	-0.5
Aviation	36	18	20	42	49	61	76	93	112	-5.9	9.6	4.5	3.9
Inland navigation	7	4	7	11	11	12	12	12	12	0.0	4.9	0.6	0.2

Source: PRIMES

Finland: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**11860**	**13166**	**14991**	**16468**	**16007**	**19233**	**20368**	**21268**	**21385**	**2.4**	**0.7**	**2.4**	**0.5**
Solids	1581	2061	1207	2129	1759	1519	1490	1342	1274	-2.7	3.8	-1.7	-1.5
Oil	0	15	37	205	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	5006	4957	5799	6003	5997	9131	9842	10694	10694	1.5	0.3	5.1	0.8
Renewable energy sources	5273	6133	7949	8131	8251	8583	9036	9232	9417	4.2	0.4	0.9	0.4
Hydro	934	1111	1261	1185	1136	1129	1134	1160	1179	3.0	-1.0	0.0	0.4
Biomass & Waste	4338	5021	6681	6930	7062	7350	7649	7674	7814	4.4	0.6	0.8	0.2
Wind	0	1	7	15	45	84	218	343	370		21.0	17.0	5.4
Solar and others	0	0	1	1	8	21	35	54	53	3.8	30.6	16.1	4.1
Geothermal	0	0	0	0	0	0	0	0	0			2.3	-0.2
Net Imports	**18124**	**15650**	**18587**	**19306**	**18762**	**18197**	**17603**	**17291**	**16620**	**0.3**	**0.1**	**-0.6**	**-0.6**
Solids	4378	3774	3533	3338	4052	3325	3464	3321	3210	-2.1	1.4	-1.6	-0.8
Oil	10570	8314	10610	10985	9370	9612	8919	8586	8155	0.0	-1.2	-0.5	-0.9
- Crude oil and Feedstocks	8930	8579	12164	11068	10453	10710	10052	9733	9319	3.1	-1.5	-0.4	-0.8
- Oil products	1639	-265	-1553	-84	-1083	-1098	-1133	-1147	-1163				
Natural gas	2261	2839	3422	3598	4177	4076	3982	4008	3889	4.2	2.0	-0.5	-0.2
Electricity	915	723	1021	1463	1088	860	662	559	539	1.1	0.6	-4.8	-2.0
Gross Inland Consumption	**29046**	**29070**	**32544**	**34666**	**34297**	**36951**	**37489**	**38068**	**37501**	**1.1**	**0.5**	**0.9**	**0.0**
Solids	5327	5950	5087	4925	5811	4844	4953	4663	4484	-0.5	1.3	-1.6	-1.0
Oil	10029	8455	9266	10625	8898	9132	8437	8095	7652	-0.8	-0.4	-0.5	-1.0
Natural gas	2261	2839	3422	3598	4177	4076	3982	4008	3889	4.2	2.0	-0.5	-0.2
Nuclear	5006	4957	5799	6003	5997	9131	9842	10694	10694	1.5	0.3	5.1	0.8
Electricity	915	723	1021	1463	1088	860	662	559	539	1.1	0.6	-4.8	-2.0
Renewable energy forms	5508	6146	7949	8053	8326	8907	9612	10049	10242	3.7	0.5	1.4	0.6
as % in Gross Inland Consumption													
Solids	18.3	20.5	15.6	14.2	16.9	13.1	13.2	12.2	12.0				
Oil	34.5	29.1	28.5	30.7	25.9	24.7	22.5	21.3	20.4				
Natural gas	7.8	9.8	10.5	10.4	12.2	11.0	10.6	10.5	10.4				
Nuclear	17.2	17.1	17.8	17.3	17.5	24.7	26.3	28.1	28.5				
Renewable energy forms	19.0	21.1	24.4	23.2	24.3	24.1	25.6	26.4	27.3				
Gross Electricity Generation in GWh_e	**54367**	**64052**	**69976**	**70540**	**79419**	**89020**	**93924**	**99027**	**99538**	**2.6**	**1.3**	**1.7**	**0.6**
Self consumption and grid losses	5546	6510	5543	5756	6331	7300	7565	9045	9665	0.0	1.3	1.8	2.5
Fuel Inputs for Thermal Power Generation	**5451**	**6714**	**6923**	**7538**	**10548**	**8676**	**8785**	**8320**	**8134**	**2.4**	**4.3**	**-1.8**	**-0.8**
Solids	3216	3882	3168	2974	4461	3449	3564	3088	2661	-0.1	3.5	-2.2	-2.9
Oil (including refinery gas)	294	256	131	107	221	162	123	114	91	-7.8	5.4	-5.7	-3.0
Gas	1015	1581	2106	2384	2949	2003	1834	1834	1845	7.6	3.4	-4.6	0.1
Biomass & Waste	926	996	1518	2073	2917	3062	3264	3284	3537	5.1	6.8	1.1	0.8
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**12101**	**14065**	**15357**	**15526**	**13043**	**13929**	**13450**	**13190**	**12672**	**2.4**	**-1.6**	**0.3**	**-0.6**
Refineries	10735	12067	13249	13248	10855	11140	10481	10160	9739	2.1	-2.0	-0.4	-0.7
Biofuels and hydrogen production	0	0	0	0	70	164	221	258	286			12.2	2.6
District heating	573	548	803	954	1134	1676	1794	1849	1733	3.4	3.5	4.7	-0.3
Others	793	1451	1306	1325	984	948	955	923	914	5.1	-2.8	-0.3	-0.4
Energy Branch Consumption	**776**	**959**	**1281**	**1263**	**1221**	**1261**	**1226**	**1296**	**1311**	**5.1**	**-0.5**	**0.0**	**0.7**
Non-Energy Uses	**1492**	**1203**	**946**	**1149**	**1092**	**1156**	**1161**	**1157**	**1170**	**-4.4**	**1.4**	**0.6**	**0.1**
Final Energy Demand	**21758**	**22069**	**24176**	**25157**	**24640**	**25582**	**25614**	**25507**	**25126**	**1.1**	**0.2**	**0.4**	**-0.2**
by sector													
Industry	9620	9989	12046	11999	11283	11781	11929	11994	12001	2.3	-0.7	0.6	0.1
- energy intensive industries	7353	7629	9446	9070	8204	8256	8271	8207	8143	2.5	-1.4	0.1	-0.2
- other industrial sectors	2268	2360	2599	2929	3079	3525	3658	3787	3858	1.4	1.7	1.7	0.5
Residential	5333	5430	4541	4849	5069	5180	5167	5091	5021	-1.6	1.1	0.2	-0.3
Tertiary	2483	2487	3132	3478	3566	3861	3838	3880	3777	2.3	1.3	0.7	-0.2
Transport	4321	4162	4457	4831	4721	4760	4680	4543	4326	0.3	0.6	-0.1	-0.8
by fuel													
Solids	1621	1277	1099	966	734	787	791	998	1263	-3.8	-4.0	0.8	4.8
Oil	8131	7591	7535	7920	6724	6916	6327	6022	5704	-0.8	-1.1	-0.6	-1.0
Gas	1501	1523	1328	1156	879	1354	1357	1387	1244	-1.2	-4.0	4.4	-0.9
Electricity	5068	5608	6487	6959	7300	7813	8017	8227	8201	2.5	1.2	0.9	0.2
Heat (from CHP and District Heating) [A]	1915	2126	2780	3597	5101	4458	4547	4053	3971	3.8	6.3	-1.1	-1.3
Renewable energy forms	3522	3944	4946	4559	3902	4254	4575	4820	4742	3.5	-2.3	1.6	0.4
Other	0	0	0	0	0	1	1	1	1			7.9	-0.3
RES in Gross Final Energy Consumption [B]			**7256**	**7401**	**7822**	**8370**	**9039**	**9360**	**9571**		**0.8**	**1.5**	**0.6**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**72.2**		**70.1**	**70.3**	**71.6**	**66.8**	**64.9**	**61.8**	**56.8**	**-0.3**	**0.2**	**-1.0**	**-1.3**
of which ETS sectors GHGs emissions				37.5	40.7	35.8	35.5	33.0	28.7			-1.4	-2.1
CO_2 Emissions (energy related)	**54.4**	**55.6**	**53.7**	**54.1**	**55.9**	**52.4**	**50.5**	**47.6**	**42.7**	**-0.1**	**0.4**	**-1.0**	**-1.6**
Power generation/District heating	17.8	21.8	20.2	20.5	28.2	22.9	23.0	20.4	15.8	1.3	3.4	-2.0	-3.7
Energy Branch	1.4	1.6	2.6	2.5	2.1	1.9	1.7	1.5	1.5	6.6	-2.3	-1.7	-1.6
Industry	14.0	12.3	12.5	11.8	7.2	9.0	8.1	8.6	9.3	-1.2	-5.4	1.3	1.4
Residential	6.5	5.9	2.4	2.1	2.1	2.4	2.2	2.1	2.1	-9.6	-1.2	0.3	-0.3
Tertiary	2.1	1.8	3.0	3.0	2.7	2.7	2.4	2.4	2.2	3.8	-1.2	-1.3	-0.5
Transport	12.7	12.2	13.1	14.2	13.7	13.5	13.1	12.6	11.9	0.3	0.4	-0.4	-1.0
CO_2 Emissions (non energy related)	**3.7**	**3.3**	**3.8**	**3.9**	**3.6**	**3.8**	**3.8**	**3.9**	**3.9**	**0.4**	**-0.6**	**0.7**	**0.2**
Non-CO_2 GHGs Emissions	**14.2**		**12.6**	**12.3**	**12.1**	**10.7**	**10.6**	**10.3**	**10.2**	**-1.2**	**-0.4**	**-1.4**	**-0.4**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**97.1**	**97.4**	**99.2**	**92.5**	**89.8**	**85.6**	**78.7**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Finland: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	4.974	5.099	5.171	5.237	5.337	5.429	5.501	5.549	5.569	0.4	0.3	0.3	0.1
GDP (in 000 MEuro'05)	114.0	109.7	138.8	157.1	165.5	183.9	201.4	217.3	233.5	2.0	1.8	2.0	1.5
Gross Inl. Cons./GDP (toe/MEuro'05)	254.9	265.0	234.5	220.7	207.2	200.9	186.1	175.2	160.6	-0.8	-1.2	-1.1	-1.5
Carbon intensity (t of CO_2/toe of GIC)	1.87	1.91	1.65	1.56	1.63	1.42	1.35	1.25	1.14	-1.3	-0.1	-1.9	-1.7
Import Dependency %	61.2	53.2	56.0	54.9	54.0	48.6	46.4	44.8	43.7				
Total Energy-related Costs (C) (in 000 M€05)			15.2	17.9	19.3	22.1	25.8	27.8	28.9		2.5	2.9	1.1
as % of GDP			10.9	11.4	11.7	12.0	12.8	12.8	12.4				
Energy intensity indicators													
Industry (Energy on Value added)	134.0	126.6	100.0	82.1	73.6	67.9	63.2	59.7	56.8	-2.9	-3.0	-1.5	-1.1
Residential (Energy on Private Income)	132.1	141.3	100.0	91.2	93.9	87.8	80.8	74.2	67.7	-2.7	-0.6	-1.5	-1.8
Tertiary (Energy on Value added)	94.6	96.3	100.0	101.6	99.0	95.7	86.5	80.5	72.4	0.6	-0.1	-1.3	-1.8
Passenger transport (toe/Mpkm)	35.9	35.5	35.5	37.8	36.6	33.8	31.6	29.3	26.6	-0.1	0.3	-1.5	-1.7
Freight transport (toe/Mtkm)	46.0	45.8	38.2	36.9	35.8	35.5	34.0	32.5	30.5	-1.8	-0.7	-0.5	-1.1
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.23	0.24	0.19	0.18	0.20	0.16	0.15	0.13	0.10	-1.6	0.2	-2.6	-3.6
Final energy demand (t of CO_2/toe)	1.62	1.46	1.28	1.24	1.04	1.08	1.00	1.01	1.02	-2.3	-2.1	-0.3	0.1
Industry	1.46	1.24	1.03	0.98	0.63	0.76	0.68	0.72	0.78	-3.4	-4.8	0.7	1.3
Residential	1.21	1.09	0.52	0.43	0.41	0.46	0.42	0.42	0.42	-8.1	-2.2	0.1	0.0
Tertiary	0.84	0.70	0.97	0.87	0.75	0.69	0.61	0.61	0.59	1.4	-2.5	-2.0	-0.3
Transport	2.94	2.93	2.94	2.94	2.90	2.84	2.80	2.77	2.74	0.0	-0.2	-0.3	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			29.2	28.5	30.7	31.6	34.0	35.2	36.5				
RES in transport (%)			0.3	0.4	2.1	4.4	6.0	7.3	8.8				
Gross Electricity generation by fuel type (in GWh)			**69976**	**70540**	**79419**	**89020**	**93924**	**99027**	**99538**		**1.3**	**1.7**	**0.6**
Nuclear energy			22475	23267	23248	36244	39213	42874	42874		0.3	5.4	0.9
Coal and lignite			14241	11925	14594	12603	13089	12210	11591		0.2	-1.1	-1.2
Petroleum products			554	431	910	849	602	433	325		5.1	-4.0	-6.0
Gas (including derived gases)			10676	11917	13988	10753	10142	10447	10074		2.7	-3.2	-0.1
Biomass & waste			7292	9047	12941	14431	15088	15479	16529		5.9	1.5	0.9
Hydro			14657	13782	13206	13124	13185	13493	13715		-1.0	0.0	0.4
Wind			78	170	525	972	2530	3986	4299		21.0	17.0	5.4
Solar, tidal etc.			2	3	7	44	75	104	131		13.8	26.2	5.8
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**16630**	**17045**	**17583**	**20254**	**20856**	**20935**	**22066**		**0.6**	**1.7**	**0.6**
Nuclear energy			2687	2690	2691	4207	4550	4973	4973		0.0	5.4	0.9
Renewable energy			2882	3080	3291	3526	4163	4760	4943		1.3	2.4	1.7
Hydro (pumping excluded)			2841	2994	2994	3014	3050	3091	3106		0.5	0.2	0.2
Wind			38	82	289	466	1036	1561	1701		22.5	13.6	5.1
Solar			3	4	8	46	78	108	136		10.5	25.3	5.8
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			11060	11275	11601	12520	12143	11202	12150		0.5	0.5	0.0
of which cogeneration units			5965	6033	6818	6287	6199	5974	5610		1.3	-0.9	-1.0
of which CCS units			0	0	0	0	0	85	443				
Solids fired			5562	5607	5626	5386	5104	3361	3223		0.1	-1.0	-4.5
Gas fired			3042	3007	3074	4201	4172	4769	4505		0.1	3.1	0.8
Oil fired			898	897	899	494	436	399	176		0.0	-7.0	-8.7
Biomass-waste fired			1558	1763	2002	2440	2431	2673	4247		2.5	2.0	5.7
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			46.1	45.4	49.5	48.0	49.3	51.1	48.4				
Efficiency for thermal electricity production (%)			40.7	38.0	34.6	38.3	38.1	39.9	40.7				
CHP indicator (% of electricity from CHP)			38.3	41.0	40.4	36.0	33.9	31.5	31.4				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.9	4.6				
Non fossil fuels in electricity generation (%)			63.6	65.6	62.9	72.8	74.6	76.7	77.9				
- nuclear			32.1	33.0	29.3	40.7	41.7	43.3	43.1				
- renewable energy forms and industrial waste			31.5	32.6	33.6	32.1	32.9	33.4	34.8				
Transport sector													
Passenger transport activity (Gpkm)	**74.6**	**72.8**	**80.0**	**87.0**	**89.5**	**96.3**	**100.8**	**104.2**	**107.1**	**0.7**	**1.1**	**1.2**	**0.6**
Public road transport	8.5	8.0	7.7	7.5	7.6	7.7	7.9	8.1	8.3	-1.0	-0.2	0.4	0.4
Private cars and motorcycles	52.0	50.9	56.6	62.8	64.5	69.0	71.0	72.0	72.3	0.9	1.3	1.0	0.2
Rail	3.7	3.6	3.9	4.0	4.3	4.7	5.0	5.3	5.5	0.6	1.0	1.5	0.9
Aviation	6.1	5.8	7.7	8.8	9.1	10.9	12.7	14.7	16.9	2.4	1.8	3.4	2.9
Inland navigation	4.3	4.5	4.2	3.8	3.9	4.0	4.1	4.1	4.2	-0.4	-0.6	0.4	0.1
Freight transport activity (Gtkm)	**35.8**	**34.5**	**42.4**	**41.8**	**40.4**	**42.4**	**44.0**	**46.0**	**48.3**	**1.7**	**-0.5**	**0.9**	**0.9**
Trucks	26.3	24.5	32.0	31.9	29.7	31.2	32.3	34.1	36.2	2.0	-0.7	0.8	1.1
Rail	8.4	9.6	10.1	9.7	10.4	11.0	11.4	11.7	11.9	1.9	0.3	0.9	0.4
Inland navigation	1.1	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	-12.2	-4.3	1.3	0.9
Energy demand in transport (ktoe)	**4321**	**4162**	**4457**	**4831**	**4721**	**4760**	**4680**	**4543**	**4326**	**0.3**	**0.6**	**-0.1**	**-0.8**
Public road transport	78	72	69	66	66	65	64	62	59	-1.3	-0.4	-0.3	-0.7
Private cars and motorcycles	2023	1967	2089	2459	2427	2326	2208	2025	1785	0.3	1.5	-0.9	-2.1
Trucks	1546	1479	1529	1448	1349	1405	1399	1405	1412	-0.1	-1.2	0.4	0.1
Rail	100	102	94	97	101	105	99	92	66	-0.6	0.7	-0.2	-3.9
Aviation	459	408	505	565	577	653	701	751	795	1.0	1.3	2.0	1.3
Inland navigation	116	134	170	196	202	207	209	209	209	3.9	1.7	0.4	0.0

Source: PRIMES

France: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**111013**	**127609**	**131920**	**136736**	**135007**	**140027**	**148122**	**152420**	**156164**	**1.7**	**0.2**	**0.9**	**0.5**
Solids	7625	5359	2267	383	340	216	17	17	11	-11.4	-17.3	-25.8	-4.3
Oil	3514	3509	2897	1479	0	0	0	0	0	-1.9			
Natural gas	2516	2793	1505	909	0	0	0	0	0	-5.0			
Nuclear	81018	97308	107093	116474	114683	117571	121548	122404	122823	2.8	0.7	0.6	0.1
Renewable energy sources	16339	18641	18160	17492	19985	22241	26557	29998	33330	1.1	1.0	2.9	2.3
Hydro	4635	6322	5822	4496	4900	4921	4932	5129	5202	2.3	-1.7	0.1	0.5
Biomass & Waste	11575	12171	12181	12761	13728	14930	16664	17931	18082	0.5	1.2	2.0	0.8
Wind	0	0	7	83	977	1708	3858	5407	6302		64.8	14.7	5.0
Solar and others	19	15	26	22	223	524	917	1328	1746	2.8	24.1	15.2	6.7
Geothermal	110	132	124	130	157	159	185	201	1999	1.2	2.4	1.7	26.8
Net Imports	**120596**	**116805**	**134196**	**144346**	**138158**	**136732**	**130088**	**123044**	**118195**	**1.1**	**0.3**	**-0.6**	**-1.0**
Solids	13004	9010	13201	13504	11257	11758	9201	7405	6749	0.2	-1.6	-2.0	-3.1
Oil	87127	86307	91185	95364	90001	87082	83257	79492	75281	0.5	-0.1	-0.8	-1.0
- Crude oil and Feedstocks	76561	79689	85250	85529	84073	82744	80974	79144	77026	1.1	-0.1	-0.4	-0.5
- Oil products	10566	6619	5936	9835	5929	4338	2283	348	-1745	-5.6	0.0	-9.1	
Natural gas	24371	27493	35778	40720	42076	43459	43200	40424	39711	3.9	1.6	0.3	-0.8
Electricity	-3907	-6005	-5974	-5187	-5040	-5296	-5323	-4064	-3421				
Gross Inland Consumption	**227754**	**241418**	**259828**	**277086**	**270384**	**273850**	**275266**	**272455**	**271259**	**1.3**	**0.4**	**0.2**	**-0.1**
Solids	19955	15287	15240	14296	11597	11974	9218	7423	6760	-2.7	-2.7	-2.3	-3.1
Oil	88316	86611	89539	92991	87220	84173	80314	76484	72182	0.1	-0.3	-0.8	-1.1
Natural gas	26032	29577	35766	41077	42076	43459	43200	40424	39711	3.2	1.6	0.3	-0.8
Nuclear	81018	97308	107093	116474	114683	117571	121548	122404	122823	2.8	0.7	0.6	0.1
Electricity	-3907	-6005	-5975	-5188	-5040	-5296	-5323	-4064	-3421				
Renewable energy forms	16339	18641	18165	17436	19849	21969	26311	29785	33204	1.1	0.9	2.9	2.4
as % in Gross Inland Consumption													
Solids	8.8	6.3	5.9	5.2	4.3	4.4	3.3	2.7	2.5				
Oil	38.8	35.9	34.5	33.6	32.3	30.7	29.2	28.1	26.6				
Natural gas	11.4	12.3	13.8	14.8	15.6	15.9	15.7	14.8	14.6				
Nuclear	35.6	40.3	41.2	42.0	42.4	42.9	44.2	44.9	45.3				
Renewable energy forms	7.2	7.7	7.0	6.3	7.3	8.0	9.6	10.9	12.2				
Gross Electricity Generation in GWh_e	**416667**	**490848**	**535963**	**571367**	**567236**	**604841**	**637952**	**657224**	**678309**	**2.5**	**0.6**	**1.2**	**0.6**
Self consumption and grid losses	61718	69726	72429	80428	59121	64442	67739	73903	78750	1.6	-2.0	1.4	1.5
Fuel Inputs for Thermal Power Generation	**10983**	**8553**	**13122**	**16669**	**14124**	**16455**	**14337**	**12390**	**14326**	**1.8**	**0.7**	**0.1**	**0.0**
Solids	7334	5441	6231	6404	5206	5820	3133	1416	1414	-1.6	-1.8	-5.0	-7.6
Oil (including refinery gas)	1920	605	1284	1952	166	289	169	690	686	-3.9	-18.5	0.2	15.0
Gas	1423	1216	4062	6288	6179	7080	6894	5900	5796	11.1	4.3	1.1	-1.7
Biomass & Waste	306	1290	1545	2024	2563	3255	4129	4373	4611	17.6	5.2	4.9	1.1
Geothermal heat	0	0	0	0	9	11	11	11	1819			2.3	66.2
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**90122**	**91635**	**98266**	**95011**	**91832**	**91263**	**89852**	**88218**	**86007**	**0.9**	**-0.7**	**-0.2**	**-0.4**
Refineries	80205	83811	90956	88526	85607	84177	82258	80367	78216	1.3	-0.6	-0.4	-0.5
Biofuels and hydrogen production	0	155	328	408	1697	2450	3014	3384	3528		17.9	5.9	1.6
District heating	1019	588	312	239	180	265	266	215	264	-11.1	-5.4	4.0	-0.1
Others	8898	7081	6669	5838	4348	4371	4314	4252	3999	-2.8	-4.2	-0.1	-0.8
Energy Branch Consumption	**9413**	**10501**	**10829**	**10252**	**10269**	**9225**	**9120**	**9115**	**8976**	**1.4**	**-0.5**	**-1.2**	**-0.2**
Non-Energy Uses	**13454**	**16838**	**15903**	**16133**	**15056**	**14786**	**14520**	**14305**	**14256**	**1.7**	**-0.5**	**-0.4**	**-0.2**
Final Energy Demand	**137226**	**142756**	**152708**	**157515**	**156469**	**158685**	**159637**	**158626**	**156219**	**1.1**	**0.2**	**0.2**	**-0.2**
by sector													
Industry	36439	37119	36887	34001	33351	33868	34344	34838	35618	0.1	-1.0	0.3	0.4
- energy intensive industries	23706	21472	22331	20150	18715	18382	18120	17878	17727	-0.6	-1.8	-0.3	-0.2
- other industrial sectors	12733	15647	14556	13850	14635	15486	16224	16959	17891	1.3	0.1	1.0	1.0
Residential	37053	37201	42587	45295	45204	45865	46002	45863	45487	1.4	0.6	0.2	-0.1
Tertiary	21698	24144	21648	28279	28584	29540	30039	30105	30160	0.0	2.8	0.5	0.0
Transport	42037	44292	51586	49941	49329	49412	49252	47820	44954	2.1	-0.4	0.0	-0.9
by fuel													
Solids	9017	6905	5775	5148	4346	4063	4036	3994	3430	-4.4	-2.8	-0.7	-1.6
Oil	67695	68410	72242	71510	68725	66564	64077	60695	56898	0.7	-0.5	-0.7	-1.2
Gas	23400	27098	30880	33744	34726	34674	33867	31651	30867	2.8	1.2	-0.3	-0.9
Electricity	25960	29456	33096	36337	36269	39910	42456	44853	46928	2.5	0.9	1.6	1.0
Heat (from CHP and District Heating) [A]	774	447	237	182	1282	1797	2408	3389	4021	-11.1	18.4	6.5	5.3
Renewable energy forms	10380	10439	10478	10594	11118	11671	12786	14036	14068	0.1	0.6	1.4	1.0
Other	0	0	0	0	3	6	8	8	7			8.3	-0.5
RES in Gross Final Energy Consumption [B]			**16831**	**17055**	**19499**	**21403**	**25357**	**28789**	**30637**		**1.5**	**2.7**	**1.9**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**554.8**		**553.9**	**541.3**	**511.0**	**501.9**	**476.9**	**453.4**	**431.2**	**0.0**	**-0.8**	**-0.7**	**-1.0**
of which ETS sectors GHGs emissions				158.7	130.4	132.2	120.3	110.2	101.4			-0.8	-1.7
CO_2 Emissions (energy related)	**352.9**	**344.8**	**372.9**	**379.9**	**356.6**	**353.4**	**331.7**	**307.6**	**285.5**	**0.6**	**-0.4**	**-0.7**	**-1.5**
Power generation/District heating	40.1	27.6	39.7	47.4	36.6	41.9	30.7	23.1	17.7	-0.1	-0.8	-1.7	-5.3
Energy Branch	16.8	18.7	19.1	16.1	13.5	12.8	12.0	11.2	10.2	1.3	-3.4	-1.2	-1.6
Industry	78.7	75.7	69.7	60.7	54.8	53.8	52.3	48.1	46.5	-1.2	-2.4	-0.5	-1.2
Residential	55.4	52.4	61.7	65.2	66.5	64.0	60.2	56.9	53.7	1.1	0.8	-1.0	-1.1
Tertiary	39.4	41.0	32.2	44.7	45.0	42.9	40.9	38.3	36.7	-2.0	3.4	-1.0	-1.1
Transport	122.5	129.5	150.6	145.8	140.1	138.0	135.7	130.0	120.6	2.1	-0.7	-0.3	-1.2
CO_2 Emissions (non energy related)	**32.4**	**28.5**	**26.7**	**26.7**	**25.2**	**25.3**	**25.4**	**25.6**	**25.5**	**-1.9**	**-0.6**	**0.1**	**0.0**
Non-CO_2 GHGs Emissions	**169.5**		**154.3**	**134.7**	**129.3**	**123.2**	**119.7**	**120.3**	**120.2**	**-0.9**	**-1.8**	**-0.8**	**0.0**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**99.8**	**97.6**	**92.1**	**90.5**	**86.0**	**81.7**	**77.7**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										France: Baseline 2009			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	56.577	57.753	58.850	60.825	62.583	64.203	65.607	66.846	67.982	0.4	0.6	0.5	0.4
GDP (in 000 MEuro'05)	1302.7	1384.7	1589.7	1726.1	1759.1	1945.7	2144.4	2342.0	2550.1	2.0	1.0	2.0	1.7
Gross Inl. Cons./GDP (toe/MEuro'05)	174.8	174.4	163.4	160.5	153.7	140.7	128.4	116.3	106.4	-0.7	-0.6	-1.8	-1.9
Carbon intensity (t of CO_2/toe of GIC)	1.55	1.43	1.44	1.37	1.32	1.29	1.21	1.13	1.05	-0.8	-0.8	-0.9	-1.3
Import Dependency %	52.4	47.9	51.1	51.6	50.6	49.4	46.8	44.7	43.1				
Total Energy-related Costs (C) (in 000 M€05)			144.7	160.1	165.4	186.8	221.2	243.6	249.5		1.3	3.0	1.2
as % of GDP			9.1	9.3	9.4	9.6	10.3	10.4	9.8				
Energy intensity indicators													
Industry (Energy on Value added)	128.3	120.9	100.0	86.6	85.1	79.8	74.0	68.8	64.8	-2.5	-1.6	-1.4	-1.3
Residential (Energy on Private Income)	103.2	99.3	100.0	94.4	94.9	87.5	80.8	75.0	69.1	-0.3	-0.5	-1.6	-1.6
Tertiary (Energy on Value added)	124.1	128.9	100.0	120.2	117.8	109.5	100.8	92.3	84.8	-2.1	1.7	-1.5	-1.7
Passenger transport (toe/Mpkm)	40.1	40.6	45.2	42.7	40.9	37.1	34.8	31.2	26.7	1.2	-1.0	-1.6	-2.6
Freight transport (toe/Mtkm)	51.9	47.3	38.9	39.0	38.9	38.6	37.9	37.4	35.9	-2.9	0.0	-0.3	-0.5
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.09	0.06	0.07	0.08	0.06	0.07	0.05	0.03	0.02	-2.4	-1.8	-3.1	-6.1
Final energy demand (t of CO_2/toe)	2.16	2.09	2.06	2.01	1.96	1.88	1.81	1.72	1.65	-0.5	-0.5	-0.8	-0.9
Industry	2.16	2.04	1.89	1.78	1.64	1.59	1.52	1.38	1.31	-1.3	-1.4	-0.8	-1.5
Residential	1.50	1.41	1.45	1.44	1.47	1.40	1.31	1.24	1.18	-0.3	0.2	-1.2	-1.0
Tertiary	1.82	1.70	1.49	1.58	1.58	1.45	1.36	1.27	1.22	-2.0	0.6	-1.4	-1.1
Transport	2.91	2.92	2.92	2.92	2.84	2.79	2.76	2.72	2.68	0.0	-0.3	-0.3	-0.3
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			10.7	10.4	12.1	13.0	15.3	17.4	18.8				
RES in transport (%)			1.1	1.3	4.4	6.2	7.8	9.1	10.2				
Gross Electricity generation by fuel type (in GWh)			**535963**	**571367**	**567236**	**604841**	**637952**	**657224**	**678309**		**0.6**	**1.2**	**0.6**
Nuclear energy			415087	451448	444587	455783	472075	482429	484259		0.7	0.6	0.3
Coal and lignite			27802	28623	21926	24563	13377	6102	7601		-2.3	-4.8	-5.5
Petroleum products			5664	7913	850	1065	502	2414	1914		-17.3	-5.1	14.3
Gas (including derived gases)			16069	25269	24120	34126	32224	24421	24074		4.1	2.9	-2.9
Biomass & waste			3561	4865	6274	9245	11855	10287	11369		5.8	6.6	-0.4
Hydro			67698	52277	56979	57217	57354	59645	60485		-1.7	0.1	0.5
Wind			77	963	11361	19859	44865	62877	73275		64.8	14.7	5.0
Solar, tidal etc.			5	10	666	2509	4934	7668	11173		63.1	22.2	8.5
Geothermal and other renewables			0	0	473	476	765	1380	4159			4.9	18.5
Net Generation Capacity in MW_e			**107892**	**111422**	**117671**	**129416**	**139245**	**148669**	**160344**		**0.9**	**1.7**	**1.4**
Nuclear energy			60309	63242	63242	64757	66272	60068	60313		0.5	0.5	-0.9
Renewable energy			20632	21290	27667	33188	44153	53457	60891		3.0	4.8	3.3
Hydro (pumping excluded)			20568	20551	20652	20706	20770	21092	21322		0.0	0.1	0.3
Wind			57	723	6022	10125	18836	25064	28794		59.4	12.1	4.3
Solar			7	16	753	2117	4157	6591	9715		59.7	18.6	8.9
Other renewables (tidal etc.)			0	0	240	240	390	709	1060			5.0	10.5
Thermal power			26951	26891	26762	31471	28820	35143	39140		-0.1	0.7	3.1
of which cogeneration units			4599	5371	4275	6268	5455	5974	6340		-0.7	2.5	1.5
of which CCS units			0	0	0	0	0	0	739				
Solids fired			9942	8576	7177	5963	3936	2714	1754		-3.2	-5.8	-7.8
Gas fired			4574	5523	6789	12678	13749	21679	26640		4.0	7.3	6.8
Oil fired			11028	11219	10920	10560	8425	7997	7669		-0.1	-2.6	-0.9
Biomass-waste fired			1407	1572	1874	2269	2709	2752	2835		2.9	3.8	0.5
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	2	2	2	2	242			0.0	66.2
Load factor for net electric capacities (%)			52.5	53.8	52.6	51.1	50.2	48.4	46.3				
Efficiency for thermal electricity production (%)			34.8	34.4	32.4	36.1	34.8	30.0	28.3				
CHP indicator (% of electricity from CHP)			3.2	3.4	3.3	4.5	4.3	4.0	4.0				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	1.1				
Non fossil fuels in electricity generation (%)			90.8	89.2	91.7	90.1	92.8	95.0	95.0				
- nuclear			77.4	79.0	78.4	75.4	74.0	73.4	71.4				
- renewable energy forms and industrial waste			13.3	10.2	13.4	14.8	18.8	21.6	23.7				
Transport sector													
Passenger transport activity (Gpkm)	**772.5**	**819.1**	**908.2**	**937.7**	**952.1**	**1024.9**	**1075.3**	**1133.1**	**1199.6**	**1.6**	**0.5**	**1.2**	**1.1**
Public road transport	41.3	41.6	43.0	43.9	47.5	51.1	54.4	57.9	61.4	0.4	1.0	1.4	1.2
Private cars and motorcycles	599.8	652.5	711.9	740.3	740.3	789.2	816.6	850.2	893.3	1.7	0.4	1.0	0.9
Rail	73.9	64.5	80.7	88.9	94.0	103.6	112.1	122.3	132.3	0.9	1.5	1.8	1.7
Aviation	53.5	56.4	69.1	61.5	66.9	77.6	88.7	99.0	108.8	2.6	-0.3	2.9	2.1
Inland navigation	3.9	4.1	3.5	3.1	3.2	3.4	3.5	3.7	3.9	-1.3	-0.7	0.8	0.9
Freight transport activity (Gtkm)	**213.6**	**233.1**	**270.8**	**254.9**	**268.2**	**295.1**	**313.5**	**334.9**	**358.2**	**2.4**	**-0.1**	**1.6**	**1.3**
Trucks	153.7	178.2	204.0	205.3	216.5	239.2	253.4	270.2	288.9	2.9	0.6	1.6	1.3
Rail	52.2	48.3	57.7	40.7	42.7	46.4	50.2	54.2	58.3	1.0	-3.0	1.6	1.5
Inland navigation	7.6	6.6	9.1	8.9	9.0	9.5	10.0	10.5	10.9	1.9	-0.1	1.0	0.9
Energy demand in transport (ktoe)	**42037**	**44292**	**51586**	**49941**	**49329**	**49412**	**49252**	**47820**	**44954**	**2.1**	**-0.4**	**0.0**	**-0.9**
Public road transport	440	438	446	446	480	503	510	512	511	0.1	0.7	0.6	0.0
Private cars and motorcycles	25694	27178	32862	32693	31237	29815	28537	26542	23851	2.5	-0.5	-0.9	-1.8
Trucks	10192	10029	9441	8938	9405	10313	10773	11407	11841	-0.8	0.0	1.4	0.9
Rail	1153	1222	1376	1267	1296	1367	1376	1392	1330	1.8	-0.6	0.6	-0.3
Aviation	3839	4690	6683	6291	6596	7085	7717	7613	7053	5.7	-0.1	1.6	-0.9
Inland navigation	718	735	778	306	315	329	340	353	369	0.8	-8.7	0.8	0.8

Source: PRIMES

Germany: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**186681**	**141981**	**133331**	**136015**	**119159**	**108500**	**86547**	**82414**	**85808**	**-3.3**	**-1.1**	**-3.1**	**-0.1**
Solids	125125	78834	59599	56488	45650	38386	30732	34881	34582	-7.1	-2.6	-3.9	1.2
Oil	4031	3308	3525	5746	3120	2630	2200	0	0	-1.3	-1.2	-3.4	
Natural gas	13532	15099	15800	14224	12200	11000	10000	8000	6500	1.6	-2.6	-2.0	-4.2
Nuclear	37674	37322	43750	42061	33909	26429	8919	0	0	1.5	-2.5	-12.5	
Renewable energy sources	6320	7417	10656	17496	24281	30055	34696	39533	44726	5.4	8.6	3.6	2.6
Hydro	1498	1873	1869	1684	1811	1883	1922	1986	2052	2.2	-0.3	0.6	0.7
Biomass & Waste	4797	5348	7877	12980	16558	18531	20363	21168	21581	5.1	7.7	2.1	0.6
Wind	6	147	804	2341	4199	7008	8859	11654	15110	62.9	18.0	7.8	5.5
Solar and others	11	41	96	353	1300	2063	2510	2881	3172	24.3	29.8	6.8	2.4
Geothermal	7	9	10	138	413	570	1042	1845	2811	3.4	45.5	9.7	10.4
Net Imports	**166524**	**196270**	**205682**	**215281**	**210889**	**212034**	**221907**	**211289**	**194553**	**2.1**	**0.3**	**0.5**	**-1.3**
Solids	3182	10963	21603	26805	26101	29934	40529	37309	31597	21.1	1.9	4.5	-2.5
Oil	121527	131988	126951	123134	112353	108652	103551	97284	89189	0.4	-1.2	-0.8	-1.5
- Crude oil and Feedstocks	89820	102213	102638	113980	110081	108466	106175	100992	93855	1.3	0.7	-0.4	-1.2
- Oil products	31707	29775	24312	9154	2272	186	-2624	-3709	-4666	-2.6	-21.1		
Natural gas	41747	52904	56865	65734	73591	73066	76292	74807	71739	3.1	2.6	0.4	-0.6
Electricity	68	415	263	-393	-1439	22	1098	1403	1475	14.5			3.0
Gross Inland Consumption	**356271**	**339454**	**341166**	**347147**	**327478**	**317875**	**305805**	**291078**	**277747**	**-0.4**	**-0.4**	**-0.7**	**-1.0**
Solids	131521	92175	83725	82803	71751	68321	71261	72190	66179	-4.4	-1.5	-0.1	-0.7
Oil	125712	134828	130919	124323	112903	108623	103103	94658	86574	0.4	-1.5	-0.9	-1.7
Natural gas	54976	67298	71853	80856	85791	84066	86292	82807	78239	2.7	1.8	0.1	-1.0
Nuclear	37674	37322	43750	42061	33909	26429	8919	0	0	1.5	-2.5	-12.5	
Electricity	68	415	263	-393	-1439	22	1098	1403	1475	14.5			3.0
Renewable energy forms	6320	7417	10656	17496	24564	30414	35133	40020	45280	5.4	8.7	3.6	2.6
as % in Gross Inland Consumption													
Solids	36.9	27.2	24.5	23.9	21.9	21.5	23.3	24.8	23.8				
Oil	35.3	39.7	38.4	35.8	34.5	34.2	33.7	32.5	31.2				
Natural gas	15.4	19.8	21.1	23.3	26.2	26.4	28.2	28.4	28.2				
Nuclear	10.6	11.0	12.8	12.1	10.4	8.3	2.9	0.0	0.0				
Renewable energy forms	1.8	2.2	3.1	5.0	7.5	9.6	11.5	13.7	16.3				
Gross Electricity Generation in GWh_e	**547549**	**533711**	**567219**	**613054**	**631996**	**634715**	**640072**	**661848**	**680251**	**0.4**	**1.1**	**0.1**	**0.6**
Self consumption and grid losses	66295	62666	74161	73028	70290	68151	69729	86457	98584	1.1	-0.5	-0.1	3.5
Fuel Inputs for Thermal Power Generation	**92914**	**85884**	**85258**	**92517**	**90560**	**87715**	**96523**	**98438**	**92363**	**-0.9**	**0.6**	**0.6**	**-0.4**
Solids	75541	69147	68066	66172	59768	57030	59276	60216	54604	-1.0	-1.3	-0.1	-0.8
Oil (including refinery gas)	2873	2090	1113	2051	858	1467	2756	2353	1760	-9.0	-2.6	12.4	-4.4
Gas	12676	11982	12906	19356	23181	22052	26110	26055	24320	0.2	6.0	1.2	-0.7
Biomass & Waste	1824	2665	3174	4938	6576	6942	7767	8501	9392	5.7	7.6	1.7	1.9
Geothermal heat	0	0	0	0	179	223	614	1314	2287			13.1	14.1
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**165992**	**141292**	**137838**	**145413**	**135869**	**133239**	**131299**	**121853**	**113759**	**-1.8**	**-0.1**	**-0.3**	**-1.4**
Refineries	108022	117793	120748	127966	120595	118246	115067	107095	99301	1.1	0.0	-0.5	-1.5
Biofuels and hydrogen production	0	31	222	1948	3596	4289	4606	4614	4502		32.1	2.5	-0.2
District heating	6392	3638	1437	868	1528	1365	1491	498	869	-13.9	0.6	-0.2	-5.3
Others	51578	19831	15431	14632	10150	9339	10135	9647	9087	-11.4	-4.1	0.0	-1.1
Energy Branch Consumption	**15451**	**14982**	**14383**	**15267**	**14136**	**13435**	**13005**	**13634**	**13797**	**-0.7**	**-0.2**	**-0.8**	**0.6**
Non-Energy Uses	**23473**	**23323**	**25457**	**24974**	**24221**	**24136**	**23962**	**23079**	**22194**	**0.8**	**-0.5**	**-0.1**	**-0.8**
Final Energy Demand	**227197**	**222795**	**218098**	**218369**	**217767**	**218762**	**215959**	**207827**	**199255**	**-0.4**	**0.0**	**-0.1**	**-0.8**
by sector													
Industry	71457	62001	57896	55666	52776	53258	54259	53533	52843	-2.1	-0.9	0.3	-0.3
- energy intensive industries	48775	42867	39110	37592	34484	34378	34841	33765	33041	-2.2	-1.3	0.1	-0.5
- other industrial sectors	22682	19134	18787	18074	18291	18879	19418	19769	19802	-1.9	-0.3	0.6	0.2
Residential	58417	63145	62142	67731	69448	68995	66344	63530	61267	0.6	1.1	-0.5	-0.8
Tertiary	38691	34569	31872	32823	32799	32602	31857	30861	29593	-1.9	0.3	-0.3	-0.7
Transport	58631	63080	66188	62149	62745	63908	63500	59903	55551	1.2	-0.5	0.1	-1.3
by fuel													
Solids	37141	14915	10949	9829	7225	6849	7065	7165	6955	-11.5	-4.1	-0.2	-0.2
Oil	96799	104905	98462	88706	81498	78302	73577	67275	61418	0.2	-1.9	-1.0	-1.8
Gas	42724	52595	56064	59821	60744	59161	56562	54166	50823	2.8	0.8	-0.7	-1.1
Electricity	38391	38912	41496	44497	45468	47383	48796	49585	50259	0.8	0.9	0.7	0.3
Heat (from CHP and District Heating) [A]	9150	8737	6323	7428	11986	14037	15809	15211	15533	-3.6	6.6	2.8	-0.2
Renewable energy forms	2991	2731	4804	8088	10841	13023	14141	14416	14257	4.9	8.5	2.7	0.1
Other	0	0	0	0	5	8	10	10	9			7.7	-1.1
RES in Gross Final Energy Consumption [B]			**8852**	**14393**	**22559**	**28609**	**32669**	**37004**	**41312**		**9.8**	**3.8**	**2.4**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**1210.3**		**1025.5**	**997.3**	**923.0**	**889.1**	**885.2**	**801.9**	**681.5**	**-1.6**	**-1.0**	**-0.4**	**-2.6**
of which ETS sectors GHGs emissions				544.6	476.4	460.3	481.7	422.7	330.8			0.1	-3.7
CO_2 Emissions (energy related)	**943.1**	**858.6**	**817.9**	**803.4**	**748.2**	**718.6**	**714.9**	**633.2**	**518.2**	**-1.4**	**-0.9**	**-0.5**	**-3.2**
Power generation/District heating	373.3	328.6	315.8	325.0	305.1	292.7	309.4	253.7	166.9	-1.7	-0.3	0.1	-6.0
Energy Branch	25.9	27.2	26.6	28.3	24.3	22.1	20.7	19.0	17.4	0.3	-0.9	-1.6	-1.7
Industry	165.4	129.6	113.0	101.0	77.1	70.9	69.2	67.4	63.5	-3.7	-3.8	-1.1	-0.9
Residential	127.3	126.8	117.8	122.2	120.1	113.0	101.8	92.7	85.8	-0.8	0.2	-1.6	-1.7
Tertiary	81.9	63.9	53.2	52.0	49.6	46.4	42.6	39.9	37.0	-4.2	-0.7	-1.5	-1.4
Transport	169.4	182.4	191.5	174.8	171.9	173.4	171.3	160.6	147.7	1.2	-1.1	0.0	-1.5
CO_2 Emissions (non energy related)	**84.2**	**80.6**	**82.8**	**77.7**	**67.9**	**68.2**	**72.4**	**72.7**	**72.0**	**-0.2**	**-2.0**	**0.7**	**-0.1**
Non-CO_2 GHGs Emissions	**183.0**		**124.8**	**116.2**	**107.0**	**102.3**	**97.9**	**96.0**	**91.3**	**-3.8**	**-1.5**	**-0.9**	**-0.7**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**84.7**	**82.4**	**76.3**	**73.5**	**73.1**	**66.3**	**56.3**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Germany: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	79.113	81.539	82.163	82.501	82.145	81.858	81.472	80.907	80.152	0.4	0.0	-0.1	-0.2
GDP (in 000 MEuro'05)	1830.3	1971.3	2177.2	2243.2	2281.5	2510.7	2723.6	2867.1	3008.8	1.8	0.5	1.8	1.0
Gross Inl. Cons./GDP (toe/MEuro'05)	194.7	172.2	156.7	154.8	143.5	126.6	112.3	101.5	92.3	-2.1	-0.9	-2.4	-1.9
Carbon intensity (t of CO_2/toe of GIC)	2.65	2.53	2.40	2.31	2.28	2.26	2.34	2.18	1.87	-1.0	-0.5	0.2	-2.2
Import Dependency %	46.4	57.5	59.9	61.6	63.9	66.2	71.9	71.9	69.4				
Total Energy-related Costs (C) (in 000 M€05)			200.9	240.5	253.8	284.6	329.6	352.1	352.4		2.4	2.6	0.7
as % of GDP			9.2	10.7	11.1	11.3	12.1	12.3	11.7				
Energy intensity indicators													
Industry (Energy on Value added)	132.8	118.3	100.0	89.5	83.5	78.1	73.1	68.9	65.4	-2.8	-1.8	-1.3	-1.1
Residential (Energy on Private Income)	113.2	111.0	100.0	107.4	110.1	99.4	88.8	81.0	74.3	-1.2	1.0	-2.1	-1.8
Tertiary (Energy on Value added)	156.4	123.5	100.0	98.2	95.3	86.2	77.7	71.2	64.9	-4.4	-0.5	-2.0	-1.8
Passenger transport (toe/Mpkm)	49.7	45.4	45.0	40.5	39.2	35.9	34.1	31.0	27.8	-1.0	-1.4	-1.4	-2.0
Freight transport (toe/Mtkm)	43.7	43.4	42.5	37.7	37.8	37.2	35.5	33.6	31.4	-0.3	-1.2	-0.6	-1.2
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.56	0.51	0.48	0.45	0.38	0.35	0.36	0.29	0.19	-1.4	-2.3	-0.5	-6.4
Final energy demand (t of CO_2/toe)	2.39	2.26	2.18	2.06	1.92	1.85	1.78	1.73	1.68	-0.9	-1.2	-0.8	-0.6
Industry	2.31	2.09	1.95	1.81	1.46	1.33	1.28	1.26	1.20	-1.7	-2.9	-1.3	-0.6
Residential	2.18	2.01	1.90	1.80	1.73	1.64	1.53	1.46	1.40	-1.4	-0.9	-1.2	-0.9
Tertiary	2.12	1.85	1.67	1.58	1.51	1.42	1.34	1.29	1.25	-2.4	-1.0	-1.2	-0.7
Transport	2.89	2.89	2.89	2.81	2.74	2.71	2.70	2.68	2.66	0.0	-0.5	-0.2	-0.1
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			3.9	6.4	10.0	12.6	14.6	17.1	19.8				
RES in transport (%)			0.6	3.9	7.1	8.6	9.6	10.5	11.5				
Gross Electricity generation by fuel type (in GWh)			**567219**	**613054**	**631996**	**634715**	**640072**	**661848**	**680251**		**1.1**	**0.1**	**0.6**
Nuclear energy			169575	163026	131452	102456	34576	0	0		-2.5	-12.5	
Coal and lignite			292440	285286	259860	249528	262322	277036	263528		-1.2	0.1	0.0
Petroleum products			4733	8811	4426	6957	12229	10458	7705		-0.7	10.7	-4.5
Gas (including derived gases)			59321	91860	131597	127026	150531	152782	138442		8.3	1.4	-0.8
Biomass & waste			10011	15988	26427	31269	36112	39497	43093		10.2	3.2	1.8
Hydro			21728	19577	21054	21893	22349	23094	23856		-0.3	0.6	0.7
Wind			9350	27224	48827	81492	103009	135507	175702		18.0	7.8	5.5
Solar, tidal etc.			60	1282	8146	13833	18230	21945	25266		63.4	8.4	3.3
Geothermal and other renewables			0	0	208	260	714	1528	2659			13.1	14.1
Net Generation Capacity in MW_e			**112510**	**121873**	**143633**	**165802**	**173108**	**185047**	**196941**		**2.5**	**1.9**	**1.3**
Nuclear energy			21301	20680	15521	12031	4049	0	0		-3.1	-12.6	
Renewable energy			10477	24021	40427	58576	68805	83006	98953		14.5	5.5	3.7
Hydro (pumping excluded)			4268	4081	4246	4310	4427	4616	4694		-0.1	0.4	0.6
Wind			6095	18433	27723	39906	45459	55616	68039		16.4	5.1	4.1
Solar			114	1508	8458	14360	18919	22774	26220		53.8	8.4	3.3
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			80731	77172	87685	95195	100254	102041	97988		0.8	1.3	-0.2
of which cogeneration units			13526	16773	21790	23145	24610	26269	26842		4.9	1.2	0.9
of which CCS units			0	0	0	0	646	7147	14829				36.8
Solids fired			51482	48960	48589	49004	45725	41647	42696		-0.6	-0.6	-0.7
Gas fired			20674	19428	28704	36205	39248	44379	40506		3.3	3.2	0.3
Oil fired			6659	6354	5356	4176	8758	9179	7715		-2.2	5.0	-1.3
Biomass-waste fired			1916	2430	5006	5781	6442	6662	6769		10.1	2.6	0.5
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	30	30	81	174	304			10.6	14.1
Load factor for net electric capacities (%)			53.7	53.6	47.2	41.4	40.0	37.8	36.0				
Efficiency for thermal electricity production (%)			37.0	37.4	40.1	40.7	41.2	42.0	42.4				
CHP indicator (% of electricity from CHP)			11.7	13.9	20.2	23.5	24.0	25.3	25.0				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	1.1	11.7	22.5				
Non fossil fuels in electricity generation (%)			37.2	37.0	37.4	39.6	33.6	33.5	39.8				
- nuclear			29.9	26.6	20.8	16.1	5.4	0.0	0.0				
- renewable energy forms and industrial waste			7.3	10.5	16.6	23.4	28.2	33.5	39.8				
Transport sector													
Passenger transport activity (Gpkm)	**888.1**	**1033.4**	**1065.5**	**1098.9**	**1112.3**	**1209.7**	**1268.3**	**1300.7**	**1335.5**	**1.8**	**0.4**	**1.3**	**0.5**
Public road transport	73.1	68.5	69.0	67.1	68.5	73.4	77.1	79.1	80.8	-0.6	-0.1	1.2	0.5
Private cars and motorcycles	698.4	830.5	849.6	875.7	881.4	951.5	984.8	996.0	1011.8	2.0	0.4	1.1	0.3
Rail	76.1	85.4	90.0	92.3	93.4	101.6	109.3	114.2	118.9	1.7	0.4	1.6	0.8
Aviation	37.4	46.3	54.7	61.7	66.9	81.0	94.9	109.0	121.6	3.9	2.0	3.6	2.5
Inland navigation	3.1	2.7	2.2	2.0	2.1	2.2	2.3	2.4	2.4	-3.1	-0.7	1.0	0.4
Freight transport activity (Gtkm)	**331.7**	**372.3**	**429.8**	**469.6**	**507.7**	**551.4**	**571.1**	**580.2**	**587.7**	**2.6**	**1.7**	**1.2**	**0.3**
Trucks	175.2	237.8	280.7	310.1	338.9	367.1	376.2	380.1	383.9	4.8	1.9	1.0	0.2
Rail	101.7	70.5	82.7	95.4	103.6	113.3	120.1	123.1	125.1	-2.0	2.3	1.5	0.4
Inland navigation	54.8	64.0	66.5	64.1	65.2	71.0	74.9	77.0	78.7	1.9	-0.2	1.4	0.5
Energy demand in transport (ktoe)	**58631**	**63080**	**66188**	**62149**	**62745**	**63908**	**63500**	**59903**	**55551**	**1.2**	**-0.5**	**0.1**	**-1.3**
Public road transport	779	721	716	682	690	717	715	694	666	-0.8	-0.4	0.4	-0.7
Private cars and motorcycles	37559	39747	39405	35052	33748	32480	31129	28285	24943	0.5	-1.5	-0.8	-2.2
Trucks	12208	13949	16490	15960	17381	18590	18344	17657	16814	3.1	0.5	0.5	-0.9
Rail	2118	2131	1950	1830	1886	1962	1931	1854	1631	-0.8	-0.3	0.2	-1.7
Aviation	5307	5975	7345	8304	8712	9808	11014	11038	11117	3.3	1.7	2.4	0.1
Inland navigation	660	558	281	321	327	352	367	374	380	-8.2	1.5	1.2	0.3

Source: PRIMES

Greece: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**9155**	**9741**	**10011**	**10316**	**9798**	**10189**	**10636**	**11201**	**11724**	**0.9**	**-0.2**	**0.8**	**1.0**
Solids	7077	7911	8222	8538	7948	8002	7965	7962	7968	1.5	-0.3	0.0	0.0
Oil	835	460	281	101	82	60	40	0	0	-10.3	-11.6	-6.9	
Natural gas	138	44	42	18	24	0	0	0	0	-11.2	-5.5		
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	1105	1326	1466	1659	1744	2127	2632	3239	3757	2.9	1.8	4.2	3.6
Hydro	152	303	318	431	344	353	364	376	384	7.6	0.8	0.6	0.5
Biomass & Waste	893	935	1010	1015	998	1083	1093	1140	1197	1.2	-0.1	0.9	0.9
Wind	0	3	39	109	263	433	742	1092	1320	74.7	21.1	10.9	5.9
Solar and others	56	82	99	102	138	255	367	443	487	5.8	3.4	10.3	2.9
Geothermal	3	3	2	1	1	1	66	188	369	-4.7	-4.1	51.1	18.9
Net Imports	**15473**	**18268**	**22065**	**23448**	**23677**	**25280**	**25969**	**26596**	**26879**	**3.6**	**0.7**	**0.9**	**0.3**
Solids	988	925	768	371	204	213	238	254	267	-2.5	-12.4	1.6	1.2
Oil	14424	17275	19610	20419	19759	20070	19832	19527	19140	3.1	0.1	0.0	-0.4
- Crude oil and Feedstocks	14802	16997	20508	19443	20099	20398	20192	19930	19594	3.3	-0.2	0.0	-0.3
- Oil products	-378	277	-898	977	-340	-329	-360	-403	-453				
Natural gas	0	0	1689	2332	3238	4328	5054	5970	6621		6.7	4.6	2.7
Electricity	61	69	-1	325	401	436	404	390	385			0.1	-0.5
Gross Inland Consumption	**22338**	**24228**	**28217**	**31352**	**30864**	**32739**	**33774**	**34847**	**35543**	**2.4**	**0.9**	**0.9**	**0.5**
Solids	8091	8783	9040	8952	8152	8215	8202	8216	8235	1.1	-1.0	0.1	0.0
Oil	12942	14006	16007	18063	17230	17399	17040	16577	16080	2.1	0.7	-0.1	-0.6
Natural gas	138	44	1705	2354	3262	4328	5054	5970	6621	28.6	6.7	4.5	2.7
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	61	69	-1	325	401	436	404	390	385			0.1	-0.5
Renewable energy forms	1105	1326	1466	1659	1819	2360	3073	3693	4222	2.9	2.2	5.4	3.2
as % in Gross Inland Consumption													
Solids	36.2	36.3	32.0	28.6	26.4	25.1	24.3	23.6	23.2				
Oil	57.9	57.8	56.7	57.6	55.8	53.1	50.5	47.6	45.2				
Natural gas	0.6	0.2	6.0	7.5	10.6	13.2	15.0	17.1	18.6				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	4.9	5.5	5.2	5.3	5.9	7.2	9.1	10.6	11.9				
Gross Electricity Generation in GWh_e	**34767**	**41291**	**53415**	**59416**	**61339**	**69330**	**76011**	**82010**	**87041**	**4.4**	**1.4**	**2.2**	**1.4**
Self consumption and grid losses	5818	6451	8430	10124	10133	11194	11891	12763	13342	3.8	1.9	1.6	1.2
Fuel Inputs for Thermal Power Generation	**8619**	**9938**	**11693**	**12405**	**11542**	**12506**	**12927**	**13677**	**14270**	**3.1**	**-0.1**	**1.1**	**1.0**
Solids	6890	7810	8234	8693	7894	7956	7937	7939	7951	1.8	-0.4	0.1	0.0
Oil (including refinery gas)	1711	2076	2114	2055	1556	1380	1026	771	553	2.1	-3.0	-4.1	-6.0
Gas	18	14	1280	1605	2058	2887	3457	4249	4809	53.1	4.9	5.3	3.4
Biomass & Waste	0	38	64	52	34	283	443	530	589		-6.0	29.1	2.9
Geothermal heat	0	0	0	0	0	0	64	187	368				19.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**16747**	**17954**	**22504**	**21602**	**20643**	**21046**	**20932**	**20716**	**20416**	**3.0**	**-0.9**	**0.1**	**-0.2**
Refineries	16670	17901	22473	21510	20496	20801	20599	20320	19987	3.0	-0.9	0.1	-0.3
Biofuels and hydrogen production	0	0	0	0	144	243	330	394	426			8.6	2.6
District heating	0	0	0	0	0	0	0	0	0				
Others	77	52	30	93	3	3	3	2	2	-8.8	-21.0	-1.4	-1.1
Energy Branch Consumption	**1194**	**1172**	**1558**	**1755**	**1725**	**1763**	**1786**	**1788**	**1769**	**2.7**	**1.0**	**0.3**	**-0.1**
Non-Energy Uses	**672**	**456**	**719**	**761**	**771**	**831**	**902**	**941**	**970**	**0.7**	**0.7**	**1.6**	**0.7**
Final Energy Demand	**14541**	**15838**	**18560**	**20800**	**21201**	**22492**	**23264**	**23678**	**23908**	**2.5**	**1.3**	**0.9**	**0.3**
by sector													
Industry	3945	4114	4445	4143	4035	4194	4421	4500	4594	1.2	-1.0	0.9	0.4
- energy intensive industries	2535	2493	2727	2573	2397	2498	2638	2687	2740	0.7	-1.3	1.0	0.4
- other industrial sectors	1410	1621	1718	1570	1638	1696	1782	1813	1854	2.0	-0.5	0.8	0.4
Residential	3057	3332	4486	5489	5703	6204	6443	6536	6583	3.9	2.4	1.2	0.2
Tertiary	1718	1947	2417	3083	3163	3475	3635	3777	3895	3.5	2.7	1.4	0.7
Transport	5821	6445	7212	8085	8300	8619	8765	8865	8836	2.2	1.4	0.5	0.1
by fuel													
Solids	1053	1074	888	446	257	258	265	276	284	-1.7	-11.7	0.3	0.7
Oil	10073	10837	12631	14278	14248	14633	14617	14499	14245	2.3	1.2	0.3	-0.3
Gas	15	14	257	585	674	790	876	900	964	33.0	10.1	2.7	1.0
Electricity	2448	2931	3710	4377	4645	5273	5751	6175	6553	4.2	2.3	2.2	1.3
Heat (from CHP and District Heating) [A]	0	0	28	49	207	328	450	521	537		22.1	8.1	1.8
Renewable energy forms	952	982	1046	1066	1169	1209	1304	1304	1324	0.9	1.1	1.1	0.2
Other	0	0	0	0	1	1	1	1	1			9.0	-0.1
RES in Gross Final Energy Consumption [B]			**1370**	**1507**	**1809**	**2204**	**2778**	**3226**	**3588**		**2.8**	**4.4**	**2.6**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**101.4**		**120.5**	**127.5**	**117.5**	**121.1**	**122.5**	**123.9**	**124.6**	**1.7**	**-0.3**	**0.4**	**0.2**
of which ETS sectors GHGs emissions				67.9	61.9	64.7	66.4	68.4	70.1			0.7	0.5
CO_2 Emissions (energy related)	**71.1**	**78.0**	**88.9**	**95.8**	**90.7**	**93.7**	**94.1**	**94.7**	**94.7**	**2.3**	**0.2**	**0.4**	**0.1**
Power generation/District heating	34.1	39.0	43.9	46.3	42.4	44.1	44.2	45.3	45.9	2.6	-0.3	0.4	0.4
Energy Branch	2.4	2.2	3.1	3.5	2.9	2.9	2.9	2.8	2.7	2.3	-0.4	-0.1	-0.8
Industry	9.3	9.8	9.9	8.2	7.1	7.3	7.4	7.3	7.4	0.6	-3.3	0.5	0.0
Residential	4.6	4.8	7.5	9.7	10.2	11.0	11.0	10.8	10.5	4.9	3.2	0.7	-0.4
Tertiary	3.4	3.2	3.4	4.2	4.0	3.8	3.6	3.5	3.3	0.1	1.6	-0.8	-0.9
Transport	17.2	19.1	21.3	23.9	24.0	24.7	24.9	25.0	24.9	2.1	1.2	0.4	0.0
CO_2 Emissions (non energy related)	**7.2**	**7.7**	**8.1**	**8.3**	**8.2**	**8.9**	**9.8**	**10.4**	**11.0**	**1.2**	**0.1**	**1.8**	**1.2**
Non-CO_2 GHGs Emissions	**23.1**		**23.5**	**23.5**	**18.7**	**18.5**	**18.7**	**18.7**	**18.8**	**0.1**	**-2.3**	**0.0**	**0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**118.9**	**125.8**	**115.9**	**119.4**	**120.8**	**122.2**	**122.8**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)												Greece: Baseline 2009	
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	10.121	10.595	10.904	11.083	11.307	11.476	11.556	11.575	11.573	0.7	0.4	0.2	0.0
GDP (in 000 MEuro'05)	127.6	135.8	160.9	197.6	219.4	251.9	290.6	323.2	351.6	2.3	3.2	2.9	1.9
Gross Inl. Cons./GDP (toe/MEuro'05)	175.0	178.4	175.4	158.6	140.7	130.0	116.2	107.8	101.1	0.0	-2.2	-1.9	-1.4
Carbon intensity (t of CO_2/toe of GIC)	3.18	3.22	3.15	3.05	2.94	2.86	2.78	2.72	2.67	-0.1	-0.7	-0.5	-0.4
Import Dependency %	62.2	65.8	69.4	68.6	70.7	71.3	70.9	70.4	69.6				
Total Energy-related Costs (C) (in 000 M€05)			17.2	21.1	22.8	26.9	33.2	37.7	39.8		2.8	3.8	1.8
as % of GDP			10.7	10.7	10.4	10.7	11.4	11.7	11.3				
Energy intensity indicators													
Industry (Energy on Value added)	84.1	92.5	100.0	74.3	67.9	62.8	58.2	54.7	52.1	1.7	-3.8	-1.5	-1.1
Residential (Energy on Private Income)	79.7	79.3	100.0	99.6	95.7	90.4	82.3	75.8	70.5	2.3	-0.4	-1.5	-1.5
Tertiary (Energy on Value added)	99.0	104.6	100.0	102.6	95.5	90.5	81.7	75.9	71.7	0.1	-0.5	-1.6	-1.3
Passenger transport (toe/Mpkm)	41.7	39.9	36.3	35.0	34.3	31.9	30.0	28.5	26.8	-1.4	-0.6	-1.3	-1.1
Freight transport (toe/Mtkm)	79.8	79.3	66.6	63.2	61.1	60.8	58.6	56.2	53.6	-1.8	-0.9	-0.4	-0.9
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.98	0.94	0.82	0.77	0.65	0.59	0.53	0.50	0.48	-1.8	-2.3	-1.9	-1.0
Final energy demand (t of CO_2/toe)	2.38	2.32	2.26	2.21	2.14	2.08	2.02	1.97	1.93	-0.5	-0.6	-0.6	-0.4
Industry	2.36	2.37	2.22	1.98	1.75	1.73	1.67	1.63	1.61	-0.6	-2.4	-0.5	-0.3
Residential	1.51	1.43	1.66	1.77	1.79	1.77	1.70	1.66	1.60	0.9	0.8	-0.5	-0.7
Tertiary	1.96	1.65	1.40	1.37	1.25	1.08	1.00	0.92	0.85	-3.3	-1.1	-2.2	-1.6
Transport	2.96	2.96	2.95	2.95	2.90	2.87	2.84	2.82	2.82	0.0	-0.2	-0.2	-0.1
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			7.2	7.0	8.2	9.4	11.5	13.2	14.6				
RES in transport (%)			0.0	0.0	2.2	3.6	4.9	5.9	6.6				
Gross Electricity generation by fuel type (in GWh)			**53415**	**59416**	**61339**	**69330**	**76011**	**82010**	**87041**		**1.4**	**2.2**	**1.4**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			33585	35610	33567	33731	33431	34219	34311		0.0	0.0	0.3
Petroleum products			9354	9188	8142	6792	5230	3443	2479		-1.4	-4.3	-7.2
Gas (including derived gases)			6149	8154	12325	17512	20732	22393	24727		7.2	5.3	1.8
Biomass & waste			183	182	151	1205	1887	2313	2546		-1.9	28.7	3.0
Hydro			3692	5016	3999	4110	4238	4374	4464		0.8	0.6	0.5
Wind			451	1266	3062	5039	8623	12692	15349		21.1	10.9	5.9
Solar, tidal etc.			0	1	94	941	1795	2358	2738			34.2	4.3
Geothermal and other renewables			0	0	0	0	75	217	427				19.0
Net Generation Capacity in MW_e			**10288**	**11926**	**14954**	**18393**	**21152**	**25889**	**28489**		**3.8**	**3.5**	**3.0**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			2585	2887	3820	5458	7540	9619	11085		4.0	7.0	3.9
Hydro (pumping excluded)			2359	2395	2395	2547	2692	2776	2811		0.2	1.2	0.4
Wind			226	491	1348	2230	3678	5306	6489		19.6	10.6	5.8
Solar			0	1	76	682	1170	1537	1785			31.4	4.3
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			7703	9039	11135	12935	13613	16270	17404		3.8	2.0	2.5
of which cogeneration units			200	361	581	741	938	1014	1035		11.3	4.9	1.0
of which CCS units			0	0	0	0	0	0	0				
Solids fired			4507	4799	4799	4241	4375	4434	4434		0.6	-0.9	0.1
Gas fired			1114	1899	3629	6209	7070	9878	10920		12.5	6.9	4.4
Oil fired			2054	2282	2622	2401	2006	1712	1712		2.5	-2.6	-1.6
Biomass-waste fired			28	59	85	85	152	220	289		11.8	6.1	6.6
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	9	25	49				19.0
Load factor for net electric capacities (%)			54.9	52.8	43.9	40.5	38.8	34.2	33.1				
Efficiency for thermal electricity production (%)			36.2	36.8	40.4	40.7	40.8	39.4	38.9				
CHP indicator (% of electricity from CHP)			1.6	1.9	5.0	5.7	6.3	6.4	6.2				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			8.1	10.9	11.9	16.3	21.9	26.8	29.3				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			8.1	10.9	11.9	16.3	21.9	26.8	29.3				
Transport sector													
Passenger transport activity (Gpkm)	**85.8**	**99.2**	**128.7**	**152.9**	**170.2**	**185.7**	**198.3**	**207.7**	**217.8**	**4.1**	**2.8**	**1.5**	**0.9**
Public road transport	17.7	20.2	21.7	21.7	22.2	22.7	23.2	23.3	23.5	2.0	0.2	0.4	0.1
Private cars and motorcycles	37.5	47.5	66.7	89.7	102.7	109.0	111.8	111.0	111.2	5.9	4.4	0.9	-0.1
Rail	2.8	2.3	3.1	3.4	3.7	4.1	4.5	4.8	5.0	0.9	2.0	2.0	0.9
Aviation	22.1	22.8	29.9	31.1	34.1	42.2	50.9	60.4	69.9	3.1	1.3	4.1	3.2
Inland navigation	5.7	6.3	7.3	7.1	7.4	7.7	8.0	8.2	8.3	2.6	0.1	0.7	0.4
Freight transport activity (Gtkm)	**28.0**	**31.4**	**38.1**	**43.2**	**40.3**	**44.2**	**48.1**	**52.3**	**56.1**	**3.1**	**0.6**	**1.8**	**1.6**
Trucks	20.8	24.0	29.0	32.5	28.7	31.6	34.3	37.4	40.3	3.4	-0.1	1.8	1.6
Rail	0.6	0.3	0.4	0.6	0.9	1.0	1.1	1.2	1.2	-3.5	7.4	2.3	1.1
Inland navigation	6.6	7.1	8.7	10.1	10.7	11.6	12.7	13.7	14.6	2.8	2.1	1.7	1.4
Energy demand in transport (ktoe)	**5821**	**6445**	**7212**	**8085**	**8300**	**8619**	**8765**	**8865**	**8836**	**2.2**	**1.4**	**0.5**	**0.1**
Public road transport	190	214	225	220	222	222	215	206	196	1.7	-0.1	-0.3	-1.0
Private cars and motorcycles	1657	2092	2729	3464	3816	3656	3493	3309	3051	5.1	3.4	-0.9	-1.3
Trucks	2066	2309	2380	2517	2223	2426	2535	2642	2704	1.4	-0.7	1.3	0.6
Rail	75	57	60	58	76	85	88	88	82	-2.2	2.4	1.4	-0.6
Aviation	1264	1226	1325	1181	1284	1522	1692	1854	2018	0.5	-0.3	2.8	1.8
Inland navigation	568	546	493	645	678	710	742	766	784	-1.4	3.2	0.9	0.6

Source: PRIMES

Hungary: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**14157**	**13466**	**11215**	**10644**	**10561**	**10984**	**11469**	**12312**	**12891**	**-2.3**	**-0.6**	**0.8**	**1.2**
Solids	3948	3095	2893	1748	1720	1519	1527	1281	1524	-3.1	-5.1	-1.2	0.0
Oil	2330	2339	1673	1780	1200	1000	1000	900	800	-3.3	-3.3	-1.8	-2.2
Natural gas	3812	3788	2475	2331	2200	2000	1900	1775	1700	-4.2	-1.2	-1.5	-1.1
Nuclear	3544	3618	3658	3569	3787	4465	4497	5051	5051	0.3	0.3	1.7	1.2
Renewable energy sources	523	626	516	1217	1654	2000	2545	3305	3816	-0.1	12.4	4.4	4.1
Hydro	15	14	15	17	13	21	90	198	202	0.0	-1.9	21.6	8.4
Biomass & Waste	422	526	415	1110	1552	1853	2150	2544	2689	-0.2	14.1	3.3	2.3
Wind	0	0	0	1	15	25	42	54	64			10.6	4.3
Solar and others	0	0	0	2	10	22	86	118	158			24.6	6.3
Geothermal	86	86	86	87	65	79	178	392	703	0.0	-2.8	10.7	14.7
Net Imports	**14465**	**12652**	**14026**	**17519**	**17741**	**19013**	**19025**	**18434**	**18082**	**-0.3**	**2.4**	**0.7**	**-0.5**
Solids	1686	1395	1081	1303	1320	1332	1309	1311	1294	-4.3	2.0	-0.1	-0.1
Oil	6651	5519	5366	5872	6514	7407	7536	7616	7531	-2.1	2.0	1.5	0.0
- Crude oil and Feedstocks	6505	5962	5893	6334	6615	7477	7600	7683	7630	-1.0	1.2	1.4	0.0
- Oil products	145	-444	-527	-462	-101	-70	-64	-68	-100				
Natural gas	5170	5532	7283	9807	9488	9888	9856	9207	8979	3.5	2.7	0.4	-0.9
Electricity	958	207	296	535	396	356	283	248	218	-11.1	3.0	-3.3	-2.6
Gross Inland Consumption	**28681**	**25896**	**25016**	**28006**	**28302**	**29997**	**30495**	**30746**	**30972**	**-1.4**	**1.2**	**0.7**	**0.2**
Solids	5969	4549	3967	3054	3041	2851	2836	2592	2817	-4.0	-2.6	-0.7	-0.1
Oil	8774	7721	6923	7537	7714	8407	8536	8516	8331	-2.3	1.1	1.0	-0.2
Natural gas	8913	9175	9657	12094	11688	11888	11756	10982	10679	0.8	1.9	0.1	-1.0
Nuclear	3544	3618	3658	3569	3787	4465	4497	5051	5051	0.3	0.3	1.7	1.2
Electricity	958	207	296	535	396	356	283	248	218	-11.1	3.0	-3.3	-2.6
Renewable energy forms	523	626	516	1217	1677	2030	2587	3357	3876	-0.1	12.5	4.4	4.1
as % in Gross Inland Consumption													
Solids	20.8	17.6	15.9	10.9	10.7	9.5	9.3	8.4	9.1				
Oil	30.6	29.8	27.7	26.9	27.3	28.0	28.0	27.7	26.9				
Natural gas	31.1	35.4	38.6	43.2	41.3	39.6	38.6	35.7	34.5				
Nuclear	12.4	14.0	14.6	12.7	13.4	14.9	14.7	16.4	16.3				
Renewable energy forms	1.8	2.4	2.1	4.3	5.9	6.8	8.5	10.9	12.5				
Gross Electricity Generation in GWh_e	**28431**	**34011**	**35185**	**35749**	**37726**	**41603**	**45552**	**49348**	**52737**	**2.2**	**0.7**	**1.9**	**1.5**
Self consumption and grid losses	6572	7502	7991	6769	6107	6355	6790	7310	8329	2.0	-2.7	1.1	2.1
Fuel Inputs for Thermal Power Generation	**4970**	**6113**	**6107**	**5659**	**5276**	**5387**	**5985**	**5977**	**6764**	**2.1**	**-1.5**	**1.3**	**1.2**
Solids	2871	2977	2853	1924	1983	1753	1768	1535	1785	-0.1	-3.6	-1.1	0.1
Oil (including refinery gas)	440	1447	1052	122	55	49	63	99	103	9.1	-25.5	1.4	4.9
Gas	1636	1634	2140	3078	2470	2632	2868	2471	2494	2.7	1.4	1.5	-1.4
Biomass & Waste	24	55	62	534	768	938	1180	1564	1759	10.2	28.6	4.4	4.1
Geothermal heat	0	0	0	0	0	15	105	308	623				19.4
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**11720**	**10716**	**9261**	**10031**	**10487**	**11315**	**11293**	**11278**	**11072**	**-2.3**	**1.3**	**0.7**	**-0.2**
Refineries	8870	8536	7622	8584	8843	9566	9696	9671	9470	-1.5	1.5	0.9	-0.2
Biofuels and hydrogen production	0	0	0	5	163	232	310	350	369			6.7	1.7
District heating	1146	789	471	629	710	703	488	477	482	-8.5	4.2	-3.7	-0.1
Others	1704	1392	1168	813	770	814	798	780	751	-3.7	-4.1	0.4	-0.6
Energy Branch Consumption	**1459**	**1390**	**1243**	**1657**	**1692**	**1791**	**1799**	**1789**	**1781**	**-1.6**	**3.1**	**0.6**	**-0.1**
Non-Energy Uses	**1584**	**1631**	**1596**	**2326**	**2289**	**2382**	**2451**	**2458**	**2462**	**0.1**	**3.7**	**0.7**	**0.0**
Final Energy Demand	**19184**	**15711**	**15759**	**18080**	**18687**	**19855**	**20211**	**20184**	**20018**	**-1.9**	**1.7**	**0.8**	**-0.1**
by sector													
Industry	6525	3808	3461	3430	3400	3490	3504	3488	3452	-6.1	-0.2	0.3	-0.1
- energy intensive industries	4160	2691	2536	2314	2249	2293	2281	2236	2182	-4.8	-1.2	0.1	-0.4
- other industrial sectors	2365	1117	925	1116	1152	1197	1223	1251	1270	-9.0	2.2	0.6	0.4
Residential	6377	5833	5276	6381	6335	6582	6620	6508	6441	-1.9	1.8	0.4	-0.3
Tertiary	3251	3411	3759	4073	4035	4212	4239	4256	4261	1.5	0.7	0.5	0.1
Transport	3031	2660	3263	4196	4916	5571	5848	5932	5863	0.7	4.2	1.8	0.0
by fuel													
Solids	2502	965	668	692	649	684	695	701	685	-12.4	-0.3	0.7	-0.2
Oil	6029	4158	4186	4812	5290	5923	6081	6091	5958	-3.6	2.4	1.4	-0.2
Gas	5941	6370	6503	7852	7796	7763	7496	7094	6772	0.9	1.8	-0.4	-1.0
Electricity	2717	2385	2531	2780	2840	3096	3322	3565	3747	-0.7	1.2	1.6	1.2
Heat (from CHP and District Heating) [A]	1570	1287	1440	1297	1256	1387	1478	1530	1666	-0.9	-1.4	1.6	1.2
Renewable energy forms	425	545	430	647	854	1001	1138	1201	1188	0.1	7.1	2.9	0.4
Other	0	0	0	0	1	1	1	1	1			10.8	0.0
RES in Gross Final Energy Consumption [B]			**469**	**798**	**1274**	**1550**	**1980**	**2476**	**2686**		**10.5**	**4.5**	**3.1**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**96.9**		**76.3**	**77.5**	**75.4**	**76.1**	**75.9**	**73.2**	**70.3**	**-2.4**	**-0.1**	**0.1**	**-0.8**
of which ETS sectors GHGs emissions				29.6	27.7	27.0	27.3	25.5	24.0			-0.1	-1.3
CO_2 Emissions (energy related)	**65.7**	**57.0**	**53.7**	**55.0**	**55.1**	**56.6**	**56.5**	**53.7**	**51.0**	**-2.0**	**0.3**	**0.2**	**-1.0**
Power generation/District heating	20.5	23.0	21.5	17.3	16.0	15.4	15.6	13.7	12.4	0.5	-2.9	-0.3	-2.2
Energy Branch	2.6	2.4	1.6	2.0	2.2	2.4	2.3	2.2	2.0	-4.7	3.4	0.2	-1.1
Industry	14.7	8.7	6.3	6.2	6.1	6.1	5.7	5.5	5.0	-8.1	-0.4	-0.6	-1.3
Residential	13.7	9.9	8.6	10.5	10.2	10.4	10.2	9.6	9.3	-4.6	1.8	0.0	-0.9
Tertiary	5.6	5.5	6.2	6.7	6.7	6.7	6.5	6.3	6.2	1.1	0.7	-0.2	-0.6
Transport	8.6	7.6	9.5	12.2	14.0	15.7	16.3	16.4	16.1	0.9	4.0	1.5	-0.1
CO_2 Emissions (non energy related)	**5.3**	**3.7**	**3.7**	**3.8**	**3.7**	**3.9**	**4.1**	**4.2**	**4.3**	**-3.5**	**-0.1**	**1.0**	**0.4**
Non-CO_2 GHGs Emissions	**25.9**		**18.8**	**18.8**	**16.5**	**15.6**	**15.3**	**15.3**	**15.0**	**-3.1**	**-1.3**	**-0.8**	**-0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**78.7**	**80.0**	**77.8**	**78.5**	**78.3**	**75.6**	**72.5**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Hungary: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	10.375	10.337	10.222	10.098	10.023	9.964	9.893	9.790	9.651	-0.1	-0.2	-0.1	-0.2
GDP (in 000 MEuro'05)	66.0	59.1	72.0	88.7	87.6	101.1	114.8	127.6	141.2	0.9	2.0	2.7	2.1
Gross Inl. Cons./GDP (toe/MEuro'05)	434.3	437.9	347.4	315.8	323.1	296.6	265.7	241.0	219.3	-2.2	-0.7	-1.9	-1.9
Carbon intensity (t of CO_2/toe of GIC)	2.29	2.20	2.15	1.96	1.95	1.89	1.85	1.75	1.65	-0.6	-1.0	-0.5	-1.2
Import Dependency %	50.4	48.9	56.1	62.6	62.7	63.4	62.4	60.0	58.4				
Total Energy-related Costs (C) (in 000 M€05)			13.0	14.5	16.0	19.4	23.9	26.9	28.3		2.1	4.1	1.7
as % of GDP			18.0	16.4	18.3	19.2	20.8	21.1	20.0				
Energy intensity indicators													
Industry (Energy on Value added)	248.3	156.7	100.0	79.0	81.5	75.8	69.9	64.6	60.2	-8.7	-2.0	-1.5	-1.5
Residential (Energy on Private Income)	123.0	126.8	100.0	89.6	93.8	81.1	71.6	63.4	55.9	-2.1	-0.6	-2.7	-2.5
Tertiary (Energy on Value added)	81.4	103.5	100.0	86.0	86.8	76.6	67.4	60.4	54.1	2.1	-1.4	-2.5	-2.2
Passenger transport (toe/Mpkm)	25.9	25.3	24.2	24.9	25.2	25.1	25.2	24.7	23.6	-0.7	0.4	0.0	-0.7
Freight transport (toe/Mtkm)	26.1	32.6	45.9	59.7	63.0	63.3	60.6	57.3	53.2	5.8	3.2	-0.4	-1.3
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.42	0.45	0.40	0.33	0.28	0.25	0.23	0.19	0.16	-0.6	-3.4	-2.0	-3.4
Final energy demand (t of CO_2/toe)	2.22	2.02	1.94	1.97	1.98	1.96	1.91	1.87	1.82	-1.3	0.2	-0.3	-0.5
Industry	2.25	2.28	1.83	1.81	1.79	1.74	1.64	1.58	1.46	-2.1	-0.2	-0.9	-1.2
Residential	2.15	1.70	1.62	1.65	1.61	1.57	1.53	1.47	1.44	-2.8	-0.1	-0.5	-0.6
Tertiary	1.71	1.60	1.66	1.65	1.65	1.60	1.54	1.48	1.44	-0.3	0.0	-0.7	-0.6
Transport	2.84	2.85	2.90	2.91	2.84	2.82	2.78	2.76	2.74	0.2	-0.2	-0.2	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			2.9	4.3	6.6	7.6	9.5	11.9	13.0				
RES in transport (%)			0.0	0.2	3.7	4.6	5.9	6.7	7.3				
Gross Electricity generation by fuel type (in GWh)			**35185**	**35749**	**37726**	**41603**	**45552**	**49348**	**52737**		**0.7**	**1.9**	**1.5**
Nuclear energy			14177	13832	14681	17308	17432	19816	19816		0.3	1.7	1.3
Coal and lignite			9924	6910	7208	6320	6824	6065	8060		-3.1	-0.5	1.7
Petroleum products			3901	505	279	210	266	430	459		-23.2	-0.5	5.6
Gas (including derived gases)			6885	12572	11958	13339	14444	13021	13142		5.7	1.9	-0.9
Biomass & waste			120	1717	3273	3849	4859	6590	7210		39.2	4.0	4.0
Hydro			178	203	147	241	1043	2297	2345		-1.9	21.6	8.4
Wind			0	10	177	289	483	623	740			10.6	4.3
Solar, tidal etc.			0	0	3	29	77	147	241			38.3	12.1
Geothermal and other renewables			0	0	0	18	123	358	724				19.4
Net Generation Capacity in MW_e			**7956**	**8749**	**9385**	**9804**	**9456**	**9295**	**9975**		**1.7**	**0.1**	**0.5**
Nuclear energy			1804	1827	1854	2161	2174	2475	2475		0.3	1.6	1.3
Renewable energy			44	64	256	422	1069	1325	1604		19.2	15.4	4.1
Hydro (pumping excluded)			44	47	47	61	437	461	509		0.7	25.0	1.5
Wind			0	17	205	330	552	711	845			10.4	4.3
Solar			0	0	4	30	80	153	250			34.9	12.1
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			6109	6859	7276	7221	6214	5495	5896		1.8	-1.6	-0.5
of which cogeneration units			1125	1339	1710	2031	2460	2811	3066		4.3	3.7	2.2
of which CCS units			0	0	0	0	0	0	329				
Solids fired			1664	1475	1511	1140	993	867	1095		-1.0	-4.1	1.0
Gas fired			3599	4648	5021	5274	4374	3433	3579		3.4	-1.4	-2.0
Oil fired			762	309	317	285	201	249	234		-8.4	-4.5	1.5
Biomass-waste fired			84	427	427	521	632	905	905		17.6	4.0	3.7
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	2	14	41	83				19.4
Load factor for net electric capacities (%)			46.0	43.0	43.3	46.1	52.3	57.6	56.5				
Efficiency for thermal electricity production (%)			29.3	33.0	37.0	37.9	38.1	38.1	37.6				
CHP indicator (% of electricity from CHP)			14.3	20.0	29.4	32.3	35.8	34.9	34.0				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	6.4				
Non fossil fuels in electricity generation (%)			41.1	44.1	48.5	52.2	52.7	60.5	58.9				
- nuclear			40.3	38.7	38.9	41.6	38.3	40.2	37.6				
- renewable energy forms and industrial waste			0.8	5.4	9.5	10.6	14.5	20.3	21.4				
Transport sector													
Passenger transport activity (Gpkm)	**82.7**	**75.1**	**80.1**	**81.4**	**79.4**	**91.8**	**100.9**	**108.8**	**117.0**	**-0.3**	**-0.1**	**2.4**	**1.5**
Public road transport	19.3	16.6	18.7	17.8	17.0	17.2	17.5	17.8	18.1	-0.3	-0.9	0.2	0.4
Private cars and motorcycles	47.6	46.2	47.0	47.7	47.1	57.9	64.4	69.3	74.5	-0.1	0.0	3.2	1.5
Rail	13.9	10.9	12.3	12.2	11.0	11.3	12.0	13.0	14.1	-1.2	-1.1	0.9	1.6
Aviation	1.9	1.4	2.1	3.7	4.2	5.4	7.0	8.7	10.3	0.6	7.3	5.2	4.0
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**34.0**	**23.4**	**28.8**	**36.4**	**46.3**	**51.6**	**54.4**	**56.5**	**58.4**	**-1.6**	**4.8**	**1.6**	**0.7**
Trucks	15.2	13.8	19.1	25.2	34.4	39.1	41.0	42.3	43.4	2.4	6.0	1.8	0.6
Rail	16.8	8.4	8.8	9.1	9.8	10.3	11.0	11.6	12.2	-6.3	1.1	1.2	1.1
Inland navigation	2.0	1.2	0.9	2.1	2.1	2.3	2.4	2.6	2.7	-7.9	9.0	1.5	1.1
Energy demand in transport (ktoe)	**3031**	**2660**	**3263**	**4196**	**4916**	**5571**	**5848**	**5932**	**5863**	**0.7**	**4.2**	**1.8**	**0.0**
Public road transport	123	141	156	184	174	170	165	159	154	2.3	1.1	-0.5	-0.7
Private cars and motorcycles	1825	1546	1532	1583	1545	1790	1983	2073	2095	-1.7	0.1	2.5	0.6
Trucks	637	595	1181	2040	2782	3132	3166	3113	3006	6.4	8.9	1.3	-0.5
Rail	272	191	176	159	156	162	158	152	122	-4.3	-1.1	0.1	-2.6
Aviation	164	182	219	230	258	315	375	434	487	2.9	1.7	3.8	2.6
Inland navigation	9	5	1	1	1	1	1	1	1	-24.1	5.8	1.3	0.9

Source: PRIMES

Ireland: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**3353**	**4010**	**2152**	**1616**	**1633**	**1846**	**2109**	**2410**	**2738**	**-4.3**	**-2.7**	**2.6**	**2.6**
Solids	1312	1606	959	789	598	609	634	643	594	-3.1	-4.6	0.6	-0.7
Oil	0	0	0	0	0	0	0	0	0				
Natural gas	1873	2249	958	461	410	454	476	493	500	-6.5	-8.1	1.5	0.5
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	168	155	235	367	625	783	998	1275	1644	3.4	10.3	4.8	5.1
Hydro	60	61	73	54	59	61	61	61	61	2.0	-2.0	0.2	0.0
Biomass & Waste	108	92	141	216	264	292	357	457	583	2.7	6.5	3.0	5.0
Wind	0	1	21	96	286	388	490	628	798		29.9	5.5	5.0
Solar and others	0	0	0	0	13	37	80	112	182	14.9	52.1	20.2	8.6
Geothermal	0	0	0	0	2	5	11	17	22	0.0	48.2	16.0	7.3
Net Imports	**7093**	**7631**	**12266**	**13657**	**13989**	**15127**	**15787**	**16065**	**16048**	**5.6**	**1.3**	**1.2**	**0.2**
Solids	2064	1823	1789	1969	1644	1779	1933	1902	1745	-1.4	-0.8	1.6	-1.0
Oil	5029	5725	7991	8503	8633	9156	9355	9460	9527	4.7	0.8	0.8	0.2
- Crude oil and Feedstocks	2023	2269	3008	3305	3147	3308	3356	3371	3374	4.0	0.5	0.6	0.1
- Oil products	3006	3456	4982	5198	5486	5848	5999	6088	6154	5.2	1.0	0.9	0.3
Natural gas	0	85	2478	3010	3481	3851	4045	4185	4250		3.5	1.5	0.5
Electricity	0	-1	8	176	156	163	172	162	153		33.9	1.0	-1.1
Gross Inland Consumption	**10246**	**10861**	**14328**	**15123**	**15522**	**16865**	**17782**	**18356**	**18661**	**3.4**	**0.8**	**1.4**	**0.5**
Solids	3416	2775	2711	2685	2242	2388	2568	2544	2339	-2.3	-1.9	1.4	-0.9
Oil	4789	5598	7938	8426	8534	9049	9241	9340	9402	5.2	0.7	0.8	0.2
Natural gas	1873	2334	3436	3470	3891	4305	4522	4678	4750	6.3	1.3	1.5	0.5
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	0	-1	8	176	156	163	172	162	153		33.9	1.0	-1.1
Renewable energy forms	168	155	235	367	699	961	1280	1632	2016	3.4	11.5	6.2	4.6
as % in Gross Inland Consumption													
Solids	33.3	25.6	18.9	17.8	14.4	14.2	14.4	13.9	12.5				
Oil	46.7	51.5	55.4	55.7	55.0	53.7	52.0	50.9	50.4				
Natural gas	18.3	21.5	24.0	22.9	25.1	25.5	25.4	25.5	25.5				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	1.6	1.4	1.6	2.4	4.5	5.7	7.2	8.9	10.8				
Gross Electricity Generation in GWh_e	**14232**	**17622**	**23695**	**25008**	**26679**	**30342**	**33345**	**36268**	**38339**	**5.2**	**1.2**	**2.3**	**1.4**
Self consumption and grid losses	2261	2658	3457	3869	3599	4040	4405	4712	4804	4.3	0.4	2.0	0.9
Fuel Inputs for Thermal Power Generation	**3019**	**3711**	**4792**	**4747**	**4168**	**4606**	**4897**	**5030**	**4831**	**4.7**	**-1.4**	**1.6**	**-0.1**
Solids	1839	2028	1925	1903	1646	1851	2024	2031	1871	0.5	-1.6	2.1	-0.8
Oil (including refinery gas)	339	622	1019	775	349	328	288	253	224	11.6	-10.2	-1.9	-2.5
Gas	841	1060	1825	2040	2127	2348	2428	2505	2464	8.1	1.5	1.3	0.1
Biomass & Waste	0	0	24	30	45	79	157	241	273		6.7	13.2	5.7
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**1943**	**2439**	**3488**	**3479**	**3328**	**3551**	**3667**	**3712**	**3735**	**6.0**	**-0.5**	**1.0**	**0.2**
Refineries	1746	2272	3317	3343	3147	3308	3356	3371	3374	6.6	-0.5	0.6	0.1
Biofuels and hydrogen production	0	0	0	1	93	171	244	284	314			10.1	2.6
District heating	0	0	0	0	0	0	0	0	0				
Others	197	167	171	135	87	72	67	57	47	-1.4	-6.5	-2.6	-3.4
Energy Branch Consumption	**168**	**185**	**245**	**379**	**335**	**354**	**367**	**373**	**362**	**3.9**	**3.2**	**0.9**	**-0.1**
Non-Energy Uses	**624**	**552**	**552**	**308**	**177**	**208**	**220**	**230**	**242**	**-1.2**	**-10.8**	**2.2**	**0.9**
Final Energy Demand	**7368**	**7910**	**10681**	**12340**	**12508**	**13600**	**14347**	**14897**	**15391**	**3.8**	**1.6**	**1.4**	**0.7**
by sector													
Industry	1745	1854	2348	2481	2286	2503	2703	2881	3059	3.0	-0.3	1.7	1.2
- energy intensive industries	870	881	1174	1237	1025	1056	1085	1119	1152	3.0	-1.3	0.6	0.6
- other industrial sectors	876	973	1174	1244	1261	1447	1618	1762	1906	3.0	0.7	2.5	1.7
Residential	2406	2200	2489	2895	3257	3480	3612	3722	3838	0.3	2.7	1.0	0.6
Tertiary	1227	1507	1826	1967	1965	2149	2229	2311	2376	4.1	0.7	1.3	0.6
Transport	1989	2349	4018	4997	5000	5468	5803	5983	6118	7.3	2.2	1.5	0.5
by fuel													
Solids	1784	933	699	704	583	525	532	502	458	-9.0	-1.8	-0.9	-1.5
Oil	3887	4813	6919	8020	7682	8199	8443	8595	8732	5.9	1.1	0.9	0.3
Gas	568	796	1201	1337	1684	1873	2008	2088	2180	7.8	3.4	1.8	0.8
Electricity	1020	1277	1744	2094	2127	2412	2647	2863	3024	5.5	2.0	2.2	1.3
Heat (from CHP and District Heating) [A]	0	0	0	0	123	160	163	185	206			2.9	2.3
Renewable energy forms	108	92	118	184	308	430	552	662	790	0.9	10.1	6.0	3.6
Other	0	0	0	0	0	1	1	1	1			9.8	1.7
RES in Gross Final Energy Consumption [B]			**218**	**349**	**551**	**929**	**1241**	**1585**	**1965**		**9.7**	**8.5**	**4.7**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**56.0**		**69.0**	**70.7**	**66.0**	**69.3**	**71.1**	**72.2**	**71.8**	**2.1**	**-0.4**	**0.7**	**0.1**
of which ETS sectors GHGs emissions				24.6	19.7	21.6	22.7	23.1	22.5			1.4	-0.1
CO_2 Emissions (energy related)	**30.8**	**32.9**	**41.9**	**45.5**	**42.6**	**45.6**	**47.5**	**48.1**	**47.7**	**3.1**	**0.1**	**1.1**	**0.1**
Power generation/District heating	10.4	12.6	15.2	14.8	12.7	13.9	14.7	14.8	14.0	3.9	-1.8	1.5	-0.5
Energy Branch	0.2	0.2	0.3	0.6	0.6	0.6	0.6	0.6	0.6	4.0	5.6	0.8	-0.3
Industry	4.0	3.8	4.6	4.9	3.8	4.1	4.3	4.3	4.3	1.5	-1.9	1.1	0.1
Residential	7.5	6.0	6.0	6.8	7.6	7.7	7.8	7.8	7.9	-2.1	2.3	0.3	0.1
Tertiary	2.9	3.4	3.8	3.4	3.3	3.5	3.6	3.6	3.7	2.8	-1.3	0.7	0.3
Transport	5.9	6.9	12.0	14.9	14.6	15.8	16.5	17.0	17.3	7.4	2.0	1.3	0.4
CO_2 Emissions (non energy related)	**2.3**	**2.3**	**2.9**	**2.7**	**1.5**	**1.7**	**1.7**	**1.8**	**1.9**	**2.4**	**-6.5**	**1.4**	**0.9**
Non-CO_2 GHGs Emissions	**22.8**		**24.1**	**22.6**	**22.0**	**22.0**	**21.8**	**22.3**	**22.2**	**0.5**	**-0.9**	**-0.1**	**0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**123.2**	**126.4**	**117.9**	**123.8**	**126.9**	**129.0**	**128.2**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)												Ireland: Baseline 2009	
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	3.507	3.598	3.778	4.109	4.614	5.052	5.404	5.673	5.881	0.7	2.0	1.6	0.8
GDP (in 000 MEuro'05)	61.2	77.7	123.7	162.2	158.8	190.3	221.7	253.4	285.9	7.3	2.5	3.4	2.6
Gross Inl. Cons./GDP (toe/MEuro'05)	167.4	139.9	115.8	93.3	97.8	88.6	80.2	72.4	65.3	-3.6	-1.7	-2.0	-2.0
Carbon intensity (t of CO_2/toe of GIC)	3.01	3.03	2.93	3.01	2.74	2.71	2.67	2.62	2.56	-0.3	-0.7	-0.3	-0.4
Import Dependency %	69.1	69.5	84.7	89.7	89.5	89.1	88.2	87.0	85.4				
Total Energy-related Costs [C] (in 000 M€05)			10.2	13.0	12.9	15.0	18.9	21.7	23.1		2.3	3.9	2.1
as % of GDP			8.3	8.0	8.1	7.9	8.5	8.6	8.1				
Energy intensity indicators													
Industry (Energy on Value added)	222.5	150.3	100.0	80.1	68.9	64.5	60.3	57.4	54.7	-7.7	-3.7	-1.3	-1.0
Residential (Energy on Private Income)	167.3	129.6	100.0	93.3	99.0	95.0	86.3	80.7	76.4	-5.0	-0.1	-1.4	-1.2
Tertiary (Energy on Value added)	111.3	119.2	100.0	81.9	80.3	72.9	64.5	58.0	52.5	-1.1	-2.2	-2.2	-2.1
Passenger transport (toe/Mpkm)	48.7	45.2	51.0	48.5	47.4	43.9	41.0	37.1	33.6	0.5	-0.7	-1.5	-2.0
Freight transport (toe/Mtkm)	95.9	115.5	121.2	116.0	115.6	114.2	109.9	105.1	99.5	2.4	-0.5	-0.5	-1.0
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.73	0.71	0.64	0.59	0.45	0.43	0.42	0.38	0.34	-1.3	-3.5	-0.8	-1.9
Final energy demand (t of CO_2/toe)	2.74	2.55	2.47	2.43	2.34	2.29	2.24	2.20	2.16	-1.0	-0.5	-0.4	-0.4
Industry	2.28	2.05	1.98	1.99	1.67	1.62	1.58	1.50	1.41	-1.4	-1.7	-0.6	-1.1
Residential	3.10	2.71	2.42	2.34	2.33	2.22	2.16	2.11	2.06	-2.4	-0.4	-0.7	-0.5
Tertiary	2.34	2.28	2.07	1.74	1.69	1.65	1.60	1.55	1.54	-1.2	-2.0	-0.6	-0.3
Transport	2.96	2.96	2.97	2.98	2.92	2.88	2.85	2.84	2.82	0.1	-0.2	-0.2	-0.1
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			2.0	2.8	4.4	6.8	8.6	10.6	12.7				
RES in transport (%)			0.0	0.0	2.3	3.9	5.3	6.0	6.6				
Gross Electricity generation by fuel type (in GWh)			**23695**	**25008**	**26679**	**30342**	**33345**	**36268**	**38339**		**1.2**	**2.3**	**1.4**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			8830	8822	7889	8903	9741	9770	9004		-1.1	2.1	-0.8
Petroleum products			4387	3389	1646	1521	1322	1311	1170		-9.3	-2.2	-1.2
Gas (including derived gases)			9311	10959	12995	14419	15062	15806	16028		3.4	1.5	0.6
Biomass & waste			76	95	129	263	595	931	1067		5.4	16.5	6.0
Hydro			846	631	691	708	707	704	705		-2.0	0.2	0.0
Wind			244	1112	3327	4516	5702	7305	9276		29.9	5.5	5.0
Solar, tidal etc.			0	0	2	14	24	35	49			28.7	7.5
Geothermal and other renewables			0	0	0	0	193	405	1039				18.4
Net Generation Capacity in MW_e			**4399**	**5718**	**9578**	**9495**	**9808**	**10340**	**11580**		**8.1**	**0.2**	**1.7**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			346	743	1578	1901	2413	3061	4026		16.4	4.3	5.3
Hydro (pumping excluded)			230	225	225	229	230	230	230		-0.2	0.2	0.0
Wind			116	517	1348	1659	2058	2585	3206		27.8	4.3	4.5
Solar			0	0	5	14	25	37	51			17.3	7.5
Other renewables (tidal etc.)			0	0	0	0	100	210	539				18.4
Thermal power			4053	4976	7999	7593	7395	7278	7553		7.0	-0.8	0.2
of which cogeneration units			133	127	273	319	325	331	351		7.4	1.8	0.8
of which CCS units			0	0	0	0	0	0	0				
Solids fired			1276	1229	1230	1204	1222	1221	1221		-0.4	-0.1	0.0
Gas fired			1966	2927	5903	6115	5853	5648	5899		11.6	-0.1	0.1
Oil fired			783	772	781	190	192	224	224		0.0	-13.1	1.6
Biomass-waste fired			27	49	85	85	128	186	209		12.0	4.2	5.0
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			58.1	46.6	30.2	34.8	37.1	38.4	36.4				
Efficiency for thermal electricity production (%)			40.6	42.2	46.8	46.9	46.9	47.6	48.5				
CHP indicator (% of electricity from CHP)			2.6	2.6	2.6	4.4	4.6	4.3	4.6				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			4.9	7.3	15.5	18.1	21.7	25.9	31.7				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			4.9	7.3	15.5	18.1	21.7	25.9	31.7				
Transport sector													
Passenger transport activity (Gpkm)	**29.2**	**35.6**	**47.1**	**58.1**	**62.9**	**71.3**	**80.8**	**90.4**	**100.6**	**4.9**	**2.9**	**2.5**	**2.2**
Public road transport	3.9	5.2	6.1	6.7	7.2	7.7	8.2	8.7	9.2	4.7	1.6	1.3	1.2
Private cars and motorcycles	21.3	25.3	32.4	38.4	40.8	46.0	52.0	58.5	65.4	4.3	2.3	2.5	2.3
Rail	1.2	1.3	1.4	1.9	2.1	2.4	2.7	3.1	3.5	1.3	4.1	2.7	2.4
Aviation	2.0	3.0	6.3	10.1	11.9	14.2	16.7	19.0	21.3	12.3	6.6	3.5	2.4
Inland navigation	0.9	0.9	0.9	1.0	1.0	1.1	1.2	1.2	1.3	0.5	0.6	1.6	1.3
Freight transport activity (Gtkm)	**5.9**	**6.4**	**13.3**	**18.8**	**17.4**	**20.4**	**22.7**	**25.0**	**27.5**	**8.5**	**2.7**	**2.7**	**2.0**
Trucks	5.1	5.5	12.3	17.9	16.7	19.6	21.7	24.0	26.4	9.2	3.1	2.7	2.0
Rail	0.6	0.6	0.5	0.3	0.1	0.2	0.2	0.2	0.3	-1.8	-12.5	4.4	3.0
Inland navigation	0.2	0.3	0.6	0.6	0.6	0.7	0.7	0.8	0.8	9.3	0.3	2.5	1.4
Energy demand in transport (ktoe)	**1989**	**2349**	**4018**	**4997**	**5000**	**5468**	**5803**	**5983**	**6118**	**7.3**	**2.2**	**1.5**	**0.5**
Public road transport	31	41	48	51	54	57	58	58	58	4.4	1.3	0.6	0.1
Private cars and motorcycles	994	1146	1713	1897	1935	1954	2041	2030	1981	5.6	1.2	0.5	-0.3
Trucks	525	694	1577	2150	1999	2316	2472	2607	2717	11.6	2.4	2.1	1.0
Rail	48	50	42	45	28	30	25	27	25	-1.4	-4.0	-1.0	-0.2
Aviation	365	390	613	836	966	1092	1185	1239	1313	5.3	4.6	2.1	1.0
Inland navigation	26	28	25	18	18	20	21	23	24	-0.5	-3.2	1.7	1.2

Source: PRIMES

Italy: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**25558**	**29435**	**27128**	**28111**	**28335**	**28954**	**33209**	**44411**	**57483**	**0.6**	**0.4**	**1.6**	**5.6**
Solids	218	44	4	60	0	0	0	0	0	-33.8			
Oil	4766	5405	4811	6520	5380	5386	5322	5186	4985	0.1	1.1	-0.1	-0.7
Natural gas	14030	16347	13622	9886	8500	7900	7300	6700	6000	-0.3	-4.6	-1.5	-1.9
Nuclear	0	0	0	0	0	0	3277	12794	24935				22.5
Renewable energy sources	6544	7640	8691	11645	14455	15668	17310	19731	21564	2.9	5.2	1.8	2.2
Hydro	2719	3249	3812	3101	3300	3308	3329	3329	3353	3.4	-1.4	0.1	0.1
Biomass & Waste	849	1215	1716	3521	5401	5568	5796	5880	5961	7.3	12.2	0.7	0.3
Wind	0	1	48	202	528	1005	1588	2314	2632	73.3	27.0	11.6	5.2
Solar and others	5	8	12	30	246	823	1440	1990	2383	9.2	34.8	19.4	5.2
Geothermal	2971	3167	3103	4791	4981	4964	5157	6218	7236	0.4	4.8	0.3	3.4
Net Imports	**132454**	**135059**	**153428**	**160955**	**154695**	**160872**	**165235**	**160995**	**154560**	**1.5**	**0.1**	**0.7**	**-0.7**
Solids	13792	12987	13188	16366	16066	17246	18216	17237	15820	-0.4	2.0	1.3	-1.4
Oil	90279	90092	88933	79901	69397	69795	69133	67062	63956	-0.2	-2.4	0.0	-0.8
- Crude oil and Feedstocks	84617	82939	90784	95053	81995	82416	81761	79702	76595	0.7	-1.0	0.0	-0.7
- Oil products	5662	7153	-1852	-15153	-12597	-12621	-12628	-12640	-12639				
Natural gas	25311	28530	47008	59840	64248	68439	71852	70264	67975	6.4	3.2	1.1	-0.6
Electricity	2980	3218	3813	4227	3630	3333	2914	2512	2126	2.5	-0.5	-2.2	-3.1
Gross Inland Consumption	**153512**	**161674**	**172955**	**187312**	**179958**	**186617**	**195167**	**202041**	**208557**	**1.2**	**0.4**	**0.8**	**0.7**
Solids	14621	12272	12659	16477	16066	17246	18216	17237	15820	-1.4	2.4	1.3	-1.4
Oil	90274	93660	89365	83691	71704	71971	71178	68882	65454	-0.1	-2.2	-0.1	-0.8
Natural gas	39001	44652	57940	70651	72748	76339	79152	76964	73975	4.0	2.3	0.8	-0.7
Nuclear	0	0	0	0	0	0	3277	12794	24935				22.5
Electricity	2980	3218	3813	4227	3630	3333	2914	2512	2126	2.5	-0.5	-2.2	-3.1
Renewable energy forms	6636	7871	9177	12266	15808	17728	20431	23651	26247	3.3	5.6	2.6	2.5
as % in Gross Inland Consumption													
Solids	9.5	7.6	7.3	8.8	8.9	9.2	9.3	8.5	7.6				
Oil	58.8	57.9	51.7	44.7	39.8	38.6	36.5	34.1	31.4				
Natural gas	25.4	27.6	33.5	37.7	40.4	40.9	40.6	38.1	35.5				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	1.7	6.3	12.0				
Renewable energy forms	4.3	4.9	5.3	6.5	8.8	9.5	10.5	11.7	12.6				
Gross Electricity Generation in GWh_e	**213400**	**237312**	**270016**	**296786**	**300873**	**331620**	**373488**	**405533**	**434222**	**2.4**	**1.1**	**2.2**	**1.5**
Self consumption and grid losses	29388	31368	35087	36142	33441	37053	42830	46626	51323	1.8	-0.5	2.5	1.8
Fuel Inputs for Thermal Power Generation	**40328**	**43578**	**47763**	**54689**	**52209**	**55568**	**57998**	**55885**	**50688**	**1.7**	**0.9**	**1.1**	**-1.3**
Solids	7017	5287	5836	10001	10924	11716	12403	11368	10227	-1.8	6.5	1.3	-1.9
Oil (including refinery gas)	21531	25009	18954	9640	2060	3157	2854	3319	1621	-1.3	-19.9	3.3	-5.5
Gas	8971	10234	19665	28200	31258	32298	33739	29997	25816	8.2	4.7	0.8	-2.6
Biomass & Waste	39	94	419	2270	3214	3644	4065	5214	5987	26.8	22.6	2.4	3.9
Geothermal heat	2770	2954	2890	4578	4753	4753	4937	5987	7037	0.4	5.1	0.4	3.6
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**99583**	**99070**	**103125**	**107857**	**94779**	**95850**	**95993**	**94129**	**90771**	**0.4**	**-0.8**	**0.1**	**-0.6**
Refineries	91895	92690	97315	102905	89434	89681	88863	86601	83238	0.6	-0.8	-0.1	-0.7
Biofuels and hydrogen production	0	0	0	179	1282	1810	2571	2967	3296			7.2	2.5
District heating	0	0	0	0	0	0	0	0	0				
Others	7688	6380	5811	4773	4063	4358	4560	4561	4237	-2.8	-3.5	1.2	-0.7
Energy Branch Consumption	**7028**	**7345**	**7289**	**10110**	**9398**	**9473**	**9674**	**9607**	**9425**	**0.4**	**2.6**	**0.3**	**-0.3**
Non-Energy Uses	**10095**	**13807**	**11039**	**11267**	**10618**	**10809**	**11108**	**11301**	**11501**	**0.9**	**-0.4**	**0.5**	**0.3**
Final Energy Demand	**107380**	**113897**	**123465**	**135679**	**131767**	**137212**	**141883**	**144056**	**145714**	**1.4**	**0.7**	**0.7**	**0.3**
by sector													
Industry	36259	36459	39526	41924	39732	40372	42233	43653	45260	0.9	0.1	0.6	0.7
- energy intensive industries	25255	24765	24933	26667	24618	24873	25547	25809	26047	-0.1	-0.1	0.4	0.2
- other industrial sectors	11004	11694	14593	15257	15114	15500	16685	17844	19213	2.9	0.4	1.0	1.4
Residential	26334	26707	28361	32040	32616	34582	35540	35839	36005	0.7	1.4	0.9	0.1
Tertiary	11271	12990	14190	17934	16861	17645	18484	18597	18533	2.3	1.7	0.9	0.0
Transport	33514	37741	41388	43782	42558	44612	45626	45966	45916	2.1	0.3	0.7	0.1
by fuel													
Solids	4209	4012	3681	4220	3321	3596	3772	3813	3628	-1.3	-1.0	1.3	-0.4
Oil	53841	53287	56357	58458	53763	53159	52682	51862	50998	0.5	-0.5	-0.2	-0.3
Gas	29813	34652	37984	41979	40953	43226	44454	44168	44650	2.5	0.8	0.8	0.0
Electricity	18409	20442	23435	25828	25852	27888	30571	32606	34314	2.4	1.0	1.7	1.2
Heat (from CHP and District Heating) [A]	0	0	0	3082	4011	4634	4413	5628	5984			1.0	3.1
Renewable energy forms	1107	1505	2007	2112	3864	4704	5984	5973	6134	6.1	6.8	4.5	0.2
Other	0	0	0	0	2	5	6	6	6			9.7	0.1
RES in Gross Final Energy Consumption [B]			**6180**	**7829**	**10053**	**11953**	**14729**	**17071**	**18722**		**5.0**	**3.9**	**2.4**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**499.0**		**532.3**	**561.6**	**513.8**	**526.5**	**530.2**	**513.7**	**485.1**	**0.6**	**-0.4**	**0.3**	**-0.9**
of which ETS sectors GHGs emissions				254.4	217.8	226.6	230.7	218.1	193.4			0.6	-1.7
CO_2 Emissions (energy related)	**384.7**	**399.5**	**418.8**	**447.6**	**412.3**	**425.9**	**429.8**	**413.1**	**384.8**	**0.9**	**-0.2**	**0.4**	**-1.1**
Power generation/District heating	118.8	125.9	130.5	137.8	124.4	133.6	135.6	123.6	99.1	0.9	-0.5	0.9	-3.1
Energy Branch	16.0	16.4	15.9	19.1	17.5	17.4	17.2	15.6	14.3	-0.1	1.0	-0.2	-1.9
Industry	77.6	73.8	75.5	74.9	63.1	61.5	64.1	62.9	64.1	-0.3	-1.8	0.2	0.0
Residential	55.7	52.9	54.8	61.4	62.7	65.0	64.6	64.0	62.9	-0.2	1.4	0.3	-0.3
Tertiary	19.1	21.2	22.0	27.2	24.3	23.7	23.0	21.9	20.7	1.4	1.0	-0.6	-1.0
Transport	97.5	109.2	120.1	127.3	120.1	124.6	125.2	125.0	123.7	2.1	0.0	0.4	-0.1
CO_2 Emissions (non energy related)	**32.7**	**30.6**	**28.2**	**30.5**	**27.7**	**28.4**	**29.2**	**30.0**	**30.5**	**-1.5**	**-0.2**	**0.5**	**0.5**
Non-CO_2 GHGs Emissions	**81.5**		**85.2**	**83.5**	**73.7**	**72.2**	**71.2**	**70.6**	**69.8**	**0.4**	**-1.4**	**-0.3**	**-0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**106.7**	**112.6**	**103.0**	**105.5**	**106.3**	**103.0**	**97.2**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Italy: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	56.694	56.844	56.924	58.462	60.017	60.929	61.421	61.683	61.868	0.0	0.5	0.2	0.1
GDP (in 000 MEuro'05)	1168.7	1244.9	1367.8	1429.5	1403.5	1526.1	1678.7	1832.9	1974.0	1.6	0.3	1.8	1.6
Gross Inl. Cons./GDP (toe/MEuro'05)	131.4	129.9	126.4	131.0	128.2	122.3	116.3	110.2	105.7	-0.4	0.1	-1.0	-1.0
Carbon intensity (t of CO_2/toe of GIC)	2.51	2.47	2.42	2.39	2.29	2.28	2.20	2.04	1.85	-0.3	-0.6	-0.4	-1.8
Import Dependency %	84.8	82.3	87.3	84.4	84.5	84.7	83.3	78.4	72.9				
Total Energy-related Costs (C) (in 000 M€05)			137.3	158.1	158.1	186.0	224.8	253.8	265.5		1.4	3.6	1.7
as % of GDP			10.0	11.1	11.3	12.2	13.4	13.8	13.4				
Energy intensity indicators													
Industry (Energy on Value added)	105.9	98.6	100.0	110.7	111.4	106.4	100.5	92.9	87.4	-0.6	1.1	-1.0	-1.4
Residential (Energy on Private Income)	109.6	106.6	100.0	108.8	110.4	105.1	98.3	91.7	86.5	-0.9	1.0	-1.2	-1.3
Tertiary (Energy on Value added)	93.4	101.2	100.0	119.0	111.9	106.4	100.8	92.8	85.9	0.7	1.1	-1.0	-1.6
Passenger transport (toe/Mpkm)	33.5	32.5	31.3	32.3	31.6	30.9	30.1	28.8	27.6	-0.7	0.1	-0.5	-0.9
Freight transport (toe/Mtkm)	48.4	44.6	45.2	47.5	46.4	46.5	45.6	44.1	42.0	-0.7	0.3	-0.2	-0.8
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.56	0.53	0.48	0.39	0.34	0.33	0.31	0.25	0.19	-1.4	-3.4	-1.1	-4.6
Final energy demand (t of CO_2/toe)	2.33	2.26	2.21	2.14	2.05	2.00	1.95	1.90	1.86	-0.5	-0.7	-0.5	-0.5
Industry	2.14	2.03	1.91	1.79	1.59	1.52	1.52	1.44	1.42	-1.1	-1.8	-0.5	-0.7
Residential	2.12	1.98	1.93	1.92	1.92	1.88	1.82	1.79	1.75	-0.9	0.0	-0.6	-0.4
Tertiary	1.70	1.63	1.55	1.51	1.44	1.34	1.24	1.18	1.12	-0.9	-0.7	-1.5	-1.1
Transport	2.91	2.89	2.90	2.91	2.82	2.79	2.75	2.72	2.69	0.0	-0.3	-0.3	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			4.9	5.6	7.5	8.5	10.1	11.5	12.5				
RES in transport (%)			0.3	0.9	3.9	5.2	7.1	8.2	9.1				
Gross Electricity generation by fuel type (in GWh)			**270016**	**296786**	**300873**	**331620**	**373488**	**405533**	**434222**		**1.1**	**2.2**	**1.5**
Nuclear energy			0	0	0	0	13681	54580	107502				22.9
Coal and lignite			27603	46304	48896	55517	59526	56696	53197		5.9	2.0	-1.1
Petroleum products			85749	45284	9789	15697	14001	14836	7176		-19.5	3.6	-6.5
Gas (including derived gases)			105453	152542	177441	186399	201434	177090	152004		5.3	1.3	-2.8
Biomass & waste			1604	8901	13003	14733	15873	20134	23807		23.3	2.0	4.1
Hydro			44328	36061	38369	38468	38710	38707	38992		-1.4	0.1	0.1
Wind			563	2344	6138	11685	18465	26909	30600		27.0	11.6	5.2
Solar, tidal etc.			18	31	1711	3594	6058	9620	12762		57.7	13.5	7.7
Geothermal and other renewables			4698	5320	5526	5526	5741	6962	8183		1.6	0.4	3.6
Net Generation Capacity in MW_e			**67747**	**81560**	**96738**	**100125**	**102164**	**113381**	**125226**		**3.6**	**0.5**	**2.1**
Nuclear energy			0	0	0	0	1579	6301	12410				22.9
Renewable energy			13784	19213	22856	27907	33428	39797	43570		5.2	3.9	2.7
Hydro (pumping excluded)			13212	17095	17095	17440	17440	17440	17440		2.6	0.2	0.0
Wind			363	1635	4507	7942	12154	16746	19008		28.6	10.4	4.6
Solar			209	483	1254	2524	3834	5611	7122		19.6	11.8	6.4
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			53963	62347	73882	72218	67157	67283	69245		3.2	-0.9	0.3
of which cogeneration units			3956	5817	7500	8571	8828	9536	10528		6.6	1.6	1.8
of which CCS units			0	0	0	0	460	460	1207				10.1
Solids fired			8719	8816	9772	11776	10056	9899	10816		1.1	0.3	0.7
Gas fired			23805	34917	50453	50201	48289	46701	46166		7.8	-0.4	-0.4
Oil fired			20261	16623	10546	6221	3706	4017	4086		-6.3	-9.9	1.0
Biomass-waste fired			588	1322	2440	3349	4435	5871	7243		15.3	6.2	5.0
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			590	671	671	671	671	795	934		1.3	0.0	3.4
Load factor for net electric capacities (%)			43.3	39.7	34.3	36.5	40.1	39.2	37.8				
Efficiency for thermal electricity production (%)			40.5	40.6	41.9	43.0	44.0	42.4	41.5				
CHP indicator (% of electricity from CHP)			9.1	9.7	13.3	14.6	14.4	14.1	14.3				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	1.3	1.2	2.9				
Non fossil fuels in electricity generation (%)			19.0	17.7	21.5	22.3	26.4	38.7	51.1				
- nuclear			0.0	0.0	0.0	0.0	3.7	13.5	24.8				
- renewable energy forms and industrial waste			19.0	17.7	21.5	22.3	22.7	25.2	26.3				
Transport sector													
Passenger transport activity (Gpkm)	**739.1**	**842.8**	**980.7**	**968.1**	**1001.0**	**1056.7**	**1102.3**	**1147.5**	**1191.1**	**2.9**	**0.2**	**1.0**	**0.8**
Public road transport	84.0	87.1	93.6	101.2	103.7	106.6	109.4	112.3	114.7	1.1	1.0	0.5	0.5
Private cars and motorcycles	582.7	674.6	793.5	763.0	788.1	832.3	862.5	891.2	919.5	3.1	-0.1	0.9	0.6
Rail	48.9	51.9	55.2	56.5	55.7	56.8	60.5	64.9	69.5	1.2	0.1	0.8	1.4
Aviation	18.4	24.3	33.5	42.7	48.6	56.1	64.8	73.8	81.9	6.2	3.8	2.9	2.4
Inland navigation	5.1	4.9	5.0	4.7	4.8	4.9	5.1	5.3	5.5	-0.4	-0.3	0.5	0.7
Freight transport activity (Gtkm)	**180.7**	**231.6**	**237.6**	**262.6**	**235.8**	**257.2**	**273.9**	**291.8**	**311.9**	**2.8**	**-0.1**	**1.5**	**1.3**
Trucks	125.5	174.4	184.7	211.8	184.0	202.7	217.0	232.6	250.6	3.9	0.0	1.7	1.5
Rail	19.4	21.7	22.8	22.8	24.6	25.7	26.9	27.7	28.5	1.7	0.7	0.9	0.6
Inland navigation	35.8	35.4	30.2	28.0	27.2	28.8	30.1	31.5	32.9	-1.7	-1.0	1.0	0.9
Energy demand in transport (ktoe)	**33514**	**37741**	**41388**	**43782**	**42558**	**44612**	**45626**	**45966**	**45916**	**2.1**	**0.3**	**0.7**	**0.1**
Public road transport	739	706	793	932	945	942	920	895	867	0.7	1.8	-0.3	-0.6
Private cars and motorcycles	21620	23735	25970	26093	25971	26689	26885	26620	26248	1.8	0.0	0.3	-0.2
Trucks	8154	9612	10097	11738	10175	11168	11718	12104	12382	2.2	0.1	1.4	0.6
Rail	739	821	835	908	931	920	898	882	842	1.2	1.1	-0.4	-0.6
Aviation	1872	2418	3491	3863	4288	4638	4939	5191	5295	6.4	2.1	1.4	0.7
Inland navigation	391	450	203	249	248	257	265	274	283	-6.3	2.0	0.7	0.7

Source: PRIMES

Latvia: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**1124**	**1432**	**1409**	**1870**	**1914**	**2208**	**2311**	**2363**	**2396**	**2.3**	**3.1**	**1.9**	**0.4**
Solids	61	78	16	3	1	1	1	1	1	-12.3	-21.8	-1.9	-2.7
Oil	1	0	0	10	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	1062	1354	1393	1858	1913	2206	2310	2363	2395	2.8	3.2	1.9	0.4
Hydro	387	253	242	286	248	250	252	255	257	-4.6	0.2	0.2	0.2
Biomass & Waste	675	1101	1150	1568	1651	1918	2004	2035	2048	5.5	3.7	2.0	0.2
Wind	0	0	0	4	14	37	51	70	85		44.4	14.2	5.3
Solar and others	0	0	0	0	0	1	2	3	5			25.2	7.7
Geothermal	0	0	0	0	0	0	0	0	0			2.1	1.6
Net Imports	**7468**	**3366**	**2245**	**2994**	**3146**	**3295**	**3296**	**3235**	**3197**	**-11.3**	**3.4**	**0.5**	**-0.3**
Solids	627	170	63	77	53	43	36	24	21	-20.5	-1.8	-3.7	-5.3
Oil	3972	2094	1116	1676	1938	2183	2183	2166	2135	-11.9	5.7	1.2	-0.2
- Crude oil and Feedstocks	1	2	94	4	1	1	1	1	1	55.9	-35.0	1.2	-0.6
- Oil products	3971	2092	1022	1672	1937	2181	2182	2165	2134	-12.7	6.6	1.2	-0.2
Natural gas	2561	999	1113	1434	1415	1434	1457	1391	1417	-8.0	2.4	0.3	-0.3
Electricity	308	194	154	185	121	43	20	21	20	-6.7	-2.3	-16.4	-0.2
Gross Inland Consumption	**7931**	**4628**	**3746**	**4491**	**4747**	**5158**	**5249**	**5232**	**5221**	**-7.2**	**2.4**	**1.0**	**-0.1**
Solids	711	273	135	82	54	44	37	24	22	-15.3	-8.7	-3.6	-5.2
Oil	3487	1893	1175	1382	1625	1838	1826	1801	1763	-10.3	3.3	1.2	-0.4
Natural gas	2380	1010	1092	1358	1415	1434	1457	1391	1417	-7.5	2.6	0.3	-0.3
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	308	194	154	185	121	43	20	21	20	-6.7	-2.3	-16.4	-0.2
Renewable energy forms	1045	1258	1191	1485	1532	1799	1909	1996	1999	1.3	2.5	2.2	0.5
as % in Gross Inland Consumption													
Solids	9.0	5.9	3.6	1.8	1.1	0.9	0.7	0.5	0.4				
Oil	44.0	40.9	31.4	30.8	34.2	35.6	34.8	34.4	33.8				
Natural gas	30.0	21.8	29.2	30.2	29.8	27.8	27.8	26.6	27.1				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	13.2	27.2	31.8	33.1	32.3	34.9	36.4	38.1	38.3				
Gross Electricity Generation in GWh_e	**6647**	**3978**	**4135**	**4904**	**5796**	**7651**	**8569**	**9000**	**9320**	**-4.6**	**3.4**	**4.0**	**0.8**
Self consumption and grid losses	1445	1428	1148	1027	1066	1156	1200	1193	1142	-2.3	-0.7	1.2	-0.5
Fuel Inputs for Thermal Power Generation	**887**	**592**	**513**	**576**	**752**	**966**	**1077**	**1154**	**1230**	**-5.3**	**3.9**	**3.7**	**1.3**
Solids	20	65	47	0	0	0	0	0	0	9.2			
Oil (including refinery gas)	177	242	77	13	11	14	12	10	10	-8.0	-17.5	0.8	-2.0
Gas	690	286	388	541	641	702	734	695	709	-5.6	5.1	1.4	-0.3
Biomass & Waste	0	0	0	21	100	250	331	449	511			12.7	4.4
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**2570**	**892**	**562**	**476**	**443**	**445**	**431**	**388**	**334**	**-14.1**	**-2.4**	**-0.3**	**-2.5**
Refineries	1	1	1	1	1	1	1	1	1	0.0	1.3	1.2	-0.6
Biofuels and hydrogen production	0	0	0	2	33	48	67	80	88			7.5	2.7
District heating	2542	881	560	473	409	395	362	307	245	-14.0	-3.1	-1.2	-3.8
Others	27	9	1	0	0	0	0	0	0	-28.3			
Energy Branch Consumption	**126**	**127**	**147**	**100**	**128**	**136**	**138**	**135**	**132**	**1.5**	**-1.4**	**0.7**	**-0.4**
Non-Energy Uses	**78**	**46**	**79**	**93**	**56**	**58**	**59**	**56**	**55**	**0.2**	**-3.5**	**0.7**	**-0.8**
Final Energy Demand	**6389**	**3814**	**3239**	**4029**	**4161**	**4459**	**4513**	**4504**	**4487**	**-6.6**	**2.5**	**0.8**	**-0.1**
by sector													
Industry	1980	692	573	705	654	656	639	619	623	-11.7	1.3	-0.2	-0.3
- energy intensive industries	712	308	224	287	259	236	217	202	195	-10.9	1.4	-1.7	-1.1
- other industrial sectors	1267	384	349	419	396	420	422	417	428	-12.1	1.3	0.6	0.1
Residential	1586	1603	1327	1514	1505	1552	1571	1565	1548	-1.8	1.3	0.4	-0.1
Tertiary	1727	806	592	743	705	747	751	748	746	-10.1	1.8	0.6	-0.1
Transport	1097	714	747	1066	1297	1504	1551	1572	1571	-3.8	5.7	1.8	0.1
by fuel													
Solids	316	124	57	73	46	37	31	18	18	-15.7	-2.1	-4.0	-5.5
Oil	2062	1157	1057	1331	1550	1751	1740	1720	1684	-6.5	3.9	1.2	-0.3
Gas	672	366	329	508	491	478	503	532	565	-6.9	4.1	0.2	1.2
Electricity	711	381	382	490	505	577	630	669	700	-6.0	2.8	2.2	1.1
Heat (from CHP and District Heating) [A]	2013	905	590	598	542	514	494	501	494	-11.5	-0.9	-0.9	0.0
Renewable energy forms	616	881	824	1028	1027	1102	1115	1062	1026	3.0	2.2	0.8	-0.8
Other	0	0	0	0	0	0	0	0	0			12.6	3.6
RES in Gross Final Energy Consumption [B]			**1178**	**1387**	**1457**	**1671**	**1757**	**1815**	**1810**		**2.1**	**1.9**	**0.3**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**26.9**		**10.0**	**11.4**	**11.6**	**12.2**	**12.0**	**11.8**	**11.7**	**-9.5**	**1.6**	**0.3**	**-0.2**
of which ETS sectors GHGs emissions				3.0	3.0	3.1	3.1	3.0	3.0			0.5	-0.4
CO_2 Emissions (energy related)	**18.8**	**8.8**	**6.7**	**7.6**	**8.2**	**8.9**	**8.8**	**8.6**	**8.5**	**-9.9**	**2.1**	**0.7**	**-0.4**
Power generation/District heating	9.7	3.9	2.4	2.1	2.2	2.2	2.2	2.0	2.0	-13.1	-0.9	0.3	-1.2
Energy Branch	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	5.0	-10.3	2.5	-1.1
Industry	2.5	1.3	0.9	1.1	1.0	1.0	0.9	0.9	0.8	-9.5	1.0	-1.2	-1.5
Residential	1.2	0.5	0.3	0.4	0.5	0.5	0.6	0.6	0.8	-13.3	4.7	2.2	3.0
Tertiary	2.1	0.9	0.7	0.8	0.7	0.7	0.6	0.6	0.6	-10.8	1.1	-1.4	-1.0
Transport	3.2	2.1	2.2	3.1	3.7	4.3	4.4	4.4	4.3	-3.7	5.6	1.6	-0.2
CO_2 Emissions (non energy related)	**0.6**	**0.2**	**0.2**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**-8.5**	**1.4**	**0.3**	**-0.4**
Non-CO_2 GHGs Emissions	**7.5**		**3.1**	**3.5**	**3.2**	**3.0**	**2.9**	**3.0**	**3.0**	**-8.6**	**0.3**	**-0.8**	**0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**37.0**	**42.4**	**43.3**	**45.2**	**44.7**	**44.0**	**43.6**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Latvia: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	2.668	2.501	2.382	2.306	2.247	2.200	2.151	2.095	2.033	-1.1	-0.6	-0.4	-0.6
GDP (in 000 MEuro'05)	12.5	6.8	8.8	13.0	12.9	15.4	17.4	19.2	21.0	-3.5	3.9	3.0	1.9
Gross Inl. Cons./GDP (toe/MEuro'05)	632.3	684.6	426.7	345.2	367.9	334.2	301.4	272.8	248.4	-3.9	-1.5	-2.0	-1.9
Carbon intensity (t of CO_2/toe of GIC)	2.37	1.91	1.78	1.70	1.73	1.72	1.69	1.64	1.63	-2.9	-0.2	-0.3	-0.3
Import Dependency %	88.9	70.5	59.8	63.0	62.2	59.9	58.8	57.8	57.2				
Total Energy-related Costs (C) (in 000 M€05)			1.8	2.7	3.1	4.0	5.0	5.6	6.0		5.3	4.9	1.9
as % of GDP			20.8	21.0	23.8	25.9	28.5	29.4	28.3				
Energy intensity indicators													
Industry (Energy on Value added)	157.6	153.2	100.0	84.9	84.4	76.9	71.4	66.9	63.1	-4.4	-1.7	-1.7	-1.2
Residential (Energy on Private Income)	84.9	156.2	100.0	75.0	80.6	67.8	58.8	52.6	47.0	1.7	-2.1	-3.1	-2.2
Tertiary (Energy on Value added)	322.8	180.2	100.0	84.3	80.7	69.1	61.0	54.4	49.2	-11.1	-2.1	-2.8	-2.1
Passenger transport (toe/Mpkm)	19.6	37.3	26.2	26.1	27.0	27.2	27.0	26.6	25.5	2.9	0.3	0.0	-0.6
Freight transport (toe/Mtkm)	27.8	24.9	19.0	19.6	24.8	24.8	23.1	21.4	19.9	-3.7	2.7	-0.7	-1.5
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.28	0.23	0.18	0.16	0.15	0.15	0.14	0.12	0.12	-4.3	-1.6	-1.0	-1.5
Final energy demand (t of CO_2/toe)	1.41	1.26	1.26	1.35	1.44	1.46	1.44	1.44	1.43	-1.2	1.4	0.0	-0.1
Industry	1.28	1.92	1.63	1.52	1.57	1.50	1.42	1.39	1.25	2.4	-0.3	-1.0	-1.2
Residential	0.76	0.33	0.22	0.28	0.30	0.32	0.36	0.41	0.49	-11.7	3.4	1.8	3.1
Tertiary	1.21	1.12	1.13	1.09	1.06	0.96	0.86	0.81	0.79	-0.7	-0.6	-2.0	-0.9
Transport	2.90	2.89	2.92	2.95	2.89	2.87	2.83	2.78	2.74	0.1	-0.1	-0.2	-0.3
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			33.7	32.6	33.4	35.9	37.4	38.7	38.9				
RES in transport (%)			0.7	0.7	3.1	4.0	5.5	7.1	8.5				
Gross Electricity generation by fuel type (in GWh)			**4135**	**4904**	**5796**	**7651**	**8569**	**9000**	**9320**		**3.4**	**4.0**	**0.8**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			78	0	0	0	0	0	0				
Petroleum products			107	26	45	52	47	38	34		-8.2	0.4	-3.2
Gas (including derived gases)			1128	1465	2342	3303	3729	3548	3428		7.6	4.8	-0.8
Biomass & waste			0	42	368	949	1261	1630	1861			13.1	4.0
Hydro			2818	3324	2881	2911	2931	2960	2992		0.2	0.2	0.2
Wind			4	47	158	432	594	813	991		44.4	14.2	5.3
Solar, tidal etc.			0	0	1	5	8	12	14			24.5	5.8
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**2079**	**2171**	**2359**	**2856**	**2902**	**3068**	**3110**		**1.3**	**2.1**	**0.7**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			1499	1544	1616	1777	1868	1983	2071		0.8	1.5	1.0
Hydro (pumping excluded)			1497	1518	1520	1522	1525	1529	1532		0.2	0.0	0.0
Wind			2	26	94	250	334	441	524		46.9	13.6	4.6
Solar			0	0	2	5	9	13	15			15.6	5.8
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			581	627	743	1079	1034	1085	1039		2.5	3.4	0.0
of which cogeneration units			354	386	441	449	478	514	467		2.2	0.8	-0.2
of which CCS units			0	0	0	0	0	0	0				
Solids fired			29	0	0	0	0	0	0				
Gas fired			449	548	608	899	809	809	716		3.1	2.9	-1.2
Oil fired			91	53	54	54	54	54	47		-5.1	0.1	-1.3
Biomass-waste fired			11	26	81	126	172	222	276		22.2	7.8	4.8
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			21.8	24.8	27.0	29.7	32.8	32.5	33.3				
Efficiency for thermal electricity production (%)			22.0	22.9	31.5	38.3	40.2	38.9	37.2				
CHP indicator (% of electricity from CHP)			39.8	33.1	38.0	30.0	29.0	30.0	25.9				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			68.3	69.6	58.8	56.2	55.9	60.2	62.9				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			68.3	69.6	58.8	56.2	55.9	60.2	62.9				
Transport sector													
Passenger transport activity (Gpkm)	**21.1**	**11.4**	**15.4**	**19.7**	**21.5**	**24.6**	**26.1**	**27.4**	**28.7**	**-3.1**	**3.4**	**1.9**	**0.9**
Public road transport	5.9	1.8	2.3	2.9	2.5	2.7	2.9	3.0	3.2	-8.7	0.8	1.2	1.2
Private cars and motorcycles	6.6	7.7	11.8	14.8	16.6	19.0	19.6	19.9	20.1	6.0	3.5	1.7	0.3
Rail	6.1	1.7	1.0	1.2	1.2	1.3	1.5	1.5	1.6	-16.7	2.0	1.9	1.1
Aviation	2.5	0.2	0.3	0.8	1.2	1.7	2.2	3.0	3.8	-18.7	14.9	6.1	5.3
Inland navigation	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**24.5**	**11.6**	**18.1**	**28.2**	**28.8**	**33.6**	**36.6**	**39.4**	**42.3**	**-3.0**	**4.8**	**2.4**	**1.4**
Trucks	5.9	1.8	4.8	8.4	11.6	13.7	14.5	15.2	15.8	-2.0	9.3	2.2	0.9
Rail	18.5	9.8	13.3	19.8	17.2	19.8	22.1	24.2	26.5	-3.3	2.6	2.6	1.8
Inland navigation	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Energy demand in transport (ktoe)	**1097**	**714**	**747**	**1066**	**1297**	**1504**	**1551**	**1572**	**1571**	**-3.8**	**5.7**	**1.8**	**0.1**
Public road transport	46	15	17	21	18	19	19	20	21	-9.3	0.6	0.5	0.9
Private cars and motorcycles	242	378	356	433	476	541	548	544	510	4.0	2.9	1.4	-0.7
Trucks	512	205	270	460	637	746	761	783	801	-6.2	9.0	1.8	0.5
Rail	189	90	76	94	81	90	88	60	42	-8.7	0.6	0.9	-7.1
Aviation	73	26	27	59	85	108	135	164	198	-9.6	12.2	4.8	3.9
Inland navigation	35	0	0	0	0	0	0	0	0				

Source: PRIMES

Lithuania: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**4740**	**3695**	**3188**	**3702**	**1010**	**1250**	**2996**	**4789**	**5027**	**-3.9**	**-10.9**	**11.5**	**5.3**
Solids	14	15	12	20	3	4	3	2	2	-1.8	-11.7	-0.3	-6.6
Oil	12	130	349	240	155	130	100	85	70	40.0	-7.8	-4.3	-3.5
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	4394	3050	2172	2666	0	0	1572	3099	3099	-6.8			7.0
Renewable energy sources	321	501	656	776	851	1116	1321	1602	1856	7.4	2.6	4.5	3.5
Hydro	36	32	29	39	36	37	39	39	40	-2.0	2.1	0.7	0.4
Biomass & Waste	285	469	627	734	801	1050	1231	1493	1730	8.2	2.5	4.4	3.5
Wind	0	0	0	0	14	29	48	64	77			13.3	4.7
Solar and others	0	0	0	0	0	1	3	5	9			21.7	12.7
Geothermal	0	0	0	3	0	0	0	0	0			2.0	0.4
Net Imports	**11688**	**5650**	**4343**	**5120**	**6554**	**7019**	**6534**	**5795**	**5573**	**-9.4**	**4.2**	**0.0**	**-1.6**
Solids	758	157	87	190	116	100	92	75	63	-19.5	2.9	-2.3	-3.6
Oil	7281	3693	2313	2700	2531	2839	2940	3000	3023	-10.8	0.9	1.5	0.3
- Crude oil and Feedstocks	9560	3619	4846	9093	8831	9812	10105	10279	10328	-6.6	6.2	1.4	0.2
- Oil products	-2279	74	-2533	-6393	-6301	-6973	-7165	-7279	-7305				
Natural gas	4678	2029	2065	2492	3558	3695	3571	3149	2939	-7.9	5.6	0.0	-1.9
Electricity	-1030	-230	-115	-255	366	412	-31	-372	-361				
Gross Inland Consumption	**16059**	**8672**	**7070**	**8616**	**7408**	**8098**	**9354**	**10405**	**10420**	**-7.9**	**0.5**	**2.4**	**1.1**
Solids	797	246	98	201	119	103	95	77	65	-18.9	2.0	-2.3	-3.7
Oil	6899	3085	2203	2769	2530	2798	2864	2906	2913	-10.8	1.4	1.2	0.2
Natural gas	4678	2029	2064	2476	3558	3695	3571	3149	2939	-7.9	5.6	0.0	-1.9
Nuclear	4394	3050	2172	2666	0	0	1572	3099	3099	-6.8			7.0
Electricity	-1030	-230	-115	-255	366	412	-31	-372	-361				
Renewable energy forms	320	493	649	758	836	1089	1283	1545	1765	7.3	2.6	4.4	3.2
as % in Gross Inland Consumption													
Solids	5.0	2.8	1.4	2.3	1.6	1.3	1.0	0.7	0.6				
Oil	43.0	35.6	31.2	32.1	34.1	34.6	30.6	27.9	28.0				
Natural gas	29.1	23.4	29.2	28.7	48.0	45.6	38.2	30.3	28.2				
Nuclear	27.4	35.2	30.7	30.9	0.0	0.0	16.8	29.8	29.7				
Renewable energy forms	2.0	5.7	9.2	8.8	11.3	13.4	13.7	14.8	16.9				
Gross Electricity Generation in GWh_e	**28400**	**13518**	**11118**	**14412**	**6425**	**7007**	**13413**	**18643**	**18802**	**-9.0**	**-5.3**	**7.6**	**3.4**
Self consumption and grid losses	3959	4152	3075	2782	1760	1758	2079	2375	2293	-2.5	-5.4	1.7	1.0
Fuel Inputs for Thermal Power Generation	**2610**	**950**	**912**	**1221**	**1923**	**2059**	**2035**	**1717**	**1770**	**-10.0**	**7.7**	**0.6**	**-1.4**
Solids	0	0	0	0	0	0	0	0	0				
Oil (including refinery gas)	1067	517	196	172	72	64	57	40	73	-15.6	-9.5	-2.4	2.6
Gas	1543	433	716	1044	1770	1829	1714	1357	1349	-7.4	9.5	-0.3	-2.4
Biomass & Waste	0	0	0	5	81	165	264	321	347			12.5	2.8
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**11418**	**4482**	**5762**	**9984**	**9517**	**10570**	**10893**	**11071**	**11134**	**-6.6**	**5.1**	**1.4**	**0.2**
Refineries	9591	3402	5105	9458	8936	9912	10191	10357	10395	-6.1	5.8	1.3	0.2
Biofuels and hydrogen production	0	0	0	3	11	36	81	101	111			21.7	3.2
District heating	1819	1074	653	519	567	620	618	613	626	-9.7	-1.4	0.9	0.1
Others	8	6	4	4	3	2	2	1	1	-7.0	-4.4	-2.3	-7.1
Energy Branch Consumption	**996**	**600**	**670**	**958**	**849**	**913**	**982**	**1045**	**1036**	**-3.9**	**2.4**	**1.5**	**0.5**
Non-Energy Uses	**864**	**544**	**657**	**795**	**1007**	**1102**	**1100**	**1092**	**1073**	**-2.7**	**4.4**	**0.9**	**-0.3**
Final Energy Demand	**9679**	**4592**	**3740**	**4465**	**4635**	**5145**	**5395**	**5580**	**5640**	**-9.1**	**2.2**	**1.5**	**0.4**
by sector													
Industry	3327	1017	780	995	973	1078	1099	1120	1107	-13.5	2.2	1.2	0.1
- energy intensive industries	1670	473	361	442	436	471	465	473	469	-14.2	1.9	0.7	0.1
- other industrial sectors	1657	544	419	552	537	607	633	647	638	-12.8	2.5	1.7	0.1
Residential	1843	1641	1342	1384	1365	1488	1552	1556	1573	-3.1	0.2	1.3	0.1
Tertiary	2512	894	566	678	679	727	741	747	748	-13.8	1.8	0.9	0.1
Transport	1996	1040	1051	1408	1618	1853	2004	2158	2212	-6.2	4.4	2.2	1.0
by fuel													
Solids	748	225	87	190	116	99	91	74	62	-19.4	2.9	-2.3	-3.8
Oil	4064	1670	1352	1610	1793	2025	2126	2247	2280	-10.4	2.9	1.7	0.7
Gas	1483	510	363	503	405	454	469	472	484	-13.1	1.1	1.5	0.3
Electricity	1033	546	531	682	700	791	856	925	958	-6.4	2.8	2.0	1.1
Heat (from CHP and District Heating) [A]	2078	1193	828	905	1080	1204	1275	1229	1306	-8.8	2.7	1.7	0.2
Renewable energy forms	272	448	579	574	541	572	576	632	550	7.9	-0.7	0.6	-0.5
Other	0	0	0	0	0	0	0	0	0			12.5	0.3
RES in Gross Final Energy Consumption [B]			**642**	**727**	**770**	**893**	**988**	**1082**	**1223**		**1.8**	**2.5**	**2.2**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**48.8**		**18.9**	**22.5**	**23.7**	**22.9**	**22.7**	**21.6**	**21.2**	**-9.0**	**2.3**	**-0.4**	**-0.7**
of which ETS sectors GHGs emissions				10.1	11.1	10.0	9.8	8.8	8.4			-1.3	-1.5
CO_2 Emissions (energy related)	**32.4**	**13.5**	**10.2**	**12.5**	**13.6**	**14.3**	**14.2**	**13.3**	**12.8**	**-10.9**	**2.8**	**0.5**	**-1.0**
Power generation/District heating	12.0	5.6	3.9	3.9	5.3	5.6	5.3	4.4	4.0	-10.6	3.1	0.0	-2.7
Energy Branch	1.6	0.8	1.1	1.9	1.5	1.3	1.2	0.9	0.7	-3.5	3.1	-2.8	-5.4
Industry	6.1	1.7	1.1	1.3	0.9	0.9	0.9	0.9	0.9	-15.9	-2.0	0.7	-0.8
Residential	2.3	0.8	0.5	0.6	0.6	0.7	0.7	0.7	0.7	-13.6	1.1	1.4	-0.2
Tertiary	4.5	1.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	-19.8	-0.2	-0.8	-0.7
Transport	5.8	3.0	3.1	4.1	4.7	5.3	5.6	6.0	6.1	-6.2	4.4	1.8	0.8
CO_2 Emissions (non energy related)	**3.5**	**1.5**	**1.6**	**1.7**	**1.9**	**2.1**	**2.2**	**2.3**	**2.4**	**-7.7**	**1.9**	**1.6**	**0.8**
Non-CO_2 GHGs Emissions	**12.9**		**7.1**	**8.3**	**8.3**	**6.4**	**6.3**	**6.0**	**6.0**	**-5.8**	**1.5**	**-2.7**	**-0.4**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**38.8**	**46.1**	**48.6**	**46.8**	**46.4**	**44.3**	**43.4**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)												Lithuania: Baseline 2009	
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	3.694	3.643	3.512	3.425	3.337	3.275	3.220	3.158	3.083	-0.5	-0.5	-0.4	-0.4
GDP (in 000 MEuro'05)	19.4	11.4	14.3	20.9	21.5	26.3	30.3	33.5	36.3	-3.0	4.1	3.5	1.8
Gross Inl. Cons./GDP (toe/MEuro'05)	829.6	761.0	493.0	412.8	345.3	308.5	308.2	310.1	287.2	-5.1	-3.5	-1.1	-0.7
Carbon intensity (t of CO_2/toe of GIC)	2.02	1.55	1.45	1.45	1.83	1.77	1.52	1.28	1.23	-3.3	2.4	-1.9	-2.1
Import Dependency %	72.4	64.1	60.6	58.5	86.7	84.9	68.6	54.8	52.6				
Total Energy-related Costs (C) (in 000 M€05)			2.3	3.4	3.9	5.0	6.5	7.7	8.5		5.3	5.4	2.7
as % of GDP			16.1	16.2	18.0	19.0	21.5	23.0	23.4				
Energy intensity indicators													
Industry (Energy on Value added)	258.4	180.8	100.0	78.3	68.7	62.1	55.8	53.5	51.0	-9.1	-3.7	-2.1	-0.9
Residential (Energy on Private Income)	103.1	158.3	100.0	67.4	68.6	61.1	56.2	51.4	48.1	-0.3	-3.7	-2.0	-1.5
Tertiary (Energy on Value added)	452.0	203.3	100.0	87.1	86.4	75.5	65.9	58.8	53.3	-14.0	-1.5	-2.7	-2.1
Passenger transport (toe/Mpkm)	30.8	26.6	20.7	18.0	18.1	18.6	20.3	22.8	23.5	-3.9	-1.3	1.2	1.5
Freight transport (toe/Mtkm)	46.9	37.1	25.8	24.2	24.9	24.9	24.2	23.5	22.8	-5.8	-0.3	-0.3	-0.6
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.21	0.17	0.16	0.14	0.23	0.22	0.16	0.12	0.11	-2.8	3.6	-3.4	-4.2
Final energy demand (t of CO_2/toe)	1.94	1.54	1.39	1.49	1.44	1.44	1.43	1.44	1.43	-3.3	0.4	-0.1	0.0
Industry	1.83	1.69	1.37	1.35	0.90	0.87	0.86	0.80	0.78	-2.8	-4.1	-0.5	-0.9
Residential	1.27	0.48	0.40	0.46	0.44	0.45	0.45	0.44	0.43	-10.8	0.9	0.1	-0.3
Tertiary	1.80	1.73	0.88	0.85	0.72	0.66	0.61	0.57	0.57	-6.9	-2.0	-1.6	-0.8
Transport	2.93	2.91	2.93	2.93	2.91	2.88	2.81	2.79	2.77	0.0	-0.1	-0.4	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			15.1	14.8	15.4	16.2	17.1	18.1	20.3				
RES in transport (%)			0.0	0.3	0.9	2.5	5.2	6.0	6.6				
Gross Electricity generation by fuel type (in GWh)			**11118**	**14412**	**6425**	**7007**	**13413**	**18643**	**18802**		**-5.3**	**7.6**	**3.4**
Nuclear energy			8417	10335	0	0	6563	13127	13127				7.2
Coal and lignite			0	0	0	0	0	0	0				
Petroleum products			405	476	207	189	168	102	179		-6.5	-2.1	0.6
Gas (including derived gases)			1957	3136	5422	5602	4861	3272	3188		10.7	-1.1	-4.1
Biomass & waste			0	12	212	451	794	904	893			14.1	1.2
Hydro			339	451	419	425	449	457	466		2.1	0.7	0.4
Wind			0	2	162	336	564	745	890			13.3	4.7
Solar, tidal etc.			0	0	2	4	15	34	60			24.3	14.7
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**4586**	**3692**	**2756**	**3020**	**4131**	**4850**	**4984**		**-5.0**	**4.1**	**1.9**
Nuclear energy			2291	1200	0	0	758	1515	1515				7.2
Renewable energy			100	115	299	493	779	1006	1196		11.6	10.0	4.4
Hydro (pumping excluded)			100	114	122	123	148	155	159		2.0	1.9	0.7
Wind			0	1	175	365	615	815	975			13.4	4.7
Solar			0	0	2	5	16	36	62			22.9	14.7
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			2196	2377	2457	2527	2595	2329	2273		1.1	0.5	-1.3
of which cogeneration units			873	824	873	930	999	916	997		0.0	1.4	0.0
of which CCS units			0	0	0	0	0	0	0				
Solids fired			0	0	0	0	0	0	0				
Gas fired			1661	2057	2124	2163	2184	2017	2017		2.5	0.3	-0.8
Oil fired			528	303	315	327	332	203	96		-5.0	0.5	-11.6
Biomass-waste fired			7	17	18	38	78	110	160		9.6	16.2	7.4
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			23.5	40.2	24.9	25.2	35.3	41.7	41.0				
Efficiency for thermal electricity production (%)			22.3	25.5	26.1	26.1	24.6	21.4	20.7				
CHP indicator (% of electricity from CHP)			18.3	17.8	62.5	59.5	32.6	20.4	21.9				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			78.8	74.9	12.4	17.4	62.5	81.9	82.1				
- nuclear			75.7	71.7	0.0	0.0	48.9	70.4	69.8				
- renewable energy forms and industrial waste			3.0	3.2	12.4	17.4	13.6	11.5	12.3				
Transport sector													
Passenger transport activity (Gpkm)	**24.1**	**21.7**	**30.0**	**40.1**	**44.9**	**49.1**	**49.9**	**50.1**	**50.4**	**2.2**	**4.1**	**1.1**	**0.1**
Public road transport	7.9	4.2	2.8	3.7	3.6	3.9	4.1	4.2	4.2	-10.0	2.7	1.4	0.3
Private cars and motorcycles	11.3	16.2	26.3	35.1	39.8	43.2	43.3	42.8	42.2	8.8	4.2	0.9	-0.3
Rail	3.6	1.1	0.6	0.4	0.4	0.4	0.5	0.5	0.5	-16.3	-4.0	1.6	1.3
Aviation	1.0	0.2	0.3	0.8	1.0	1.4	1.9	2.5	3.3	-10.3	12.4	6.0	5.8
Inland navigation	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-12.8	0.2	0.8	0.6
Freight transport activity (Gtkm)	**26.8**	**12.4**	**16.7**	**28.4**	**32.3**	**37.8**	**40.9**	**43.1**	**45.0**	**-4.6**	**6.8**	**2.4**	**1.0**
Trucks	7.3	5.2	7.8	15.9	19.0	22.5	24.1	25.1	25.8	0.6	9.3	2.4	0.7
Rail	19.3	7.2	8.9	12.5	13.4	15.3	16.8	18.1	19.3	-7.4	4.1	2.3	1.4
Inland navigation	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Energy demand in transport (ktoe)	**1996**	**1040**	**1051**	**1408**	**1618**	**1853**	**2004**	**2158**	**2212**	**-6.2**	**4.4**	**2.2**	**1.0**
Public road transport	46	25	16	21	21	23	24	25	26	-9.8	2.5	1.6	0.5
Private cars and motorcycles	539	504	572	648	725	804	886	993	1007	0.6	2.4	2.0	1.3
Trucks	1139	383	358	608	723	850	892	913	922	-10.9	7.3	2.1	0.3
Rail	133	87	76	79	84	94	99	103	108	-5.5	1.0	1.7	0.9
Aviation	135	41	27	46	60	77	96	118	144	-14.9	8.5	4.8	4.1
Inland navigation	5	1	3	5	5	5	5	6	6	-5.0	5.3	0.7	0.4

Source: PRIMES

Luxembourg: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**47**	**47**	**57**	**74**	**96**	**149**	**182**	**203**	**215**	**1.9**	**5.5**	**6.6**	**1.7**
Solids	0	0	0	0	0	0	0	0	0				
Oil	0	0	0	0	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	47	47	57	74	96	149	182	203	215	1.9	5.5	6.6	1.7
Hydro	6	7	10	8	8	7	8	8	8	5.8	-2.9	0.2	0.2
Biomass & Waste	41	39	44	59	76	103	119	123	126	0.7	5.6	4.5	0.6
Wind	0	0	2	5	6	13	20	23	27		10.8	11.8	3.0
Solar and others	0	0	0	2	6	26	36	49	55			19.7	4.3
Geothermal	0	0	0	0	0	0	0	0	0			0.3	0.5
Net Imports	**3526**	**3264**	**3630**	**4622**	**4697**	**5068**	**5128**	**5131**	**5043**	**0.3**	**2.6**	**0.9**	**-0.2**
Solids	1134	514	125	82	37	30	25	17	12	-19.8	-11.6	-3.7	-7.1
Oil	1626	1763	2342	3081	3067	3271	3208	3118	2972	3.7	2.7	0.5	-0.8
- Crude oil and Feedstocks	0	0	0	0	0	0	0	0	0				
- Oil products	1626	1763	2342	3081	3067	3271	3208	3118	2972	3.7	2.7	0.5	-0.8
Natural gas	430	557	670	1179	1250	1372	1489	1599	1645	4.6	6.4	1.8	1.0
Electricity	336	430	492	280	318	327	300	274	284	3.9	-4.3	-0.6	-0.6
Gross Inland Consumption	**3561**	**3342**	**3637**	**4714**	**4793**	**5218**	**5310**	**5334**	**5258**	**0.2**	**2.8**	**1.0**	**-0.1**
Solids	1134	514	125	82	37	30	25	17	12	-19.8	-11.6	-3.7	-7.1
Oil	1614	1794	2292	3100	3067	3271	3208	3118	2972	3.6	3.0	0.5	-0.8
Natural gas	430	557	670	1179	1250	1372	1489	1599	1645	4.6	6.4	1.8	1.0
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	336	430	492	280	318	327	300	274	284	3.9	-4.3	-0.6	-0.6
Renewable energy forms	47	47	57	74	122	218	287	326	345	1.9	8.0	9.0	1.9
as % in Gross Inland Consumption													
Solids	31.9	15.4	3.4	1.7	0.8	0.6	0.5	0.3	0.2				
Oil	45.3	53.7	63.0	65.8	64.0	62.7	60.4	58.5	56.5				
Natural gas	12.1	16.7	18.4	25.0	26.1	26.3	28.0	30.0	31.3				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	1.3	1.4	1.6	1.6	2.5	4.2	5.4	6.1	6.6				
Gross Electricity Generation in GWh_e	**627**	**498**	**433**	**3344**	**3485**	**4411**	**5303**	**6025**	**6163**	**-3.6**	**23.2**	**4.3**	**1.5**
Self consumption and grid losses	410	497	439	448	545	644	707	753	780	0.7	2.2	2.6	1.0
Fuel Inputs for Thermal Power Generation	**190**	**132**	**75**	**568**	**574**	**697**	**813**	**922**	**937**	**-8.8**	**22.5**	**3.5**	**1.4**
Solids	0	0	0	0	0	0	0	0	0				
Oil (including refinery gas)	3	2	0	0	0	1	1	1	1				2.5
Gas	162	106	47	525	540	655	765	874	892	-11.6	27.6	3.5	1.5
Biomass & Waste	25	24	28	43	34	42	47	47	44	1.0	1.8	3.4	-0.6
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**378**	**144**	**0**	**1**	**55**	**117**	**163**	**182**	**188**			**11.5**	**1.4**
Refineries	0	0	0	0	0	0	0	0	0				
Biofuels and hydrogen production	0	0	0	1	55	117	163	182	188			11.5	1.4
District heating	0	0	0	0	0	0	0	0	0				
Others	378	144	0	0	0	0	0	0	0				
Energy Branch Consumption	**31**	**30**	**26**	**30**	**37**	**44**	**48**	**51**	**53**	**-1.8**	**3.8**	**2.7**	**0.8**
Non-Energy Uses	**20**	**23**	**14**	**20**	**22**	**27**	**29**	**31**	**33**	**-3.9**	**5.0**	**2.7**	**1.3**
Final Energy Demand	**3335**	**3171**	**3558**	**4439**	**4491**	**4859**	**4904**	**4885**	**4805**	**0.7**	**2.4**	**0.9**	**-0.2**
by sector													
Industry	1729	1197	958	938	899	997	1041	1081	1120	-5.7	-0.6	1.5	0.7
- energy intensive industries	1525	901	506	461	431	468	481	486	491	-10.5	-1.6	1.1	0.2
- other industrial sectors	204	296	453	477	468	529	560	595	630	8.3	0.3	1.8	1.2
Residential	521	565	598	651	676	701	708	717	725	1.4	1.2	0.5	0.2
Tertiary	74	99	118	130	137	149	155	158	162	4.7	1.5	1.3	0.4
Transport	1010	1311	1884	2721	2780	3012	3000	2929	2798	6.4	4.0	0.8	-0.7
by fuel													
Solids	756	369	125	82	37	30	25	17	12	-16.5	-11.6	-3.7	-7.1
Oil	1587	1758	2276	3080	3044	3243	3178	3086	2937	3.7	3.0	0.4	-0.8
Gas	622	585	623	678	710	717	724	725	752	0.0	1.3	0.2	0.4
Electricity	355	430	491	529	571	651	696	727	747	3.3	1.5	2.0	0.7
Heat (from CHP and District Heating) [A]	0	14	27	55	59	68	76	89	98		8.1	2.6	2.5
Renewable energy forms	15	15	16	16	70	149	206	240	259	0.4	16.0	11.3	2.3
Other	0	0	0	0	0	0	1	1	1			7.5	1.5
RES in Gross Final Energy Consumption [B]			**32**	**41**	**109**	**203**	**271**	**311**	**331**		**13.2**	**9.5**	**2.0**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**13.1**		**10.5**	**14.3**	**14.1**	**15.1**	**15.2**	**15.1**	**14.7**	**-2.2**	**3.0**	**0.7**	**-0.3**
of which ETS sectors GHGs emissions				4.0	3.8	4.2	4.5	4.7	4.6			1.7	0.2
CO_2 Emissions (energy related)	**10.7**	**8.7**	**8.9**	**12.4**	**12.3**	**13.1**	**13.2**	**13.1**	**12.8**	**-1.8**	**3.3**	**0.7**	**-0.3**
Power generation/District heating	0.7	0.4	0.1	1.2	1.3	1.5	1.8	2.0	2.1	-17.0	27.6	3.6	1.5
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Industry	5.7	3.1	1.7	1.5	1.3	1.4	1.4	1.4	1.5	-11.5	-2.5	0.8	0.4
Residential	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.1	0.2	-0.4	-0.6
Tertiary	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	17.3	-3.0	0.3	-1.3
Transport	3.0	3.9	5.6	8.2	8.2	8.7	8.6	8.3	7.9	6.5	3.9	0.4	-0.8
CO_2 Emissions (non energy related)	**1.6**	**1.0**	**0.7**	**0.8**	**0.7**	**0.8**	**0.8**	**0.8**	**0.8**	**-7.6**	**0.2**	**1.5**	**-0.4**
Non-CO_2 GHGs Emissions	**0.9**		**0.9**	**1.1**	**1.1**	**1.2**	**1.1**	**1.1**	**1.1**	**0.4**	**2.0**	**0.1**	**-0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**80.2**	**109.1**	**107.6**	**115.0**	**115.6**	**115.1**	**112.1**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)									Luxembourg: Baseline 2009				
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	0.379	0.406	0.434	0.461	0.494	0.523	0.551	0.579	0.607	1.3	1.3	1.1	1.0
GDP (in 000 MEuro'05)	13.6	18.8	25.4	30.2	32.6	40.5	47.3	53.4	59.4	6.5	2.5	3.8	2.3
Gross Inl. Cons./GDP (toe/MEuro'05)	262.3	177.4	143.4	155.9	147.1	128.7	112.2	99.9	88.5	-5.9	0.3	-2.7	-2.3
Carbon intensity (t of CO_2/toe of GIC)	2.99	2.62	2.44	2.64	2.56	2.52	2.49	2.46	2.43	-2.0	0.5	-0.3	-0.2
Import Dependency %	99.0	97.7	99.8	98.0	98.0	97.1	96.6	96.2	95.9				
Total Energy-related Costs [C] (in 000 M€05)			2.7	3.7	3.9	4.7	5.7	6.3	6.4		3.5	3.8	1.2
as % of GDP			10.8	12.3	11.9	11.5	12.0	11.8	10.8				
Energy intensity indicators													
Industry (Energy on Value added)	259.7	159.1	100.0	93.6	86.3	78.9	72.4	68.5	65.6	-9.1	-1.5	-1.7	-1.0
Residential (Energy on Private Income)	125.3	116.2	100.0	100.4	98.1	81.0	69.7	62.5	56.6	-2.2	-0.2	-3.4	-2.1
Tertiary (Energy on Value added)	103.2	111.6	100.0	91.5	88.9	77.8	69.0	62.0	57.1	-0.3	-1.2	-2.5	-1.9
Passenger transport (toe/Mpkm)	119.7	125.6	136.5	150.7	143.3	131.7	119.4	107.2	96.4	1.3	0.5	-1.8	-2.1
Freight transport (toe/Mtkm)	92.1	84.1	102.9	156.5	154.7	151.2	146.2	139.2	128.0	1.1	4.2	-0.6	-1.3
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	1.13	0.59	0.15	0.31	0.30	0.29	0.29	0.29	0.29	-18.4	7.4	-0.5	-0.1
Final energy demand (t of CO_2/toe)	2.98	2.63	2.46	2.52	2.45	2.39	2.33	2.27	2.22	-1.9	-0.1	-0.5	-0.4
Industry	3.28	2.58	1.74	1.63	1.45	1.41	1.36	1.32	1.31	-6.1	-1.8	-0.7	-0.3
Residential	2.45	2.39	2.37	2.21	2.14	2.03	1.96	1.88	1.81	-0.3	-1.0	-0.9	-0.8
Tertiary	0.21	0.35	0.65	0.48	0.41	0.40	0.37	0.34	0.32	12.0	-4.4	-1.0	-1.7
Transport	2.96	2.96	2.97	3.00	2.95	2.90	2.85	2.83	2.81	0.1	-0.1	-0.3	-0.1
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			0.9	0.9	2.5	4.3	5.7	6.5	7.0				
RES in transport (%)			0.0	0.1	2.3	4.6	6.5	7.4	8.0				
Gross Electricity generation by fuel type (in GWh)			**433**	**3344**	**3485**	**4411**	**5303**	**6025**	**6163**		**23.2**	**4.3**	**1.5**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			0	0	0	0	0	0	0				
Petroleum products			0	0	0	3	3	4	4				2.5
Gas (including derived gases)			231	3050	3165	3976	4698	5374	5477		29.9	4.0	1.5
Biomass & waste			55	130	115	136	208	206	197		7.6	6.1	-0.6
Hydro			120	93	90	84	92	92	94		-2.9	0.2	0.2
Wind			27	53	75	155	231	270	309		10.8	11.8	3.0
Solar, tidal etc.			0	18	40	59	72	80	82			6.1	1.4
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**165**	**609**	**607**	**858**	**1048**	**1179**	**1233**		**13.9**	**5.6**	**1.6**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			54	101	131	234	300	334	358		9.3	8.7	1.8
Hydro (pumping excluded)			39	40	40	40	40	40	40		0.2	0.0	0.1
Wind			14	35	50	134	186	211	232		13.5	14.1	2.3
Solar			1	26	41	61	74	83	86		45.1	6.1	1.4
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			111	509	477	624	749	845	875		15.7	4.6	1.6
of which cogeneration units			37	54	94	151	185	213	226		9.8	7.0	2.0
of which CCS units			0	0	0	0	0	0	0				
Solids fired			0	0	0	0	0	0	0				
Gas fired			95	483	452	599	719	816	845		16.8	4.8	1.6
Oil fired			0	0	0	1	1	1	1				1.0
Biomass-waste fired			16	25	25	24	28	28	28		4.5	1.3	0.0
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			28.0	62.2	63.9	57.1	56.2	56.8	55.6				
Efficiency for thermal electricity production (%)			32.7	48.1	49.2	50.7	51.9	52.1	52.1				
CHP indicator (% of electricity from CHP)			52.7	12.6	16.3	18.9	18.0	18.4	19.3				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			46.7	8.8	9.2	9.8	11.4	10.7	11.1				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			46.7	8.8	9.2	9.8	11.4	10.7	11.1				
Transport sector													
Passenger transport activity (Gpkm)	**5.2**	**6.2**	**7.3**	**8.1**	**8.6**	**9.5**	**9.8**	**10.2**	**10.7**	**3.4**	**1.6**	**1.4**	**0.9**
Public road transport	0.5	0.5	0.6	0.8	0.9	0.9	1.0	1.0	1.1	2.6	3.3	1.1	1.0
Private cars and motorcycles	4.0	4.8	5.7	6.5	6.7	7.4	7.5	7.7	8.0	3.6	1.6	1.1	0.6
Rail	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	4.8	-0.5	1.8	1.0
Aviation	0.5	0.5	0.6	0.6	0.7	0.8	1.0	1.1	1.2	2.2	0.7	3.5	2.5
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**4.2**	**6.4**	**8.6**	**9.5**	**10.0**	**11.7**	**12.5**	**13.2**	**13.8**	**7.5**	**1.5**	**2.2**	**1.0**
Trucks	3.2	5.5	7.6	8.8	9.3	10.8	11.6	12.3	12.9	9.0	2.0	2.3	1.0
Rail	0.6	0.5	0.6	0.4	0.4	0.5	0.5	0.5	0.5	0.3	-4.1	1.8	0.4
Inland navigation	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	-1.0	0.9	0.9
Energy demand in transport (ktoe)	**1010**	**1311**	**1884**	**2721**	**2780**	**3012**	**3000**	**2929**	**2798**	**6.4**	**4.0**	**0.8**	**-0.7**
Public road transport	10	11	13	17	18	18	18	18	18	2.3	3.2	0.3	0.0
Private cars and motorcycles	483	574	662	779	769	751	674	602	570	3.2	1.5	-1.3	-1.7
Trucks	364	520	866	1479	1540	1750	1815	1820	1752	9.1	5.9	1.7	-0.3
Rail	13	9	15	9	10	11	11	10	10	2.0	-4.5	0.8	-0.5
Aviation	131	189	320	431	438	476	477	472	441	9.3	3.2	0.9	-0.8
Inland navigation	9	8	7	6	6	6	6	6	7	-2.4	-1.5	0.7	0.8

Source: PRIMES

Malta: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
											Annual % Change		
Production	**0**	**0**	**0**	**0**	**5**	**25**	**40**	**55**	**66**			**24.5**	**5.1**
Solids	0	0	0	0	0	0	0	0	0				
Oil	0	0	0	0	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	0	0	0	0	5	25	40	55	66			24.5	5.1
Hydro	0	0	0	0	0	0	0	0	0				
Biomass & Waste	0	0	0	0	0	3	4	5	5			50.7	2.8
Wind	0	0	0	0	0	3	9	19	28				11.4
Solar and others	0	0	0	0	4	19	27	30	33			19.8	2.2
Geothermal	0	0	0	0	0	0	0	0	0			0.1	-1.5
Net Imports	**612**	**891**	**822**	**958**	**911**	**808**	**793**	**777**	**761**	**3.0**	**1.0**	**-1.4**	**-0.4**
Solids	0	0	0	0	0	0	0	0	0				
Oil	612	891	822	958	911	662	617	537	485	3.0	1.0	-3.8	-2.4
- Crude oil and Feedstocks	0	0	0	0	0	0	0	0	0				
- Oil products	612	891	822	958	911	662	617	537	485	3.0	1.0	-3.8	-2.4
Natural gas	0	0	0	0	0	143	149	211	242			133.0	5.0
Electricity	0	0	0	0	0	0	22	24	26				1.7
Gross Inland Consumption	**582**	**809**	**773**	**958**	**916**	**833**	**833**	**832**	**827**	**2.9**	**1.7**	**-0.9**	**-0.1**
Solids	0	0	0	0	0	0	0	0	0				
Oil	582	809	773	958	911	662	617	537	485	2.9	1.7	-3.8	-2.4
Natural gas	0	0	0	0	0	143	149	211	242			133.0	5.0
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	0	0	0	0	0	0	22	24	26				1.7
Renewable energy forms	0	0	0	0	5	28	45	60	73			24.7	5.1
as % in Gross Inland Consumption													
Solids	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Oil	100.0	100.0	100.0	100.0	99.5	79.5	74.1	64.6	58.7				
Natural gas	0.0	0.0	0.0	0.0	0.0	17.1	17.9	25.3	29.3				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	0.0	0.0	0.0	0.0	0.5	3.4	5.4	7.2	8.9				
Gross Electricity Generation in GWh_e	**1100**	**1632**	**1917**	**2240**	**2166**	**2269**	**2136**	**2186**	**2170**	**5.7**	**1.2**	**-0.1**	**0.2**
Self consumption and grid losses	190	373	350	396	382	369	345	310	268	6.3	0.9	-1.0	-2.5
Fuel Inputs for Thermal Power Generation	**322**	**463**	**495**	**580**	**539**	**419**	**369**	**333**	**297**	**4.4**	**0.9**	**-3.7**	**-2.1**
Solids	0	0	0	0	0	0	0	0	0				
Oil (including refinery gas)	322	463	495	580	539	275	224	149	108	4.4	0.9	-8.4	-7.1
Gas	0	0	0	0	0	140	140	177	182				2.7
Biomass & Waste	0	0	0	0	0	4	5	7	7				3.0
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**0**	**0**	**0**	**0**	**0**	**3**	**3**	**4**	**6**			**23.0**	**5.3**
Refineries	0	0	0	0	0	0	0	0	0				
Biofuels and hydrogen production	0	0	0	0	0	3	3	4	6			24.8	5.4
District heating	0	0	0	0	0	0	0	0	0			3.3	3.4
Others	0	0	0	0	0	0	0	0	0				
Energy Branch Consumption	**8**	**19**	**10**	**9**	**8**	**8**	**7**	**6**	**5**	**2.5**	**-2.3**	**-1.7**	**-3.1**
Non-Energy Uses	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**				
Final Energy Demand	**333**	**451**	**412**	**526**	**529**	**573**	**604**	**634**	**654**	**2.2**	**2.5**	**1.3**	**0.8**
by sector													
Industry	0	42	43	46	46	50	53	57	60		0.7	1.4	1.2
- energy intensive industries	0	0	0	0	0	0	0	0	0				
- other industrial sectors	0	42	43	46	46	50	53	57	60		0.7	1.4	1.2
Residential	55	73	76	89	92	101	111	120	126	3.2	2.0	1.9	1.2
Tertiary	56	32	55	63	66	75	85	94	100	-0.2	1.9	2.5	1.6
Transport	222	305	238	329	324	346	355	363	369	0.7	3.1	0.9	0.4
by fuel													
Solids	0	0	0	0	0	0	0	0	0				
Oil	255	343	277	378	371	387	393	388	378	0.9	3.0	0.6	-0.4
Gas	0	0	0	0	0	2	9	33	60			79.7	20.9
Electricity	78	108	135	148	153	163	176	186	190	5.6	1.3	1.4	0.7
Heat (from CHP and District Heating) [A]	0	0	0	0	0	0	0	0	0			3.3	3.4
Renewable energy forms	0	0	0	0	4	20	25	26	27			19.9	0.6
Other	0	0	0	0	0	0	0	0	0			9.5	-0.3
RES in Gross Final Energy Consumption [B]			**0**	**0**	**5**	**26**	**41**	**56**	**69**			**23.9**	**5.2**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**2.0**		**2.7**	**3.3**	**3.1**	**2.6**	**2.5**	**2.4**	**2.3**	**3.1**	**1.6**	**-2.2**	**-0.8**
of which ETS sectors GHGs emissions				2.1	2.0	1.6	1.5	1.3	1.3			-3.3	-1.5
CO_2 Emissions (energy related)	**1.8**	**2.5**	**2.4**	**3.0**	**2.8**	**2.4**	**2.2**	**2.1**	**2.0**	**3.0**	**1.7**	**-2.3**	**-0.9**
Power generation/District heating	1.0	1.5	1.6	1.9	1.7	1.2	1.0	0.9	0.8	4.4	0.9	-4.9	-3.0
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Residential	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-1.8	2.0	-0.4	1.7
Tertiary	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1		2.4	2.6	4.3
Transport	0.7	0.9	0.7	1.0	1.0	1.0	1.1	1.1	1.1	0.7	3.2	0.8	0.2
CO_2 Emissions (non energy related)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**				
Non-CO_2 GHGs Emissions	**0.2**		**0.3**	**0.3**	**0.3**	**0.3**	**0.2**	**0.3**	**0.2**	**3.4**	**0.6**	**-1.3**	**0.3**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**135.1**	**168.0**	**158.3**	**134.5**	**126.3**	**121.5**	**116.3**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Malta: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	0.352	0.369	0.380	0.403	0.414	0.421	0.427	0.431	0.432	0.8	0.8	0.3	0.1
GDP (in 000 MEuro'05)	2.9	3.7	4.5	4.8	5.2	5.9	6.8	7.6	8.3	4.6	1.3	2.7	2.0
Gross Inl. Cons./GDP (toe/MEuro'05)	200.3	218.0	170.3	199.7	176.9	141.5	122.8	109.7	99.7	-1.6	0.4	-3.6	-2.1
Carbon intensity (t of CO_2/toe of GIC)	3.06	3.08	3.10	3.12	3.10	2.84	2.69	2.56	2.46	0.1	0.0	-1.4	-0.9
Import Dependency %	100.0	104.5	100.8	100.0	99.5	97.0	95.2	93.4	92.0				
Total Energy-related Costs [C] (in 000 M€05)			0.4	0.6	0.6	0.7	0.9	1.1	1.2		4.5	4.0	2.6
as % of GDP			8.9	12.6	12.2	12.4	13.8	14.7	14.6				
Energy intensity indicators													
Industry (Energy on Value added)	0.0	122.2	100.0	133.5	125.2	119.2	110.4	105.4	102.6		2.3	-1.3	-0.7
Residential (Energy on Private Income)	115.3	114.5	100.0	108.5	106.3	101.4	96.4	92.3	88.5	-1.4	0.6	-1.0	-0.8
Tertiary (Energy on Value added)	158.1	70.7	100.0	103.0	100.8	100.6	98.2	97.5	94.2	-4.5	0.1	-0.3	-0.4
Passenger transport (toe/Mpkm)	47.2	56.2	41.7	57.4	51.3	47.8	44.2	41.3	38.4	-1.2	2.1	-1.5	-1.4
Freight transport (toe/Mtkm)	211.4	232.0	156.0	212.1	192.7	183.1	178.7	175.0	169.6	-3.0	2.1	-0.8	-0.5
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.93	0.91	0.82	0.83	0.80	0.53	0.49	0.41	0.35	-1.3	-0.3	-4.8	-3.2
Final energy demand (t of CO_2/toe)	2.26	2.24	1.99	2.14	2.10	2.03	1.99	1.96	1.94	-1.3	0.5	-0.5	-0.2
Industry		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
Residential	1.66	1.47	1.01	1.10	1.00	0.86	0.80	0.79	0.83	-4.9	0.0	-2.3	0.4
Tertiary	0.00	0.00	0.64	0.69	0.67	0.60	0.67	0.78	0.87		0.5	0.1	2.6
Transport	2.97	2.96	2.98	3.00	3.00	2.98	2.97	2.96	2.93	0.0	0.1	-0.1	-0.1
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			0.0	0.0	1.0	5.2	7.9	10.5	12.7				
RES in transport (%)			0.0	0.0	0.1	1.1	1.5	1.9	2.9				
Gross Electricity generation by fuel type (in GWh)			**1917**	**2240**	**2166**	**2269**	**2136**	**2186**	**2170**		**1.2**	**-0.1**	**0.2**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			0	0	0	0	0	0	0				
Petroleum products			1917	2240	2158	1303	1060	701	503		1.2	-6.9	-7.2
Gas (including derived gases)			0	0	0	893	893	1145	1181				2.8
Biomass & waste			0	0	0	17	23	30	31				3.0
Hydro			0	0	0	0	0	0	0				
Wind			0	0	0	32	109	222	321				11.4
Solar, tidal etc.			0	0	8	25	52	89	135			21.1	9.9
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**484**	**544**	**550**	**836**	**654**	**757**	**828**		**1.3**	**1.7**	**2.4**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			0	0	5	31	80	147	213			31.9	10.3
Hydro (pumping excluded)			0	0	0	0	0	0	0				
Wind			0	0	0	15	46	89	125				10.6
Solar			0	0	5	16	34	58	88			21.1	9.9
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			484	544	545	805	574	609	615		1.2	0.5	0.7
of which cogeneration units			0	0	0	0	0	0	0				
of which CCS units			0	0	0	0	0	0	0				
Solids fired			0	0	0	0	0	0	0				
Gas fired			0	0	0	124	124	160	165				2.9
Oil fired			484	544	545	678	447	446	446		1.2	-2.0	0.0
Biomass-waste fired			0	0	0	2	3	4	4				3.0
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			42.5	44.9	43.0	29.8	35.9	32.0	29.1				
Efficiency for thermal electricity production (%)			33.3	33.2	34.4	45.4	46.0	48.5	49.6				
CHP indicator (% of electricity from CHP)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			0.0	0.0	0.4	3.2	8.6	15.6	22.4				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			0.0	0.0	0.4	3.2	8.6	15.6	22.4				
Transport sector													
Passenger transport activity (Gpkm)	**3.9**	**4.4**	**4.8**	**4.8**	**5.4**	**6.2**	**6.8**	**7.4**	**8.1**	**1.9**	**1.2**	**2.4**	**1.7**
Public road transport	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	1.2	1.2	0.5	0.2
Private cars and motorcycles	1.5	1.8	1.9	2.1	2.2	2.2	2.2	2.2	2.2	1.9	1.7	0.1	-0.1
Rail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Aviation	2.0	2.2	2.5	2.3	2.7	3.4	4.0	4.7	5.3	2.1	0.8	4.2	2.8
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**0.2**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**4.1**	**0.0**	**1.9**	**1.3**
Trucks	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	4.1	0.0	1.9	1.3
Rail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Energy demand in transport (ktoe)	**222**	**305**	**238**	**329**	**324**	**346**	**355**	**363**	**369**	**0.7**	**3.1**	**0.9**	**0.4**
Public road transport	9	9	7	10	11	11	10	10	10	-1.9	3.7	-0.1	-0.7
Private cars and motorcycles	105	164	105	175	164	160	151	142	135	0.0	4.6	-0.9	-1.1
Trucks	35	58	39	53	48	51	54	57	58	1.0	2.1	1.2	0.8
Rail	0	0	0	0	0	0	0	0	0				
Aviation	72	74	86	90	101	124	140	154	165	1.8	1.6	3.3	1.7
Inland navigation	0	0	0	0	0	0	0	0	0				

Source: PRIMES

Netherlands: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**60563**	**66301**	**57430**	**61899**	**60223**	**57815**	**55655**	**47328**	**41544**	**-0.5**	**0.5**	**-0.8**	**-2.9**
Solids	0	0	0	0	2	2	2	1	3			0.5	5.6
Oil	4114	3625	2472	2346	1240	530	0	0	0	-5.0	-6.7		
Natural gas	54613	60456	51904	56265	54900	51980	49180	40100	32670	-0.5	0.6	-1.1	-4.0
Nuclear	881	1036	1013	1031	1017	1023	1024	1186	2217	1.4	0.0	0.1	8.0
Renewable energy sources	956	1184	2040	2257	3064	4280	5449	6041	6654	7.9	4.2	5.9	2.0
Hydro	7	8	12	8	8	9	9	9	9	5.3	-3.6	0.0	0.0
Biomass & Waste	942	1144	1945	2050	2360	2754	2926	3069	3253	7.5	2.0	2.2	1.1
Wind	5	27	71	178	616	1324	2191	2463	2669	30.9	24.1	13.5	2.0
Solar and others	2	5	12	22	80	155	238	345	457	18.5	21.3	11.6	6.7
Geothermal	0	0	0	0	0	37	86	155	267			129.9	11.9
Net Imports	**18273**	**17142**	**35442**	**38390**	**34250**	**37860**	**38982**	**46506**	**51212**	**6.8**	**-0.3**	**1.3**	**2.8**
Solids	9574	8921	8222	8313	7268	9105	9320	10106	9428	-1.5	-1.2	2.5	0.1
Oil	31704	33609	42777	48868	46283	47209	46960	45775	43950	3.0	0.8	0.1	-0.7
- Crude oil and Feedstocks	48979	60332	62222	62643	60536	61512	61195	59946	58023	2.4	-0.3	0.1	-0.5
- Oil products	-17275	-26723	-19446	-13775	-14252	-14304	-14235	-14171	-14073				
Natural gas	-23799	-26370	-17191	-20941	-21488	-19798	-18415	-10559	-3372				
Electricity	792	980	1626	1573	1389	325	-89	-176	-196	7.5	-1.6		
Gross Inland Consumption	**67955**	**74528**	**77042**	**82479**	**78384**	**79420**	**78480**	**77471**	**75978**	**1.3**	**0.2**	**0.0**	**-0.3**
Solids	9206	9098	8035	8190	7269	9106	9322	10107	9430	-1.4	-1.0	2.5	0.1
Oil	25308	28142	29610	33527	31434	31484	30802	29412	27172	1.6	0.6	-0.2	-1.2
Natural gas	30810	34085	34711	35324	33412	32182	30765	29541	29298	1.2	-0.4	-0.8	-0.5
Nuclear	881	1036	1013	1031	1017	1023	1024	1186	2217	1.4	0.0	0.1	8.0
Electricity	792	980	1626	1573	1389	325	-89	-176	-196	7.5	-1.6		
Renewable energy forms	959	1187	2048	2834	3862	5298	6656	7401	8057	7.9	6.6	5.6	1.9
as % in Gross Inland Consumption													
Solids	13.5	12.2	10.4	9.9	9.3	11.5	11.9	13.0	12.4				
Oil	37.2	37.8	38.4	40.6	40.1	39.6	39.2	38.0	35.8				
Natural gas	45.3	45.7	45.1	42.8	42.6	40.5	39.2	38.1	38.6				
Nuclear	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.5	2.9				
Renewable energy forms	1.4	1.6	2.7	3.4	4.9	6.7	8.5	9.6	10.6				
Gross Electricity Generation in GWh_e	**71824**	**81054**	**89599**	**100235**	**104437**	**126316**	**138830**	**145932**	**150252**	**2.2**	**1.5**	**2.9**	**0.8**
Self consumption and grid losses	5556	6855	7754	8521	8805	10706	12902	13952	14193	3.4	1.3	3.9	1.0
Fuel Inputs for Thermal Power Generation	**14646**	**17053**	**18277**	**19614**	**19102**	**21547**	**22032**	**22795**	**22679**	**2.2**	**0.4**	**1.4**	**0.3**
Solids	5698	5900	5114	4958	4760	6675	6936	7788	7171	-1.1	-0.7	3.8	0.3
Oil (including refinery gas)	727	917	671	691	594	588	571	718	630	-0.8	-1.2	-0.4	1.0
Gas	7651	9466	11071	11913	11392	11461	11505	10873	11074	3.8	0.3	0.1	-0.4
Biomass & Waste	570	770	1421	2052	2356	2787	2934	3262	3538	9.6	5.2	2.2	1.9
Geothermal heat	0	0	0	0	0	37	86	155	267				11.9
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**73390**	**84833**	**86509**	**91301**	**84034**	**84457**	**82495**	**80777**	**78383**	**1.7**	**-0.3**	**-0.2**	**-0.5**
Refineries	69876	81133	83485	87803	81008	81393	79366	77655	75347	1.8	-0.3	-0.2	-0.5
Biofuels and hydrogen production	0	0	0	0	256	456	605	654	680			9.0	1.2
District heating	0	11	153	436	494	494	494	455	388		12.4	0.0	-2.4
Others	3514	3689	2870	3062	2276	2114	2029	2014	1967	-2.0	-2.3	-1.1	-0.3
Energy Branch Consumption	**5462**	**6320**	**5600**	**6665**	**5810**	**5795**	**5797**	**5678**	**5473**	**0.2**	**0.4**	**0.0**	**-0.6**
Non-Energy Uses	**9775**	**9892**	**10307**	**13031**	**12949**	**12826**	**12341**	**12166**	**12154**	**0.5**	**2.3**	**-0.5**	**-0.2**
Final Energy Demand	**42876**	**47727**	**50174**	**51639**	**50669**	**50888**	**50282**	**49128**	**47572**	**1.6**	**0.1**	**-0.1**	**-0.6**
by sector													
Industry	12542	12675	13753	14929	14508	14446	14058	13724	13360	0.9	0.5	-0.3	-0.5
- energy intensive industries	9531	8686	9823	10639	10042	9948	9612	9328	9010	0.3	0.2	-0.4	-0.6
- other industrial sectors	3010	3989	3930	4291	4466	4497	4446	4396	4350	2.7	1.3	0.0	-0.2
Residential	9938	11152	10333	10101	10171	10359	10187	9986	9745	0.4	-0.2	0.0	-0.4
Tertiary	10012	11463	12229	11495	11305	11316	11103	10785	10476	2.0	-0.8	-0.2	-0.6
Transport	10385	12436	13858	15114	14685	14767	14934	14633	13991	2.9	0.6	0.2	-0.7
by fuel													
Solids	1651	1415	1295	1515	1137	1188	1200	1114	1065	-2.4	-1.3	0.5	-1.2
Oil	12851	14721	16512	17406	16692	16595	16515	15315	13809	2.5	0.1	-0.1	-1.8
Gas	21244	22515	21008	20335	19322	18518	17105	16578	15684	-0.1	-0.8	-1.2	-0.9
Electricity	6322	7143	8421	8989	9174	9825	10299	10740	11079	2.9	0.9	1.2	0.7
Heat (from CHP and District Heating) [A]	439	1568	2558	2981	3675	3835	3942	4044	4490	19.3	3.7	0.7	1.3
Renewable energy forms	370	364	380	413	668	925	1218	1335	1442	0.3	5.8	6.2	1.7
Other	0	0	0	0	1	2	2	2	2			8.2	-0.1
RES in Gross Final Energy Consumption [B]			**814**	**1169**	**3244**	**4750**	**6053**	**6717**	**7263**		**14.8**	**6.4**	**1.8**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**214.2**		**219.2**	**217.8**	**197.4**	**202.8**	**195.8**	**191.2**	**180.8**	**0.2**	**-1.0**	**-0.1**	**-0.8**
of which ETS sectors GHGs emissions				107.3	91.5	98.7	95.4	94.9	88.7			0.4	-0.7
CO_2 Emissions (energy related)	**152.1**	**167.6**	**166.2**	**172.1**	**159.6**	**164.5**	**157.4**	**152.7**	**142.1**	**0.9**	**-0.4**	**-0.1**	**-1.0**
Power generation/District heating	43.4	49.2	49.1	51.2	48.5	56.2	53.2	53.9	50.6	1.2	-0.1	0.9	-0.5
Energy Branch	13.8	16.0	13.5	15.0	11.4	10.6	10.1	9.6	9.0	-0.3	-1.7	-1.2	-1.2
Industry	26.6	24.8	24.6	25.4	21.9	21.3	19.9	18.4	15.8	-0.8	-1.1	-1.0	-2.3
Residential	19.2	20.6	18.9	17.8	17.9	17.6	16.6	15.6	14.7	-0.2	-0.5	-0.8	-1.2
Tertiary	18.9	20.7	19.5	18.1	17.4	16.6	15.4	14.0	12.8	0.3	-1.2	-1.2	-1.9
Transport	30.2	36.3	40.6	44.5	42.5	42.2	42.2	41.2	39.2	3.0	0.4	-0.1	-0.7
CO_2 Emissions (non energy related)	**9.4**	**9.1**	**8.2**	**8.6**	**7.9**	**8.1**	**8.0**	**8.1**	**8.1**	**-1.4**	**-0.4**	**0.1**	**0.1**
Non-CO_2 GHGs Emissions	**52.6**		**44.8**	**37.0**	**29.9**	**30.3**	**30.3**	**30.4**	**30.7**	**-1.6**	**-4.0**	**0.1**	**0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**102.3**	**101.7**	**92.2**	**94.7**	**91.4**	**89.3**	**84.4**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Netherlands: Baseline 2009			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	14.893	15.424	15.864	16.306	16.503	16.717	16.896	17.069	17.208	0.6	0.4	0.2	0.2
GDP (in 000 MEuro'05)	347.5	394.3	480.8	513.4	539.5	589.1	637.9	682.4	726.3	3.3	1.2	1.7	1.3
Gross Inl. Cons./GDP (toe/MEuro'05)	195.6	189.0	160.2	160.7	145.3	134.8	123.0	113.5	104.6	-2.0	-1.0	-1.6	-1.6
Carbon intensity (t of CO_2/toe of GIC)	2.24	2.25	2.16	2.09	2.04	2.07	2.01	1.97	1.87	-0.4	-0.6	-0.1	-0.7
Import Dependency %	23.2	20.0	39.2	38.7	36.3	39.6	41.2	49.6	55.2				
Total Energy-related Costs (C) (in 000 M€05)			45.7	53.0	53.8	62.0	73.6	80.9	82.9		1.7	3.2	1.2
as % of GDP			9.5	10.3	10.0	10.5	11.5	11.8	11.4				
Energy intensity indicators													
Industry (Energy on Value added)	105.2	107.3	100.0	108.1	104.0	97.5	90.7	84.9	79.6	-0.5	0.4	-1.4	-1.3
Residential (Energy on Private Income)	133.0	133.8	100.0	93.4	91.5	83.9	75.3	69.0	63.1	-2.8	-0.9	-1.9	-1.8
Tertiary (Energy on Value added)	117.5	115.7	100.0	86.8	80.6	72.8	65.4	58.9	53.5	-1.6	-2.1	-2.1	-2.0
Passenger transport (toe/Mpkm)	41.4	49.0	49.3	52.8	50.8	46.7	44.9	41.2	36.4	1.8	0.3	-1.2	-2.1
Freight transport (toe/Mtkm)	34.9	37.8	38.1	36.6	35.8	35.6	34.1	32.5	30.8	0.9	-0.6	-0.5	-1.0
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.56	0.48	0.39	0.35	0.30	0.30	0.26	0.26	0.23	-3.4	-2.8	-1.3	-1.3
Final energy demand (t of CO_2/toe)	2.21	2.15	2.07	2.05	1.97	1.92	1.87	1.82	1.74	-0.7	-0.5	-0.5	-0.8
Industry	2.12	1.96	1.79	1.70	1.51	1.47	1.42	1.34	1.18	-1.7	-1.7	-0.6	-1.8
Residential	1.93	1.85	1.83	1.76	1.76	1.70	1.63	1.56	1.51	-0.5	-0.4	-0.8	-0.7
Tertiary	1.89	1.81	1.60	1.58	1.54	1.47	1.39	1.30	1.22	-1.7	-0.4	-1.0	-1.3
Transport	2.91	2.92	2.93	2.95	2.89	2.86	2.83	2.82	2.80	0.1	-0.1	-0.2	-0.1
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			1.6	2.2	6.3	9.2	11.9	13.5	15.0				
RES in transport (%)			0.1	0.1	2.6	4.6	6.2	6.9	7.5				
Gross Electricity generation by fuel type (in GWh)			**89599**	**100235**	**104437**	**126316**	**138830**	**145932**	**150252**		**1.5**	**2.9**	**0.8**
Nuclear energy			3925	3996	3942	3967	3971	5096	9592		0.0	0.1	9.2
Coal and lignite			23513	22687	21513	33250	35217	39552	36127		-0.9	5.1	0.3
Petroleum products			2380	2698	2946	2937	2885	2121	1850		2.2	-0.2	-4.3
Gas (including derived gases)			55301	62203	59752	59828	59705	57709	57580		0.8	0.0	-0.4
Biomass & waste			3500	6463	8937	10677	11252	12430	13306		9.8	2.3	1.7
Hydro			142	88	99	99	99	99	99		-3.6	0.0	0.0
Wind			829	2067	7160	15398	25472	28637	31031		24.1	13.5	2.0
Solar, tidal etc.			8	34	87	116	124	103	170		27.0	3.6	3.2
Geothermal and other renewables			0	0	0	43	105	185	497				16.8
Net Generation Capacity in MW_e			**20559**	**23096**	**26283**	**31431**	**33532**	**34187**	**35845**		**2.5**	**2.5**	**0.7**
Nuclear energy			504	504	504	504	504	589	1108		0.0	0.0	8.2
Renewable energy			494	1331	3212	5740	8782	9778	10672		20.6	10.6	2.0
Hydro (pumping excluded)			39	37	37	37	37	37	37		-0.5	0.0	0.0
Wind			442	1243	3078	5578	8615	9632	10397		21.4	10.8	1.9
Solar			13	51	96	125	128	107	177		22.2	2.9	3.2
Other renewables (tidal etc.)			0	0	0	0	2	2	61				44.8
Thermal power			19561	21261	22566	25186	24246	23821	24066		1.4	0.7	-0.1
of which cogeneration units			6017	5905	8239	8347	8659	8880	9101		3.2	0.5	0.5
of which CCS units			0	0	0	0	1005	1005	1005				0.0
Solids fired			4200	4200	4186	8133	8534	8534	8534		0.0	7.4	0.0
Gas fired			13732	14827	15935	14307	12857	12216	12258		1.5	-2.1	-0.5
Oil fired			776	762	995	787	786	898	896		2.5	-2.3	1.3
Biomass-waste fired			853	1473	1451	1954	2057	2152	2343		5.4	3.6	1.3
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	5	11	21	35				11.9
Load factor for net electric capacities (%)			47.7	47.5	43.5	43.8	44.7	46.0	45.2				
Efficiency for thermal electricity production (%)			39.9	41.2	41.9	42.6	42.6	42.3	41.4				
CHP indicator (% of electricity from CHP)			39.1	30.8	42.7	36.3	33.4	31.5	31.8				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	4.7	6.1	6.9				
Non fossil fuels in electricity generation (%)			9.4	12.6	19.4	24.0	29.5	31.9	36.4				
- nuclear			4.4	4.0	3.8	3.1	2.9	3.5	6.4				
- renewable energy forms and industrial waste			5.0	8.6	15.6	20.8	26.7	28.4	30.0				
Transport sector													
Passenger transport activity (Gpkm)	**172.2**	**172.3**	**184.4**	**194.8**	**197.9**	**213.8**	**226.7**	**240.0**	**254.4**	**0.7**	**0.7**	**1.4**	**1.2**
Public road transport	13.0	12.0	11.3	11.8	12.4	13.2	13.8	14.1	14.3	-1.4	0.9	1.1	0.3
Private cars and motorcycles	138.6	133.0	143.3	151.5	151.7	162.2	169.2	177.5	187.4	0.3	0.6	1.1	1.0
Rail	12.3	17.7	16.1	16.7	18.1	19.6	21.2	22.6	23.9	2.7	1.2	1.6	1.2
Aviation	7.0	8.5	13.0	14.2	15.1	18.0	21.7	25.1	28.0	6.3	1.5	3.7	2.6
Inland navigation	1.2	1.0	0.7	0.7	0.7	0.8	0.8	0.8	0.8	-5.0	0.2	0.6	0.5
Freight transport activity (Gtkm)	**93.2**	**105.7**	**125.4**	**132.3**	**129.2**	**134.5**	**139.4**	**146.1**	**153.8**	**3.0**	**0.3**	**0.8**	**1.0**
Trucks	54.5	67.1	79.6	84.2	80.0	83.8	86.6	91.2	96.8	3.9	0.1	0.8	1.1
Rail	3.1	3.1	4.5	5.9	7.4	7.7	7.9	8.1	8.1	3.9	5.0	0.7	0.2
Inland navigation	35.7	35.5	41.3	42.2	41.8	43.0	44.8	46.9	48.9	1.5	0.1	0.7	0.9
Energy demand in transport (ktoe)	**10385**	**12436**	**13858**	**15114**	**14685**	**14767**	**14934**	**14633**	**13991**	**2.9**	**0.6**	**0.2**	**-0.7**
Public road transport	166	151	140	144	150	155	153	148	143	-1.7	0.7	0.2	-0.7
Private cars and motorcycles	5237	5553	5491	6371	6117	5868	5668	5358	4946	0.5	1.1	-0.8	-1.4
Trucks	2666	3278	4037	4552	4319	4475	4450	4451	4436	4.2	0.7	0.3	0.0
Rail	147	163	176	172	197	203	187	173	167	1.8	1.2	-0.6	-1.1
Aviation	1608	2589	3343	3670	3698	3857	4260	4280	4068	7.6	1.0	1.4	-0.5
Inland navigation	560	702	672	206	204	209	216	223	231	1.8	-11.2	0.5	0.7

Source: PRIMES

Poland: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**99385**	**99403**	**80300**	**79260**	**69088**	**66603**	**67801**	**67231**	**66595**	**-2.1**	**-1.5**	**-0.2**	**-0.2**
Solids	94459	91104	71298	68876	59068	55712	52821	49038	46066	-2.8	-1.9	-1.1	-1.4
Oil	179	367	1433	1498	750	700	700	650	600	23.1	-6.3	-0.7	-1.5
Natural gas	2378	3169	3313	3884	3865	3440	3100	2800	2700	3.4	1.6	-2.2	-1.4
Nuclear	0	0	0	0	0	0	2817	5094	6738				9.1
Renewable energy sources	2369	4763	4256	5002	5405	6750	8363	9648	10491	6.0	2.4	4.5	2.3
Hydro	139	162	181	189	195	205	221	231	246	2.7	0.7	1.3	1.1
Biomass & Waste	2230	4600	4072	4792	5094	6363	7819	8957	9653	6.2	2.3	4.4	2.1
Wind	0	0	0	12	87	126	215	294	375		70.0	9.5	5.7
Solar and others	0	0	0	0	1	9	27	51	82			34.5	11.6
Geothermal	0	0	3	9	28	49	81	115	135		25.1	11.3	5.2
Net Imports	**2306**	**-11**	**10262**	**16911**	**32448**	**42317**	**45109**	**47968**	**47840**	**16.1**	**12.2**	**3.3**	**0.6**
Solids	-18913	-21202	-16309	-12755	-5382	-342	2088	4353	4686				8.4
Oil	14536	15622	20512	22155	27324	31119	31716	32146	31654	3.5	2.9	1.5	0.0
- Crude oil and Feedstocks	13196	14112	18949	18362	22682	25656	26086	26393	26105	3.7	1.8	1.4	0.0
- Oil products	1340	1510	1563	3793	4642	5463	5629	5753	5549	1.5	11.5	1.9	-0.1
Natural gas	6773	5810	6607	8531	11192	12167	12025	12312	12422	-0.2	5.4	0.7	0.3
Electricity	-90	-241	-548	-962	-576	-442	-449	-498	-528				
Gross Inland Consumption	**100083**	**100165**	**90907**	**93870**	**101116**	**108450**	**112434**	**114723**	**113963**	**-1.0**	**1.1**	**1.1**	**0.1**
Solids	75405	70500	56358	54918	53686	55370	54910	53391	50752	-2.9	-0.5	0.2	-0.8
Oil	13461	16149	20889	22734	27655	31350	31940	32319	31782	4.5	2.8	1.5	0.0
Natural gas	8938	8995	9960	12235	15057	15607	15125	15112	15122	1.1	4.2	0.0	0.0
Nuclear	0	0	0	0	0	0	2817	5094	6738				9.1
Electricity	-90	-241	-548	-962	-576	-442	-449	-498	-528				
Renewable energy forms	2369	4763	4249	4946	5295	6565	8091	9304	10098	6.0	2.2	4.3	2.2
as % in Gross Inland Consumption													
Solids	75.3	70.4	62.0	58.5	53.1	51.1	48.8	46.5	44.5				
Oil	13.4	16.1	23.0	24.2	27.3	28.9	28.4	28.2	27.9				
Natural gas	8.9	9.0	11.0	13.0	14.9	14.4	13.5	13.2	13.3				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	2.5	4.4	5.9				
Renewable energy forms	2.4	4.8	4.7	5.3	5.2	6.1	7.2	8.1	8.9				
Gross Electricity Generation in GWh_e	**134591**	**137017**	**143148**	**155331**	**162746**	**173065**	**187136**	**201069**	**215830**	**0.6**	**1.3**	**1.4**	**1.4**
Self consumption and grid losses	24377	30428	27978	28523	30141	31338	34507	37423	40450	1.4	0.7	1.4	1.6
Fuel Inputs for Thermal Power Generation	**43419**	**36847**	**35960**	**38149**	**41083**	**43197**	**42995**	**42347**	**40951**	**-1.9**	**1.3**	**0.5**	**-0.5**
Solids	41138	35842	34793	35942	37763	39902	39481	38784	37337	-1.7	0.8	0.4	-0.6
Oil (including refinery gas)	1235	405	228	179	190	231	206	197	196	-15.6	-1.8	0.8	-0.5
Gas	673	488	783	1483	1479	1342	1500	1445	1356	1.5	6.6	0.1	-1.0
Biomass & Waste	372	114	157	546	1651	1721	1809	1914	2046	-8.3	26.6	0.9	1.2
Geothermal heat	0	0	0	0	0	0	0	8	16				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**37964**	**33093**	**34029**	**32016**	**34125**	**36747**	**37146**	**37382**	**36898**	**-1.1**	**0.0**	**0.9**	**-0.1**
Refineries	13269	15062	20074	19789	23597	26532	26945	27192	26845	4.2	1.6	1.3	0.0
Biofuels and hydrogen production	0	0	0	47	363	654	943	1146	1292			10.0	3.2
District heating	9949	5985	4320	3640	3545	3462	3892	4234	4433	-8.0	-2.0	0.9	1.3
Others	14746	12045	9635	8541	6620	6099	5366	4810	4329	-4.2	-3.7	-2.1	-2.1
Energy Branch Consumption	**6808**	**7653**	**7263**	**7151**	**8573**	**8968**	**9084**	**9140**	**9008**	**0.6**	**1.7**	**0.6**	**-0.1**
Non-Energy Uses	**4218**	**3720**	**4319**	**4471**	**4708**	**5007**	**5071**	**5216**	**5414**	**0.2**	**0.9**	**0.7**	**0.7**
Final Energy Demand	**59652**	**63525**	**55323**	**57854**	**64813**	**70690**	**73022**	**74704**	**74949**	**-0.8**	**1.6**	**1.2**	**0.3**
by sector													
Industry	25258	22722	18886	16462	17460	18667	19017	19180	19142	-2.9	-0.8	0.9	0.1
- energy intensive industries	16252	15428	13373	11186	11360	11803	11738	11564	11558	-1.9	-1.6	0.3	-0.2
- other industrial sectors	9006	7294	5513	5276	6100	6864	7279	7616	7583	-4.8	1.0	1.8	0.4
Residential	18126	23284	17519	18377	18767	19374	19725	19877	19836	-0.3	0.7	0.5	0.1
Tertiary	8906	9244	9714	10932	11848	12984	13587	14156	14357	0.9	2.0	1.4	0.6
Transport	7362	8275	9204	12083	16738	19664	20693	21491	21614	2.3	6.2	2.1	0.4
by fuel													
Solids	17066	23299	13728	11350	10261	9994	10176	9601	8724	-2.2	-2.9	-0.1	-1.5
Oil	9143	11618	14917	17874	21970	25387	25903	26362	26112	5.0	3.9	1.7	0.1
Gas	7987	7735	7447	8400	11522	12231	11428	11141	10881	-0.7	4.5	-0.1	-0.5
Electricity	8262	7703	8454	9028	9926	10828	11760	12680	13698	0.2	1.6	1.7	1.5
Heat (from CHP and District Heating) [A]	15563	8763	6886	7056	7907	7784	7994	8260	8525	-7.8	1.4	0.1	0.6
Renewable energy forms	1631	4408	3889	4146	3226	4463	5759	6656	7005	9.1	-1.9	6.0	2.0
Other	0	0	0	0	1	3	4	4	4			12.1	0.5
RES in Gross Final Energy Consumption [B]			**3766**	**4290**	**4528**	**5871**	**7352**	**8507**	**9233**		**1.9**	**5.0**	**2.3**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**440.8**		**374.8**	**375.2**	**396.5**	**414.2**	**409.7**	**401.1**	**381.2**	**-1.6**	**0.6**	**0.3**	**-0.7**
of which ETS sectors GHGs emissions				218.9	221.1	229.0	225.1	217.4	203.9			0.2	-1.0
CO_2 Emissions (energy related)	**332.3**	**330.9**	**288.6**	**291.2**	**312.3**	**330.8**	**325.7**	**315.8**	**296.5**	**-1.4**	**0.8**	**0.4**	**-0.9**
Power generation/District heating	209.3	169.9	158.8	162.1	168.3	176.6	171.8	164.0	150.2	-2.7	0.6	0.2	-1.3
Energy Branch	5.8	12.7	11.3	10.6	10.2	9.8	9.4	9.1	8.5	6.9	-1.0	-0.8	-1.0
Industry	44.0	59.9	46.3	33.5	33.5	35.4	35.8	35.0	34.0	0.5	-3.2	0.7	-0.5
Residential	33.1	44.4	27.9	30.2	31.2	31.7	29.9	27.7	24.9	-1.7	1.1	-0.4	-1.8
Tertiary	19.4	20.8	18.4	20.5	21.8	22.4	21.7	21.3	20.4	-0.5	1.7	-0.1	-0.6
Transport	20.6	23.2	25.8	34.4	47.1	54.8	57.0	58.7	58.5	2.3	6.2	1.9	0.3
CO_2 Emissions (non energy related)	**17.7**	**18.0**	**17.6**	**16.8**	**18.6**	**20.7**	**22.3**	**23.4**	**24.3**	**-0.1**	**0.6**	**1.8**	**0.9**
Non-CO_2 GHGs Emissions	**90.8**		**68.6**	**67.2**	**65.6**	**62.6**	**61.8**	**62.0**	**60.5**	**-2.8**	**-0.5**	**-0.6**	**-0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**85.0**	**85.1**	**89.9**	**94.0**	**92.9**	**91.0**	**86.5**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Poland: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	38.038	38.581	38.654	38.174	38.092	38.068	37.960	37.612	36.975	0.2	-0.1	0.0	-0.3
GDP (in 000 MEuro'05)	144.7	161.3	210.0	244.4	298.1	353.9	406.1	464.5	515.8	3.8	3.6	3.1	2.4
Gross Inl. Cons./GDP (toe/MEuro'05)	691.6	620.9	432.9	384.1	339.2	306.4	276.9	247.0	220.9	-4.6	-2.4	-2.0	-2.2
Carbon intensity (t of CO_2/toe of GIC)	3.32	3.30	3.17	3.10	3.09	3.05	2.90	2.75	2.60	-0.4	-0.3	-0.6	-1.1
Import Dependency %	2.3	0.0	11.3	18.0	32.0	38.9	40.0	41.6	41.8				
Total Energy-related Costs (C) (in 000 M€05)			31.5	39.8	47.7	58.6	74.3	86.6	93.3		4.2	4.5	2.3
as % of GDP			15.0	16.3	16.0	16.5	18.3	18.6	18.1				
Energy intensity indicators													
Industry (Energy on Value added)	200.8	177.4	100.0	67.2	56.2	49.6	45.2	41.6	39.7	-6.7	-5.6	-2.1	-1.3
Residential (Energy on Private Income)	182.3	177.4	100.0	91.0	79.4	69.5	60.7	53.2	47.2	-5.8	-2.3	-2.7	-2.5
Tertiary (Energy on Value added)	130.3	119.8	100.0	98.0	88.9	79.8	71.7	64.1	57.4	-2.6	-1.2	-2.1	-2.2
Passenger transport (toe/Mpkm)	22.8	27.4	24.9	26.7	27.6	27.1	26.8	26.4	25.8	0.9	1.1	-0.3	-0.4
Freight transport (toe/Mtkm)	25.3	27.2	29.2	32.1	34.1	34.0	33.3	32.7	31.6	1.4	1.6	-0.3	-0.5
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.62	0.67	0.67	0.65	0.59	0.58	0.54	0.49	0.42	0.8	-1.3	-0.9	-2.3
Final energy demand (t of CO_2/toe)	1.96	2.33	2.14	2.05	2.06	2.04	1.98	1.91	1.84	0.9	-0.4	-0.4	-0.7
Industry	1.74	2.64	2.45	2.03	1.92	1.89	1.88	1.83	1.77	3.5	-2.4	-0.2	-0.6
Residential	1.83	1.90	1.59	1.64	1.66	1.64	1.52	1.39	1.26	-1.3	0.4	-0.9	-1.9
Tertiary	2.18	2.25	1.89	1.87	1.84	1.73	1.60	1.51	1.42	-1.4	-0.3	-1.4	-1.1
Transport	2.80	2.80	2.81	2.85	2.81	2.79	2.75	2.73	2.70	0.0	0.0	-0.2	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			6.5	7.1	6.7	8.0	9.7	10.9	11.8				
RES in transport (%)			0.1	0.5	2.7	4.1	5.6	6.6	7.4				
Gross Electricity generation by fuel type (in GWh)			**143148**	**155331**	**162746**	**173065**	**187136**	**201069**	**215830**		**1.3**	**1.4**	**1.4**
Nuclear energy			0	0	0	0	11760	21546	28710				9.3
Coal and lignite			137226	145736	148979	159480	159386	162120	167841		0.8	0.7	0.5
Petroleum products			911	759	994	766	266	250	427		0.9	-12.4	4.9
Gas (including derived gases)			2450	4990	4995	4443	5278	5154	5489		7.4	0.6	0.4
Biomass & waste			451	1510	4505	4531	5373	5867	6085		25.9	1.8	1.3
Hydro			2106	2201	2263	2379	2568	2682	2856		0.7	1.3	1.1
Wind			5	135	1008	1462	2495	3418	4361		70.0	9.5	5.7
Solar, tidal etc.			0	0	1	4	10	23	42			22.8	16.0
Geothermal and other renewables			0	0	0	0	0	9	18				
Net Generation Capacity in MW_e			**29565**	**30959**	**32474**	**32365**	**33340**	**35977**	**40667**		**0.9**	**0.3**	**2.0**
Nuclear energy			0	0	0	0	1515	2776	3699				9.3
Renewable energy			813	1028	1687	2024	2727	3360	4003		7.6	4.9	3.9
Hydro (pumping excluded)			809	907	1014	1098	1187	1203	1203		2.3	1.6	0.1
Wind			4	121	672	922	1530	2133	2756		66.9	8.6	6.1
Solar			0	0	1	4	10	24	44			22.3	16.0
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			28752	29931	30787	30340	29098	29841	32965		0.7	-0.6	1.3
of which cogeneration units			9348	9606	9771	8066	7948	8255	8505		0.4	-2.0	0.7
of which CCS units			0	0	0	0	610	1238	2268				14.0
Solids fired			27462	28152	28873	27782	25966	26574	29459		0.5	-1.1	1.3
Gas fired			847	1291	1208	1556	1753	1741	1722		3.6	3.8	-0.2
Oil fired			429	430	430	439	391	274	213		0.0	-0.9	-5.9
Biomass-waste fired			14	59	276	563	988	1252	1568		34.6	13.6	4.7
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	1	2				
Load factor for net electric capacities (%)			50.3	52.4	52.3	56.0	58.4	57.8	54.7				
Efficiency for thermal electricity production (%)			33.7	34.5	33.4	33.7	34.1	35.2	37.8				
CHP indicator (% of electricity from CHP)			17.6	18.3	17.8	18.2	18.6	20.1	18.5				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	3.6	6.6	10.9				
Non fossil fuels in electricity generation (%)			1.8	2.5	4.8	4.8	11.9	16.7	19.5				
- nuclear			0.0	0.0	0.0	0.0	6.3	10.7	13.3				
- renewable energy forms and industrial waste			1.8	2.5	4.8	4.8	5.6	6.0	6.2				
Transport sector													
Passenger transport activity (Gpkm)	**186.5**	**182.3**	**217.1**	**257.8**	**323.6**	**378.2**	**412.2**	**442.6**	**464.7**	**1.5**	**4.1**	**2.5**	**1.2**
Public road transport	46.3	34.0	31.7	29.3	28.3	29.5	31.4	33.7	35.3	-3.7	-1.1	1.1	1.2
Private cars and motorcycles	83.4	115.2	153.6	201.2	262.6	310.3	338.3	360.8	375.5	6.3	5.5	2.6	1.0
Rail	55.4	31.6	28.8	22.3	24.8	27.4	29.4	31.6	33.2	-6.3	-1.5	1.7	1.2
Aviation	0.9	1.2	2.8	4.8	7.6	10.8	12.8	16.2	20.4	12.4	10.7	5.3	4.8
Inland navigation	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	-6.3	-0.6	1.3	0.7
Freight transport activity (Gtkm)	**122.9**	**120.3**	**130.2**	**162.1**	**228.4**	**276.9**	**290.6**	**300.2**	**304.0**	**0.6**	**5.8**	**2.4**	**0.5**
Trucks	40.3	51.2	75.0	111.8	172.5	210.8	219.3	223.9	223.8	6.4	8.7	2.4	0.2
Rail	81.6	68.2	54.0	50.0	55.5	65.6	70.8	75.8	79.7	-4.0	0.3	2.5	1.2
Inland navigation	1.0	0.9	1.2	0.3	0.4	0.4	0.4	0.5	0.5	1.3	-11.4	2.5	1.4
Energy demand in transport (ktoe)	**7362**	**8275**	**9204**	**12083**	**16738**	**19664**	**20693**	**21491**	**21614**	**2.3**	**6.2**	**2.1**	**0.4**
Public road transport	421	307	276	254	244	248	253	257	262	-4.1	-1.3	0.4	0.3
Private cars and motorcycles	3435	4241	4687	6248	8146	9271	9961	10519	10657	3.2	5.7	2.0	0.7
Trucks	2111	2659	3326	4792	7343	8895	9139	9316	9200	4.6	8.2	2.2	0.1
Rail	1099	669	540	468	507	584	572	558	471	-6.9	-0.6	1.2	-1.9
Aviation	196	371	369	319	497	664	765	838	1021	6.5	3.0	4.4	2.9
Inland navigation	99	29	6	2	2	2	3	3	3	-24.3	-9.9	1.7	0.8

Source: PRIMES

Portugal: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**3396**	**3321**	**3826**	**3583**	**4652**	**4972**	**5251**	**5723**	**6448**	**1.2**	**2.0**	**1.2**	**2.1**
Solids	115	0	0	0	0	0	0	0	0				
Oil	0	0	0	0	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	3281	3321	3826	3583	4652	4972	5251	5723	6448	1.5	2.0	1.2	2.1
Hydro	787	717	974	407	892	937	941	959	925	2.1	-0.9	0.5	-0.2
Biomass & Waste	2479	2550	2770	2936	2950	2955	3023	3293	3358	1.1	0.6	0.2	1.1
Wind	0	1	14	152	589	753	876	977	1342	66.9	44.9	4.0	4.4
Solar and others	11	15	18	23	66	172	256	328	572	5.4	13.6	14.5	8.4
Geothermal	3	37	49	66	154	155	155	167	250	31.4	12.1	0.1	4.9
Net Imports	**15122**	**18012**	**21881**	**24414**	**20967**	**21046**	**20930**	**20914**	**20329**	**3.8**	**-0.4**	**0.0**	**-0.3**
Solids	2789	3797	3913	3223	2319	2256	2181	2103	1613	3.4	-5.1	-0.6	-3.0
Oil	12329	14137	15848	16711	13740	13771	13616	13416	13227	2.5	-1.4	-0.1	-0.3
- Crude oil and Feedstocks	11319	13603	12231	13637	12411	12440	12380	12299	12216	0.8	0.1	0.0	-0.1
- Oil products	1011	534	3618	3073	1329	1330	1236	1117	1011	13.6	-9.5	-0.7	-2.0
Natural gas	0	0	2039	3893	4220	4074	4035	4128	4218		7.5	-0.4	0.4
Electricity	3	79	80	587	542	564	626	709	692	38.1	21.1	1.4	1.0
Gross Inland Consumption	**17508**	**20469**	**25078**	**27035**	**25036**	**25412**	**25562**	**26004**	**26125**	**3.7**	**0.0**	**0.2**	**0.2**
Solids	2580	3493	3803	3347	2319	2256	2181	2103	1613	4.0	-4.8	-0.6	-3.0
Oil	11644	13576	15335	15768	13157	13164	12997	12783	12575	2.8	-1.5	-0.1	-0.3
Natural gas	0	0	2034	3751	4220	4074	4035	4128	4218		7.6	-0.4	0.4
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	3	79	80	587	542	564	626	709	692	38.1	21.1	1.4	1.0
Renewable energy forms	3281	3321	3826	3583	4797	5354	5723	6282	7026	1.5	2.3	1.8	2.1
as % in Gross Inland Consumption													
Solids	14.7	17.1	15.2	12.4	9.3	8.9	8.5	8.1	6.2				
Oil	66.5	66.3	61.1	58.3	52.6	51.8	50.8	49.2	48.1				
Natural gas	0.0	0.0	8.1	13.9	16.9	16.0	15.8	15.9	16.1				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	18.7	16.2	15.3	13.3	19.2	21.1	22.4	24.2	26.9				
Gross Electricity Generation in GWh_e	**28350**	**33148**	**43364**	**46180**	**46349**	**50371**	**54603**	**59551**	**65860**	**4.3**	**0.7**	**1.7**	**1.9**
Self consumption and grid losses	4441	4776	5363	5983	5692	6297	6991	8391	9873	1.9	0.6	2.1	3.5
Fuel Inputs for Thermal Power Generation	**4304**	**5493**	**6508**	**8007**	**6198**	**6301**	**6634**	**7074**	**6675**	**4.2**	**-0.5**	**0.7**	**0.1**
Solids	2027	2919	3198	3319	2314	2251	2177	2099	1610	4.7	-3.2	-0.6	-3.0
Oil (including refinery gas)	2105	2371	1671	1885	551	466	432	232	160	-2.3	-10.5	-2.4	-9.5
Gas	19	18	1234	2309	2478	2355	2348	2655	2690	51.6	7.2	-0.5	1.4
Biomass & Waste	149	148	356	430	704	1078	1527	1927	1971	9.1	7.1	8.1	2.6
Geothermal heat	3	37	49	65	151	151	151	161	244	31.4	11.8	0.0	4.9
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**11443**	**14111**	**12911**	**13785**	**12848**	**12960**	**12959**	**12920**	**12854**	**1.2**	**0.0**	**0.1**	**-0.1**
Refineries	11111	13635	12462	13785	12694	12702	12623	12522	12431	1.2	0.2	-0.1	-0.2
Biofuels and hydrogen production	0	0	0	0	154	258	336	397	422			8.1	2.3
District heating	0	16	0	0	0	0	0	0	0				
Others	332	460	449	0	0	0	0	0	0	3.1			
Energy Branch Consumption	**655**	**960**	**1025**	**1101**	**898**	**880**	**859**	**902**	**946**	**4.6**	**-1.3**	**-0.4**	**1.0**
Non-Energy Uses	**2113**	**1891**	**2364**	**2429**	**2182**	**2228**	**2264**	**2290**	**2392**	**1.1**	**-0.8**	**0.4**	**0.6**
Final Energy Demand	**11813**	**13789**	**17694**	**18723**	**18125**	**18628**	**19031**	**19399**	**19784**	**4.1**	**0.2**	**0.5**	**0.4**
by sector													
Industry	4728	4974	6244	5689	5004	4887	4955	5077	5419	2.8	-2.2	-0.1	0.9
- energy intensive industries	3073	3350	4092	3767	3010	2881	2848	2834	2960	2.9	-3.0	-0.6	0.4
- other industrial sectors	1656	1625	2151	1922	1994	2006	2107	2243	2459	2.7	-0.8	0.6	1.6
Residential	2290	2569	2804	3206	3192	3357	3455	3532	3565	2.0	1.3	0.8	0.3
Tertiary	1055	1377	2105	2773	2622	2785	2869	2957	3016	7.1	2.2	0.9	0.5
Transport	3740	4869	6542	7055	7307	7599	7752	7832	7784	5.8	1.1	0.6	0.0
by fuel													
Solids	617	546	465	16	5	5	4	4	3	-2.8	-35.9	-2.6	-2.9
Oil	6700	8215	10509	10561	9637	9714	9582	9574	9379	4.6	-0.9	-0.1	-0.2
Gas	103	97	853	1307	1682	1663	1635	1423	1480	23.6	7.0	-0.3	-1.0
Electricity	2024	2477	3299	3983	3980	4295	4662	5051	5451	5.0	1.9	1.6	1.6
Heat (from CHP and District Heating) [A]	28	36	134	328	375	604	1073	1299	1376	16.8	10.8	11.1	2.5
Renewable energy forms	2341	2417	2433	2529	2444	2346	2074	2046	2093	0.4	0.0	-1.6	0.1
Other	0	0	0	0	1	1	1	1	1			9.9	-0.2
RES in Gross Final Energy Consumption [B]			**3559**	**3886**	**4526**	**4815**	**5120**	**5661**	**6409**		**2.4**	**1.2**	**2.3**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**59.3**		**83.4**	**89.3**	**74.2**	**73.5**	**72.1**	**71.6**	**64.5**	**3.5**	**-1.2**	**-0.3**	**-1.1**
of which ETS sectors GHGs emissions				42.1	31.4	30.4	30.1	30.1	23.8			-0.4	-2.3
CO_2 Emissions (energy related)	**39.1**	**48.6**	**58.7**	**61.8**	**51.6**	**50.9**	**49.9**	**49.1**	**41.8**	**4.2**	**-1.3**	**-0.3**	**-1.7**
Power generation/District heating	14.8	19.2	20.9	24.5	16.7	15.9	15.4	15.2	8.6	3.5	-2.2	-0.8	-5.7
Energy Branch	1.5	2.4	2.5	2.6	2.2	2.1	2.0	1.9	1.8	5.3	-1.4	-1.0	-1.2
Industry	8.2	8.4	10.7	7.1	5.6	5.3	5.0	4.7	4.7	2.6	-6.2	-1.2	-0.5
Residential	1.6	1.9	2.0	2.3	2.2	2.2	2.1	2.0	2.0	2.0	1.1	-0.4	-0.6
Tertiary	1.9	2.2	3.2	4.3	3.6	3.5	3.2	3.0	2.8	5.4	1.2	-1.0	-1.3
Transport	11.1	14.4	19.4	21.0	21.3	21.9	22.1	22.2	21.9	5.8	0.9	0.4	-0.1
CO_2 Emissions (non energy related)	**4.4**	**5.9**	**6.6**	**7.8**	**6.6**	**6.6**	**6.6**	**6.7**	**7.0**	**4.1**	**0.1**	**0.0**	**0.6**
Non-CO_2 GHGs Emissions	**15.8**		**18.1**	**19.7**	**16.0**	**16.0**	**15.6**	**15.8**	**15.7**	**1.4**	**-1.2**	**-0.2**	**0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**140.7**	**150.5**	**125.2**	**123.9**	**121.6**	**120.7**	**108.8**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Portugal: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	9.996	10.018	10.195	10.529	10.723	10.947	11.108	11.224	11.317	0.2	0.5	0.4	0.2
GDP (in 000 MEuro'05)	102.0	116.9	142.8	149.1	147.9	162.4	179.6	198.7	221.5	3.4	0.4	2.0	2.1
Gross Inl. Cons./GDP (toe/MEuro'05)	171.7	175.1	175.7	181.3	169.3	156.5	142.3	130.9	118.0	0.2	-0.4	-1.7	-1.9
Carbon intensity (t of CO_2/toe of GIC)	2.23	2.37	2.34	2.29	2.06	2.00	1.95	1.89	1.60	0.5	-1.3	-0.5	-2.0
Import Dependency %	83.5	86.0	85.0	88.4	81.8	80.9	79.9	78.5	75.9				
Total Energy-related Costs [C] (in 000 M€05)			17.9	20.9	22.2	25.8	31.0	34.9	37.1		2.2	3.4	1.8
as % of GDP			12.6	14.0	15.0	15.9	17.2	17.6	16.7				
Energy intensity indicators													
Industry (Energy on Value added)	82.1	95.7	100.0	93.4	88.5	82.3	77.6	72.4	70.2	2.0	-1.2	-1.3	-1.0
Residential (Energy on Private Income)	121.8	112.4	100.0	106.5	109.0	103.9	95.7	89.3	81.8	-2.0	0.9	-1.3	-1.6
Tertiary (Energy on Value added)	70.3	77.9	100.0	121.4	111.2	105.7	96.7	88.8	80.0	3.6	1.1	-1.4	-1.9
Passenger transport (toe/Mpkm)	40.1	44.2	40.9	40.3	39.3	36.3	34.3	32.2	29.5	0.2	-0.4	-1.3	-1.5
Freight transport (toe/Mtkm)	45.1	53.4	66.8	61.4	61.3	60.9	58.5	55.5	52.1	4.0	-0.9	-0.5	-1.1
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.52	0.57	0.47	0.49	0.33	0.28	0.23	0.20	0.10	-1.0	-3.4	-3.5	-7.6
Final energy demand (t of CO_2/toe)	1.93	1.95	1.99	1.85	1.81	1.77	1.70	1.65	1.59	0.3	-1.0	-0.6	-0.7
Industry	1.74	1.68	1.71	1.25	1.12	1.08	1.00	0.93	0.87	-0.2	-4.1	-1.1	-1.3
Residential	0.71	0.74	0.71	0.70	0.70	0.67	0.62	0.58	0.56	0.0	-0.2	-1.2	-0.9
Tertiary	1.77	1.62	1.51	1.53	1.36	1.25	1.12	1.02	0.94	-1.6	-1.0	-1.9	-1.8
Transport	2.96	2.96	2.97	2.98	2.92	2.88	2.86	2.83	2.82	0.1	-0.2	-0.2	-0.1
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			19.6	20.2	24.3	25.1	26.1	28.3	31.2				
RES in transport (%)			0.2	0.2	2.7	4.3	5.5	6.5	7.1				
Gross Electricity generation by fuel type (in GWh)			**43364**	**46180**	**46349**	**50371**	**54603**	**59551**	**65860**		**0.7**	**1.7**	**1.9**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			15643	15647	10758	10463	10121	9759	8731		-3.7	-0.6	-1.5
Petroleum products			7769	8912	2886	2432	2193	1143	871		-9.4	-2.7	-8.8
Gas (including derived gases)			7229	13599	13010	11885	12202	14633	15291		6.1	-0.6	2.3
Biomass & waste			1153	1410	2063	4712	6971	8835	9054		6.0	12.9	2.6
Hydro			11321	4730	10371	10892	10947	11146	10761		-0.9	0.5	-0.2
Wind			168	1773	6853	8758	10180	11360	15601		44.9	4.0	4.4
Solar, tidal etc.			1	3	194	996	1562	1923	4321		69.3	23.2	10.7
Geothermal and other renewables			80	105	215	233	426	751	1231		10.4	7.1	11.2
Net Generation Capacity in MW_e			**10360**	**13096**	**17405**	**20172**	**20699**	**21216**	**24270**		**5.3**	**1.7**	**1.6**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			3967	5488	8490	10133	11387	12378	15221		7.9	3.0	2.9
Hydro (pumping excluded)			3883	4422	4499	4622	4676	4676	4781		1.5	0.4	0.2
Wind			83	1064	3832	4803	5508	6084	7600		46.7	3.7	3.3
Solar			1	2	156	696	1091	1343	2366		65.7	21.5	8.0
Other renewables (tidal etc.)			0	0	2	12	112	274	473			47.8	15.5
Thermal power			6393	7607	8915	10039	9312	8838	9049		3.4	0.4	-0.3
of which cogeneration units			1640	1845	2271	2431	2525	2927	2960		3.3	1.1	1.6
of which CCS units			0	0	0	0	0	0	654				
Solids fired			1889	1903	1855	1807	1807	1421	1222		-0.2	-0.3	-3.8
Gas fired			1383	2589	3923	5512	5253	5340	5744		11.0	3.0	0.9
Oil fired			2795	2730	2727	2181	1420	947	903		-0.2	-6.3	-4.4
Biomass-waste fired			312	372	387	515	807	1105	1143		2.2	7.6	3.5
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			14	14	24	24	24	25	36		5.5	0.0	4.2
Load factor for net electric capacities (%)			46.1	38.9	29.6	27.8	29.3	30.8	29.4				
Efficiency for thermal electricity production (%)			42.1	42.6	40.1	40.5	41.1	42.1	44.1				
CHP indicator (% of electricity from CHP)			10.6	12.2	21.9	25.7	27.2	30.7	28.2				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	10.1				
Non fossil fuels in electricity generation (%)			29.3	17.4	42.5	50.8	55.1	57.1	62.2				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			29.3	17.4	42.5	50.8	55.1	57.1	62.2				
Transport sector													
Passenger transport activity (Gpkm)	**56.9**	**67.3**	**91.5**	**105.0**	**110.8**	**121.1**	**130.4**	**140.8**	**152.0**	**4.9**	**1.9**	**1.6**	**1.5**
Public road transport	10.3	11.3	11.8	11.1	10.8	11.2	11.8	12.3	12.8	1.4	-0.9	0.8	0.8
Private cars and motorcycles	33.3	41.9	59.2	72.0	75.4	80.9	86.0	91.0	96.6	5.9	2.4	1.3	1.2
Rail	6.3	5.3	4.6	4.7	5.0	5.5	6.0	6.5	7.1	-3.2	1.0	1.7	1.7
Aviation	6.7	8.5	15.7	17.0	19.2	23.2	26.3	30.7	35.2	8.9	2.1	3.2	3.0
Inland navigation	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	1.0	0.5	0.4
Freight transport activity (Gtkm)	**32.3**	**35.4**	**41.9**	**46.0**	**48.2**	**52.7**	**56.1**	**59.5**	**63.4**	**2.6**	**1.4**	**1.5**	**1.2**
Trucks	28.9	32.0	38.9	42.6	44.7	48.9	51.9	55.1	58.8	3.0	1.4	1.5	1.2
Rail	1.5	2.0	2.2	2.4	2.5	2.8	3.0	3.2	3.4	4.1	1.5	1.7	1.2
Inland navigation	1.9	1.4	0.8	1.0	1.0	1.0	1.1	1.2	1.3	-7.9	1.4	1.6	1.2
Energy demand in transport (ktoe)	**3740**	**4869**	**6542**	**7055**	**7307**	**7599**	**7752**	**7832**	**7784**	**5.8**	**1.1**	**0.6**	**0.0**
Public road transport	82	95	114	113	109	110	110	108	107	3.3	-0.4	0.1	-0.3
Private cars and motorcycles	1573	2209	2788	3200	3219	3113	3081	3058	2945	5.9	1.4	-0.4	-0.5
Trucks	1384	1817	2718	2769	2899	3144	3216	3237	3255	7.0	0.6	1.0	0.1
Rail	83	81	88	66	66	68	67	66	55	0.6	-2.9	0.1	-1.9
Aviation	574	620	790	881	987	1136	1250	1334	1390	3.2	2.3	2.4	1.1
Inland navigation	44	47	44	26	27	28	29	30	31	0.0	-4.9	0.9	0.6

Source: PRIMES

Romania: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**41415**	**32618**	**28816**	**28180**	**27530**	**28866**	**30203**	**31052**	**31237**	**-3.6**	**-0.5**	**0.9**	**0.3**
Solids	7935	7886	5875	5793	5757	6401	5941	4890	4826	-3.0	-0.2	0.3	-2.1
Oil	7963	7124	6434	6183	4790	5100	5000	4950	4794	-2.1	-2.9	0.4	-0.4
Natural gas	22911	14446	10968	9701	8869	8500	8231	8200	7922	-7.1	-2.1	-0.7	-0.4
Nuclear	0	0	1407	1433	2906	2906	4365	5783	5783		7.5	4.2	2.9
Renewable energy sources	2606	3162	4131	5070	5208	5958	6665	7229	7912	4.7	2.3	2.5	1.7
Hydro	1460	1435	1271	1737	1548	1760	2053	2143	2191	-1.4	2.0	2.9	0.7
Biomass & Waste	1146	1726	2854	3314	3589	3929	4146	4478	5052	9.5	2.3	1.5	2.0
Wind	0	0	0	0	34	128	191	240	274			18.9	3.7
Solar and others	0	0	0	0	6	43	142	199	213			36.9	4.1
Geothermal	0	0	7	18	31	97	134	168	181		16.5	15.8	3.1
Net Imports	**22567**	**14552**	**8116**	**10814**	**11581**	**12543**	**12598**	**12430**	**11832**	**-9.7**	**3.6**	**0.8**	**-0.6**
Solids	4615	2870	1905	2904	1899	1929	1972	1792	1664	-8.5	0.0	0.4	-1.7
Oil	11209	6862	3560	3970	6200	7106	7341	7359	7101	-10.8	5.7	1.7	-0.3
- Crude oil and Feedstocks	16126	8760	4870	8851	10984	12328	12612	12624	12275	-11.3	8.5	1.4	-0.3
- Oil products	-4917	-1898	-1311	-4882	-4784	-5223	-5271	-5264	-5174				
Natural gas	5928	4794	2712	4190	3877	4159	4027	4047	3910	-7.5	3.6	0.4	-0.3
Electricity	815	26	-60	-250	-342	-573	-652	-663	-671				
Gross Inland Consumption	**63714**	**47138**	**37131**	**39242**	**39111**	**41409**	**42802**	**43482**	**43069**	**-5.3**	**0.5**	**0.9**	**0.1**
Solids	12318	10793	7753	8769	7656	8330	7913	6681	6490	-4.5	-0.1	0.3	-2.0
Oil	19136	13917	10214	10321	10990	12206	12341	12309	11895	-6.1	0.7	1.2	-0.4
Natural gas	28838	19240	13680	13942	12746	12659	12258	12247	11832	-7.2	-0.7	-0.4	-0.4
Nuclear	0	0	1407	1433	2906	2906	4365	5783	5783		7.5	4.2	2.9
Electricity	815	26	-60	-250	-342	-573	-652	-663	-671				
Renewable energy forms	2606	3162	4137	5026	5155	5881	6576	7123	7740	4.7	2.2	2.5	1.6
as % in Gross Inland Consumption													
Solids	19.3	22.9	20.9	22.3	19.6	20.1	18.5	15.4	15.1				
Oil	30.0	29.5	27.5	26.3	28.1	29.5	28.8	28.3	27.6				
Natural gas	45.3	40.8	36.8	35.5	32.6	30.6	28.6	28.2	27.5				
Nuclear	0.0	0.0	3.8	3.7	7.4	7.0	10.2	13.3	13.4				
Renewable energy forms	4.1	6.7	11.1	12.8	13.2	14.2	15.4	16.4	18.0				
Gross Electricity Generation in GWh_e	**63398**	**59255**	**51925**	**59402**	**61558**	**69947**	**76342**	**81219**	**84943**	**-2.0**	**1.7**	**2.2**	**1.1**
Self consumption and grid losses	14858	13101	9963	9773	9848	10477	10719	10805	12259	-3.9	-0.1	0.9	1.4
Fuel Inputs for Thermal Power Generation	**23517**	**16474**	**10637**	**10103**	**9131**	**9921**	**8618**	**7531**	**7610**	**-7.6**	**-1.5**	**-0.6**	**-1.2**
Solids	8166	7352	5442	5982	5799	6492	5641	4578	4558	-4.0	0.6	-0.3	-2.1
Oil (including refinery gas)	6202	2996	1683	775	464	451	398	331	428	-12.2	-12.1	-1.5	0.7
Gas	9113	6090	3507	3343	2489	2515	2109	2134	2072	-9.1	-3.4	-1.6	-0.2
Biomass & Waste	36	37	4	3	379	441	448	465	530	-19.0	56.3	1.7	1.7
Geothermal heat	0	0	0	0	0	23	23	23	23				0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**25114**	**21082**	**14984**	**18111**	**18276**	**19711**	**19835**	**19782**	**19243**	**-5.0**	**2.0**	**0.8**	**-0.3**
Refineries	23765	15691	11396	15142	15774	17428	17612	17574	17070	-7.1	3.3	1.1	-0.3
Biofuels and hydrogen production	0	0	0	0	59	119	169	271	404			11.1	9.1
District heating	496	1902	1739	825	953	760	680	714	714	13.4	-5.8	-3.3	0.5
Others	853	3489	1850	2144	1489	1404	1374	1223	1056	8.0	-2.1	-0.8	-2.6
Energy Branch Consumption	**3579**	**5328**	**4163**	**4205**	**4109**	**4309**	**4297**	**4207**	**4165**	**1.5**	**-0.1**	**0.4**	**-0.3**
Non-Energy Uses	**922**	**1401**	**2048**	**2469**	**2399**	**2203**	**2047**	**1850**	**1636**	**8.3**	**1.6**	**-1.6**	**-2.2**
Final Energy Demand	**37257**	**26634**	**22460**	**24613**	**24884**	**27053**	**28708**	**29490**	**29420**	**-4.9**	**1.0**	**1.4**	**0.2**
by sector													
Industry	25111	14854	9051	9904	9032	9443	10179	10553	10332	-9.7	0.0	1.2	0.1
- energy intensive industries	15699	10577	6223	7109	6168	6090	6304	6220	5741	-8.8	-0.1	0.2	-0.9
- other industrial sectors	9412	4278	2828	2795	2864	3353	3875	4333	4591	-11.3	0.1	3.1	1.7
Residential	4548	6353	8426	7964	7894	8128	8103	7911	7663	6.4	-0.7	0.3	-0.6
Tertiary	3181	2358	1587	2524	2911	3333	3559	3700	3758	-6.7	6.3	2.0	0.5
Transport	4416	3069	3396	4221	5047	6148	6867	7326	7666	-2.6	4.0	3.1	1.1
by fuel													
Solids	3026	1586	977	1569	1097	1125	1595	1508	1422	-10.7	1.2	3.8	-1.1
Oil	8055	5519	5310	6606	7173	8336	8680	8894	8957	-4.1	3.1	1.9	0.3
Gas	20495	10249	6885	7721	7574	7863	8000	7975	7383	-10.3	1.0	0.5	-0.8
Electricity	4690	3126	2916	3337	3528	3951	4390	4810	5023	-4.6	1.9	2.2	1.4
Heat (from CHP and District Heating) [A]	377	4679	3570	2135	2319	2254	2192	2065	1933	25.2	-4.2	-0.6	-1.2
Renewable energy forms	612	1476	2802	3244	3192	3523	3850	4236	4699	16.4	1.3	1.9	2.0
Other	0	0	0	0	0	1	1	2	2		7.1	13.1	1.6
RES in Gross Final Energy Consumption [B]			**4118**	**4599**	**4914**	**5518**	**6231**	**6779**	**7421**		**1.8**	**2.4**	**1.8**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**262.9**		**138.2**	**150.5**	**140.7**	**145.6**	**143.9**	**138.2**	**129.0**	**-6.2**	**0.2**	**0.2**	**-1.1**
of which ETS sectors GHGs emissions				79.5	68.7	69.5	66.2	61.0	51.3			-0.4	-2.5
CO_2 Emissions (energy related)	**168.7**	**115.1**	**84.8**	**90.3**	**85.7**	**92.5**	**90.8**	**85.8**	**76.8**	**-6.6**	**0.1**	**0.6**	**-1.7**
Power generation/District heating	76.4	59.2	40.6	37.2	33.6	36.1	31.2	26.3	19.5	-6.1	-1.9	-0.7	-4.6
Energy Branch	6.2	7.6	7.4	7.9	7.7	7.9	7.7	7.5	7.0	1.7	0.5	0.0	-1.0
Industry	58.1	31.3	18.8	21.5	17.2	17.6	19.0	18.4	16.2	-10.7	-0.9	1.0	-1.6
Residential	8.8	5.2	6.6	7.2	7.3	7.3	7.4	7.3	7.3	-2.9	1.1	0.1	-0.1
Tertiary	6.8	3.1	1.9	4.4	5.4	6.1	6.0	5.9	5.8	-12.2	11.3	1.0	-0.2
Transport	12.3	8.6	9.7	12.2	14.5	17.6	19.5	20.5	21.0	-2.4	4.1	3.0	0.8
CO_2 Emissions (non energy related)	**23.2**	**18.5**	**13.1**	**16.3**	**14.1**	**14.0**	**15.4**	**16.2**	**15.4**	**-5.5**	**0.7**	**0.9**	**0.0**
Non-CO_2 GHGs Emissions	**71.0**		**40.3**	**43.9**	**40.9**	**39.1**	**37.8**	**36.2**	**36.8**	**-5.5**	**0.2**	**-0.8**	**-0.3**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**52.5**	**57.2**	**53.5**	**55.4**	**54.7**	**52.6**	**49.1**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Romania: Baseline 2009			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	23.211	22.712	22.455	21.659	21.334	21.103	20.834	20.484	20.049	-0.3	-0.5	-0.2	-0.4
GDP (in 000 MEuro'05)	71.6	64.5	60.4	79.8	93.8	115.4	135.0	151.7	166.1	-1.7	4.5	3.7	2.1
Gross Inl. Cons./GDP (toe/MEuro'05)	889.4	731.4	614.4	491.7	416.8	358.8	317.0	286.7	259.2	-3.6	-3.8	-2.7	-2.0
Carbon intensity (t of CO_2/toe of GIC)	2.65	2.44	2.28	2.30	2.19	2.23	2.12	1.97	1.78	-1.5	-0.4	-0.3	-1.7
Import Dependency %	35.4	30.9	21.9	27.6	29.6	30.3	29.4	28.6	27.5				
Total Energy-related Costs (C) (in 000 M€05)			11.1	15.8	17.4	23.1	30.2	35.1	37.9		4.6	5.7	2.3
as % of GDP			18.3	19.8	18.6	20.0	22.4	23.1	22.8				
Energy intensity indicators													
Industry (Energy on Value added)	200.0	171.9	100.0	81.4	71.0	60.7	54.4	48.5	43.4	-6.7	-3.4	-2.6	-2.2
Residential (Energy on Private Income)	50.5	69.0	100.0	58.9	48.8	41.1	36.0	31.8	28.8	7.1	-6.9	-3.0	-2.2
Tertiary (Energy on Value added)	186.9	138.7	100.0	121.7	110.4	100.5	89.0	79.5	70.6	-6.1	1.0	-2.1	-2.3
Passenger transport (toe/Mpkm)	16.3	20.1	28.4	21.4	22.0	22.3	22.4	22.1	21.3	5.7	-2.5	0.2	-0.5
Freight transport (toe/Mtkm)	37.3	36.8	34.8	30.6	31.5	31.9	31.4	30.6	30.3	-0.7	-1.0	0.0	-0.4
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	1.12	0.43	0.39	0.39	0.33	0.33	0.27	0.22	0.16	-10.1	-1.4	-2.1	-4.9
Final energy demand (t of CO_2/toe)	2.31	1.81	1.64	1.84	1.78	1.79	1.81	1.76	1.71	-3.4	0.8	0.1	-0.5
Industry	2.32	2.11	2.07	2.17	1.90	1.86	1.87	1.74	1.57	-1.1	-0.9	-0.2	-1.8
Residential	1.94	0.83	0.78	0.90	0.92	0.90	0.91	0.92	0.96	-8.7	1.7	-0.1	0.5
Tertiary	2.13	1.33	1.17	1.73	1.86	1.82	1.68	1.58	1.55	-5.8	4.7	-1.0	-0.8
Transport	2.79	2.81	2.85	2.89	2.87	2.86	2.83	2.79	2.74	0.2	0.1	-0.1	-0.3
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			17.0	17.6	18.6	19.3	20.6	21.9	24.0				
RES in transport (%)			1.5	1.0	2.2	3.0	3.7	5.1	6.8				
Gross Electricity generation by fuel type (in GWh)			**51925**	**59402**	**61558**	**69947**	**76342**	**81219**	**84943**		**1.7**	**2.2**	**1.1**
Nuclear energy			5455	5554	11592	11592	17684	23775	23775		7.8	4.3	3.0
Coal and lignite			18913	21922	21537	24281	22065	17786	19632		1.3	0.2	-1.2
Petroleum products			3398	1894	1149	1101	986	914	1194		-10.3	-1.5	1.9
Gas (including derived gases)			9373	9822	7742	9629	8003	9344	9130		-1.9	0.3	1.3
Biomass & waste			10	7	1138	1301	1373	1483	2273		60.6	1.9	5.2
Hydro			14775	20203	18003	20466	23869	24923	25477		2.0	2.9	0.7
Wind			0	0	394	1492	2220	2787	3192			18.9	3.7
Solar, tidal etc.			0	0	5	58	116	180	244			37.5	7.7
Geothermal and other renewables			0	0	0	26	26	26	26				0.0
Net Generation Capacity in MW_e			**21880**	**18732**	**20417**	**21849**	**24452**	**22194**	**22072**		**-0.7**	**1.8**	**-1.0**
Nuclear energy			667	663	1357	1368	2109	2844	2844		7.4	4.5	3.0
Renewable energy			6154	6161	6563	7703	9082	9573	9890		0.6	3.3	0.9
Hydro (pumping excluded)			6154	6160	6312	6717	7585	7661	7661		0.3	1.9	0.1
Wind			0	1	246	926	1376	1726	1976			18.8	3.7
Solar			0	0	5	60	121	187	253			37.5	7.7
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			15058	11908	12497	12777	13261	9778	9338		-1.8	0.6	-3.4
of which cogeneration units			3742	3305	3236	3236	3218	2995	2936		-1.4	-0.1	-0.9
of which CCS units			0	0	0	0	0	49	843				
Solids fired			8144	6483	6667	7463	8415	5568	5030		-2.0	2.4	-5.0
Gas fired			4299	3584	4029	4043	3615	3245	3185		-0.6	-1.1	-1.3
Oil fired			2384	1583	1550	1016	975	683	683		-4.2	-4.5	-3.5
Biomass-waste fired			231	257	252	252	252	278	437		0.9	0.0	5.6
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	3	3	3	3				0.0
Load factor for net electric capacities (%)			25.4	33.8	32.3	34.5	33.7	39.6	40.9				
Efficiency for thermal electricity production (%)			25.6	28.6	29.7	31.5	32.4	33.8	36.5				
CHP indicator (% of electricity from CHP)			35.2	28.6	24.7	25.4	25.0	23.9	21.9				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.7	11.0				
Non fossil fuels in electricity generation (%)			39.0	43.4	50.6	49.9	59.3	65.5	64.7				
- nuclear			10.5	9.3	18.8	16.6	23.2	29.3	28.0				
- renewable energy forms and industrial waste			28.5	34.0	31.7	33.4	36.2	36.2	36.7				
Transport sector													
Passenger transport activity (Gpkm)	**87.7**	**78.1**	**78.9**	**87.7**	**100.6**	**119.7**	**136.3**	**149.8**	**161.5**	**-1.1**	**2.5**	**3.1**	**1.7**
Public road transport	24.0	12.3	12.0	11.8	12.6	13.7	15.1	16.1	16.9	-6.7	0.5	1.8	1.1
Private cars and motorcycles	24.3	39.0	47.6	58.4	67.3	83.2	96.5	107.2	116.6	7.0	3.5	3.7	1.9
Rail	36.6	24.9	17.6	14.6	14.8	15.5	16.5	17.4	18.2	-7.0	-1.7	1.1	1.0
Aviation	2.8	1.8	1.7	3.0	5.9	7.2	8.3	9.2	9.8	-5.1	13.4	3.4	1.7
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-6.7	-2.2	0.8	0.1
Freight transport activity (Gtkm)	**80.0**	**40.7**	**33.3**	**76.5**	**89.8**	**109.0**	**121.3**	**131.1**	**139.8**	**-8.4**	**10.4**	**3.1**	**1.4**
Trucks	29.0	19.7	14.3	51.5	63.3	79.0	87.6	94.3	100.6	-6.8	16.1	3.3	1.4
Rail	48.9	17.9	16.4	16.6	17.0	19.1	21.5	23.5	25.1	-10.4	0.4	2.3	1.6
Inland navigation	2.1	3.1	2.6	8.4	9.4	10.9	12.2	13.3	14.1	2.3	13.6	2.7	1.4
Energy demand in transport (ktoe)	**4416**	**3069**	**3396**	**4221**	**5047**	**6148**	**6867**	**7326**	**7666**	**-2.6**	**4.0**	**3.1**	**1.1**
Public road transport	241	130	120	97	103	110	115	117	115	-6.7	-1.5	1.1	0.0
Private cars and motorcycles	843	1133	1893	1610	1832	2236	2596	2848	2974	8.4	-0.3	3.6	1.4
Trucks	2463	1039	688	2140	2624	3248	3557	3736	3943	-12.0	14.3	3.1	1.0
Rail	282	472	451	209	207	218	230	247	253	4.8	-7.5	1.1	0.9
Aviation	275	192	128	113	224	271	296	301	299	-7.3	5.7	2.8	0.1
Inland navigation	312	103	115	51	57	65	73	78	82	-9.5	-6.8	2.5	1.3

Source: PRIMES

Slovak Republic: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**5249**	**4862**	**6074**	**6634**	**5975**	**8269**	**8566**	**8910**	**9565**	**1.5**	**-0.2**	**3.7**	**1.1**
Solids	1397	1017	1018	637	932	932	969	1144	1156	-3.1	-0.9	0.4	1.8
Oil	81	128	162	384	38	40	41	41	40	7.2	-13.5	0.8	-0.4
Natural gas	338	264	133	126	123	132	138	134	137	-8.9	-0.7	1.1	-0.1
Nuclear	3105	2950	4255	4573	3610	5139	5188	5152	5637	3.2	-1.6	3.7	0.8
Renewable energy sources	328	503	506	914	1272	2025	2230	2438	2596	4.4	9.7	5.8	1.5
Hydro	162	427	406	399	403	434	440	443	446	9.7	-0.1	0.9	0.1
Biomass & Waste	166	76	100	507	857	1548	1715	1888	2013	-5.0	24.0	7.2	1.6
Wind	0	0	0	1	7	31	54	76	97			23.2	5.9
Solar and others	0	0	0	0	4	10	18	27	36			17.4	7.1
Geothermal	0	0	0	8	2	2	3	4	4			7.1	2.5
Net Imports	**16102**	**12344**	**11586**	**12488**	**12738**	**12967**	**13454**	**13641**	**13099**	**-3.2**	**1.0**	**0.5**	**-0.3**
Solids	6055	4131	3437	3737	3262	3255	3338	3771	3400	-5.5	-0.5	0.2	0.2
Oil	4246	3565	2674	3320	4165	4385	4479	4452	4255	-4.5	4.5	0.7	-0.5
- Crude oil and Feedstocks	5916	5293	5310	5433	6491	6823	6973	6940	6681	-1.1	2.0	0.7	-0.4
- Oil products	-1670	-1728	-2636	-2114	-2326	-2439	-2495	-2488	-2426				
Natural gas	5353	4528	5707	5754	5662	6076	6314	6169	6270	0.6	-0.1	1.1	-0.1
Electricity	447	119	-232	-281	-166	-174	-215	-340	-424				
Gross Inland Consumption	**20994**	**17748**	**17550**	**19061**	**18714**	**21235**	**22020**	**22551**	**22664**	**-1.8**	**0.6**	**1.6**	**0.3**
Solids	7771	5414	4261	4231	4194	4187	4307	4915	4555	-5.8	-0.2	0.3	0.6
Oil	4255	3543	2992	3758	4203	4425	4520	4493	4295	-3.5	3.5	0.7	-0.5
Natural gas	5088	5217	5776	5921	5785	6209	6452	6304	6407	1.3	0.0	1.1	-0.1
Nuclear	3105	2950	4255	4573	3610	5139	5188	5152	5637	3.2	-1.6	3.7	0.8
Electricity	447	119	-232	-281	-166	-174	-215	-340	-424				
Renewable energy forms	328	504	498	858	1087	1450	1768	2028	2193	4.3	8.1	5.0	2.2
as % in Gross Inland Consumption													
Solids	37.0	30.5	24.3	22.2	22.4	19.7	19.6	21.8	20.1				
Oil	20.3	20.0	17.0	19.7	22.5	20.8	20.5	19.9	18.9				
Natural gas	24.2	29.4	32.9	31.1	30.9	29.2	29.3	28.0	28.3				
Nuclear	14.8	16.6	24.2	24.0	19.3	24.2	23.6	22.8	24.9				
Renewable energy forms	1.6	2.8	2.8	4.5	5.8	6.8	8.0	9.0	9.7				
Gross Electricity Generation in GWh_e	**23428**	**26036**	**30431**	**31346**	**31993**	**37033**	**41246**	**46595**	**49652**	**2.6**	**0.5**	**2.6**	**1.9**
Self consumption and grid losses	5213	5190	5246	3910	3846	4211	4516	5669	6516	0.1	-3.1	1.6	3.7
Fuel Inputs for Thermal Power Generation	**3178**	**3113**	**2551**	**2478**	**3510**	**3167**	**3656**	**4589**	**4512**	**-2.2**	**3.2**	**0.4**	**2.1**
Solids	2054	1835	1617	1638	2061	1918	2038	2700	2501	-2.4	2.5	-0.1	2.1
Oil (including refinery gas)	243	119	30	99	166	67	142	17	7	-19.0	18.8	-1.6	-26.5
Gas	882	1158	905	701	968	745	883	968	1077	0.3	0.7	-0.9	2.0
Biomass & Waste	0	0	0	40	315	437	593	903	927			6.6	4.6
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**9061**	**8065**	**8153**	**9349**	**9422**	**10095**	**10340**	**10278**	**9859**	**-1.1**	**1.5**	**0.9**	**-0.5**
Refineries	6339	5263	5541	6388	6975	7351	7539	7508	7222	-1.3	2.3	0.8	-0.4
Biofuels and hydrogen production	0	0	0	11	47	89	128	145	159			10.6	2.1
District heating	265	743	586	717	525	799	882	931	889	8.3	-1.1	5.3	0.1
Others	2458	2060	2026	2233	1875	1856	1791	1694	1588	-1.9	-0.8	-0.5	-1.2
Energy Branch Consumption	**1153**	**994**	**915**	**2194**	**2281**	**2357**	**2361**	**2311**	**2238**	**-2.3**	**9.6**	**0.3**	**-0.5**
Non-Energy Uses	**1375**	**886**	**1263**	**1244**	**1220**	**1453**	**1641**	**1700**	**1739**	**-0.8**	**-0.3**	**3.0**	**0.6**
Final Energy Demand	**14791**	**10460**	**10285**	**10613**	**10913**	**12259**	**12822**	**12959**	**12871**	**-3.6**	**0.6**	**1.6**	**0.0**
by sector													
Industry	6728	4088	3816	4470	4118	4564	4703	4675	4581	-5.5	0.8	1.3	-0.3
- energy intensive industries	3162	2966	3026	3645	3101	3342	3377	3315	3228	-0.4	0.2	0.9	-0.5
- other industrial sectors	3566	1122	790	825	1017	1222	1325	1360	1353	-14.0	2.6	2.7	0.2
Residential	2233	1976	2586	2533	2542	2702	2782	2806	2814	1.5	-0.2	0.9	0.1
Tertiary	4384	2980	2424	1815	2011	2401	2617	2762	2826	-5.8	-1.9	2.7	0.8
Transport	1446	1415	1459	1796	2242	2592	2721	2716	2649	0.1	4.4	2.0	-0.3
by fuel													
Solids	4319	2322	1511	1511	1240	1375	1397	1385	1264	-10.0	-2.0	1.2	-1.0
Oil	3324	1636	1725	2191	2477	2793	2857	2806	2691	-6.4	3.7	1.4	-0.6
Gas	4319	3907	4537	3651	3530	3739	3792	3690	3672	0.5	-2.5	0.7	-0.3
Electricity	2013	1868	1893	1965	2131	2513	2805	3044	3158	-0.6	1.2	2.8	1.2
Heat (from CHP and District Heating) [A]	648	722	619	951	1172	1380	1634	1717	1637	-0.5	6.6	3.4	0.0
Renewable energy forms	166	4	1	344	362	459	336	316	448	-42.8	89.0	-0.7	2.9
Other	0	0	0	0	0	0	1	1	1			11.1	-0.2
RES in Gross Final Energy Consumption [B]			**291**	**722**	**931**	**1203**	**1301**	**1631**	**1867**		**12.4**	**3.4**	**3.7**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**68.0**		**45.8**	**49.3**	**50.4**	**50.9**	**52.7**	**54.2**	**50.0**	**-3.9**	**1.0**	**0.5**	**-0.5**
of which ETS sectors GHGs emissions				29.1	28.9	27.8	29.1	30.6	27.0			0.1	-0.7
CO_2 Emissions (energy related)	**53.1**	**38.5**	**34.3**	**36.9**	**38.5**	**39.4**	**40.3**	**41.2**	**37.0**	**-4.3**	**1.2**	**0.5**	**-0.9**
Power generation/District heating	12.0	12.8	10.3	10.2	12.5	11.7	12.8	14.1	11.0	-1.5	1.9	0.3	-1.5
Energy Branch	2.4	1.7	1.6	4.9	4.9	4.7	4.1	4.1	4.0	-4.3	12.1	-1.8	-0.4
Industry	17.7	11.1	9.7	10.6	8.7	9.2	9.3	9.1	8.5	-5.8	-1.0	0.7	-1.0
Residential	4.4	2.9	4.1	3.5	3.3	3.5	3.5	3.4	3.4	-0.6	-2.1	0.4	-0.2
Tertiary	12.5	6.1	4.5	2.5	2.6	3.0	3.0	2.9	2.9	-9.8	-5.5	1.6	-0.4
Transport	4.0	3.9	4.1	5.2	6.4	7.3	7.6	7.5	7.3	0.1	4.6	1.7	-0.4
CO_2 Emissions (non energy related)	**3.5**	**2.8**	**3.3**	**3.7**	**3.9**	**4.8**	**5.5**	**5.9**	**6.0**	**-0.7**	**1.8**	**3.6**	**0.9**
Non-CO_2 GHGs Emissions	**11.4**		**8.2**	**8.6**	**8.0**	**6.7**	**6.9**	**7.1**	**7.0**	**-3.2**	**-0.2**	**-1.6**	**0.3**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**67.3**	**72.4**	**74.1**	**74.9**	**77.6**	**79.7**	**73.6**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Slovak Republic: Baseline 2009			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	5.288	5.356	5.399	5.385	5.407	5.427	5.432	5.402	5.332	0.2	0.0	0.0	-0.2
GDP (in 000 MEuro'05)	26.2	25.6	30.3	38.5	48.2	61.0	73.3	82.8	91.9	1.5	4.8	4.3	2.3
Gross Inl. Cons./GDP (toe/MEuro'05)	801.4	692.4	579.5	495.2	388.4	347.9	300.5	272.4	246.7	-3.2	-3.9	-2.5	-2.0
Carbon intensity (t of CO_2/toe of GIC)	2.53	2.17	1.95	1.94	2.06	1.86	1.83	1.82	1.63	-2.6	0.5	-1.1	-1.2
Import Dependency %	76.7	69.6	66.0	65.5	68.1	61.1	61.1	60.5	57.8				
Total Energy-related Costs (C) (in 000 M€05)			6.4	7.5	8.0	10.6	13.6	15.7	16.7		2.3	5.4	2.0
as % of GDP			21.2	19.4	16.7	17.3	18.6	18.9	18.1				
Energy intensity indicators													
Industry (Energy on Value added)	201.8	135.7	100.0	69.1	50.3	41.7	35.8	32.6	30.7	-6.8	-6.6	-3.3	-1.5
Residential (Energy on Private Income)	87.6	95.0	100.0	77.6	70.3	59.1	52.0	46.7	42.1	1.3	-3.5	-3.0	-2.1
Tertiary (Energy on Value added)	206.5	152.1	100.0	61.4	56.9	50.9	45.6	41.5	37.0	-7.0	-5.5	-2.2	-2.1
Passenger transport (toe/Mpkm)	16.3	19.2	22.0	21.9	22.2	22.3	22.3	21.8	20.5	3.1	0.1	0.1	-0.8
Freight transport (toe/Mtkm)	19.9	22.2	23.8	28.7	31.1	31.9	30.8	29.2	27.6	1.8	2.7	-0.1	-1.1
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.37	0.34	0.25	0.22	0.25	0.20	0.19	0.19	0.15	-3.6	-0.2	-2.4	-2.8
Final energy demand (t of CO_2/toe)	2.61	2.29	2.18	2.05	1.93	1.88	1.82	1.77	1.71	-1.8	-1.2	-0.5	-0.6
Industry	2.63	2.72	2.54	2.37	2.12	2.02	1.98	1.95	1.85	-0.3	-1.8	-0.7	-0.7
Residential	1.96	1.47	1.59	1.39	1.31	1.30	1.26	1.21	1.21	-2.1	-1.9	-0.5	-0.4
Tertiary	2.86	2.04	1.85	1.36	1.27	1.23	1.14	1.05	1.02	-4.3	-3.7	-1.1	-1.1
Transport	2.80	2.74	2.81	2.89	2.86	2.83	2.79	2.76	2.74	0.0	0.2	-0.3	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			2.7	6.5	8.2	9.4	9.7	11.9	13.7				
RES in transport (%)			0.7	1.0	2.6	3.9	5.3	6.1	6.8				
Gross Electricity generation by fuel type (in GWh)			**30431**	**31346**	**31993**	**37033**	**41246**	**46595**	**49652**		**0.5**	**2.6**	**1.9**
Nuclear energy			16491	17724	13996	20330	20536	21101	23216		-1.6	3.9	1.2
Coal and lignite			5591	5514	6409	6482	7090	10552	10902		1.4	1.0	4.4
Petroleum products			126	441	846	347	747	84	27		20.9	-1.2	-28.4
Gas (including derived gases)			3498	2929	5000	3113	4982	5498	5694		3.6	0.0	1.3
Biomass & waste			0	95	974	1342	2114	3265	3414			8.1	4.9
Hydro			4725	4637	4685	5042	5115	5151	5189		-0.1	0.9	0.1
Wind			0	7	78	365	632	888	1123			23.2	5.9
Solar, tidal etc.			0	0	4	13	30	54	86			22.8	11.2
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**6775**	**7153**	**6633**	**8202**	**8206**	**8902**	**10085**		**-0.2**	**2.2**	**2.1**
Nuclear energy			2484	2605	1859	2721	2735	2748	3016		-2.9	3.9	1.0
Renewable energy			1620	1583	1759	2135	2466	2732	2989		0.8	3.4	1.9
Hydro (pumping excluded)			1620	1578	1686	1797	1863	1863	1863		0.4	1.0	0.0
Wind			0	5	69	325	572	812	1036			23.6	6.1
Solar			0	0	4	14	31	56	90			22.8	11.2
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			2671	2965	3016	3346	3006	3423	4080		1.2	0.0	3.1
of which cogeneration units			491	1043	1296	1402	1734	1791	1804		10.2	3.0	0.4
of which CCS units			0	0	0	0	0	126	443				
Solids fired			1453	1541	1492	1781	1562	1870	1972		0.3	0.5	2.4
Gas fired			1138	1191	1290	1299	1103	1159	1658		1.3	-1.6	4.2
Oil fired			81	182	184	185	185	162	115		8.6	0.1	-4.7
Biomass-waste fired			0	50	50	81	155	232	335			11.9	8.0
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			45.6	46.6	51.8	48.9	54.7	56.2	52.3				
Efficiency for thermal electricity production (%)			31.1	31.2	32.4	30.6	35.1	36.4	38.2				
CHP indicator (% of electricity from CHP)			21.6	17.0	24.1	21.0	25.1	24.0	22.9				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	2.9	9.2				
Non fossil fuels in electricity generation (%)			69.7	71.7	61.7	73.2	68.9	65.4	66.5				
- nuclear			54.2	56.5	43.7	54.9	49.8	45.3	46.8				
- renewable energy forms and industrial waste			15.5	15.1	17.9	18.3	19.1	20.1	19.8				
Transport sector													
Passenger transport activity (Gpkm)	**42.7**	**37.6**	**37.2**	**39.0**	**42.9**	**47.6**	**51.4**	**54.4**	**57.3**	**-1.4**	**1.5**	**1.8**	**1.1**
Public road transport	19.8	14.4	9.3	8.5	8.8	9.0	9.2	9.4	9.5	-7.3	-0.6	0.5	0.3
Private cars and motorcycles	16.0	18.4	24.4	26.4	29.9	33.6	36.5	38.5	40.4	4.3	2.1	2.0	1.0
Rail	6.8	4.6	3.2	2.6	2.6	2.6	2.8	2.9	3.0	-7.3	-2.2	0.7	0.9
Aviation	0.0	0.1	0.2	1.5	1.7	2.3	2.9	3.7	4.4		22.1	5.8	4.2
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**37.7**	**31.2**	**27.0**	**32.8**	**41.4**	**47.9**	**51.0**	**52.4**	**53.4**	**-3.3**	**4.4**	**2.1**	**0.5**
Trucks	15.6	15.9	14.3	22.6	30.7	36.2	38.0	38.4	38.5	-0.8	7.9	2.2	0.1
Rail	21.4	13.8	11.2	9.5	9.9	10.9	12.1	13.1	13.9	-6.2	-1.2	2.0	1.4
Inland navigation	0.7	1.5	1.4	0.7	0.8	0.8	0.9	0.9	1.0	6.6	-5.8	1.6	0.9
Energy demand in transport (ktoe)	**1446**	**1415**	**1459**	**1796**	**2242**	**2592**	**2721**	**2716**	**2649**	**0.1**	**4.4**	**2.0**	**-0.3**
Public road transport	123	88	57	51	52	52	51	50	50	-7.4	-0.9	-0.2	-0.2
Private cars and motorcycles	558	579	724	759	852	947	1022	1052	1029	2.6	1.6	1.8	0.1
Trucks	652	566	552	888	1235	1474	1511	1462	1406	-1.7	8.4	2.0	-0.7
Rail	100	119	83	49	51	53	57	61	63	-1.9	-4.8	1.2	1.0
Aviation	0	40	27	39	43	56	69	80	89		4.8	4.9	2.6
Inland navigation	12	24	16	9	9	10	11	11	11	3.1	-5.8	1.5	0.8

Source: PRIMES

Slovenia: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**2902**	**3020**	**3085**	**3492**	**3657**	**4019**	**4221**	**4801**	**4928**	**0.6**	**1.7**	**1.4**	**1.6**
Solids	1432	1216	1062	1184	1252	1505	1573	745	823	-2.9	1.7	2.3	-6.3
Oil	3	2	1	0	0	0	0	0	0	-10.4			
Natural gas	20	16	6	3	4	0	0	0	0	-11.4	-4.9		
Nuclear	1192	1245	1228	1518	1557	1557	1557	2904	2904	0.3	2.4	0.0	6.4
Renewable energy sources	254	542	788	787	845	957	1091	1152	1201	12.0	0.7	2.6	1.0
Hydro	254	279	330	298	338	353	365	366	368	2.7	0.2	0.8	0.1
Biomass & Waste	0	263	458	489	502	568	653	690	715		0.9	2.7	0.9
Wind	0	0	0	0	0	6	14	20	24				5.2
Solar and others	0	0	0	0	6	31	57	74	92			26.2	4.9
Geothermal	0	0	0	0	0	1	1	1	1			28.1	4.1
Net Imports	**2572**	**3063**	**3381**	**3825**	**4276**	**4824**	**5248**	**4846**	**4586**	**2.8**	**2.4**	**2.1**	**-1.3**
Solids	130	186	245	323	269	293	373	233	216	6.5	0.9	3.3	-5.3
Oil	1804	2239	2430	2604	3075	3546	3735	3645	3474	3.0	2.4	2.0	-0.7
- Crude oil and Feedstocks	598	589	151	0	1	1	1	1	1	-12.8	-38.2	1.9	-0.4
- Oil products	1206	1650	2278	2604	3074	3544	3734	3644	3473	6.6	3.0	2.0	-0.7
Natural gas	723	750	820	925	980	1073	1239	1153	1098	1.3	1.8	2.4	-1.2
Electricity	-85	-142	-114	-28	-58	-115	-135	-246	-270				
Gross Inland Consumption	**5523**	**6111**	**6427**	**7299**	**7904**	**8808**	**9431**	**9607**	**9473**	**1.5**	**2.1**	**1.8**	**0.0**
Solids	1645	1402	1306	1539	1521	1798	1946	978	1039	-2.3	1.5	2.5	-6.1
Oil	1754	2290	2393	2554	3046	3511	3698	3606	3434	3.2	2.4	2.0	-0.7
Natural gas	763	746	826	929	984	1073	1239	1153	1098	0.8	1.8	2.3	-1.2
Nuclear	1192	1245	1228	1518	1557	1557	1557	2904	2904	0.3	2.4	0.0	6.4
Electricity	-85	-142	-114	-28	-58	-115	-135	-246	-270				
Renewable energy forms	254	571	788	787	855	983	1127	1213	1269	12.0	0.8	2.8	1.2
as % in Gross Inland Consumption													
Solids	29.8	22.9	20.3	21.1	19.2	20.4	20.6	10.2	11.0				
Oil	31.8	37.5	37.2	35.0	38.5	39.9	39.2	37.5	36.2				
Natural gas	13.8	12.2	12.8	12.7	12.5	12.2	13.1	12.0	11.6				
Nuclear	21.6	20.4	19.1	20.8	19.7	17.7	16.5	30.2	30.7				
Renewable energy forms	4.6	9.3	12.3	10.8	10.8	11.2	11.9	12.6	13.4				
Gross Electricity Generation in GWh_e	**12440**	**12652**	**13622**	**15114**	**16193**	**18404**	**20168**	**22179**	**22930**	**0.9**	**1.7**	**2.2**	**1.3**
Self consumption and grid losses	1584	1497	1662	1943	1965	2244	2385	2400	2804	0.5	1.7	2.0	1.6
Fuel Inputs for Thermal Power Generation	**1543**	**1523**	**1342**	**1507**	**1622**	**1987**	**2246**	**1272**	**1349**	**-1.4**	**1.9**	**3.3**	**-5.0**
Solids	1296	1315	1253	1411	1431	1702	1849	886	959	-0.3	1.3	2.6	-6.4
Oil (including refinery gas)	155	119	12	9	2	7	2	6	5	-22.8	-15.5	-0.9	10.6
Gas	92	90	62	58	147	165	274	232	235	-3.8	9.0	6.4	-1.6
Biomass & Waste	0	0	15	30	42	114	120	148	151		10.5	11.1	2.3
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**596**	**582**	**253**	**90**	**93**	**175**	**225**	**315**	**343**	**-8.2**	**-9.5**	**9.2**	**4.3**
Refineries	542	505	170	1	1	1	1	1	1	-11.0	-38.9	1.9	-0.4
Biofuels and hydrogen production	0	0	0	0	39	106	173	212	238			16.0	3.3
District heating	53	76	83	89	53	68	50	102	103	4.7	-4.5	-0.5	7.4
Others	1	1	0	0	0	0	0	0	0				
Energy Branch Consumption	**122**	**121**	**112**	**104**	**112**	**131**	**137**	**134**	**166**	**-0.9**	**0.0**	**2.1**	**1.9**
Non-Energy Uses	**6**	**122**	**238**	**310**	**351**	**406**	**446**	**465**	**468**	**43.8**	**4.0**	**2.4**	**0.5**
Final Energy Demand	**3373**	**3948**	**4440**	**4892**	**5448**	**6167**	**6597**	**6576**	**6393**	**2.8**	**2.1**	**1.9**	**-0.3**
by sector													
Industry	1469	1180	1424	1657	1693	1835	1977	1908	1837	-0.3	1.7	1.6	-0.7
- energy intensive industries	729	587	840	1038	1046	1149	1248	1201	1152	1.4	2.2	1.8	-0.8
- other industrial sectors	740	593	585	619	647	686	730	707	685	-2.3	1.0	1.2	-0.6
Residential	853	1180	1124	1186	1205	1305	1355	1371	1365	2.8	0.7	1.2	0.1
Tertiary	122	259	580	575	569	604	610	609	593	16.9	-0.2	0.7	-0.3
Transport	930	1329	1312	1475	1981	2423	2655	2688	2598	3.5	4.2	3.0	-0.2
by fuel													
Solids	243	115	97	80	60	63	63	60	52	-8.8	-4.7	0.5	-1.9
Oil	1513	2106	2239	2404	2857	3283	3450	3334	3153	4.0	2.5	1.9	-0.9
Gas	603	468	569	665	655	695	753	679	630	-0.6	1.4	1.4	-1.8
Electricity	837	807	905	1096	1153	1263	1382	1441	1447	0.8	2.5	1.8	0.5
Heat (from CHP and District Heating) [A]	177	192	195	196	257	363	336	422	434	1.0	2.8	2.7	2.6
Renewable energy forms	0	260	435	452	466	500	612	640	675		0.7	2.8	1.0
Other	0	0	0	0	0	0	1	1	1			11.9	0.8
RES in Gross Final Energy Consumption [B]			**768**	**810**	**832**	**911**	**1093**	**1177**	**1230**		**0.8**	**2.8**	**1.2**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**18.1**		**18.6**	**20.1**	**21.3**	**24.1**	**25.6**	**20.8**	**18.9**	**0.3**	**1.4**	**1.8**	**-3.0**
of which ETS sectors GHGs emissions				9.0	8.8	10.2	11.2	7.1	5.7			2.5	-6.5
CO_2 Emissions (energy related)	**13.2**	**14.1**	**14.0**	**15.3**	**16.7**	**19.3**	**20.8**	**16.3**	**14.4**	**0.6**	**1.8**	**2.2**	**-3.6**
Power generation/District heating	6.2	6.2	5.5	6.2	6.4	7.6	8.4	4.4	3.2	-1.1	1.4	2.8	-9.1
Energy Branch	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.9			
Industry	2.5	1.8	2.3	2.3	2.2	2.3	2.5	2.0	1.8	-0.7	-0.8	1.3	-3.1
Residential	1.7	2.1	1.3	1.4	1.5	1.6	1.6	1.6	1.5	-2.5	1.3	0.8	-0.7
Tertiary	0.0	0.0	1.0	1.0	0.9	1.0	0.9	0.9	0.9	47.0	-0.1	-0.1	-1.0
Transport	2.7	3.9	3.8	4.3	5.8	6.9	7.4	7.4	7.0	3.5	4.3	2.5	-0.5
CO_2 Emissions (non energy related)	**1.1**	**0.9**	**0.9**	**1.1**	**1.1**	**1.2**	**1.4**	**1.4**	**1.4**	**-1.9**	**1.8**	**2.1**	**0.2**
Non-CO_2 GHGs Emissions	**3.8**		**3.7**	**3.7**	**3.5**	**3.5**	**3.4**	**3.2**	**3.1**	**-0.4**	**-0.6**	**-0.1**	**-1.0**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**102.8**	**110.8**	**117.6**	**133.1**	**141.2**	**115.1**	**104.4**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Slovenia: Baseline 2009
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	1.996	1.989	1.988	1.998	2.034	2.053	2.058	2.047	2.023	0.0	0.2	0.1	-0.2
GDP (in 000 MEuro'05)	20.0	19.4	24.0	28.7	32.7	38.4	44.0	48.2	50.7	1.9	3.1	3.0	1.4
Gross Inl. Cons./GDP (toe/MEuro'05)	276.7	315.3	267.9	254.2	241.6	229.5	214.3	199.5	186.8	-0.3	-1.0	-1.2	-1.4
Carbon intensity (t of CO_2/toe of GIC)	2.39	2.30	2.18	2.09	2.12	2.20	2.20	1.69	1.52	-0.9	-0.3	0.4	-3.6
Import Dependency %	46.6	50.1	52.6	52.3	53.9	54.5	55.4	50.2	48.2				
Total Energy-related Costs (C) (in 000 M€05)			3.6	3.9	4.8	6.2	7.9	8.9	9.2		3.0	5.0	1.6
as % of GDP			15.0	13.6	14.8	16.2	17.9	18.4	18.1				
Energy intensity indicators													
Industry (Energy on Value added)	109.1	109.6	100.0	92.4	82.7	76.8	73.2	67.1	63.9	-0.9	-1.9	-1.2	-1.4
Residential (Energy on Private Income)	99.0	123.5	100.0	92.2	85.2	79.3	71.5	65.3	60.7	0.1	-1.6	-1.7	-1.6
Tertiary (Energy on Value added)	27.6	54.1	100.0	82.4	72.6	65.0	57.1	51.6	47.0	13.7	-3.2	-2.4	-1.9
Passenger transport (toe/Mpkm)	33.4	45.5	38.5	32.6	32.1	31.2	30.3	27.5	24.6	1.4	-1.8	-0.6	-2.1
Freight transport (toe/Mtkm)	22.8	56.0	42.7	41.9	46.1	47.0	45.2	43.2	40.6	6.5	0.8	-0.2	-1.1
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.42	0.41	0.34	0.34	0.32	0.32	0.34	0.16	0.11	-2.0	-0.7	0.5	-10.5
Final energy demand (t of CO_2/toe)	2.05	1.99	1.89	1.86	1.90	1.91	1.88	1.81	1.75	-0.8	0.0	-0.1	-0.7
Industry	1.72	1.55	1.65	1.39	1.28	1.23	1.25	1.06	0.98	-0.4	-2.5	-0.3	-2.4
Residential	1.98	1.81	1.17	1.21	1.24	1.23	1.19	1.14	1.11	-5.2	0.6	-0.4	-0.7
Tertiary	0.17	0.13	1.65	1.76	1.66	1.64	1.54	1.49	1.44	25.7	0.0	-0.8	-0.7
Transport	2.88	2.91	2.89	2.94	2.91	2.85	2.78	2.74	2.70	0.0	0.1	-0.4	-0.3
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			16.7	15.9	14.7	14.2	15.9	17.2	18.4				
RES in transport (%)			0.5	0.3	2.3	4.7	6.8	8.3	9.6				
Gross Electricity generation by fuel type (in GWh)			**13622**	**15114**	**16193**	**18404**	**20168**	**22179**	**22930**		**1.7**	**2.2**	**1.3**
Nuclear energy			4760	5883	6035	6035	6035	12480	12480		2.4	0.0	7.5
Coal and lignite			4630	5314	5179	6738	7501	3182	3777		1.1	3.8	-6.6
Petroleum products			40	34	9	19	8	14	13		-14.0	-0.8	4.6
Gas (including derived gases)			313	324	869	897	1604	1281	1306		10.8	6.3	-2.0
Biomass & waste			45	100	171	529	555	645	659		14.3	12.5	1.7
Hydro			3833	3460	3927	4100	4249	4256	4283		0.2	0.8	0.1
Wind			0	0	0	66	167	234	278				5.2
Solar, tidal etc.			0	0	3	20	48	86	135			32.5	10.9
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**2748**	**3084**	**3293**	**4039**	**3971**	**4548**	**4846**		**1.8**	**1.9**	**2.0**
Nuclear energy			696	696	706	706	706	1515	1515		0.1	0.0	7.9
Renewable energy			846	963	1041	1175	1388	1506	1623		2.1	2.9	1.6
Hydro (pumping excluded)			846	963	1038	1079	1147	1149	1166		2.1	1.0	0.2
Wind			0	0	0	75	191	267	317				5.2
Solar			0	0	3	21	50	90	140			32.5	10.9
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			1206	1424	1547	2158	1877	1527	1707		2.5	2.0	-0.9
of which cogeneration units			453	389	448	614	589	649	644		-0.1	2.8	0.9
of which CCS units			0	0	0	0	0	0	185				
Solids fired			948	947	894	1495	1244	870	1039		-0.6	3.4	-1.8
Gas fired			223	446	624	626	552	573	585		10.8	-1.2	0.6
Oil fired			17	10	10	10	2	1	1		-5.2	-13.6	-12.0
Biomass-waste fired			17	21	19	27	79	83	83		1.4	15.2	0.5
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			53.1	52.3	52.8	48.7	54.5	52.7	50.3				
Efficiency for thermal electricity production (%)			32.2	32.9	33.0	35.4	37.0	34.6	36.7				
CHP indicator (% of electricity from CHP)			7.2	8.2	12.5	18.7	19.0	16.9	16.4				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	8.3				
Non fossil fuels in electricity generation (%)			63.4	62.5	62.6	58.4	54.8	79.8	77.8				
- nuclear			34.9	38.9	37.3	32.8	29.9	56.3	54.4				
- renewable energy forms and industrial waste			28.5	23.6	25.3	25.6	24.9	23.5	23.3				
Transport sector													
Passenger transport activity (Gpkm)	**21.6**	**21.4**	**25.0**	**26.9**	**29.5**	**32.8**	**35.6**	**37.1**	**38.0**	**1.5**	**1.7**	**1.9**	**0.7**
Public road transport	6.5	4.1	3.5	3.1	3.3	3.5	3.7	3.8	3.8	-6.0	-0.6	1.1	0.4
Private cars and motorcycles	13.5	16.5	20.5	22.7	24.9	27.8	30.1	31.4	32.1	4.3	2.0	1.9	0.6
Rail	1.4	0.6	0.7	0.8	0.8	0.9	1.0	1.1	1.1	-6.8	1.7	1.9	1.1
Aviation	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.9	1.0	3.7	4.9	4.7	3.3
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**9.1**	**6.4**	**8.2**	**14.3**	**22.4**	**29.8**	**34.8**	**38.6**	**40.9**	**-1.1**	**10.6**	**4.5**	**1.6**
Trucks	4.9	3.3	5.3	11.0	18.4	25.2	29.3	32.5	34.6	0.8	13.3	4.7	1.7
Rail	4.2	3.1	2.9	3.2	4.0	4.6	5.5	6.0	6.3	-3.8	3.4	3.3	1.3
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Energy demand in transport (ktoe)	**930**	**1329**	**1312**	**1475**	**1981**	**2423**	**2655**	**2688**	**2598**	**3.5**	**4.2**	**3.0**	**-0.2**
Public road transport	51	33	27	23	25	26	26	26	25	-6.2	-0.9	0.3	-0.2
Private cars and motorcycles	642	918	909	829	892	961	1012	951	859	3.5	-0.2	1.3	-1.6
Trucks	181	329	316	570	1000	1362	1535	1625	1635	5.8	12.2	4.4	0.6
Rail	29	29	34	29	35	40	43	42	31	1.4	0.3	2.1	-3.2
Aviation	27	20	25	23	29	35	40	44	48	-0.8	1.6	3.3	1.9
Inland navigation	0	0	0	0	0	0	0	0	0				

Source: PRIMES

Spain: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**33731**	**31366**	**31335**	**30127**	**32789**	**36507**	**38761**	**39853**	**48777**	**-0.7**	**0.5**	**1.7**	**2.3**
Solids	11679	10170	7740	6265	4688	4504	4225	3036	2519	-4.0	-4.9	-1.0	-5.0
Oil	801	790	229	168	135	107	85	0	0	-11.8	-5.1	-4.5	
Natural gas	1273	379	148	144	70	45	0	0	0	-19.4	-7.2		
Nuclear	13701	14305	16046	14842	15121	15267	15267	12490	15510	1.6	-0.6	0.1	0.2
Renewable energy sources	6276	5722	7172	8709	12775	16584	19184	24326	30749	1.3	5.9	4.1	4.8
Hydro	2184	1987	2534	1681	2537	2603	2638	2783	2821	1.5	0.0	0.4	0.7
Biomass & Waste	4067	3684	4191	5131	6125	8543	9976	11441	12130	0.3	3.9	5.0	2.0
Wind	1	23	406	1825	3379	4208	4933	7229	10178	79.0	23.6	3.9	7.5
Solar and others	21	25	33	65	722	1208	1579	1886	2086	4.5	36.3	8.1	2.8
Geothermal	2	3	8	8	12	22	59	987	3533	12.3	4.9	16.9	50.6
Net Imports	**60168**	**76165**	**99334**	**123972**	**117507**	**125904**	**133587**	**138200**	**133870**	**5.1**	**1.7**	**1.3**	**0.0**
Solids	7038	9146	12636	14418	9347	12040	13306	14414	13068	6.0	-3.0	3.6	-0.2
Oil	49476	59112	70849	79421	74755	79244	81289	82152	80604	3.7	0.5	0.8	-0.1
- Crude oil and Feedstocks	53717	56145	59233	60834	59676	63031	64552	65208	64567	1.0	0.1	0.8	0.0
- Oil products	-4240	2968	11616	18587	15079	16213	16738	16945	16037		2.6	1.0	-0.4
Natural gas	3690	7521	15467	30248	33592	34483	38716	41238	39672	15.4	8.1	1.4	0.2
Electricity	-36	386	382	-115	-377	-312	-361	-400	-387				
Gross Inland Consumption	**89717**	**102950**	**123652**	**144589**	**142062**	**153517**	**163038**	**168450**	**172871**	**3.3**	**1.4**	**1.4**	**0.6**
Solids	18942	19515	20643	20698	14035	16544	17531	17450	15587	0.9	-3.8	2.2	-1.2
Oil	45863	55298	64191	70610	66656	70457	72064	72551	70828	3.4	0.4	0.8	-0.2
Natural gas	4970	7722	15219	29844	33662	34528	38716	41238	39672	11.8	8.3	1.4	0.2
Nuclear	13701	14305	16046	14842	15121	15267	15267	12490	15510	1.6	-0.6	0.1	0.2
Electricity	-36	386	382	-115	-377	-312	-361	-400	-387				
Renewable energy forms	6276	5723	7172	8710	12964	17034	19820	25122	31662	1.3	6.1	4.3	4.8
as % in Gross Inland Consumption													
Solids	21.1	19.0	16.7	14.3	9.9	10.8	10.8	10.4	9.0				
Oil	51.1	53.7	51.9	48.8	46.9	45.9	44.2	43.1	41.0				
Natural gas	5.5	7.5	12.3	20.6	23.7	22.5	23.7	24.5	22.9				
Nuclear	15.3	13.9	13.0	10.3	10.6	9.9	9.4	7.4	9.0				
Renewable energy forms	7.0	5.6	5.8	6.0	9.1	11.1	12.2	14.9	18.3				
Gross Electricity Generation in GWh_e	**150944**	**165585**	**222776**	**290518**	**297111**	**333024**	**369455**	**405466**	**437073**	**4.0**	**2.9**	**2.2**	**1.7**
Self consumption and grid losses	21386	24594	32562	40810	39356	44288	49807	56003	64796	4.3	1.9	2.4	2.7
Fuel Inputs for Thermal Power Generation	**16683**	**18604**	**26463**	**35421**	**31257**	**34921**	**39383**	**42286**	**40307**	**4.7**	**1.7**	**2.3**	**0.2**
Solids	13881	13585	18249	17641	11993	14600	15497	15073	13169	2.8	-4.1	2.6	-1.6
Oil (including refinery gas)	2171	3654	4445	5249	4279	4041	3085	2845	2504	7.4	-0.4	-3.2	-2.1
Gas	486	987	3075	11140	13009	12905	16423	18199	15075	20.3	15.5	2.4	-0.9
Biomass & Waste	145	377	694	1391	1976	3376	4377	5265	6130	16.9	11.0	8.3	3.4
Geothermal heat	0	0	0	0	0	0	0	904	3429				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**58344**	**59752**	**63964**	**64825**	**62853**	**67121**	**69351**	**70352**	**69863**	**0.9**	**-0.2**	**1.0**	**0.1**
Refineries	54213	56829	60882	61490	59465	62998	64616	65253	64647	1.2	-0.2	0.8	0.0
Biofuels and hydrogen production	0	0	51	259	1558	2526	3029	3345	3470		40.7	6.9	1.4
District heating	0	0	0	0	0	0	0	0	0				
Others	4131	2924	3031	3077	1830	1598	1705	1754	1746	-3.0	-4.9	-0.7	0.2
Energy Branch Consumption	**4745**	**5505**	**6119**	**6708**	**5974**	**6245**	**6516**	**6753**	**7093**	**2.6**	**-0.2**	**0.9**	**0.9**
Non-Energy Uses	**6027**	**8358**	**9467**	**8349**	**7854**	**8682**	**9435**	**10142**	**10611**	**4.6**	**-1.8**	**1.9**	**1.2**
Final Energy Demand	**56801**	**63691**	**79631**	**97456**	**99884**	**109066**	**115996**	**121385**	**123799**	**3.4**	**2.3**	**1.5**	**0.7**
by sector													
Industry	20070	20508	25528	31098	30699	33262	36475	39969	42839	2.4	1.9	1.7	1.6
- energy intensive industries	13093	13648	17306	20472	19182	20397	21957	23569	24891	2.8	1.0	1.4	1.3
- other industrial sectors	6977	6860	8221	10626	11518	12865	14518	16400	17949	1.7	3.4	2.3	2.1
Residential	9275	9998	11886	15168	16074	17586	17976	17972	17779	2.5	3.1	1.1	-0.1
Tertiary	5054	7024	9241	11580	11869	12907	13537	14299	14749	6.2	2.5	1.3	0.9
Transport	22401	26162	32977	39609	41242	45311	48008	49145	48431	3.9	2.3	1.5	0.1
by fuel													
Solids	3524	2235	1671	1782	1166	1202	1245	1545	1565	-7.2	-3.5	0.7	2.3
Oil	33612	39125	46007	53066	51314	54916	56617	57150	55953	3.2	1.1	1.0	-0.1
Gas	4903	6841	12141	17978	19362	19981	20716	21036	22201	9.5	4.8	0.7	0.7
Electricity	10817	12116	16205	20824	21272	23974	26570	29095	31087	4.1	2.8	2.2	1.6
Heat (from CHP and District Heating) [A]	0	39	74	0	2185	2914	3955	4778	5177		40.3	6.1	2.7
Renewable energy forms	3945	3335	3533	3805	4582	6073	6885	7772	7807	-1.1	2.6	4.2	1.3
Other	0	0	0	1	3	6	9	9	9		61.8	11.4	0.4
RES in Gross Final Energy Consumption [B]			**6612**	**8524**	**12017**	**16130**	**18788**	**23243**	**27377**		**6.2**	**4.6**	**3.8**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**285.1**		**386.1**	**440.6**	**406.8**	**429.8**	**446.0**	**452.8**	**410.9**	**3.1**	**0.5**	**0.9**	**-0.8**
of which ETS sectors GHGs emissions				207.1	170.7	181.7	191.7	196.1	156.4			1.2	-2.0
CO_2 Emissions (energy related)	**202.4**	**224.6**	**281.1**	**336.8**	**308.4**	**329.3**	**342.6**	**347.4**	**303.2**	**3.3**	**0.9**	**1.1**	**-1.2**
Power generation/District heating	63.6	68.2	94.1	113.0	91.7	100.8	106.8	108.5	66.1	4.0	-0.3	1.5	-4.7
Energy Branch	11.5	13.1	13.4	14.4	12.1	11.5	11.7	11.4	10.6	1.5	-1.0	-0.3	-1.0
Industry	40.7	41.9	46.4	55.4	48.2	49.4	51.6	54.3	57.7	1.3	0.4	0.7	1.1
Residential	12.9	13.6	16.5	20.4	21.4	22.5	21.1	19.3	17.8	2.5	2.7	-0.2	-1.7
Tertiary	7.7	10.6	13.0	16.3	16.4	17.0	16.9	17.3	17.7	5.3	2.3	0.3	0.4
Transport	65.9	77.2	97.7	117.3	118.6	128.0	134.5	136.6	133.4	4.0	2.0	1.3	-0.1
CO_2 Emissions (non energy related)	**23.1**	**22.3**	**27.0**	**30.4**	**27.1**	**28.5**	**30.1**	**31.7**	**32.8**	**1.6**	**0.0**	**1.1**	**0.9**
Non-CO_2 GHGs Emissions	**59.6**		**78.0**	**73.4**	**71.4**	**72.0**	**73.4**	**73.7**	**74.9**	**2.7**	**-0.9**	**0.3**	**0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**135.4**	**154.6**	**142.7**	**150.8**	**156.5**	**158.8**	**144.1**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Spain: Baseline 2009			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	38.826	39.343	40.050	43.038	46.673	49.381	51.109	52.101	52.661	0.3	1.5	0.9	0.3
GDP (in 000 MEuro'05)	574.9	632.9	773.9	908.8	949.4	1099.4	1285.2	1474.1	1635.8	3.0	2.1	3.1	2.4
Gross Inl. Cons./GDP (toe/MEuro'05)	156.1	162.7	159.8	159.1	149.6	139.6	126.9	114.3	105.7	0.2	-0.7	-1.6	-1.8
Carbon intensity (t of CO_2/toe of GIC)	2.26	2.18	2.27	2.33	2.17	2.15	2.10	2.06	1.75	0.1	-0.5	-0.3	-1.8
Import Dependency %	64.3	71.8	76.7	81.3	78.2	77.5	77.5	77.6	73.3				
Total Energy-related Costs (C) (in 000 M€05)			74.6	92.6	101.3	123.3	155.4	179.5	188.7		3.1	4.4	2.0
as % of GDP			9.6	10.2	10.7	11.2	12.1	12.2	11.5				
Energy intensity indicators													
Industry (Energy on Value added)	98.8	100.1	100.0	115.5	111.3	103.0	94.6	88.2	84.1	0.1	1.1	-1.6	-1.2
Residential (Energy on Private Income)	103.7	102.8	100.0	107.4	111.0	105.5	95.3	86.1	78.6	-0.4	1.0	-1.5	-1.9
Tertiary (Energy on Value added)	70.9	90.3	100.0	107.4	104.9	97.2	87.7	81.1	75.5	3.5	0.5	-1.8	-1.5
Passenger transport (toe/Mpkm)	37.4	38.0	40.9	40.1	38.6	35.7	33.6	31.1	28.7	0.9	-0.6	-1.4	-1.6
Freight transport (toe/Mtkm)	89.2	76.3	70.6	65.5	65.4	65.2	62.7	59.7	55.8	-2.3	-0.8	-0.4	-1.2
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.42	0.41	0.42	0.39	0.28	0.27	0.25	0.23	0.13	0.0	-3.8	-1.1	-6.4
Final energy demand (t of CO_2/toe)	2.24	2.25	2.18	2.15	2.05	1.99	1.93	1.87	1.83	-0.3	-0.6	-0.6	-0.5
Industry	2.03	2.04	1.82	1.78	1.57	1.49	1.41	1.36	1.35	-1.1	-1.5	-1.0	-0.5
Residential	1.39	1.36	1.39	1.35	1.33	1.28	1.17	1.08	1.00	0.0	-0.4	-1.3	-1.6
Tertiary	1.53	1.51	1.41	1.41	1.38	1.32	1.25	1.21	1.20	-0.9	-0.2	-1.0	-0.4
Transport	2.94	2.95	2.96	2.96	2.87	2.83	2.80	2.78	2.75	0.1	-0.3	-0.3	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			8.0	8.5	11.6	14.3	15.6	18.4	21.2				
RES in transport (%)			0.4	1.0	4.7	6.9	7.8	8.5	9.3				
Gross Electricity generation by fuel type (in GWh)			**222776**	**290518**	**297111**	**333024**	**369455**	**405466**	**437073**		**2.9**	**2.2**	**1.7**
Nuclear energy			62195	57529	58619	59185	59185	49897	63059		-0.6	0.1	0.6
Coal and lignite			86960	93772	57863	70783	75470	73286	69467		-4.0	2.7	-0.8
Petroleum products			22636	26417	19176	18220	13853	12940	12164		-1.6	-3.2	-1.3
Gas (including derived gases)			14956	67692	80579	83617	104476	118017	97634		18.3	2.6	-0.7
Biomass & waste			1824	4303	6420	13095	17061	20383	24628		13.4	10.3	3.7
Hydro			29465	19549	29499	30267	30673	32359	32806		0.0	0.4	0.7
Wind			4723	21215	39295	48930	57356	84064	118350		23.6	3.9	7.5
Solar, tidal etc.			18	41	5658	8925	11381	13468	14978		77.7	7.2	2.8
Geothermal and other renewables			0	0	1	1	1	1052	3988			0.0	132.4
Net Generation Capacity in MW_e			**48421**	**69109**	**95500**	**102635**	**108840**	**119477**	**138749**		**7.0**	**1.3**	**2.5**
Nuclear energy			7579	7579	7434	6986	6986	5919	7500		-0.2	-0.6	0.7
Renewable energy			14819	22686	37238	43678	49232	60577	73394		9.7	2.8	4.1
Hydro (pumping excluded)			12533	12731	13819	13922	14192	14464	14761		1.0	0.3	0.4
Wind			2274	9918	19423	23528	27113	36806	48367		23.9	3.4	6.0
Solar			12	37	3996	6228	7926	9306	10266		78.7	7.1	2.6
Other renewables (tidal etc.)			0	0	0	0	0	0	0			0.0	0.0
Thermal power			26024	38845	50827	51971	52622	52982	57855		6.9	0.3	1.0
of which cogeneration units			3800	4796	5477	7196	8852	11067	11165		3.7	4.9	2.3
of which CCS units			0	0	0	0	340	340	4097				28.3
Solids fired			11549	11674	11466	10531	10530	9886	12937		-0.1	-0.8	2.1
Gas fired			7466	20921	31823	33241	33530	34121	34421		15.6	0.5	0.3
Oil fired			6536	5386	5609	5356	5099	4508	4923		-1.5	-0.9	-0.3
Biomass-waste fired			472	864	1929	2842	3462	4347	5119		15.1	6.0	4.0
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	120	455				
Load factor for net electric capacities (%)			50.2	46.0	34.4	35.9	37.5	37.3	34.2				
Efficiency for thermal electricity production (%)			41.1	46.7	45.1	45.7	46.0	45.9	44.4				
CHP indicator (% of electricity from CHP)			9.7	8.2	8.3	11.8	14.0	16.6	15.9				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	1.0	0.9	9.6				
Non fossil fuels in electricity generation (%)			44.1	35.3	46.9	48.2	47.5	49.6	59.0				
- nuclear			27.9	19.8	19.7	17.8	16.0	12.3	14.4				
- renewable energy forms and industrial waste			16.2	15.5	27.2	30.4	31.5	37.3	44.6				
Transport sector													
Passenger transport activity (Gpkm)	**301.3**	**386.4**	**476.1**	**535.4**	**558.5**	**641.8**	**722.3**	**797.8**	**858.1**	**4.7**	**1.6**	**2.6**	**1.7**
Public road transport	33.4	39.6	50.3	53.2	59.7	65.1	70.1	74.0	76.6	4.2	1.7	1.6	0.9
Private cars and motorcycles	186.8	257.3	310.2	346.4	353.7	404.1	458.2	501.7	531.4	5.2	1.3	2.6	1.5
Rail	19.9	20.8	25.4	27.6	28.3	31.0	35.1	39.8	43.9	2.5	1.1	2.2	2.3
Aviation	59.6	67.0	88.6	106.5	115.1	139.7	156.8	180.3	204.0	4.0	2.6	3.1	2.7
Inland navigation	1.6	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.2	-0.2	0.9	1.3	0.9
Freight transport activity (Gtkm)	**124.7**	**150.5**	**191.3**	**276.9**	**300.9**	**343.8**	**378.4**	**407.4**	**426.9**	**4.4**	**4.6**	**2.3**	**1.2**
Trucks	80.5	101.6	148.7	233.2	258.1	298.7	328.9	353.2	369.5	6.3	5.7	2.5	1.2
Rail	11.2	11.0	11.6	11.6	10.9	11.7	13.1	14.7	15.9	0.4	-0.7	1.9	1.9
Inland navigation	33.0	38.0	31.0	32.0	32.0	33.4	36.4	39.5	41.5	-0.6	0.3	1.3	1.3
Energy demand in transport (ktoe)	**22401**	**26162**	**32977**	**39609**	**41242**	**45311**	**48008**	**49145**	**48431**	**3.9**	**2.3**	**1.5**	**0.1**
Public road transport	356	417	522	541	602	639	656	656	643	3.9	1.4	0.9	-0.2
Private cars and motorcycles	8092	10704	14024	15106	14798	15247	15987	16278	15783	5.7	0.5	0.8	-0.1
Trucks	9305	9427	11708	15923	17571	20170	21395	21876	21598	2.3	4.1	2.0	0.1
Rail	529	629	850	1171	1072	1146	1159	1149	868	4.9	2.3	0.8	-2.9
Aviation	2456	3105	4486	5323	5650	6496	7074	7323	7601	6.2	2.3	2.3	0.7
Inland navigation	1664	1881	1386	1544	1548	1613	1737	1863	1939	-1.8	1.1	1.2	1.1

Source: PRIMES

Sweden: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**29665**	**31344**	**30008**	**34207**	**32984**	**34009**	**35645**	**36935**	**36883**	**0.1**	**1.0**	**0.8**	**0.3**
Solids	152	225	162	211	261	227	207	171	153	0.6	4.9	-2.3	-3.0
Oil	3	4	0	0	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	17764	18040	14781	18670	17297	17570	18789	19522	19375	-1.8	1.6	0.8	0.3
Renewable energy sources	11745	13075	15065	15325	15427	16212	16650	17243	17354	2.5	0.2	0.8	0.4
Hydro	6234	5856	6757	6260	5814	5835	5760	5864	5871	0.8	-1.5	-0.1	0.2
Biomass & Waste	5507	7206	8264	8978	9309	9887	10236	10590	10595	4.1	1.2	1.0	0.3
Wind	1	9	39	80	286	453	606	724	812	54.2	22.0	7.8	3.0
Solar and others	3	5	5	6	18	36	48	65	76	5.3	12.9	10.4	4.7
Geothermal	0	0	0	0	0	0	0	0	0			4.8	0.1
Net Imports	**18035**	**19405**	**19291**	**20179**	**18590**	**18767**	**18119**	**16988**	**16397**	**0.7**	**-0.4**	**-0.3**	**-1.0**
Solids	2399	2750	2409	2556	2012	2094	2100	1634	1747	0.0	-1.8	0.4	-1.8
Oil	15211	16044	15703	17416	15847	15718	15342	14739	14219	0.3	0.1	-0.3	-0.8
- Crude oil and Feedstocks	17071	17892	20449	20071	18457	18328	17953	17349	16827	1.8	-1.0	-0.3	-0.6
- Oil products	-1861	-1848	-4745	-2655	-2610	-2610	-2611	-2610	-2608				
Natural gas	577	755	776	843	1224	1372	1285	1236	1254	3.0	4.7	0.5	-0.2
Electricity	-152	-145	402	-636	-535	-548	-811	-858	-898				
Gross Inland Consumption	**47213**	**50401**	**47896**	**51689**	**49654**	**50739**	**51674**	**51782**	**51084**	**0.1**	**0.4**	**0.4**	**-0.1**
Solids	2683	2890	2442	2629	2272	2322	2307	1805	1900	-0.9	-0.7	0.2	-1.9
Oil	14596	15786	14429	14858	13927	13681	13251	12597	12023	-0.1	-0.4	-0.5	-1.0
Natural gas	577	755	776	843	1224	1372	1285	1236	1254	3.0	4.7	0.5	-0.2
Nuclear	17764	18040	14781	18670	17297	17570	18789	19522	19375	-1.8	1.6	0.8	0.3
Electricity	-152	-145	402	-636	-535	-548	-811	-858	-898				
Renewable energy forms	11745	13075	15065	15325	15469	16342	16853	17481	17429	2.5	0.3	0.9	0.3
as % in Gross Inland Consumption													
Solids	5.7	5.7	5.1	5.1	4.6	4.6	4.5	3.5	3.7				
Oil	30.9	31.3	30.1	28.7	28.0	27.0	25.6	24.3	23.5				
Natural gas	1.2	1.5	1.6	1.6	2.5	2.7	2.5	2.4	2.5				
Nuclear	37.6	35.8	30.9	36.1	34.8	34.6	36.4	37.7	37.9				
Renewable energy forms	24.9	25.9	31.5	29.6	31.2	32.2	32.6	33.8	34.1				
Gross Electricity Generation in GWh_e	**145958**	**148264**	**145524**	**158340**	**156570**	**163879**	**172429**	**180020**	**181004**	**0.0**	**0.7**	**1.0**	**0.5**
Self consumption and grid losses	15140	15969	16250	17365	15650	16734	17548	18850	18815	0.7	-0.4	1.2	0.7
Fuel Inputs for Thermal Power Generation	**1491**	**3246**	**3239**	**4458**	**4937**	**5512**	**5892**	**6225**	**6697**	**8.1**	**4.3**	**1.8**	**1.3**
Solids	558	705	467	494	564	565	602	308	265	-1.8	1.9	0.7	-7.9
Oil (including refinery gas)	253	737	276	317	411	304	277	269	74	0.9	4.1	-3.9	-12.3
Gas	253	406	414	490	880	1103	1041	997	981	5.0	7.8	1.7	-0.6
Biomass & Waste	427	1398	2083	3158	3082	3540	3972	4651	5376	17.2	4.0	2.6	3.1
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**20664**	**23542**	**25372**	**24500**	**22325**	**22258**	**21927**	**21024**	**19787**	**2.1**	**-1.3**	**-0.2**	**-1.0**
Refineries	18125	19553	21694	20789	18453	18326	17952	17348	16827	1.8	-1.6	-0.3	-0.6
Biofuels and hydrogen production	0	0	0	152	292	431	510	552	602			5.7	1.7
District heating	1123	2373	1973	1728	2320	2123	2103	1781	1023	5.8	1.6	-1.0	-6.9
Others	1416	1616	1705	1832	1260	1378	1363	1343	1335	1.9	-3.0	0.8	-0.2
Energy Branch Consumption	**1758**	**1629**	**1532**	**1371**	**1310**	**1355**	**1378**	**1415**	**1379**	**-1.4**	**-1.6**	**0.5**	**0.0**
Non-Energy Uses	**1826**	**2051**	**1808**	**2425**	**2444**	**2537**	**2566**	**2523**	**2542**	**-0.1**	**3.1**	**0.5**	**-0.1**
Final Energy Demand	**30518**	**32305**	**33350**	**33173**	**31638**	**32290**	**32320**	**31942**	**31501**	**0.9**	**-0.5**	**0.2**	**-0.3**
by sector													
Industry	11827	11195	12056	12097	10862	10735	10756	10803	10981	0.2	-1.0	-0.1	0.2
- energy intensive industries	8542	7497	8396	8887	7813	7657	7607	7595	7675	-0.2	-0.7	-0.3	0.1
- other industrial sectors	3285	3699	3660	3209	3049	3078	3149	3208	3306	1.1	-1.8	0.3	0.5
Residential	6542	7735	7554	7302	7323	7468	7446	7267	7042	1.4	-0.3	0.2	-0.6
Tertiary	4873	5694	5593	5166	4820	5049	5020	5024	4921	1.4	-1.5	0.4	-0.2
Transport	7276	7680	8147	8608	8633	9037	9098	8847	8557	1.1	0.6	0.5	-0.6
by fuel													
Solids	1231	1192	1141	1345	1060	1058	1039	860	996	-0.8	-0.7	-0.2	-0.4
Oil	12007	12343	12389	11175	10008	10052	9775	9327	8889	0.3	-2.1	-0.2	-0.9
Gas	587	611	673	764	602	692	660	653	692	1.4	-1.1	0.9	0.5
Electricity	10348	10711	11068	11382	11337	11855	12248	12739	12792	0.7	0.2	0.8	0.4
Heat (from CHP and District Heating) [A]	1706	3540	3550	4174	4710	4589	4570	4315	4014	7.6	2.9	-0.3	-1.3
Renewable energy forms	4639	3908	4529	4332	3920	4041	4026	4046	4116	-0.2	-1.4	0.3	0.2
Other	0	0	0	0	1	1	2	2	2			8.4	-0.2
RES in Gross Final Energy Consumption [B]			**12960**	**13507**	**14612**	**15410**	**15913**	**16434**	**16430**		**1.2**	**0.9**	**0.3**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**71.7**		**70.8**	**68.6**	**62.5**	**61.9**	**60.8**	**57.4**	**56.6**	**-0.1**	**-1.3**	**-0.3**	**-0.7**
of which ETS sectors GHGs emissions				24.1	20.4	19.9	20.0	18.5	18.8			-0.2	-0.6
CO_2 Emissions (energy related)	**50.5**	**53.3**	**50.7**	**48.6**	**43.6**	**43.4**	**42.2**	**38.7**	**37.7**	**0.0**	**-1.5**	**-0.3**	**-1.1**
Power generation/District heating	6.3	7.9	5.1	5.5	6.7	6.3	6.2	4.8	4.1	-1.9	2.7	-0.8	-4.1
Energy Branch	1.5	1.8	1.9	2.1	1.1	0.9	0.8	0.7	1.1	2.3	-5.5	-3.0	3.5
Industry	11.5	11.7	11.0	12.4	8.3	8.2	7.8	7.0	7.5	-0.4	-2.8	-0.6	-0.4
Residential	4.9	4.6	3.7	1.4	1.5	1.5	1.3	1.2	1.1	-2.6	-8.8	-1.5	-1.6
Tertiary	5.6	5.4	5.6	3.1	2.3	2.0	1.6	1.4	1.3	0.0	-8.7	-3.2	-2.1
Transport	20.7	21.9	23.2	24.1	23.7	24.5	24.4	23.6	22.6	1.1	0.2	0.3	-0.8
CO_2 Emissions (non energy related)	**5.6**	**5.9**	**5.4**	**5.6**	**5.1**	**5.4**	**5.4**	**5.6**	**5.6**	**-0.3**	**-0.6**	**0.7**	**0.4**
Non-CO_2 GHGs Emissions	**15.6**		**14.7**	**14.4**	**13.8**	**13.2**	**13.2**	**13.2**	**13.3**	**-0.6**	**-0.6**	**-0.5**	**0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**98.8**	**95.7**	**87.1**	**86.4**	**84.8**	**80.1**	**79.0**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)											Sweden: Baseline 2009		
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	8.527	8.816	8.861	9.011	9.306	9.588	9.853	10.094	10.270	0.4	0.5	0.6	0.4
GDP (in 000 MEuro'05)	210.0	220.4	259.7	294.7	304.3	342.8	380.3	417.7	456.7	2.2	1.6	2.3	1.8
Gross Inl. Cons./GDP (toe/MEuro'05)	224.9	228.7	184.4	175.4	163.2	148.0	135.9	124.0	111.8	-2.0	-1.2	-1.8	-1.9
Carbon intensity (t of CO_2/toe of GIC)	1.07	1.06	1.06	0.94	0.88	0.85	0.82	0.75	0.74	-0.1	-1.9	-0.7	-1.0
Import Dependency %	37.7	37.7	39.2	37.6	36.0	35.6	33.7	31.5	30.8				
Total Energy-related Costs (C) (in 000 M€05)			25.7	32.0	32.7	37.0	42.0	45.5	47.0		2.5	2.5	1.1
as % of GDP			9.9	10.9	10.8	10.8	11.0	10.9	10.3				
Energy intensity indicators													
Industry (Energy on Value added)	175.0	133.3	100.0	80.6	70.7	60.4	54.7	50.2	46.7	-5.4	-3.4	-2.5	-1.6
Residential (Energy on Private Income)	102.6	120.4	100.0	87.3	91.7	81.2	73.3	66.0	59.0	-0.3	-0.9	-2.2	-2.1
Tertiary (Energy on Value added)	103.9	118.2	100.0	82.9	75.6	69.8	62.3	56.6	50.6	-0.4	-2.8	-1.9	-2.1
Passenger transport (toe/Mpkm)	40.6	41.3	39.9	40.2	38.5	35.2	33.0	29.6	26.6	-0.2	-0.4	-1.5	-2.1
Freight transport (toe/Mtkm)	41.7	43.0	45.6	45.2	44.8	44.6	42.8	40.8	38.7	0.9	-0.2	-0.5	-1.0
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.02	-3.1	1.5	-1.5	-4.2
Final energy demand (t of CO_2/toe)	1.40	1.35	1.31	1.24	1.13	1.12	1.09	1.04	1.03	-0.7	-1.4	-0.4	-0.5
Industry	0.97	1.04	0.92	1.02	0.77	0.76	0.73	0.65	0.68	-0.6	-1.8	-0.5	-0.7
Residential	0.74	0.59	0.49	0.20	0.20	0.20	0.17	0.16	0.16	-4.0	-8.5	-1.7	-1.0
Tertiary	1.15	0.95	1.00	0.61	0.47	0.40	0.32	0.29	0.27	-1.4	-7.4	-3.6	-1.9
Transport	2.85	2.85	2.85	2.79	2.74	2.71	2.68	2.66	2.64	0.0	-0.4	-0.2	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			36.8	38.8	44.1	45.5	46.8	48.8	49.4				
RES in transport (%)			1.9	4.2	6.2	7.9	9.1	10.1	11.5				
Gross Electricity generation by fuel type (in GWh)			**145524**	**158340**	**156570**	**163879**	**172429**	**180020**	**181004**		**0.7**	**1.0**	**0.5**
Nuclear energy			57306	72364	67071	68131	72855	75697	75130		1.6	0.8	0.3
Coal and lignite			1623	1720	2149	2136	2278	1117	888		2.8	0.6	-9.0
Petroleum products			1210	1277	2151	1302	1203	1164	308		5.9	-5.7	-12.7
Gas (including derived gases)			1599	1844	4036	5653	5403	5537	5316		9.7	3.0	-0.2
Biomass & waste			4759	7405	10230	13491	16591	19800	21528		8.0	5.0	2.6
Hydro			78570	72795	67600	67850	66972	68183	68267		-1.5	-0.1	0.2
Wind			457	936	3328	5272	7052	8418	9443		22.0	7.8	3.0
Solar, tidal etc.			0	0	4	45	76	104	124			34.7	5.1
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**33642**	**33916**	**35761**	**37005**	**37493**	**39626**	**40737**		**0.6**	**0.5**	**0.8**
Nuclear energy			9584	9646	9685	10545	10547	10547	10547		0.1	0.9	0.0
Renewable energy			16559	16896	17939	18824	19646	20539	20972		0.8	0.9	0.7
Hydro (pumping excluded)			16347	16374	16460	16679	16770	17086	17086		0.1	0.2	0.2
Wind			209	516	1465	2097	2797	3345	3757		21.5	6.7	3.0
Solar			3	5	15	49	78	108	129		17.1	18.3	5.1
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			7499	7374	8137	7637	7301	8541	9219		0.8	-1.1	2.4
of which cogeneration units			3662	3662	4292	4146	4378	4695	4774		1.6	0.2	0.9
of which CCS units			0	0	0	0	0	0	0				
Solids fired			764	686	686	582	582	530	287		-1.1	-1.6	-6.8
Gas fired			549	405	1093	1167	1167	2199	3329		7.1	0.7	11.1
Oil fired			4606	3340	3200	2706	2053	1614	850		-3.6	-4.3	-8.4
Biomass-waste fired			1581	2943	3159	3182	3499	4197	4753		7.2	1.0	3.1
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			47.6	51.4	48.7	49.3	51.1	50.4	49.3				
Efficiency for thermal electricity production (%)			24.4	23.6	32.3	35.2	37.2	38.2	36.0				
CHP indicator (% of electricity from CHP)			6.2	7.1	11.9	13.8	14.7	15.2	15.4				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			97.0	96.9	94.7	94.5	94.8	95.7	96.4				
- nuclear			39.4	45.7	42.8	41.6	42.3	42.0	41.5				
- renewable energy forms and industrial waste			57.6	51.2	51.8	52.9	52.6	53.6	54.9				
Transport sector													
Passenger transport activity (Gpkm)	**123.7**	**124.8**	**133.4**	**138.7**	**143.5**	**158.9**	**168.7**	**178.3**	**187.1**	**0.8**	**0.7**	**1.6**	**1.0**
Public road transport	9.7	9.7	9.5	8.8	8.6	8.8	9.1	9.4	9.7	-0.2	-1.0	0.6	0.6
Private cars and motorcycles	86.9	88.1	93.5	99.6	102.0	112.0	117.5	122.0	125.6	0.7	0.9	1.4	0.7
Rail	8.6	8.8	10.2	11.0	12.6	14.3	15.3	16.3	17.1	1.7	2.1	2.0	1.1
Aviation	11.8	12.1	14.2	13.5	14.4	17.5	20.4	24.1	28.1	1.8	0.2	3.5	3.3
Inland navigation	6.7	6.2	6.1	5.8	6.0	6.2	6.4	6.5	6.7	-0.9	-0.2	0.7	0.4
Freight transport activity (Gtkm)	**53.9**	**58.9**	**62.0**	**67.3**	**69.5**	**77.4**	**82.7**	**87.6**	**92.4**	**1.4**	**1.1**	**1.8**	**1.1**
Trucks	26.5	31.6	35.6	38.6	39.6	44.6	47.5	50.4	53.3	3.0	1.1	1.8	1.2
Rail	19.1	19.4	19.5	21.7	22.9	25.5	27.2	28.8	30.2	0.2	1.7	1.7	1.0
Inland navigation	8.3	7.9	6.9	7.0	6.9	7.4	8.0	8.5	8.9	-1.8	0.1	1.4	1.1
Energy demand in transport (ktoe)	**7276**	**7680**	**8147**	**8608**	**8633**	**9037**	**9098**	**8847**	**8557**	**1.1**	**0.6**	**0.5**	**-0.6**
Public road transport	129	122	130	114	110	110	108	105	103	0.1	-1.7	-0.2	-0.4
Private cars and motorcycles	4016	4078	4108	4468	4373	4297	4142	3779	3401	0.2	0.6	-0.5	-2.0
Trucks	1974	2253	2526	2706	2768	3081	3162	3197	3195	2.5	0.9	1.3	0.1
Rail	252	273	299	332	350	372	375	376	380	1.7	1.6	0.7	0.1
Aviation	760	849	928	846	888	1027	1156	1230	1315	2.0	-0.4	2.7	1.3
Inland navigation	144	103	155	142	144	151	156	160	164	0.8	-0.7	0.8	0.5

Source: PRIMES

United Kingdom: Baseline 2009										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**205941**	**250517**	**269601**	**203293**	**166174**	**114909**	**82913**	**77593**	**77485**	**2.7**	**-4.7**	**-6.7**	**-0.7**
Solids	54125	30516	18577	12172	10500	9000	8000	7000	6000	-10.1	-5.5	-2.7	-2.8
Oil	93246	133042	128893	86714	70000	45000	25000	20000	18000	3.3	-5.9	-9.8	-3.2
Natural gas	40925	63715	97554	79397	63000	35000	24000	18000	13000	9.1	-4.3	-9.2	-5.9
Nuclear	16574	21249	21942	21054	16098	16255	12152	17454	23884	2.8	-3.0	-2.8	7.0
Renewable energy sources	1070	1996	2635	3956	6576	9654	13762	15138	16602	9.4	9.6	7.7	1.9
Hydro	436	416	437	423	403	414	415	416	418	0.0	-0.8	0.3	0.1
Biomass & Waste	627	1539	2104	3252	4770	5449	5938	6005	6115	12.9	8.5	2.2	0.3
Wind	1	34	81	250	1315	3573	6970	8083	9227	59.3	32.1	18.1	2.8
Solar and others	5	6	11	30	86	209	417	591	778	8.1	22.5	17.1	6.4
Geothermal	1	1	1	1	2	9	22	44	63	0.0	7.3	29.7	11.4
Net Imports	**5720**	**-36234**	**-39249**	**32152**	**52091**	**102121**	**127930**	**129878**	**129152**			**9.4**	**0.1**
Solids	9122	10493	14577	27459	24525	26491	24761	21021	19359	4.8	5.3	0.1	-2.4
Oil	-10607	-48766	-45734	-2409	8111	34618	53898	56740	57540			20.9	0.7
- Crude oil and Feedstocks	-4602	-36569	-39312	4857	14116	40676	59979	62977	63861			15.6	0.6
- Oil products	-6005	-12197	-6422	-7266	-6005	-6058	-6081	-6237	-6321				
Natural gas	6178	637	-9311	5973	18101	38707	46291	48693	48369			9.8	0.4
Electricity	1027	1403	1219	715	512	768	784	598	591	1.7	-8.3	4.4	-2.8
Gross Inland Consumption	**211304**	**218439**	**231868**	**232972**	**216266**	**215007**	**208829**	**205436**	**204549**	**0.9**	**-0.7**	**-0.3**	**-0.2**
Solids	64305	45866	36816	38387	35025	35491	32761	28021	25359	-5.4	-0.5	-0.7	-2.5
Oil	81124	82806	81857	82974	76112	77595	76884	74705	73452	0.1	-0.7	0.1	-0.5
Natural gas	47203	65119	87399	85473	81101	73707	70291	66693	61369	6.4	-0.7	-1.4	-1.3
Nuclear	16574	21249	21942	21054	16098	16255	12152	17454	23884	2.8	-3.0	-2.8	7.0
Electricity	1027	1403	1219	715	512	768	784	598	591	1.7	-8.3	4.4	-2.8
Renewable energy forms	1070	1996	2635	4370	7417	11191	15958	17964	19894	9.4	10.9	8.0	2.2
as % in Gross Inland Consumption													
Solids	30.4	21.0	15.9	16.5	16.2	16.5	15.7	13.6	12.4				
Oil	38.4	37.9	35.3	35.6	35.2	36.1	36.8	36.4	35.9				
Natural gas	22.3	29.8	37.7	36.7	37.5	34.3	33.7	32.5	30.0				
Nuclear	7.8	9.7	9.5	9.0	7.4	7.6	5.8	8.5	11.7				
Renewable energy forms	0.5	0.9	1.1	1.9	3.4	5.2	7.6	8.7	9.7				
Gross Electricity Generation in GWh_e	**316937**	**332435**	**374308**	**395367**	**391026**	**408409**	**429845**	**443803**	**460913**	**1.7**	**0.4**	**1.0**	**0.7**
Self consumption and grid losses	44606	46775	48358	48835	48595	51713	58877	58575	65936	0.8	0.0	1.9	1.1
Fuel Inputs for Thermal Power Generation	**56324**	**49960**	**55408**	**61068**	**60204**	**59165**	**56302**	**51368**	**44803**	**-0.2**	**0.8**	**-0.7**	**-2.3**
Solids	47267	33844	27232	30920	29175	29883	27234	22730	20208	-5.4	0.7	-0.7	-2.9
Oil (including refinery gas)	7177	3443	767	677	331	1197	1289	1064	1070	-20.0	-8.1	14.6	-1.8
Gas	1668	12054	25999	26428	26885	23697	23075	22545	18224	31.6	0.3	-1.5	-2.3
Biomass & Waste	212	620	1410	3043	3813	4379	4686	4993	5246	20.9	10.5	2.1	1.1
Geothermal heat	0	0	0	0	0	7	18	36	53				11.6
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**99522**	**102761**	**100927**	**95428**	**90001**	**91653**	**91732**	**89939**	**89052**	**0.1**	**-1.1**	**0.2**	**-0.3**
Refineries	90259	94682	89873	87812	82732	85019	84766	83022	82047	0.0	-0.8	0.2	-0.3
Biofuels and hydrogen production	0	0	0	68	1052	1849	2543	2758	2968			9.2	1.6
District heating	0	0	3373	2111	1867	637	428	361	264		-5.7	-13.7	-4.7
Others	9264	8079	7682	5436	4350	4148	3994	3799	3772	-1.9	-5.5	-0.9	-0.6
Energy Branch Consumption	**12823**	**14392**	**15027**	**15548**	**14370**	**13537**	**13427**	**12588**	**12385**	**1.6**	**-0.4**	**-0.7**	**-0.8**
Non-Energy Uses	**11365**	**12762**	**11323**	**11241**	**9838**	**11001**	**11884**	**12602**	**13335**	**0.0**	**-1.4**	**1.9**	**1.2**
Final Energy Demand	**137080**	**142633**	**152177**	**152272**	**144370**	**145683**	**144521**	**141179**	**140266**	**1.1**	**-0.5**	**0.0**	**-0.3**
by sector													
Industry	34977	35146	36424	34371	32506	32915	33575	34077	34557	0.4	-1.1	0.3	0.3
- energy intensive industries	19485	19968	19231	16421	14720	14790	15139	15415	15862	-0.1	-2.6	0.3	0.5
- other industrial sectors	15492	15178	17193	17950	17786	18125	18436	18662	18695	1.0	0.3	0.4	0.1
Residential	37941	39568	43074	43519	39646	40034	39327	38226	38173	1.3	-0.8	-0.1	-0.3
Tertiary	18621	20887	20373	19176	17792	17334	16534	15823	15413	0.9	-1.3	-0.7	-0.7
Transport	45541	47032	52307	55206	54426	55400	55084	53053	52123	1.4	0.4	0.1	-0.6
by fuel													
Solids	12266	8891	5683	4418	3573	3485	3554	3451	3446	-7.4	-4.5	-0.1	-0.3
Oil	58903	60401	62950	65915	61632	61593	60488	58173	56708	0.7	-0.2	-0.2	-0.6
Gas	41893	47140	52180	50227	45716	43542	40902	38182	37313	2.2	-1.3	-1.1	-0.9
Electricity	23597	25274	28325	29792	29273	30749	32000	33060	33906	1.8	0.3	0.9	0.6
Heat (from CHP and District Heating) [A]	0	0	2439	1268	2458	3735	4068	4368	4495		0.1	5.2	1.0
Renewable energy forms	421	926	600	653	1713	2574	3501	3937	4392	3.6	11.1	7.4	2.3
Other	0	0	0	0	3	6	7	7	7			7.5	-0.6
RES in Gross Final Energy Consumption [B]			**1432**	**2139**	**4634**	**8469**	**13418**	**15652**	**17757**		**12.5**	**11.2**	**2.8**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**772.6**		**693.3**	**678.6**	**629.5**	**611.7**	**568.2**	**532.6**	**479.2**	**-1.1**	**-1.0**	**-1.0**	**-1.7**
of which ETS sectors GHGs emissions				311.8	286.0	278.9	251.5	231.2	185.8			-1.3	-3.0
CO_2 Emissions (energy related)	**566.4**	**532.7**	**546.6**	**559.7**	**521.0**	**507.1**	**467.9**	**432.5**	**379.8**	**-0.4**	**-0.5**	**-1.1**	**-2.1**
Power generation/District heating	214.1	173.0	181.0	192.8	184.3	179.5	151.3	131.3	86.8	-1.7	0.2	-2.0	-5.4
Energy Branch	27.1	31.3	32.2	34.2	30.3	26.8	25.1	23.4	21.5	1.7	-0.6	-1.8	-1.5
Industry	81.8	78.8	72.1	66.4	58.1	54.9	54.5	53.3	52.7	-1.3	-2.1	-0.6	-0.3
Residential	77.8	77.3	81.9	80.1	70.6	69.9	66.8	63.2	62.4	0.5	-1.5	-0.6	-0.7
Tertiary	33.0	35.3	26.7	24.5	21.5	19.0	16.4	14.3	13.1	-2.1	-2.2	-2.7	-2.2
Transport	132.6	137.0	152.6	161.6	156.3	156.9	153.8	147.0	143.3	1.4	0.2	-0.2	-0.7
CO_2 Emissions (non energy related)	**22.8**	**23.4**	**20.1**	**19.8**	**18.6**	**19.3**	**20.1**	**20.7**	**21.3**	**-1.2**	**-0.8**	**0.8**	**0.6**
Non-CO_2 GHGs Emissions	**183.4**		**126.7**	**99.1**	**89.9**	**85.3**	**80.2**	**79.4**	**78.1**	**-3.6**	**-3.4**	**-1.1**	**-0.3**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**89.7**	**87.8**	**81.5**	**79.2**	**73.5**	**68.9**	**62.0**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)									United Kingdom: Baseline 2009				
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	57.157	57.943	58.785	60.060	61.984	63.792	65.683	67.543	69.224	0.3	0.5	0.6	0.5
GDP (in 000 MEuro'05)	1263.3	1371.5	1623.9	1831.7	1882.4	2132.4	2373.0	2625.4	2903.1	2.5	1.5	2.3	2.0
Gross Inl. Cons./GDP (toe/MEuro'05)	167.3	159.3	142.8	127.2	114.9	100.8	88.0	78.3	70.5	-1.6	-2.2	-2.6	-2.2
Carbon intensity (t of CO_2/toe of GIC)	2.68	2.44	2.36	2.40	2.41	2.36	2.24	2.11	1.86	-1.3	0.2	-0.7	-1.9
Import Dependency %	2.7	-16.4	-16.8	13.7	23.9	47.1	60.7	62.6	62.5				
Total Energy-related Costs [C] (in 000 M€05)			141.8	153.5	154.4	176.5	205.6	223.2	228.8		0.9	2.9	1.1
as % of GDP			8.7	8.4	8.2	8.3	8.7	8.5	7.9				
Energy intensity indicators													
Industry (Energy on Value added)	104.4	102.7	100.0	104.8	103.1	96.4	91.9	86.0	80.7	-0.4	0.3	-1.1	-1.3
Residential (Energy on Private Income)	116.5	113.7	100.0	87.6	82.0	71.6	62.4	55.2	50.2	-1.5	-2.0	-2.7	-2.1
Tertiary (Energy on Value added)	123.1	124.4	100.0	78.1	69.4	58.6	49.8	42.8	37.5	-2.1	-3.6	-3.3	-2.8
Passenger transport (toe/Mpkm)	45.4	45.3	47.6	47.2	44.9	41.5	38.9	35.2	32.7	0.5	-0.6	-1.4	-1.7
Freight transport (toe/Mtkm)	56.2	53.2	53.7	53.7	53.3	53.0	50.8	48.0	44.9	-0.5	-0.1	-0.5	-1.2
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.68	0.52	0.45	0.47	0.44	0.39	0.31	0.26	0.17	-4.0	-0.3	-3.3	-6.1
Final energy demand (t of CO_2/toe)	2.37	2.30	2.19	2.18	2.12	2.06	2.02	1.97	1.94	-0.8	-0.3	-0.5	-0.4
Industry	2.34	2.24	1.98	1.93	1.79	1.67	1.62	1.56	1.52	-1.7	-1.0	-1.0	-0.6
Residential	2.05	1.95	1.90	1.84	1.78	1.75	1.70	1.65	1.63	-0.7	-0.7	-0.5	-0.4
Tertiary	1.77	1.69	1.31	1.28	1.21	1.10	0.99	0.90	0.85	-3.0	-0.8	-2.0	-1.5
Transport	2.91	2.91	2.92	2.93	2.87	2.83	2.79	2.77	2.75	0.0	-0.2	-0.3	-0.2
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			0.9	1.4	3.2	5.8	9.3	11.2	12.7				
RES in transport (%)			0.0	0.2	2.7	4.8	6.9	8.0	8.9				
Gross Electricity generation by fuel type (in GWh)			**374308**	**395367**	**391026**	**408409**	**429845**	**443803**	**460913**		**0.4**	**1.0**	**0.7**
Nuclear energy			85048	81603	62408	63013	48031	71330	101947		-3.0	-2.6	7.8
Coal and lignite			125076	139027	126687	129737	128171	107877	104492		0.1	0.1	-2.0
Petroleum products			3447	3053	1511	5226	5533	4506	4468		-7.9	13.9	-2.1
Gas (including derived gases)			150451	152255	164829	145463	141620	138335	111668		0.9	-1.5	-2.3
Biomass & waste			4253	11595	15566	17889	18416	19117	20402		13.9	1.7	1.0
Hydro			5085	4921	4682	4811	4827	4836	4864		-0.8	0.3	0.1
Wind			947	2903	15295	41541	81043	93994	107286		32.1	18.1	2.8
Solar, tidal etc.			1	8	38	97	183	301	448		43.8	17.1	9.4
Geothermal and other renewables			0	0	12	631	2021	3507	5339			67.6	10.2
Net Generation Capacity in MW_e			**77225**	**79496**	**86809**	**99681**	**103816**	**110549**	**118842**		**1.2**	**1.8**	**1.4**
Nuclear energy			13038	10962	10723	9265	6012	8887	12638		-1.9	-5.6	7.7
Renewable energy			1873	3016	8089	16649	29905	35013	40955		15.8	14.0	3.2
Hydro (pumping excluded)			1462	1439	1499	1514	1526	1537	1551		0.2	0.2	0.2
Wind			408	1565	6542	14711	27151	31366	36201		32.0	15.3	2.9
Solar			2	11	41	101	190	312	465		35.3	16.5	9.4
Other renewables (tidal etc.)			0	1	6	323	1038	1798	2738			67.4	10.2
Thermal power			62315	65518	67997	73768	67899	66649	65249		0.9	0.0	-0.4
of which cogeneration units			4015	3141	5879	8580	8430	8600	8533		3.9	3.7	0.1
of which CCS units			0	0	0	0	2334	2334	5783				9.5
Solids fired			28647	27019	26336	21374	14997	13305	15215		-0.8	-5.5	0.1
Gas fired			26520	32734	35224	46092	47463	46936	43308		2.9	3.0	-0.9
Oil fired			5826	4093	4330	3815	2302	2129	1921		-2.9	-6.1	-1.8
Biomass-waste fired			1321	1672	2107	2485	3135	4274	4798		4.8	4.1	4.3
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	1	2	5	7				11.6
Load factor for net electric capacities (%)			52.9	54.2	49.1	44.6	44.5	43.4	41.4				
Efficiency for thermal electricity production (%)			44.0	43.1	44.1	43.4	44.9	45.2	46.3				
CHP indicator (% of electricity from CHP)			6.4	6.6	9.1	13.4	13.1	12.8	12.4				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	5.9	5.6	12.8				
Non fossil fuels in electricity generation (%)			25.5	25.6	25.1	31.3	35.9	43.5	52.1				
- nuclear			22.7	20.6	16.0	15.4	11.2	16.1	22.1				
- renewable energy forms and industrial waste			2.7	4.9	9.1	15.9	24.8	27.4	30.0				
Transport sector													
Passenger transport activity (Gpkm)	**740.2**	**770.7**	**823.2**	**884.5**	**909.1**	**993.7**	**1055.5**	**1115.9**	**1179.5**	**1.1**	**1.0**	**1.5**	**1.1**
Public road transport	47.7	45.8	48.5	49.5	51.6	54.9	57.5	59.5	61.3	0.2	0.6	1.1	0.6
Private cars and motorcycles	593.9	622.3	645.0	680.0	693.4	749.3	780.9	819.1	861.4	0.8	0.7	1.2	1.0
Rail	39.9	37.1	46.7	53.1	60.5	66.4	71.9	76.4	81.3	1.6	2.6	1.7	1.2
Aviation	52.2	58.8	77.4	96.7	98.2	117.5	139.5	155.0	169.5	4.0	2.4	3.6	2.0
Inland navigation	6.5	6.7	5.5	5.3	5.4	5.6	5.7	5.8	6.0	-1.6	-0.3	0.5	0.5
Freight transport activity (Gtkm)	**211.8**	**227.9**	**243.7**	**251.0**	**255.1**	**267.5**	**275.9**	**286.7**	**300.5**	**1.4**	**0.5**	**0.8**	**0.9**
Trucks	140.0	161.5	165.6	167.5	168.6	176.6	181.5	189.5	201.0	1.7	0.2	0.7	1.0
Rail	16.0	13.3	18.1	22.3	25.1	27.2	28.1	28.8	29.4	1.2	3.3	1.2	0.4
Inland navigation	55.8	53.1	60.0	61.2	61.4	63.8	66.2	68.4	70.1	0.7	0.2	0.8	0.6
Energy demand in transport (ktoe)	**45541**	**47032**	**52307**	**55206**	**54426**	**55400**	**55084**	**53053**	**52123**	**1.4**	**0.4**	**0.1**	**-0.6**
Public road transport	429	435	484	505	522	541	539	527	512	1.2	0.8	0.3	-0.5
Private cars and motorcycles	25845	25978	27091	27804	27161	26257	25159	23106	22478	0.5	0.0	-0.8	-1.1
Trucks	10141	10378	11364	11406	11453	11876	11756	11680	11677	1.1	0.1	0.3	-0.1
Rail	1068	1238	1326	1405	1500	1591	1514	1307	1052	2.2	1.2	0.1	-3.6
Aviation	6781	7879	11115	12810	12504	13812	14757	15040	14985	5.1	1.2	1.7	0.2
Inland navigation	1277	1123	926	1275	1286	1324	1360	1393	1420	-3.2	3.3	0.6	0.4

Source: PRIMES

(A) Regarding heat from CHP, there is a break in the series between 2005 and 2010. This is related to the practice of Eurostat to report the fuel consumption of on site CHP under the final demand categories of the individual fuels, even if the fuel is in reality used in industrial CHP. In order to keep comparability with Eurostat statistics, the fuel consumption data for the statistical years are presented in a Eurostat compatible format. For the projection period from 2010 onwards the modeling allocates the fuel consumption for new CHP plants to the CHP part of the power generation sector while the corresponding heat and steam is shown under industrial energy demand. Comparisons concerning steam in industry should therefore start only from 2010 onwards. Except for the knock-on effect on total steam, this break in the heat series does not affect other comparisons in PRIMES that can start from 2005 or earlier years.

(B) PRIMES does not report separately on industrial waste. In order to ensure a consistent breakdown of supply and demand quanties, industrial waste is shown as part of total waste and of renewables. Given that only biodegradable waste counts towards the renewables targets, the indicators on the share of RES in gross final energy demand have been adjusted to exclude industrial waste. RES indicators have been calculated on the basis of the methodology developed by EUROSTAT, i.e. taking into account normalised hydro and wind production, increased weight for renewable electricity in road transport and aviation cap for gross final energy demand.

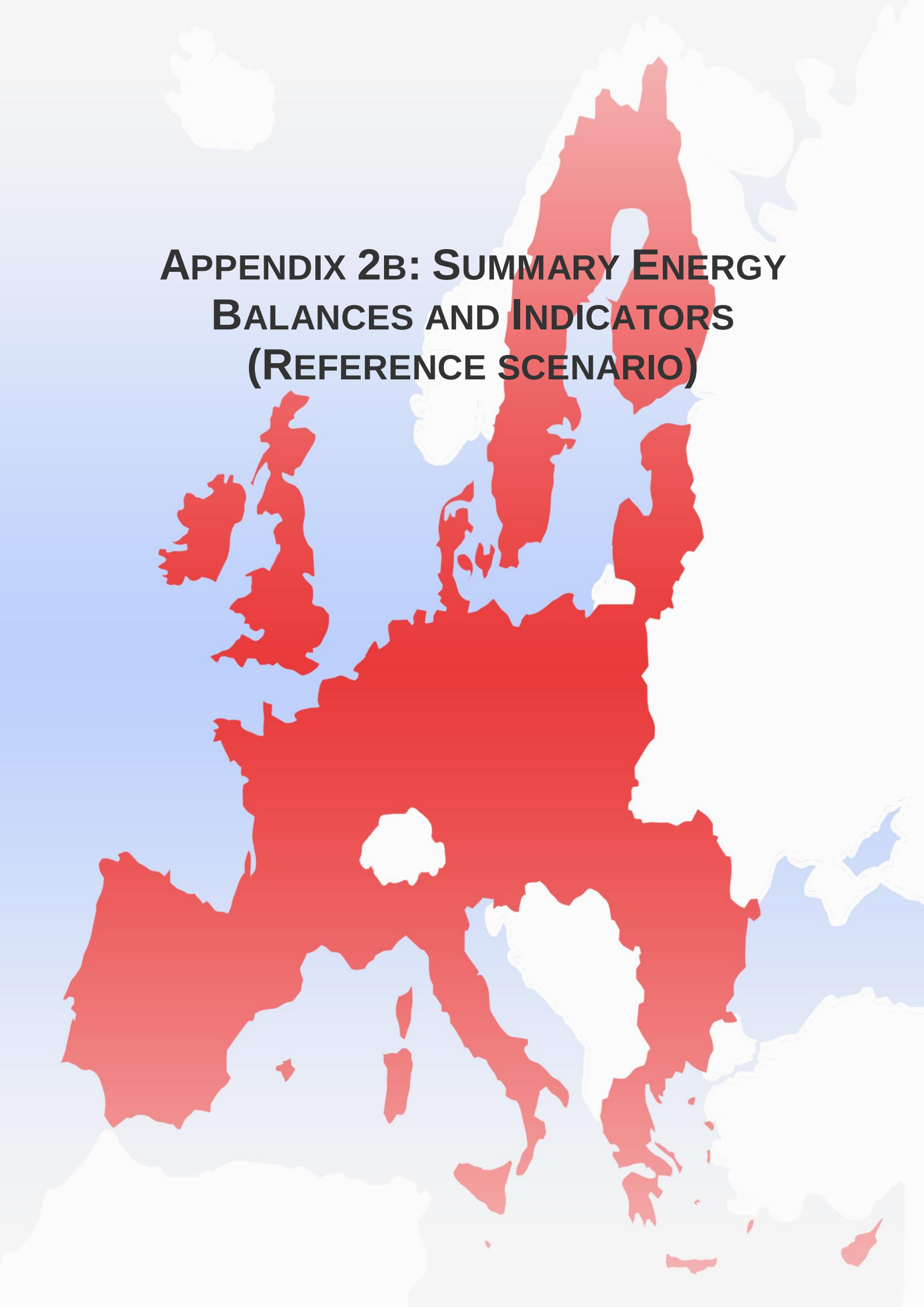
(C) excluding payments for auctioned emission allowances (if applicable)energy demand increased by distribution losses and self consumption of electricity and steam.

Disclaimer: Energy and transport statistics reported in this publication and used for the modelling are taken mainly from EUROSTAT and from the publication "EU Energy and Transport in Figures" of the Directorate General for Energy and Transport. Energy and transport statistical concepts have developed differently in the past according to their individual purposes. Energy demand in transport reflects usually sales of fuels at the point of refuelling, which can differ from the region of consumption. This is particularly relevant for airplanes and trucks. Transport statistics deal with the transport activity within a country but may not always fully include transit shipments. These differences should be borne in mind when comparing energy and transport figures. This applies in particular to transport activity ratios, such as energy efficiency in freight transport, which is measured in tonnes of oil equivalent per million tonne-km.

Abbreviations
GIC: Gross Inland Consumption
CHP: combined heat and power

Units
toe: tonne of oil equivalent, or 10^{7} kilocalories, or 41.86 GJ (Gigajoule)
ktoe: 1000 toe
MW: Megawatt or 10^{6} watt
MWh: megawatt-hour or 10^{6} watt-hours
GWh: gigawatt-hour or 10^{9} watt-hours
t: metric tonnes, or 1000 kilogrammes
Mt: Million metric tonnes
km: kilometre
pkm: passenger-kilometre (one passenger transported a distance of one kilometre)
tkm: tonne-kilometre (one tonne transported a distance of one kilometre)
Gpkm: Giga passenger-kilometre, or 10^{9} passenger-kilometre
Gtkm: Giga tonne-kilometre, or 10^{9} tonne-kilometre

APPENDIX 2B: SUMMARY ENERGY BALANCES AND INDICATORS (REFERENCE SCENARIO)



EU27: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**936047**	**950181**	**941860**	**900326**	**823118**	**794959**	**788108**	**765019**	**769894**	**0.1**	**-1.3**	**-0.4**	**-0.2**
Solids	366477	277810	213423	196277	167851	157230	139083	130204	124611	-5.3	-2.4	-1.9	-1.1
Oil	129551	171052	173006	134290	102925	74274	49602	40617	37067	2.9	-5.1	-7.0	-2.9
Natural gas	162447	188965	207559	188677	164145	128750	111020	91426	74901	2.5	-2.3	-3.8	-3.9
Nuclear	202589	223028	243761	257360	238768	240281	226615	229774	244047	1.9	-0.2	-0.5	0.7
Renewable energy sources	74984	89326	104111	123722	149430	194424	261787	272997	289268	3.3	3.7	5.8	1.0
Hydro	25101	28054	30374	26395	27808	28609	29347	30113	30748	1.9	-0.9	0.5	0.5
Biomass & Waste	46473	57201	67982	85129	97801	120894	154971	152833	153328	3.9	3.7	4.7	-0.1
Wind	67	350	1913	6061	13869	27864	45147	52085	59716	39.8	21.9	12.5	2.8
Solar and others	153	274	421	807	3261	9129	19191	21328	24186	10.7	22.7	19.4	2.3
Geothermal	3190	3447	3421	5331	6691	7929	13131	16638	21289	0.7	6.9	7.0	5.0
Net Imports	**756079**	**738600**	**826299**	**986048**	**993775**	**1049020**	**1045650**	**1059959**	**1039025**	**0.9**	**1.9**	**0.5**	**-0.1**
Solids	81846	79338	98645	126639	121637	125196	121958	132684	128533	1.9	2.1	0.0	0.5
Oil	535645	512185	533039	599851	580101	609993	607583	600309	577898	0.0	0.8	0.5	-0.5
- Crude oil and Feedstocks	508460	494000	513725	581995	578807	612244	615836	612364	594438	0.1	1.2	0.6	-0.4
- Oil products	27185	18185	19314	17856	1294	-2251	-8253	-12054	-16540	-3.4	-23.7		
Natural gas	135121	145288	192531	257366	288455	307433	300537	314560	318488	3.6	4.1	0.4	0.6
Electricity	3323	1508	1686	971	99	-613	-1684	-1781	-1867	-6.6	-24.7		
Gross Inland Consumption	**1660159**	**1662517**	**1723099**	**1825989**	**1766841**	**1792110**	**1781235**	**1771306**	**1753902**	**0.4**	**0.3**	**0.1**	**-0.2**
Solids	452940	364248	321007	319922	289488	282427	261040	262888	253144	-3.4	-1.0	-1.0	-0.3
Oil	631058	650858	658727	676859	632974	632398	604663	587254	559948	0.4	-0.4	-0.5	-0.8
Natural gas	294905	333268	393417	445998	452600	436183	411558	405987	393388	2.9	1.4	-0.9	-0.5
Nuclear	202589	223028	243761	257360	238768	240281	226615	229774	244047	1.9	-0.2	-0.5	0.7
Electricity	3323	1508	1686	971	99	-613	-1684	-1781	-1867	-6.6	-24.7		
Renewable energy forms	75343	89606	104501	124880	152912	201435	279043	287184	305242	3.3	3.9	6.2	0.9
as % in Gross Inland Consumption													
Solids	27.3	21.9	18.6	17.5	16.4	15.8	14.7	14.8	14.4				
Oil	38.0	39.1	38.2	37.1	35.8	35.3	33.9	33.2	31.9				
Natural gas	17.8	20.0	22.8	24.4	25.6	24.3	23.1	22.9	22.4				
Nuclear	12.2	13.4	14.1	14.1	13.5	13.4	12.7	13.0	13.9				
Renewable energy forms	4.5	5.4	6.1	6.8	8.7	11.2	15.7	16.2	17.4				
Gross Electricity Generation in GWh_e	**2562823**	**2712209**	**2991720**	**3274121**	**3306096**	**3531372**	**3709250**	**3931041**	**4073010**	**1.6**	**1.0**	**1.2**	**0.9**
Self consumption and grid losses	358053	383048	408040	429777	398056	420619	443863	477498	491490	1.3	-0.2	1.1	1.0
Fuel Inputs for Thermal Power Generation	**383492**	**362334**	**382613**	**424208**	**412779**	**411520**	**406826**	**420747**	**411570**	**0.0**	**0.8**	**-0.1**	**0.1**
Solids	263837	230040	223012	229245	219240	213333	193298	195169	185794	-1.7	-0.2	-1.3	-0.4
Oil (including refinery gas)	54404	51463	39294	29780	15932	15190	10484	11109	9431	-3.2	-8.6	-4.1	-1.1
Gas	56754	67806	102408	134637	138639	131139	122841	129294	124355	6.1	3.1	-1.2	0.1
Biomass & Waste	5724	10033	14960	25901	33081	45300	69665	70890	72868	10.1	8.3	7.7	0.5
Geothermal heat	2774	2992	2939	4645	5886	6558	10538	14285	19122	0.6	7.2	6.0	6.1
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**839073**	**814654**	**827098**	**842975**	**794223**	**804087**	**790118**	**776367**	**756267**	**-0.1**	**-0.4**	**-0.1**	**-0.4**
Refineries	679426	705954	735244	758152	716308	721887	699235	685382	662438	0.8	-0.3	-0.2	-0.5
Biofuels and hydrogen production	2	202	610	3129	11801	19057	29621	32029	35625	79.6	34.5	9.6	1.9
District heating	32960	23240	19323	16212	17556	16243	15221	13851	13353	-5.2	-1.0	-1.4	-1.3
Others	126685	85258	71921	65482	48559	46901	46041	45105	44851	-5.5	-3.9	-0.5	-0.3
Energy Branch Consumption	**82379**	**88696**	**88176**	**96033**	**92378**	**90544**	**88773**	**87375**	**83701**	**0.7**	**0.5**	**-0.4**	**-0.6**
Non-Energy Uses	**97931**	**110541**	**112495**	**117477**	**111365**	**114991**	**117065**	**117759**	**118736**	**1.4**	**-0.1**	**0.5**	**0.1**
Final Energy Demand	**1068710**	**1069989**	**1112989**	**1173676**	**1169000**	**1207870**	**1216152**	**1204347**	**1189353**	**0.4**	**0.5**	**0.4**	**-0.2**
by sector													
Industry	365650	328513	326949	326308	313247	322797	330376	334260	336912	-1.1	-0.4	0.5	0.2
- energy intensive industries	234722	214526	213112	210991	193770	196394	198371	197691	196806	-1.0	-0.9	0.2	-0.1
- other industrial sectors	130928	113987	113837	115317	119477	126403	132005	136569	140106	-1.4	0.5	1.0	0.6
Residential	264307	280418	286784	308104	309183	316386	313609	301904	295839	0.8	0.8	0.1	-0.6
Tertiary	158484	160442	159866	176859	176217	180998	179482	175921	174011	0.1	1.0	0.2	-0.3
Transport	280269	300617	339389	362405	370354	387688	392685	392262	382591	1.9	0.9	0.6	-0.3
by fuel													
Solids	125031	84977	61454	54486	44398	44209	43577	43912	43270	-6.9	-3.2	-0.2	-0.1
Oil	444429	456959	478880	495857	475332	476930	458953	446056	425602	0.7	-0.1	-0.4	-0.8
Gas	227902	245996	265552	283524	284161	276114	259289	243820	233521	1.5	0.7	-0.9	-1.0
Electricity	184145	193367	216403	237537	240622	258395	270699	286872	298025	1.6	1.1	1.2	1.0
Heat (from CHP and District Heating) [A]	48610	44616	40061	44441	58961	67607	72883	76671	79237	-1.9	3.9	2.1	0.8
Renewable energy forms	38592	44073	50639	57830	65500	84548	110611	106890	109619	2.8	2.6	5.4	-0.1
Other	0	0	0	0	27	67	141	127	79			18.1	-5.6
RES in Gross Final Energy Consumption [B]			**87370**	**104626**	**132875**	**181411**	**250316**	**257237**	**271877**		**4.3**	**6.5**	**0.8**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**5532.3**		**5063.6**	**5129.6**	**4836.1**	**4708.0**	**4409.7**	**4359.1**	**4211.8**	**-0.9**	**-0.5**	**-0.9**	**-0.5**
of which ETS sectors GHGs emissions				2438.2	2179.6	2116.2	1970.4	2001.3	1943.2			-1.0	-0.1
CO_2 Emissions (energy related)	**4030.6**	**3800.1**	**3810.6**	**3946.6**	**3740.4**	**3665.0**	**3403.5**	**3345.0**	**3193.7**	**-0.6**	**-0.2**	**-0.9**	**-0.6**
Power generation/District heating	1484.3	1321.2	1320.8	1381.1	1302.8	1255.6	1103.7	1124.1	1068.8	-1.2	-0.1	-1.6	-0.3
Energy Branch	152.2	171.0	170.2	181.6	158.7	146.2	132.8	127.8	119.0	1.1	-0.7	-1.8	-1.1
Industry	781.4	678.1	623.0	581.9	493.7	474.9	459.9	453.6	450.5	-2.2	-2.3	-0.7	-0.2
Residential	499.4	481.6	466.2	486.7	481.1	466.8	424.6	385.4	358.8	-0.7	0.3	-1.2	-1.7
Tertiary	300.5	275.3	242.0	262.2	253.5	240.7	219.4	200.5	185.0	-2.1	0.5	-1.4	-1.7
Transport	812.7	872.9	988.5	1053.1	1050.6	1080.7	1063.1	1053.6	1011.6	2.0	0.6	0.1	-0.5
CO_2 Emissions (non energy related)	**329.5**	**306.8**	**299.3**	**304.5**	**280.3**	**293.9**	**310.4**	**320.5**	**328.6**	**-1.0**	**-0.7**	**1.0**	**0.6**
Non-CO_2 GHGs Emissions	**1172.1**		**953.7**	**878.5**	**815.4**	**749.2**	**695.9**	**693.7**	**689.5**	**-2.0**	**-1.6**	**-1.6**	**-0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**91.5**	**92.7**	**87.4**	**85.1**	**79.7**	**78.8**	**76.1**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)									EU27: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	470.388	477.010	481.072	489.211	499.389	507.727	513.838	517.811	519.942	0.2	0.4	0.3	0.1
GDP (in 000 MEuro'05)	8142.7	8748.4	10107.2	11063.1	11385.6	12750.3	14164.0	15503.7	16824.7	2.2	1.2	2.2	1.7
Gross Inl. Cons./GDP (toe/MEuro'05)	203.9	190.0	170.5	165.1	155.2	140.6	125.8	114.3	104.2	-1.8	-0.9	-2.1	-1.9
Carbon intensity (t of CO_2/toe of GIC)	2.43	2.29	2.21	2.16	2.12	2.05	1.91	1.89	1.82	-0.9	-0.4	-1.0	-0.5
Import Dependency %	44.6	43.5	46.8	52.5	54.7	56.9	57.0	58.1	57.4				
Total Energy-related Costs [C] (in 000 M€05)			994.8	1160.9	1215.4	1421.6	1727.4	1910.7	1967.0		2.0	3.6	1.3
as % of GDP			9.8	10.5	10.7	11.1	12.2	12.3	11.7				
Energy intensity indicators													
Industry (Energy on Value added)	130.3	115.2	100.0	95.1	90.5	84.5	78.4	72.9	68.3	-2.6	-1.0	-1.4	-1.4
Residential (Energy on Private Income)	114.4	113.2	100.0	97.5	97.2	88.4	79.3	70.5	64.1	-1.3	-0.3	-2.0	-2.1
Tertiary (Energy on Value added)	126.5	117.0	100.0	99.4	95.3	86.6	77.0	68.7	62.3	-2.3	-0.5	-2.1	-2.1
Passenger transport (toe/Mpkm)	39.6	39.5	40.3	39.5	38.0	35.4	33.7	31.6	29.1	0.2	-0.6	-1.2	-1.5
Freight transport (toe/Mtkm)	47.1	46.8	46.3	46.5	46.1	45.8	44.2	42.5	40.3	-0.2	-0.1	-0.4	-0.9
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.46	0.40	0.37	0.35	0.31	0.28	0.23	0.22	0.21	-2.1	-1.8	-3.0	-1.2
Final energy demand (t of CO_2/toe)	2.24	2.16	2.08	2.03	1.95	1.87	1.78	1.74	1.69	-0.7	-0.7	-0.9	-0.5
Industry	2.14	2.06	1.91	1.78	1.58	1.47	1.39	1.36	1.34	-1.1	-1.9	-1.2	-0.4
Residential	1.89	1.72	1.63	1.58	1.56	1.48	1.35	1.28	1.21	-1.5	-0.4	-1.4	-1.1
Tertiary	1.90	1.72	1.51	1.48	1.44	1.33	1.22	1.14	1.06	-2.2	-0.5	-1.6	-1.4
Transport	2.90	2.90	2.91	2.91	2.84	2.79	2.71	2.69	2.64	0.0	-0.3	-0.5	-0.2
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			7.6	8.6	11.0	14.6	20.0	20.7	22.2				
RES in transport (%)			0.5	1.4	4.2	6.5	10.0	10.9	12.5				
Gross Electricity generation by fuel type (in GWh)			**2991720**	**3274121**	**3306096**	**3531372**	**3709250**	**3931041**	**4073010**		**1.0**	**1.2**	**0.9**
Nuclear energy			944823	997519	925964	933009	884705	914083	982494		-0.2	-0.5	1.1
Coal and lignite			944939	980774	911488	910809	844706	877735	857577		-0.4	-0.8	0.2
Petroleum products			169709	133406	73737	69550	48115	47469	40234		-8.0	-4.2	-1.8
Gas (including derived gases)			507154	693902	765580	748830	722561	757661	724312		4.2	-0.6	0.0
Biomass & waste			44772	84256	120424	171463	261200	274652	285967		10.4	8.1	0.9
Hydro			353183	306916	323347	332658	341246	350147	357538		-0.9	0.5	0.5
Wind			22246	70473	161262	324004	524963	605644	694373		21.9	12.5	2.8
Solar, tidal etc.			116	1447	16933	32193	62458	76790	94488		64.6	13.9	4.2
Geothermal and other renewables			4778	5427	7361	8856	19297	26860	36026		4.4	10.1	6.4
Net Generation Capacity in MW_e			**654125**	**715734**	**815695**	**920003**	**1003260**	**1041059**	**1110853**		**2.2**	**2.1**	**1.0**
Nuclear energy			133923	134409	127038	126752	123297	115200	123612		-0.5	-0.3	0.0
Renewable energy			112878	147262	209260	282909	388505	428770	476615		6.4	6.4	2.1
Hydro (pumping excluded)			99714	104505	107334	110738	114158	115386	117780		0.7	0.6	0.3
Wind			12793	40584	86404	143642	222085	248331	279733		21.0	9.9	2.3
Solar			371	2172	15272	27911	48639	59787	72022		45.0	12.3	4.0
Other renewables (tidal etc.)			0	1	249	619	3623	5267	7080			30.7	6.9
Thermal power			407324	434063	479397	510341	491458	497089	510626		1.6	0.2	0.4
of which cogeneration units			77070	84892	99221	113653	115164	125887	135406		2.6	1.5	1.6
of which CCS units			0	0	0	0	5394	5729	5964				1.0
Solids fired			194165	186620	182723	182220	160822	147727	142194		-0.6	-1.3	-1.2
Gas fired			129444	167173	215960	243318	237940	253608	268259		5.3	1.0	1.2
Oil fired			71058	62082	55832	44426	36621	33637	31478		-2.4	-4.1	-1.5
Biomass-waste fired			12051	17502	24091	39502	54673	60217	66153		7.2	8.5	1.9
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			605	686	792	875	1403	1901	2543		2.7	5.9	6.1
Load factor for net electric capacities (%)			49.1	49.1	44.0	41.8	40.2	41.1	39.9				
Efficiency for thermal electricity production (%)			37.6	38.5	39.1	39.9	39.9	40.4	40.3				
CHP indicator (% of electricity from CHP)			11.4	11.7	14.9	18.2	18.4	19.0	19.3				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	1.4	1.4	1.4				
Non fossil fuels in electricity generation (%)			45.8	44.8	47.0	51.0	56.4	57.2	60.2				
- nuclear			31.6	30.5	28.0	26.4	23.9	23.3	24.1				
- renewable energy forms and industrial waste			14.2	14.3	19.0	24.6	32.6	33.9	36.1				
Transport sector													
Passenger transport activity (Gpkm)	**4880.7**	**5307.7**	**5892.2**	**6240.3**	**6511.3**	**7124.9**	**7555.4**	**7986.6**	**8389.8**	**1.9**	**1.0**	**1.5**	**1.1**
Public road transport	544.0	504.0	517.6	526.0	545.0	574.0	600.7	623.3	641.7	-0.5	0.5	1.0	0.7
Private cars and motorcycles	3501.1	3986.3	4428.1	4686.5	4866.1	5288.7	5532.8	5776.4	6003.9	2.4	0.9	1.3	0.8
Rail	472.5	421.7	447.9	461.0	482.5	523.0	564.2	604.9	643.1	-0.5	0.7	1.6	1.3
Aviation	317.3	351.3	456.9	527.3	576.9	696.7	814.1	937.0	1054.9	3.7	2.4	3.5	2.6
Inland navigation	45.8	44.4	41.7	39.5	40.8	42.3	43.7	45.0	46.2	-0.9	-0.2	0.7	0.6
Freight transport activity (Gtkm)	**1848.4**	**1942.4**	**2195.7**	**2494.6**	**2662.6**	**2958.0**	**3124.6**	**3292.3**	**3438.9**	**1.7**	**1.9**	**1.6**	**1.0**
Trucks	1060.4	1288.7	1518.7	1800.3	1940.3	2171.6	2284.4	2407.1	2517.0	3.7	2.5	1.6	1.0
Rail	526.3	386.1	403.7	414.1	440.5	488.2	525.3	555.1	579.6	-2.6	0.9	1.8	1.0
Inland navigation	261.6	267.6	273.3	280.2	281.9	298.2	314.9	330.1	342.2	0.4	0.3	1.1	0.8
Energy demand in transport (ktoe)	**280269**	**300617**	**339389**	**362405**	**370354**	**387688**	**392685**	**392262**	**382591**	**1.9**	**0.9**	**0.6**	**-0.3**
Public road transport	5197	4732	4914	5039	5179	5312	5293	5202	5071	-0.6	0.5	0.2	-0.4
Private cars and motorcycles	154395	166321	182974	187736	186470	184834	181619	176494	168352	1.7	0.2	-0.3	-0.8
Trucks	74969	79037	90951	105104	111595	123528	126197	128168	127810	2.0	2.1	1.2	0.1
Rail	9560	9452	9600	9436	9652	10172	10003	9677	8522	0.0	0.1	0.4	-1.6
Aviation	29038	34112	45395	49703	51992	58165	63638	66535	66467	4.6	1.4	2.0	0.4
Inland navigation	7110	6963	5555	5386	5466	5679	5935	6187	6369	-2.4	-0.2	0.8	0.7

Source: PRIMES

Austria: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**8207**	**8711**	**9820**	**9653**	**10310**	**11117**	**11804**	**11597**	**11984**	**1.8**	**0.5**	**1.4**	**0.2**
Solids	644	305	293	0	0	0	0	0	0	-7.6			
Oil	1295	1108	1116	986	957	850	620	280	230	-1.5	-1.5	-4.2	-9.4
Natural gas	1097	1261	1533	1403	1475	1270	740	670	600	3.4	-0.4	-6.7	-2.1
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	5172	6037	6879	7263	7878	8997	10444	10647	11154	2.9	1.4	2.9	0.7
Hydro	2709	3187	3598	3085	3238	3456	3592	3676	3873	2.9	-1.0	1.0	0.8
Biomass & Waste	2445	2809	3189	3937	4246	4819	5760	5798	5964	2.7	2.9	3.1	0.3
Wind	0	0	6	114	218	351	451	502	574		43.8	7.5	2.4
Solar and others	15	36	64	92	164	353	608	621	667	15.7	9.9	14.0	0.9
Geothermal	4	5	23	35	13	18	32	50	76	20.3	-5.9	9.9	9.0
Net Imports	**17306**	**18028**	**19106**	**24658**	**23645**	**22779**	**22098**	**22047**	**21332**	**1.0**	**2.2**	**-0.7**	**-0.4**
Solids	3112	2550	3019	3959	3520	3230	3221	3181	3385	-0.3	1.5	-0.9	0.5
Oil	9741	10264	11001	13322	12743	12795	12211	11769	10998	1.2	1.5	-0.4	-1.0
- Crude oil and Feedstocks	8043	8309	7975	8225	8213	8302	8255	8320	8071	-0.1	0.3	0.1	-0.2
- Oil products	1699	1955	3026	5098	4529	4493	3956	3449	2927	5.9	4.1	-1.3	-3.0
Natural gas	4443	5404	5253	7203	7124	6643	6521	6813	6591	1.7	3.1	-0.9	0.1
Electricity	-40	-212	-118	229	279	38	-13	-20	-4				
Gross Inland Consumption	**25258**	**27054**	**29046**	**34105**	**33955**	**33896**	**33902**	**33645**	**33316**	**1.4**	**1.6**	**0.0**	**-0.2**
Solids	4042	3344	3592	4039	3520	3230	3221	3181	3385	-1.2	-0.2	-0.9	0.5
Oil	10863	11485	12223	14455	13700	13645	12831	12049	11228	1.2	1.1	-0.7	-1.3
Natural gas	5184	6374	6519	8178	8599	7913	7261	7483	7191	2.3	2.8	-1.7	-0.1
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	-40	-212	-118	229	279	38	-13	-20	-4				
Renewable energy forms	5208	6063	6829	7204	7857	9070	10603	10952	11516	2.7	1.4	3.0	0.8
as % in Gross Inland Consumption													
Solids	16.0	12.4	12.4	11.8	10.4	9.5	9.5	9.5	10.2				
Oil	43.0	42.5	42.1	42.4	40.3	40.3	37.8	35.8	33.7				
Natural gas	20.5	23.6	22.4	24.0	25.3	23.3	21.4	22.2	21.6				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	20.6	22.4	23.5	21.1	23.1	26.8	31.3	32.6	34.6				
Gross Electricity Generation in GWh_e	**49287**	**55170**	**59854**	**62963**	**63522**	**69903**	**73066**	**78894**	**82118**	**2.0**	**0.6**	**1.4**	**1.2**
Self consumption and grid losses	5257	5042	5269	7556	7683	8412	8831	9370	9806	0.0	3.8	1.4	1.1
Fuel Inputs for Thermal Power Generation	**4007**	**4309**	**3901**	**5473**	**4968**	**5199**	**5507**	**6304**	**6495**	**-0.3**	**2.4**	**1.0**	**1.7**
Solids	1510	1055	1239	1510	1377	1141	1146	1154	1161	-2.0	1.1	-1.8	0.1
Oil (including refinery gas)	488	489	279	270	164	166	170	100	173	-5.4	-5.2	0.4	0.1
Gas	1776	2321	1961	2901	2526	2216	1810	2598	2542	1.0	2.6	-3.3	3.5
Biomass & Waste	233	444	421	790	895	1667	2363	2417	2559	6.1	7.8	10.2	0.8
Geothermal heat	0	0	0	2	7	10	18	35	61			9.9	13.2
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**11637**	**11680**	**11550**	**12088**	**11921**	**11951**	**11832**	**11446**	**11161**	**-0.1**	**0.3**	**-0.1**	**-0.6**
Refineries	9317	9445	9077	9374	9171	9153	8875	8600	8301	-0.3	0.1	-0.3	-0.7
Biofuels and hydrogen production	2	5	9	42	245	385	607	736	873	17.5	39.6	9.5	3.7
District heating	347	439	554	663	769	753	722	532	306	4.8	3.3	-0.6	-8.2
Others	1971	1790	1910	2009	1735	1660	1628	1578	1681	-0.3	-1.0	-0.6	0.3
Energy Branch Consumption	**1774**	**1883**	**1924**	**2375**	**2217**	**2095**	**1999**	**1927**	**1852**	**0.8**	**1.4**	**-1.0**	**-0.8**
Non-Energy Uses	**1554**	**1318**	**1576**	**1591**	**1526**	**1582**	**1613**	**1629**	**1648**	**0.1**	**-0.3**	**0.6**	**0.2**
Final Energy Demand	**19124**	**21062**	**23122**	**27107**	**27540**	**28309**	**28368**	**27881**	**27644**	**1.9**	**1.8**	**0.3**	**-0.3**
by sector													
Industry	6366	6684	7757	8601	8658	8611	8697	8718	8852	2.0	1.1	0.0	0.2
- energy intensive industries	4194	4189	5033	5447	5135	5006	5033	5021	5057	1.8	0.2	-0.2	0.0
- other industrial sectors	2172	2495	2723	3154	3522	3605	3664	3697	3796	2.3	2.6	0.4	0.4
Residential	5801	6244	5995	6657	6906	7215	7148	6885	6707	0.3	1.4	0.3	-0.6
Tertiary	2412	2934	3290	3814	3850	4092	4150	4108	4152	3.2	1.6	0.8	0.0
Transport	4545	5200	6081	8034	8127	8391	8373	8170	7932	3.0	2.9	0.3	-0.5
by fuel													
Solids	1785	1582	1399	1497	1228	1229	1224	1176	1165	-2.4	-1.3	0.0	-0.5
Oil	7929	8779	9465	11829	11364	11468	10789	10152	9535	1.8	1.8	-0.5	-1.2
Gas	2968	3607	4265	4788	5502	5273	5032	4476	4333	3.7	2.6	-0.9	-1.5
Electricity	3629	3952	4417	4831	4928	5170	5356	5807	6063	2.0	1.1	0.8	1.2
Heat (from CHP and District Heating) [A]	612	848	1025	1324	1453	2028	2243	2254	2321	5.3	3.6	4.4	0.3
Renewable energy forms	2201	2294	2552	2838	3065	3141	3721	4012	4225	1.5	1.8	2.0	1.3
Other	0	0	0	0	1	1	2	3	2			13.2	-3.3
RES in Gross Final Energy Consumption [B]			**6012**	**6593**	**7033**	**8644**	**9965**	**10210**	**10665**		**1.6**	**3.5**	**0.7**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**80.7**		**84.6**	**97.2**	**92.8**	**89.3**	**85.3**	**83.7**	**81.3**	**0.5**	**0.9**	**-0.8**	**-0.5**
of which ETS sectors GHGs emissions				37.0	32.8	30.4	29.7	31.3	31.2			-1.0	0.5
CO_2 Emissions (energy related)	**55.7**	**58.9**	**61.3**	**74.1**	**70.8**	**67.7**	**63.6**	**61.5**	**58.9**	**1.0**	**1.4**	**-1.1**	**-0.8**
Power generation/District heating	12.8	12.3	11.5	15.0	13.2	11.5	10.5	12.1	11.5	-1.1	1.4	-2.3	0.9
Energy Branch	4.0	4.4	4.5	5.0	4.4	3.3	2.9	2.7	2.6	1.1	-0.1	-4.0	-1.1
Industry	13.1	13.9	15.6	17.4	16.8	16.2	15.8	14.7	14.9	1.8	0.7	-0.6	-0.6
Residential	9.9	9.7	8.5	9.1	9.4	9.4	8.3	7.5	6.9	-1.4	1.0	-1.2	-1.9
Tertiary	3.3	4.0	3.9	4.4	4.2	4.2	3.7	3.2	2.9	1.6	0.8	-1.3	-2.4
Transport	12.7	14.6	17.3	23.2	22.8	23.1	22.4	21.3	20.2	3.1	2.8	-0.2	-1.0
CO_2 Emissions (non energy related)	**8.0**	**7.7**	**8.1**	**9.1**	**8.5**	**8.8**	**9.4**	**9.8**	**10.2**	**0.2**	**0.5**	**1.0**	**0.9**
Non-CO_2 GHGs Emissions	**17.0**		**15.2**	**14.0**	**13.5**	**12.8**	**12.3**	**12.3**	**12.2**	**-1.1**	**-1.1**	**-0.9**	**-0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**104.8**	**120.5**	**115.0**	**110.7**	**105.7**	**103.7**	**100.8**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)									Austria: REFERENCE SCENARIO				
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	7.645	7.943	8.002	8.207	8.405	8.570	8.723	8.866	8.988	0.5	0.5	0.4	0.3
GDP (in 000 MEuro'05)	174.5	194.2	225.0	244.5	254.5	281.9	310.4	337.7	363.5	2.6	1.2	2.0	1.6
Gross Inl. Cons./GDP (toe/MEuro'05)	144.8	139.3	129.1	139.5	133.4	120.2	109.2	99.6	91.7	-1.1	0.3	-2.0	-1.7
Carbon intensity (t of CO_2/toe of GIC)	2.21	2.18	2.11	2.17	2.08	2.00	1.88	1.83	1.77	-0.4	-0.1	-1.0	-0.6
Import Dependency %	68.5	66.6	65.8	72.3	69.6	67.2	65.2	65.5	64.0				
Total Energy-related Costs (C) (in 000 M€05)			19.2	24.8	27.6	32.5	38.3	41.8	42.9		3.7	3.3	1.2
as % of GDP			8.5	10.1	10.8	11.5	12.3	12.4	11.8				
Energy intensity indicators													
Industry (Energy on Value added)	102.4	102.2	100.0	100.8	96.6	86.4	79.5	73.0	68.8	-0.2	-0.3	-1.9	-1.4
Residential (Energy on Private Income)	118.1	114.6	100.0	102.5	103.3	97.6	88.1	78.7	71.7	-1.7	0.3	-1.6	-2.0
Tertiary (Energy on Value added)	96.4	103.2	100.0	106.0	102.7	98.0	89.9	81.6	76.6	0.4	0.3	-1.3	-1.6
Passenger transport (toe/Mpkm)	37.1	36.2	37.9	45.8	44.3	40.6	38.0	34.8	32.3	0.2	1.6	-1.5	-1.6
Freight transport (toe/Mtkm)	44.2	46.3	45.4	59.0	57.1	56.2	53.4	50.7	47.6	0.3	2.3	-0.7	-1.1
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.22	0.19	0.16	0.19	0.16	0.12	0.10	0.11	0.10	-3.5	0.1	-4.5	0.0
Final energy demand (t of CO_2/toe)	2.04	2.01	1.96	2.00	1.93	1.87	1.77	1.67	1.62	-0.4	-0.2	-0.9	-0.9
Industry	2.06	2.08	2.02	2.02	1.94	1.88	1.82	1.68	1.68	-0.2	-0.4	-0.6	-0.8
Residential	1.70	1.55	1.42	1.36	1.36	1.31	1.16	1.08	1.02	-1.8	-0.4	-1.6	-1.3
Tertiary	1.36	1.37	1.17	1.16	1.09	1.02	0.88	0.78	0.69	-1.5	-0.8	-2.0	-2.4
Transport	2.80	2.81	2.85	2.89	2.80	2.75	2.67	2.61	2.54	0.2	-0.2	-0.5	-0.5
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			25.4	23.7	24.8	29.6	34.0	35.4	37.2				
RES in transport (%)			3.7	2.9	6.0	8.4	11.8	14.0	16.9				
Gross Electricity generation by fuel type (in GWh)			**59854**	**62963**	**63522**	**69903**	**73066**	**78894**	**82118**		**0.6**	**1.4**	**1.2**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			5924	6964	5885	5247	5270	5418	5359		-0.1	-1.1	0.2
Petroleum products			1096	1130	858	867	891	449	671		-2.4	0.4	-2.8
Gas (including derived gases)			9407	15163	13450	12236	9977	14092	13236		3.6	-2.9	2.9
Biomass & waste			1524	2494	3079	7096	9575	9788	10317		7.3	12.0	0.7
Hydro			41832	35868	37651	40188	41769	42746	45033		-1.0	1.0	0.8
Wind			67	1328	2538	4086	5246	5839	6680		43.8	7.5	2.4
Solar, tidal etc.			3	14	49	169	314	519	747		32.3	20.3	9.1
Geothermal and other renewables			0	3	11	14	24	43	74			7.8	12.1
Net Generation Capacity in MW_e			**14171**	**15139**	**16863**	**19941**	**20347**	**20050**	**20781**		**1.8**	**1.9**	**0.2**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			7951	8568	9814	11835	12906	13450	14392		2.1	2.8	1.1
Hydro (pumping excluded)			7892	7719	8360	9795	10302	10400	10778		0.6	2.1	0.5
Wind			54	827	1388	1897	2342	2619	3001		38.4	5.4	2.5
Solar			5	22	66	143	261	431	613		29.4	14.8	8.9
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			6220	6571	7049	8106	7442	6600	6388		1.3	0.5	-1.5
of which cogeneration units			2284	2668	2228	3254	3420	3457	4032		-0.2	4.4	1.7
of which CCS units			0	0	0	0	0	0	0				
Solids fired			1865	1708	1618	1604	1596	741	734		-1.4	-0.1	-7.5
Gas fired			3102	3441	4129	4597	3887	3876	3790		2.9	-0.6	-0.3
Oil fired			951	950	885	558	265	263	187		-0.7	-11.4	-3.4
Biomass-waste fired			301	471	416	1346	1690	1715	1669		3.3	15.1	-0.1
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			1	1	1	2	3	5	8		0.0	7.8	12.1
Load factor for net electric capacities (%)			46.8	44.8	40.6	37.6	38.5	42.3	42.5				
Efficiency for thermal electricity production (%)			39.6	40.5	40.3	42.1	40.2	40.6	39.3				
CHP indicator (% of electricity from CHP)			11.3	17.0	15.3	27.3	28.6	27.5	28.0				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			72.6	63.1	68.2	73.7	77.9	74.7	76.5				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			72.6	63.1	68.2	73.7	77.9	74.7	76.5				
Transport sector													
Passenger transport activity (Gpkm)	**80.3**	**90.3**	**95.6**	**101.1**	**104.9**	**113.5**	**119.8**	**126.1**	**131.9**	**1.8**	**0.9**	**1.3**	**1.0**
Public road transport	7.9	8.7	9.2	9.3	9.9	10.6	11.2	11.7	12.1	1.5	0.6	1.3	0.7
Private cars and motorcycles	56.4	63.0	67.8	71.9	73.5	78.4	80.8	83.4	86.1	1.9	0.8	1.0	0.6
Rail	11.7	13.4	12.3	12.8	13.4	14.5	15.6	16.5	17.3	0.5	0.8	1.6	1.0
Aviation	4.2	5.0	6.1	7.0	8.1	10.0	12.1	14.4	16.4	3.9	2.8	4.1	3.1
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.3	-0.5	0.9	0.6
Freight transport activity (Gtkm)	**35.4**	**41.7**	**54.2**	**57.8**	**61.0**	**67.2**	**71.5**	**74.5**	**77.1**	**4.4**	**1.2**	**1.6**	**0.8**
Trucks	21.6	26.5	35.1	37.0	37.7	41.4	43.5	45.0	46.5	5.0	0.7	1.4	0.7
Rail	12.2	13.2	16.6	19.0	21.5	23.8	25.8	27.3	28.1	3.2	2.6	1.9	0.9
Inland navigation	1.7	2.0	2.4	1.8	1.8	2.0	2.1	2.3	2.4	3.9	-3.0	1.8	1.2
Energy demand in transport (ktoe)	**4545**	**5200**	**6081**	**8034**	**8127**	**8391**	**8373**	**8170**	**7932**	**3.0**	**2.9**	**0.3**	**-0.5**
Public road transport	74	79	82	82	86	90	90	89	86	1.0	0.4	0.5	-0.4
Private cars and motorcycles	2570	2699	2922	3839	3762	3602	3438	3171	2958	1.3	2.6	-0.9	-1.5
Trucks	1301	1646	2152	3118	3160	3433	3467	3430	3353	5.2	3.9	0.9	-0.3
Rail	283	309	333	311	340	363	368	364	336	1.6	0.2	0.8	-0.9
Aviation	310	461	586	675	769	894	1000	1105	1186	6.6	2.8	2.7	1.7
Inland navigation	7	6	6	9	9	10	11	11	12	-1.5	4.4	1.5	1.0

Source: PRIMES

Belgium: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**13112**	**12734**	**15509**	**15450**	**15753**	**16954**	**18734**	**9998**	**5006**	**1.7**	**0.2**	**1.7**	**-12.4**
Solids	1085	269	191	57	13	12	10	16	16	-16.0	-23.5	-2.2	4.1
Oil	0	0	0	6	0	0	0	0	0				
Natural gas	10	0	2	0	0	0	0	0	0	-14.3			
Nuclear	10707	10340	12422	12277	12382	12531	12405	5391	0	1.5	0.0	0.0	
Renewable energy sources	1310	2125	2894	3110	3358	4412	6318	4591	4990	8.2	1.5	6.5	-2.3
Hydro	23	29	39	25	31	33	35	37	38	5.6	-2.2	1.1	0.9
Biomass & Waste	1285	2093	2848	3061	3090	3779	4992	3114	3450	8.3	0.8	4.9	-3.6
Wind	1	1	1	20	217	444	847	1035	1153	7.9	67.0	14.6	3.1
Solar and others	1	1	1	3	17	152	431	396	342	2.1	32.5	38.0	-2.3
Geothermal	1	1	4	1	2	4	13	9	7	14.0	-7.6	22.7	-5.8
Net Imports	**39625**	**46863**	**50812**	**53775**	**48957**	**49995**	**48667**	**53740**	**56174**	**2.5**	**-0.4**	**-0.1**	**1.4**
Solids	9493	9343	7566	5511	4292	4705	4618	7000	9376	-2.2	-5.5	0.7	7.3
Oil	22236	26667	29491	32623	29696	29975	28627	27916	27021	2.9	0.1	-0.4	-0.6
- Crude oil and Feedstocks	26896	26573	34067	32206	31702	31984	30790	30189	29402	2.4	-0.7	-0.3	-0.5
- Oil products	-4660	94	-4576	417	-2006	-2009	-2164	-2273	-2381				
Natural gas	8217	10418	13278	14817	14064	14202	13795	17221	18178	4.9	0.6	-0.2	2.8
Electricity	-320	350	372	542	672	785	997	1178	1173		6.1	4.0	1.6
Gross Inland Consumption	**48607**	**54940**	**61461**	**61147**	**57326**	**59370**	**59727**	**55863**	**53049**	**2.4**	**-0.7**	**0.4**	**-1.2**
Solids	10244	8551	8200	5450	4305	4717	4628	7016	9391	-2.2	-6.2	0.7	7.3
Oil	18497	22877	24100	24747	22312	22396	20953	20042	18890	2.7	-0.8	-0.6	-1.0
Natural gas	8169	10611	13369	14740	14064	14202	13795	17221	18178	5.0	0.5	-0.2	2.8
Nuclear	10707	10340	12422	12277	12382	12531	12405	5391	0	1.5	0.0	0.0	
Electricity	-320	350	372	542	672	785	997	1178	1173		6.1	4.0	1.6
Renewable energy forms	1310	2210	2998	3391	3590	4740	6948	5016	5417	8.6	1.8	6.8	-2.5
as % in Gross Inland Consumption													
Solids	21.1	15.6	13.3	8.9	7.5	7.9	7.7	12.6	17.7				
Oil	38.1	41.6	39.2	40.5	38.9	37.7	35.1	35.9	35.6				
Natural gas	16.8	19.3	21.8	24.1	24.5	23.9	23.1	30.8	34.3				
Nuclear	22.0	18.8	20.2	20.1	21.6	21.1	20.8	9.7	0.0				
Renewable energy forms	2.7	4.0	4.9	5.5	6.3	8.0	11.6	9.0	10.2				
Gross Electricity Generation in GWh_e	**70202**	**73524**	**82639**	**85695**	**84692**	**89521**	**93744**	**101084**	**106591**	**1.6**	**0.2**	**1.0**	**1.3**
Self consumption and grid losses	7382	7800	7825	8266	8119	8584	9237	10154	11592	0.6	0.4	1.3	2.3
Fuel Inputs for Thermal Power Generation	**6544**	**7182**	**7493**	**7733**	**6566**	**6953**	**7216**	**12104**	**15470**	**1.4**	**-1.3**	**0.9**	**7.9**
Solids	3875	3764	3025	1889	1624	1862	1798	4229	6581	-2.4	-6.0	1.0	13.9
Oil (including refinery gas)	318	232	186	411	187	286	363	683	724	-5.2	0.1	6.8	7.2
Gas	1983	2721	3790	4612	3936	3815	3034	5482	6218	6.7	0.4	-2.6	7.4
Biomass & Waste	368	465	492	821	819	988	2021	1710	1947	2.9	5.2	9.5	-0.4
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**35940**	**33857**	**42146**	**40638**	**37844**	**38626**	**37541**	**36252**	**35145**	**1.6**	**-1.1**	**-0.1**	**-0.7**
Refineries	29821	29532	38492	37438	35111	35430	33929	32787	31566	2.6	-0.9	-0.3	-0.7
Biofuels and hydrogen production	0	0	0	0	175	448	874	860	964			17.5	1.0
District heating	10	5	41	27	1	1	1	0	0	15.3	-35.1	0.0	
Others	6109	4320	3612	3173	2557	2747	2738	2605	2615	-5.1	-3.4	0.7	-0.5
Energy Branch Consumption	**2307**	**2270**	**2367**	**2125**	**1882**	**1921**	**1877**	**1793**	**1817**	**0.3**	**-2.3**	**0.0**	**-0.3**
Non-Energy Uses	**2749**	**5513**	**6865**	**7495**	**6295**	**6765**	**7124**	**7106**	**7329**	**9.6**	**-0.9**	**1.2**	**0.3**
Final Energy Demand	**32071**	**36073**	**39131**	**38443**	**37099**	**38725**	**38901**	**37669**	**36980**	**2.0**	**-0.5**	**0.5**	**-0.5**
by sector													
Industry	12591	13612	15762	13563	12103	13211	13651	13082	13104	2.3	-2.6	1.2	-0.4
- energy intensive industries	9987	10689	12028	10578	8853	9471	9639	9207	9106	1.9	-3.0	0.9	-0.6
- other industrial sectors	2604	2923	3734	2986	3250	3740	4012	3875	3999	3.7	-1.4	2.1	0.0
Residential	8360	9320	9491	9938	10011	10207	10097	9709	9339	1.3	0.5	0.1	-0.8
Tertiary	3390	4631	4167	5017	5146	5372	5365	5261	5265	2.1	2.1	0.4	-0.2
Transport	7730	8511	9710	9926	9840	9935	9787	9617	9272	2.3	0.1	-0.1	-0.5
by fuel													
Solids	3787	3306	3378	2080	1681	1757	1745	1797	1811	-1.1	-6.7	0.4	0.4
Oil	14927	16434	16130	16529	15758	15619	14413	13582	12621	0.8	-0.2	-0.9	-1.3
Gas	7249	8517	10010	10009	9655	9650	9422	10040	9887	3.3	-0.4	-0.2	0.5
Electricity	4986	5885	6667	6894	6977	7461	7985	8728	9083	2.9	0.5	1.4	1.3
Heat (from CHP and District Heating) [A]	213	220	490	427	516	978	1310	1310	1324	8.7	0.5	9.8	0.1
Renewable energy forms	909	1710	2454	2503	2511	3258	4022	2210	2253	10.4	0.2	4.8	-5.6
Other	0	0	0	0	1	2	3	2	2			16.0	-5.3
RES in Gross Final Energy Consumption [B]			**535**	**910**	**1396**	**2843**	**4863**	**3570**	**3912**		**10.1**	**13.3**	**-2.2**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**139.9**		**146.5**	**135.8**	**125.7**	**125.7**	**120.0**	**135.2**	**143.6**	**0.5**	**-1.5**	**-0.5**	**1.8**
of which ETS sectors GHGs emissions				61.4	50.8	51.5	50.4	67.9	79.5			-0.1	4.7
CO_2 Emissions (energy related)	**106.4**	**112.6**	**115.0**	**107.7**	**97.9**	**98.8**	**92.4**	**107.4**	**115.2**	**0.8**	**-1.6**	**-0.6**	**2.2**
Power generation/District heating	21.8	23.0	22.6	20.6	17.1	18.0	16.2	32.4	43.6	0.3	-2.8	-0.5	10.4
Energy Branch	5.3	5.1	5.3	4.1	2.9	2.8	2.6	2.3	2.2	0.0	-6.0	-0.9	-1.6
Industry	30.3	28.8	30.1	22.7	18.5	19.0	18.9	21.2	21.4	-0.1	-4.8	0.2	1.3
Residential	18.7	20.1	20.1	20.4	20.1	19.8	17.8	15.6	13.6	0.7	0.0	-1.2	-2.6
Tertiary	7.6	10.5	8.2	10.5	10.7	11.0	10.5	10.0	9.8	0.8	2.7	-0.1	-0.7
Transport	22.7	25.0	28.8	29.5	28.7	28.2	26.4	25.9	24.5	2.4	0.0	-0.8	-0.7
CO_2 Emissions (non energy related)	**9.0**	**10.0**	**10.2**	**9.8**	**9.1**	**10.3**	**11.1**	**11.3**	**11.9**	**1.2**	**-1.2**	**2.1**	**0.7**
Non-CO_2 GHGs Emissions	**24.4**		**21.3**	**18.3**	**18.8**	**16.6**	**16.5**	**16.5**	**16.6**	**-1.4**	**-1.3**	**-1.3**	**0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**104.7**	**97.1**	**89.9**	**89.8**	**85.8**	**96.6**	**102.7**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Belgium: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	9.948	10.131	10.239	10.446	10.784	11.070	11.322	11.547	11.745	0.3	0.5	0.5	0.4
GDP (in 000 MEuro'05)	221.2	244.0	278.8	302.1	311.4	351.5	389.5	423.2	458.5	2.3	1.1	2.3	1.6
Gross Inl. Cons./GDP (toe/MEuro'05)	219.7	225.2	220.4	202.4	184.1	168.9	153.3	132.0	115.7	0.0	-1.8	-1.8	-2.8
Carbon intensity (t of CO_2/toe of GIC)	2.19	2.05	1.87	1.76	1.71	1.66	1.55	1.92	2.17	-1.6	-0.9	-1.0	3.4
Import Dependency %	75.2	79.6	76.1	78.2	75.7	74.7	72.2	84.3	91.8				
Total Energy-related Costs [C] (in 000 M€05)			31.6	35.0	35.0	40.3	49.8	55.0	56.7		1.0	3.6	1.3
as % of GDP			11.3	11.6	11.2	11.5	12.8	13.0	12.4				
Energy intensity indicators													
Industry (Energy on Value added)	91.3	100.2	100.0	85.7	77.9	72.0	66.2	60.2	55.5	0.9	-2.5	-1.6	-1.7
Residential (Energy on Private Income)	109.5	110.3	100.0	99.3	99.3	93.1	85.2	76.2	68.7	-0.9	-0.1	-1.5	-2.1
Tertiary (Energy on Value added)	98.1	124.2	100.0	108.9	109.6	99.9	90.0	80.4	74.1	0.2	0.9	-1.9	-1.9
Passenger transport (toe/Mpkm)	45.4	44.2	46.5	46.4	44.4	40.7	38.3	35.4	32.2	0.3	-0.5	-1.5	-1.7
Freight transport (toe/Mtkm)	50.6	49.1	50.5	52.4	51.8	51.4	49.4	47.5	45.1	0.0	0.3	-0.5	-0.9
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.30	0.30	0.25	0.22	0.18	0.17	0.14	0.27	0.35	-1.6	-3.2	-2.3	9.2
Final energy demand (t of CO_2/toe)	2.47	2.34	2.23	2.16	2.10	2.01	1.89	1.93	1.88	-1.0	-0.6	-1.0	-0.1
Industry	2.41	2.11	1.91	1.67	1.53	1.44	1.38	1.62	1.63	-2.3	-2.2	-1.0	1.7
Residential	2.24	2.16	2.11	2.05	2.01	1.94	1.76	1.60	1.46	-0.6	-0.5	-1.3	-1.9
Tertiary	2.23	2.26	1.96	2.09	2.07	2.04	1.96	1.89	1.86	-1.3	0.6	-0.6	-0.6
Transport	2.94	2.94	2.96	2.97	2.92	2.83	2.70	2.70	2.65	0.1	-0.1	-0.8	-0.2
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			1.3	2.3	3.7	7.2	12.2	9.2	10.3				
RES in transport (%)			0.0	0.0	2.2	5.5	11.1	11.1	12.9				
Gross Electricity generation by fuel type (in GWh)			**82639**	**85695**	**84692**	**89521**	**93744**	**101084**	**106591**		**0.2**	**1.0**	**1.3**
Nuclear energy			48148	47586	48002	48578	48092	20899	0		0.0	0.0	
Coal and lignite			13089	7774	6125	7607	7309	21496	39055		-7.3	1.8	18.2
Petroleum products			586	1734	1005	1364	1888	3201	3363		5.5	6.5	5.9
Gas (including derived gases)			19024	25013	22708	21973	18144	34817	41109		1.8	-2.2	8.5
Biomass & waste			1317	3071	3838	4281	7828	7951	8935		11.3	7.4	1.3
Hydro			459	288	366	388	408	428	447		-2.2	1.1	0.9
Wind			15	227	2529	5158	9844	12033	13410		67.0	14.6	3.1
Solar, tidal etc.			0	1	118	172	232	258	273			7.0	1.7
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**13941**	**14716**	**17321**	**18646**	**21192**	**23304**	**24782**		**2.2**	**2.0**	**1.6**
Nuclear energy			5801	5817	5941	5941	5941	2516	0		0.2	0.0	
Renewable energy			117	285	1331	2339	3942	4878	5396		27.6	11.5	3.2
Hydro (pumping excluded)			103	116	116	125	138	148	150		1.2	1.8	0.8
Wind			14	167	1062	2036	3569	4468	4969		54.2	12.9	3.4
Solar			0	2	153	178	236	262	277			4.4	1.7
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			8024	8615	10049	10366	11309	15910	19386		2.3	1.2	5.5
of which cogeneration units			1394	1680	2142	2854	2554	2998	3052		4.4	1.8	1.8
of which CCS units			0	0	0	0	0	0	0				
Solids fired			1964	1709	1476	1076	1079	2710	5484		-2.8	-3.1	17.7
Gas fired			4891	5710	7117	7273	7242	10096	11047		3.8	0.2	4.3
Oil fired			632	639	653	679	997	1159	1172		0.3	4.3	1.6
Biomass-waste fired			537	556	803	1337	1992	1945	1682		4.1	9.5	-1.7
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			64.6	63.6	53.6	52.6	48.5	47.6	46.8				
Efficiency for thermal electricity production (%)			39.0	41.8	44.1	43.6	41.9	47.9	51.4				
CHP indicator (% of electricity from CHP)			6.8	8.8	12.4	17.1	17.8	19.2	17.8				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			60.4	59.7	64.8	65.4	70.8	41.1	21.6				
- nuclear			58.3	55.5	56.7	54.3	51.3	20.7	0.0				
- renewable energy forms and industrial waste			2.2	4.2	8.1	11.2	19.5	20.4	21.6				
Transport sector													
Passenger transport activity (Gpkm)	**116.4**	**127.3**	**137.1**	**145.6**	**152.3**	**164.8**	**170.8**	**177.8**	**184.5**	**1.6**	**1.1**	**1.2**	**0.8**
Public road transport	11.4	13.1	13.3	17.5	18.9	20.0	20.8	21.2	21.5	1.6	3.6	0.9	0.4
Private cars and motorcycles	90.5	99.1	106.5	110.1	113.6	122.3	124.7	128.9	133.2	1.6	0.6	0.9	0.7
Rail	7.3	7.6	8.6	10.1	11.1	12.5	13.5	14.2	14.8	1.7	2.6	2.0	0.9
Aviation	6.6	7.0	8.4	7.6	8.3	9.7	11.5	13.1	14.7	2.4	-0.1	3.3	2.5
Inland navigation	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	-7.4	-0.1	0.4	0.2
Freight transport activity (Gtkm)	**48.3**	**58.6**	**65.9**	**60.5**	**59.3**	**62.9**	**65.7**	**69.9**	**74.1**	**3.2**	**-1.1**	**1.0**	**1.2**
Trucks	34.6	45.6	51.0	43.8	42.4	45.1	47.0	50.6	54.3	4.0	-1.8	1.0	1.4
Rail	8.4	7.3	7.7	8.1	8.3	9.0	9.5	9.8	10.0	-0.9	0.8	1.4	0.5
Inland navigation	5.4	5.7	7.2	8.6	8.6	8.8	9.1	9.5	9.8	3.0	1.8	0.5	0.7
Energy demand in transport (ktoe)	**7730**	**8511**	**9710**	**9926**	**9840**	**9935**	**9787**	**9617**	**9272**	**2.3**	**0.1**	**-0.1**	**-0.5**
Public road transport	104	118	118	153	164	168	165	161	154	1.3	3.3	0.1	-0.7
Private cars and motorcycles	4157	4474	4677	5260	5209	5049	4769	4552	4232	1.2	1.1	-0.9	-1.2
Trucks	2210	2523	3065	2827	2726	2876	2880	2960	2992	3.3	-1.2	0.6	0.4
Rail	178	202	184	186	187	196	192	185	165	0.3	0.2	0.3	-1.5
Aviation	952	945	1530	1281	1334	1423	1552	1523	1488	4.9	-1.4	1.5	-0.4
Inland navigation	130	248	136	218	220	223	229	236	241	0.5	4.9	0.4	0.5

Source: PRIMES

Bulgaria: REFERENCE SCENARIO										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**9136**	**10191**	**9846**	**10612**	**9708**	**10019**	**11559**	**12085**	**12812**	**0.8**	**-0.1**	**1.8**	**1.0**
Solids	5121	5287	4310	4178	4376	4363	3549	2302	2837	-1.7	0.2	-2.1	-2.2
Oil	60	43	43	30	26	25	24	23	22	-3.4	-4.8	-0.8	-0.9
Natural gas	11	40	12	384	237	200	169	143	122	1.3	34.4	-3.3	-3.2
Nuclear	3783	4453	4689	4812	3792	3792	5624	7404	7404	2.2	-2.1	4.0	2.8
Renewable energy sources	161	369	792	1207	1277	1639	2193	2212	2427	17.2	4.9	5.6	1.0
Hydro	161	151	230	373	350	354	359	365	375	3.6	4.3	0.3	0.4
Biomass & Waste	0	219	562	801	849	1028	1360	1324	1425		4.2	4.8	0.5
Wind	0	0	0	0	35	102	167	211	231			16.9	3.3
Solar and others	0	0	0	0	3	44	95	131	156			40.7	5.1
Geothermal	0	0	0	33	41	111	213	181	240			18.0	1.2
Net Imports	**17836**	**13484**	**8718**	**9516**	**9544**	**9948**	**9247**	**9394**	**9174**	**-6.9**	**0.9**	**-0.3**	**-0.1**
Solids	3527	2424	2258	2550	2724	3111	2756	2873	2738	-4.4	1.9	0.1	-0.1
Oil	8553	6519	4118	5186	4683	5004	4957	4944	4756	-7.0	1.3	0.6	-0.4
- Crude oil and Feedstocks	8264	8021	5389	6423	6281	6700	6649	6644	6433	-4.2	1.5	0.6	-0.3
- Oil products	289	-1502	-1271	-1237	-1599	-1696	-1693	-1699	-1677				
Natural gas	5430	4563	2742	2458	2537	2436	2526	2752	2881	-6.6	-0.8	0.0	1.3
Electricity	326	-14	-397	-652	-359	-536	-887	-1087	-1120				
Gross Inland Consumption	**27981**	**23312**	**18647**	**19984**	**19140**	**19843**	**20679**	**21347**	**21849**	**-4.0**	**0.3**	**0.8**	**0.6**
Solids	8706	7673	6417	6892	7101	7474	6305	5175	5574	-3.0	1.0	-1.2	-1.2
Oil	9609	6253	4218	4947	4596	4905	4853	4835	4641	-7.9	0.9	0.5	-0.4
Natural gas	5395	4584	2932	2804	2774	2636	2695	2895	3003	-5.9	-0.6	-0.3	1.1
Nuclear	3783	4453	4689	4812	3792	3792	5624	7404	7404	2.2	-2.1	4.0	2.8
Electricity	326	-14	-397	-652	-359	-536	-887	-1087	-1120				
Renewable energy forms	161	363	788	1182	1237	1572	2089	2123	2347	17.2	4.6	5.4	1.2
as % in Gross Inland Consumption													
Solids	31.1	32.9	34.4	34.5	37.1	37.7	30.5	24.2	25.5				
Oil	34.3	26.8	22.6	24.8	24.0	24.7	23.5	22.7	21.2				
Natural gas	19.3	19.7	15.7	14.0	14.5	13.3	13.0	13.6	13.7				
Nuclear	13.5	19.1	25.1	24.1	19.8	19.1	27.2	34.7	33.9				
Renewable energy forms	0.6	1.6	4.2	5.9	6.5	7.9	10.1	9.9	10.7				
Gross Electricity Generation in GWh_e	**42133**	**41219**	**40639**	**43964**	**39688**	**43063**	**48527**	**53438**	**55949**	**-0.4**	**-0.2**	**2.0**	**1.4**
Self consumption and grid losses	9435	11161	10721	9679	8127	7749	7468	7565	7753	1.3	-2.7	-0.8	0.4
Fuel Inputs for Thermal Power Generation	**10103**	**9160**	**6281**	**6520**	**6281**	**6727**	**5845**	**4818**	**5446**	**-4.6**	**0.0**	**-0.7**	**-0.7**
Solids	6800	6734	5245	5670	5595	5960	4828	3802	4264	-2.6	0.6	-1.5	-1.2
Oil (including refinery gas)	951	612	170	172	44	31	28	25	48	-15.8	-12.6	-4.4	5.5
Gas	2352	1813	863	676	589	543	543	484	478	-9.5	-3.8	-0.8	-1.3
Biomass & Waste	0	0	3	2	54	166	392	431	494		32.2	22.0	2.3
Geothermal heat	0	0	0	0	0	27	54	76	163				11.6
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**13098**	**11654**	**7655**	**8936**	**7747**	**8014**	**7906**	**7810**	**7579**	**-5.2**	**0.1**	**0.2**	**-0.4**
Refineries	8358	8040	5449	6683	6459	6876	6800	6781	6555	-4.2	1.7	0.5	-0.4
Biofuels and hydrogen production	0	0	0	0	23	48	129	137	233			18.8	6.1
District heating	2781	1544	324	370	361	173	89	65	0	-19.3	1.1	-13.0	
Others	1960	2069	1882	1883	903	917	888	827	791	-0.4	-7.1	-0.2	-1.1
Energy Branch Consumption	**1357**	**1457**	**1145**	**1278**	**1321**	**1316**	**1285**	**1302**	**1293**	**-1.7**	**1.4**	**-0.3**	**0.1**
Non-Energy Uses	**1427**	**1236**	**1264**	**1067**	**928**	**1008**	**1100**	**1168**	**1197**	**-1.2**	**-3.0**	**1.7**	**0.9**
Final Energy Demand	**16102**	**11409**	**8602**	**9595**	**9802**	**10555**	**11020**	**11269**	**11400**	**-6.1**	**1.3**	**1.2**	**0.3**
by sector													
Industry	8969	6034	3652	3720	3848	4230	4456	4553	4585	-8.6	0.5	1.5	0.3
- energy intensive industries	5579	4891	2829	2851	2825	2956	2986	2966	2905	-6.6	0.0	0.6	-0.3
- other industrial sectors	3390	1143	824	870	1023	1274	1470	1587	1681	-13.2	2.2	3.7	1.3
Residential	2228	2257	2165	2145	2132	2162	2187	2144	2092	-0.3	-0.2	0.3	-0.4
Tertiary	2382	1139	962	1130	1175	1211	1227	1219	1244	-8.7	2.0	0.4	0.1
Transport	2523	1980	1823	2599	2647	2953	3151	3352	3478	-3.2	3.8	1.8	1.0
by fuel													
Solids	1477	1280	860	951	1138	1152	1129	1048	999	-5.3	2.8	-0.1	-1.2
Oil	4983	2900	3004	3672	3637	3955	3982	4029	3900	-4.9	1.9	0.9	-0.2
Gas	2066	1787	1231	1025	1143	1233	1280	1463	1591	-5.0	-0.7	1.1	2.2
Electricity	3033	2467	2075	2208	2264	2407	2550	2767	2935	-3.7	0.9	1.2	1.4
Heat (from CHP and District Heating) [A]	4543	2798	877	939	822	889	968	934	907	-15.2	-0.6	1.6	-0.6
Renewable energy forms	0	178	555	800	798	920	1109	1027	1066		3.7	3.3	-0.4
Other	0	0	0	0	0	1	2	1	1			22.5	-3.9
RES in Gross Final Energy Consumption [B]			**737**	**958**	**1111**	**1420**	**1890**	**1887**	**2039**		**4.2**	**5.5**	**0.8**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**111.5**		**65.4**	**67.0**	**66.6**	**66.6**	**61.0**	**56.9**	**58.7**	**-5.2**	**0.2**	**-0.9**	**-0.4**
of which ETS sectors GHGs emissions				41.2	40.9	42.0	37.7	33.5	35.4			-0.8	-0.6
CO_2 Emissions (energy related)	**72.5**	**58.0**	**42.1**	**45.1**	**45.2**	**47.2**	**42.4**	**38.2**	**39.7**	**-5.3**	**0.7**	**-0.6**	**-0.7**
Power generation/District heating	44.9	38.1	24.9	26.1	25.4	26.3	21.5	17.0	18.8	-5.7	0.2	-1.7	-1.3
Energy Branch	1.6	1.4	1.3	1.6	1.6	1.6	1.5	1.5	1.5	-2.1	2.5	-0.8	-0.3
Industry	11.2	9.4	8.3	7.5	8.2	8.6	8.6	8.5	8.3	-3.0	-0.1	0.5	-0.4
Residential	3.0	2.2	1.2	1.2	1.2	1.2	1.0	1.0	0.9	-8.9	0.2	-1.5	-1.5
Tertiary	4.8	1.4	1.2	1.1	1.1	1.2	1.0	0.9	0.9	-13.0	-0.4	-1.0	-1.8
Transport	7.1	5.6	5.2	7.6	7.6	8.4	8.8	9.3	9.4	-3.0	3.8	1.4	0.7
CO_2 Emissions (non energy related)	**7.6**	**7.0**	**4.6**	**5.1**	**5.6**	**6.1**	**6.6**	**6.9**	**7.1**	**-4.9**	**2.0**	**1.7**	**0.7**
Non-CO_2 GHGs Emissions	**31.4**		**18.7**	**16.8**	**15.8**	**13.2**	**12.0**	**11.8**	**11.9**	**-5.0**	**-1.7**	**-2.7**	**0.0**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**58.7**	**60.1**	**59.7**	**59.7**	**54.7**	**51.0**	**52.6**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Bulgaria: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	8.767	8.427	8.191	7.761	7.564	7.382	7.188	6.974	6.753	-0.7	-0.8	-0.5	-0.6
GDP (in 000 MEuro'05)	20.1	17.6	16.9	21.9	25.8	30.5	34.7	38.4	42.2	-1.7	4.3	3.0	2.0
Gross Inl. Cons./GDP (toe/MEuro'05)	1390.6	1322.4	1102.5	913.3	743.3	651.6	596.8	555.2	518.0	-2.3	-3.9	-2.2	-1.4
Carbon intensity (t of CO_2/toe of GIC)	2.59	2.49	2.26	2.26	2.36	2.38	2.05	1.79	1.82	-1.4	0.5	-1.4	-1.2
Import Dependency %	63.6	57.2	46.6	47.4	49.6	49.8	44.4	43.7	41.7				
Total Energy-related Costs (C) (in 000 M€05)			5.2	6.6	7.1	9.0	11.5	13.4	14.4		3.1	4.9	2.3
as % of GDP			30.9	30.1	27.6	29.5	33.1	34.9	34.0				
Energy intensity indicators													
Industry (Energy on Value added)	140.7	112.0	100.0	72.1	61.9	52.1	44.8	39.8	36.0	-3.4	-4.7	-3.2	-2.2
Residential (Energy on Private Income)	92.4	105.2	100.0	74.2	63.2	57.5	56.2	53.7	52.6	0.8	-4.5	-1.2	-0.7
Tertiary (Energy on Value added)	201.6	112.3	100.0	93.9	84.9	72.5	66.0	59.9	55.9	-6.8	-1.6	-2.5	-1.7
Passenger transport (toe/Mpkm)	35.8	32.3	28.0	31.2	29.3	28.3	27.8	27.5	26.7	-2.4	0.4	-0.5	-0.4
Freight transport (toe/Mtkm)	34.2	44.4	50.3	55.0	50.1	49.3	48.6	48.0	46.9	3.9	0.0	-0.3	-0.4
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.45	0.49	0.46	0.44	0.46	0.44	0.32	0.24	0.26	0.2	0.2	-3.5	-2.3
Final energy demand (t of CO_2/toe)	1.62	1.62	1.85	1.81	1.85	1.84	1.77	1.75	1.70	1.3	0.0	-0.5	-0.4
Industry	1.25	1.55	2.27	2.02	2.13	2.02	1.94	1.87	1.80	6.2	-0.6	-0.9	-0.7
Residential	1.35	0.97	0.55	0.56	0.57	0.54	0.48	0.45	0.43	-8.7	0.4	-1.7	-1.1
Tertiary	2.00	1.22	1.23	0.96	0.97	1.00	0.84	0.75	0.69	-4.7	-2.4	-1.4	-2.0
Transport	2.81	2.84	2.87	2.91	2.87	2.86	2.78	2.78	2.70	0.2	0.0	-0.3	-0.3
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			7.6	9.1	10.4	12.5	16.0	15.6	16.7				
RES in transport (%)			0.2	0.1	1.4	2.5	6.1	6.1	9.7				
Gross Electricity generation by fuel type (in GWh)			**40639**	**43964**	**39688**	**43063**	**48527**	**53438**	**55949**		**-0.2**	**2.0**	**1.4**
Nuclear energy			18175	18650	14700	14700	22350	30000	30000		-2.1	4.3	3.0
Coal and lignite			16820	18056	17323	19306	15312	12183	13862		0.3	-1.2	-1.0
Petroleum products			590	600	125	90	80	64	116		-14.4	-4.4	3.8
Gas (including derived gases)			2374	2312	2869	2930	2858	2469	2520		1.9	0.0	-1.3
Biomass & waste			8	5	197	676	1670	1803	2015		37.9	23.8	1.9
Hydro			2673	4336	4065	4116	4169	4242	4357		4.3	0.3	0.4
Wind			0	5	406	1190	1942	2448	2681			16.9	3.3
Solar, tidal etc.			0	0	3	24	83	140	209			38.2	9.7
Geothermal and other renewables			0	0	0	32	63	88	189				11.6
Net Generation Capacity in MW_e			**10934**	**10174**	**9634**	**10650**	**11114**	**12458**	**12542**		**-1.3**	**1.4**	**1.2**
Nuclear energy			3473	2678	1885	1910	2870	3817	3817		-5.9	4.3	2.9
Renewable energy			1908	1975	2489	3186	3937	4432	4794		2.7	4.7	2.0
Hydro (pumping excluded)			1908	1967	2097	2122	2136	2191	2340		0.9	0.2	0.9
Wind			0	8	389	1039	1728	2115	2262			16.1	2.7
Solar			0	0	3	25	73	126	192			35.8	10.2
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			5554	5521	5260	5554	4306	4209	3932		-0.5	-2.0	-0.9
of which cogeneration units			972	1108	1198	1330	1661	1573	1529		2.1	3.3	-0.8
of which CCS units			0	0	0	0	0	0	0				
Solids fired			4430	4376	4179	4553	3277	3250	3040		-0.6	-2.4	-0.7
Gas fired			812	834	794	613	516	462	421		-0.2	-4.2	-2.0
Oil fired			271	271	276	279	253	213	132		0.2	-0.9	-6.3
Biomass-waste fired			40	40	11	105	254	274	317		-12.2	37.1	2.2
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	4	7	10	22				11.6
Load factor for net electric capacities (%)			38.0	44.1	43.2	42.9	46.9	46.3	48.1				
Efficiency for thermal electricity production (%)			27.1	27.7	28.1	29.4	29.4	29.6	29.5				
CHP indicator (% of electricity from CHP)			8.5	6.8	14.7	18.6	19.7	16.8	16.3				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			51.3	52.3	48.8	48.2	62.4	72.5	70.5				
- nuclear			44.7	42.4	37.0	34.1	46.1	56.1	53.6				
- renewable energy forms and industrial waste			6.6	9.9	11.8	14.0	16.3	16.3	16.9				
Transport sector													
Passenger transport activity (Gpkm)	**51.9**	**41.6**	**43.0**	**47.5**	**54.5**	**61.6**	**66.2**	**70.5**	**74.4**	**-1.9**	**2.4**	**2.0**	**1.2**
Public road transport	25.9	15.7	13.9	11.4	11.4	11.9	12.1	12.2	12.3	-6.0	-1.9	0.6	0.1
Private cars and motorcycles	14.8	18.6	23.6	29.7	35.6	40.2	42.4	44.2	46.2	4.8	4.2	1.8	0.9
Rail	8.1	5.0	3.9	2.8	3.0	3.1	3.4	3.7	3.9	-7.1	-2.7	1.4	1.5
Aviation	2.8	2.1	1.7	3.6	4.5	6.4	8.2	10.3	12.0	-5.3	10.5	6.2	3.8
Inland navigation	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-22.7	-1.7	0.5	0.3
Freight transport activity (Gtkm)	**19.3**	**14.3**	**12.3**	**20.3**	**21.0**	**24.6**	**27.0**	**29.4**	**31.7**	**-4.5**	**5.5**	**2.5**	**1.6**
Trucks	3.6	5.2	6.4	14.4	14.8	17.7	19.3	20.9	22.5	5.9	8.8	2.6	1.6
Rail	14.1	8.6	5.5	5.2	5.3	6.0	6.7	7.4	8.0	-8.9	-0.4	2.4	1.8
Inland navigation	1.6	0.5	0.3	0.8	0.8	0.9	1.0	1.1	1.2	-15.1	9.8	2.0	1.7
Energy demand in transport (ktoe)	**2523**	**1980**	**1823**	**2599**	**2647**	**2953**	**3151**	**3352**	**3478**	**-3.2**	**3.8**	**1.8**	**1.0**
Public road transport	293	127	108	87	85	87	85	82	78	-9.5	-2.4	0.0	-0.9
Private cars and motorcycles	1266	923	982	1186	1259	1312	1343	1387	1395	-2.5	2.5	0.7	0.4
Trucks	452	504	551	1058	993	1145	1240	1336	1424	2.0	6.1	2.2	1.4
Rail	217	144	78	65	65	70	75	78	69	-9.8	-1.8	1.5	-0.9
Aviation	276	276	101	200	243	335	404	465	509	-9.6	9.2	5.2	2.3
Inland navigation	18	6	3	4	4	4	4	5	5	-16.9	2.6	1.7	1.4

Source: PRIMES

Cyprus: REFERENCE SCENARIO										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**6**	**42**	**45**	**49**	**86**	**182**	**282**	**343**	**408**	**23.2**	**6.6**	**12.7**	**3.8**
Solids	0	0	0	0	0	0	0	0	0				
Oil	0	0	0	0	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	6	42	45	49	86	182	282	343	408	23.2	6.6	12.7	3.8
Hydro	0	0	0	0	0	0	0	0	0				
Biomass & Waste	6	11	10	7	18	37	54	73	91	5.8	6.0	12.0	5.2
Wind	0	0	0	0	0	26	66	87	98				4.0
Solar and others	0	31	35	41	68	119	162	183	220		6.7	9.1	3.1
Geothermal	0	0	0	0	0	0	0	0	0			14.3	20.8
Net Imports	**1638**	**2024**	**2547**	**2816**	**3087**	**3049**	**3100**	**3165**	**3146**	**4.5**	**1.9**	**0.0**	**0.1**
Solids	68	17	36	43	38	43	52	52	57	-6.3	0.6	3.2	0.9
Oil	1570	2007	2511	2773	3049	2638	2605	2637	2568	4.8	2.0	-1.6	-0.1
- Crude oil and Feedstocks	631	797	1153	0	0	0	0	0	0	6.2	-60.7	-0.8	0.0
- Oil products	939	1210	1358	2773	3049	2638	2605	2637	2568	3.8	8.4	-1.6	-0.1
Natural gas	0	0	0	0	0	365	423	456	506			144.8	1.8
Electricity	0	0	0	0	0	0	0	0	0				
Gross Inland Consumption	**1519**	**1976**	**2390**	**2466**	**2855**	**2899**	**3043**	**3158**	**3194**	**4.6**	**1.8**	**0.6**	**0.5**
Solids	60	13	35	36	38	43	52	52	57	-5.3	0.8	3.2	0.9
Oil	1453	1920	2310	2382	2731	2305	2266	2288	2208	4.7	1.7	-1.9	-0.3
Natural gas	0	0	0	0	0	365	423	456	506			144.8	1.8
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	0	0	0	0	0	0	0	0	0				
Renewable energy forms	6	42	45	49	86	185	303	363	424	23.2	6.6	13.4	3.4
as % in Gross Inland Consumption													
Solids	4.0	0.7	1.5	1.4	1.3	1.5	1.7	1.6	1.8				
Oil	95.7	97.2	96.6	96.6	95.7	79.5	74.5	72.4	69.1				
Natural gas	0.0	0.0	0.0	0.0	0.0	12.6	13.9	14.5	15.8				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	0.4	2.1	1.9	2.0	3.0	6.4	9.9	11.5	13.3				
Gross Electricity Generation in GWh_e	**1974**	**2473**	**3369**	**4377**	**4708**	**5333**	**6124**	**6842**	**7598**	**5.5**	**3.4**	**2.7**	**2.2**
Self consumption and grid losses	207	236	353	417	421	404	449	496	533	5.5	1.8	0.7	1.7
Fuel Inputs for Thermal Power Generation	**516**	**641**	**884**	**1077**	**1092**	**936**	**956**	**1018**	**1040**	**5.5**	**2.1**	**-1.3**	**0.8**
Solids	0	0	0	0	0	0	0	0	0				
Oil (including refinery gas)	516	641	884	1077	1085	551	495	505	474	5.5	2.1	-7.5	-0.4
Gas	0	0	0	0	0	365	423	456	505				1.8
Biomass & Waste	0	0	0	0	7	21	38	56	61			18.1	4.9
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**643**	**828**	**1171**	**0**	**4**	**12**	**30**	**30**	**41**	**6.2**	**-44.0**	**23.7**	**3.2**
Refineries	643	828	1171	0	0	0	0	0	0	6.2	-60.7	-0.8	0.0
Biofuels and hydrogen production	0	0	0	0	3	12	30	30	41			24.0	3.2
District heating	0	0	0	0	0	0	0	0	0				
Others	0	0	0	0	0	0	0	0	0				
Energy Branch Consumption	**41**	**43**	**54**	**22**	**21**	**17**	**17**	**18**	**17**	**2.7**	**-9.1**	**-1.9**	**0.1**
Non-Energy Uses	**31**	**62**	**84**	**71**	**61**	**60**	**61**	**63**	**67**	**10.6**	**-3.1**	**-0.1**	**1.0**
Final Energy Demand	**1099**	**1414**	**1640**	**1809**	**2071**	**2301**	**2442**	**2520**	**2561**	**4.1**	**2.4**	**1.7**	**0.5**
by sector													
Industry	277	391	442	316	326	345	359	376	383	4.8	-3.0	1.0	0.6
- energy intensive industries	127	220	225	196	205	223	234	247	253	5.9	-0.9	1.3	0.8
- other industrial sectors	150	171	217	120	120	123	125	130	130	3.7	-5.7	0.4	0.4
Residential	110	179	215	319	363	403	442	447	463	6.9	5.4	2.0	0.5
Tertiary	82	91	129	203	314	396	445	484	505	4.6	9.3	3.5	1.3
Transport	629	752	854	972	1069	1156	1196	1212	1210	3.1	2.3	1.1	0.1
by fuel													
Solids	76	13	35	36	38	43	52	52	57	-7.5	0.8	3.2	0.9
Oil	867	1167	1302	1385	1585	1695	1710	1719	1667	4.2	2.0	0.8	-0.3
Gas	0	0	0	0	0	0	0	0	0			8.6	0.7
Electricity	151	191	258	340	369	424	488	546	608	5.5	3.7	2.8	2.2
Heat (from CHP and District Heating) [A]	0	0	0	0	2	3	4	5	4			9.6	0.0
Renewable energy forms	6	42	45	49	78	135	187	199	225	23.2	5.6	9.2	1.9
Other	0	0	0	0	0	0	0	0	0			9.7	-0.4
RES in Gross Final Energy Consumption [B]			**44**	**48**	**82**	**176**	**282**	**333**	**392**		**6.4**	**13.1**	**3.4**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**5.5**		**9.5**	**9.4**	**9.9**	**9.3**	**9.3**	**9.5**	**9.5**	**5.7**	**0.4**	**-0.7**	**0.2**
of which ETS sectors GHGs emissions				4.9	5.1	4.4	4.5	4.8	4.9			-1.1	0.8
CO_2 Emissions (energy related)	**4.6**	**5.7**	**7.0**	**7.7**	**8.3**	**7.8**	**7.9**	**8.0**	**7.9**	**4.2**	**1.8**	**-0.6**	**0.0**
Power generation/District heating	1.7	2.1	2.8	3.5	3.5	2.6	2.6	2.7	2.7	5.5	2.1	-3.0	0.5
Energy Branch	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.8			
Industry	0.8	1.1	1.3	0.9	0.9	0.9	0.9	1.0	1.0	4.3	-3.7	0.8	0.6
Residential	0.2	0.2	0.2	0.5	0.5	0.5	0.4	0.4	0.3	2.4	7.9	-0.7	-3.5
Tertiary	0.0	0.0	0.0	0.1	0.3	0.4	0.4	0.5	0.4			2.4	-0.6
Transport	1.9	2.2	2.5	2.9	3.2	3.4	3.5	3.5	3.5	3.1	2.2	0.9	0.0
CO_2 Emissions (non energy related)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**				
Non-CO_2 GHGs Emissions	**0.8**		**2.5**	**1.7**	**1.6**	**1.5**	**1.4**	**1.5**	**1.6**	**11.7**	**-4.5**	**-1.2**	**1.3**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**174.1**	**173.2**	**181.8**	**171.1**	**170.0**	**175.0**	**174.0**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Cyprus: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	0.573	0.645	0.690	0.749	0.821	0.888	0.955	1.017	1.072	1.9	1.7	1.5	1.2
GDP (in 000 MEuro'05)	7.5	9.7	11.7	13.7	15.6	18.7	22.5	26.7	30.9	4.6	2.9	3.8	3.2
Gross Inl. Cons./GDP (toe/MEuro'05)	203.6	204.4	205.1	180.5	183.6	155.1	135.1	118.2	103.3	0.1	-1.1	-3.0	-2.7
Carbon intensity (t of CO_2/toe of GIC)	3.04	2.88	2.92	3.13	2.92	2.70	2.58	2.54	2.47	-0.4	0.0	-1.2	-0.4
Import Dependency %	103.9	99.1	98.7	100.8	97.3	94.4	91.7	90.2	88.5				
Total Energy-related Costs [C] (in 000 M€05)			1.2	1.8	2.2	2.6	3.3	3.9	4.2		6.1	4.3	2.2
as % of GDP			10.4	13.2	14.1	13.8	14.8	14.6	13.5				
Energy intensity indicators													
Industry (Energy on Value added)	71.9	89.2	100.0	68.2	63.4	57.6	51.1	46.6	42.2	3.4	-4.4	-2.1	-1.9
Residential (Energy on Private Income)	92.3	102.4	100.0	124.2	126.1	115.4	104.4	89.0	79.3	0.8	2.3	-1.9	-2.7
Tertiary (Energy on Value added)	113.7	89.3	100.0	134.4	181.9	189.8	175.9	160.5	143.8	-1.3	6.2	-0.3	-2.0
Passenger transport (toe/Mpkm)	50.5	48.7	46.1	47.4	46.7	44.0	40.5	36.3	32.6	-0.9	0.1	-1.4	-2.2
Freight transport (toe/Mtkm)	216.8	219.8	225.2	226.3	225.8	224.2	216.1	206.1	195.0	0.4	0.0	-0.4	-1.0
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.84	0.83	0.84	0.79	0.74	0.49	0.42	0.39	0.35	0.0	-1.3	-5.5	-1.7
Final energy demand (t of CO_2/toe)	2.62	2.51	2.46	2.36	2.34	2.26	2.17	2.11	2.03	-0.6	-0.5	-0.8	-0.7
Industry	3.00	2.86	2.87	2.71	2.67	2.61	2.61	2.58	2.59	-0.4	-0.7	-0.2	-0.1
Residential	1.60	1.11	1.05	1.42	1.33	1.19	1.02	0.80	0.68	-4.2	2.4	-2.6	-4.0
Tertiary	0.00	0.00	0.00	0.42	1.10	1.09	0.99	0.99	0.82			-1.1	-1.8
Transport	2.97	2.97	2.98	2.96	2.95	2.93	2.89	2.90	2.87	0.0	-0.1	-0.2	-0.1
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			3.1	3.0	4.5	8.7	13.1	15.1	17.7				
RES in transport (%)			0.0	0.0	0.5	1.6	3.9	4.0	5.8				
Gross Electricity generation by fuel type (in GWh)			**3369**	**4377**	**4708**	**5333**	**6124**	**6842**	**7598**		**3.4**	**2.7**	**2.2**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			0	0	0	0	0	0	0				
Petroleum products			3369	4376	4668	2584	2367	2405	2264		3.3	-6.6	-0.4
Gas (including derived gases)			0	0	0	2323	2693	2923	3434				2.5
Biomass & waste			0	0	28	88	163	267	293			19.2	6.0
Hydro			0	0	0	0	0	0	0				
Wind			0	0	0	304	764	1015	1136				4.0
Solar, tidal etc.			0	1	11	34	137	232	471			28.2	13.2
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**940**	**1105**	**1473**	**1782**	**1993**	**2105**	**2484**		**4.6**	**3.1**	**2.2**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			0	1	7	182	438	609	798			50.3	6.2
Hydro (pumping excluded)			0	0	0	0	0	0	0				
Wind			0	0	0	161	359	470	521				3.8
Solar			0	1	7	21	79	138	277			26.7	13.4
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			940	1103	1466	1601	1556	1497	1686		4.5	0.6	0.8
of which cogeneration units			0	0	2	5	7	7	8			13.9	2.4
of which CCS units			0	0	0	0	0	0	0				
Solids fired			0	0	0	0	0	0	0				
Gas fired			0	0	0	566	566	613	913				4.9
Oil fired			940	1103	1462	1023	967	853	739		4.5	-4.0	-2.7
Biomass-waste fired			0	0	4	12	23	31	35			19.8	4.1
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			38.9	42.6	34.6	32.9	33.9	36.0	34.0				
Efficiency for thermal electricity production (%)			32.8	35.0	37.0	45.9	47.0	47.3	49.5				
CHP indicator (% of electricity from CHP)			0.0	0.0	0.3	0.6	0.7	0.6	0.6				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			0.0	0.0	0.8	8.0	17.4	22.1	25.0				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			0.0	0.0	0.8	8.0	17.4	22.1	25.0				
Transport sector													
Passenger transport activity (Gpkm)	**8.6**	**10.0**	**12.1**	**13.9**	**16.4**	**18.7**	**21.0**	**23.6**	**26.1**	**3.5**	**3.1**	**2.5**	**2.2**
Public road transport	0.9	1.0	1.1	1.3	1.3	1.4	1.5	1.6	1.7	2.8	1.8	1.4	1.1
Private cars and motorcycles	3.1	3.6	4.1	4.9	6.1	6.6	6.8	7.2	7.5	2.8	4.2	1.1	0.9
Rail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Aviation	4.7	5.4	6.9	7.7	8.9	10.7	12.7	14.8	16.9	4.0	2.5	3.6	2.9
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**0.9**	**1.2**	**1.3**	**1.4**	**1.3**	**1.5**	**1.6**	**1.7**	**1.8**	**3.9**	**0.3**	**1.7**	**1.5**
Trucks	0.9	1.2	1.3	1.4	1.3	1.5	1.6	1.7	1.8	3.9	0.3	1.7	1.5
Rail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Energy demand in transport (ktoe)	**629**	**752**	**854**	**972**	**1069**	**1156**	**1196**	**1212**	**1210**	**3.1**	**2.3**	**1.1**	**0.1**
Public road transport	18	21	24	26	28	29	30	30	30	2.6	1.6	0.7	0.0
Private cars and motorcycles	175	200	246	331	393	397	388	358	318	3.5	4.8	-0.1	-2.0
Trucks	194	264	295	315	304	334	344	355	360	4.3	0.3	1.2	0.5
Rail	0	0	0	0	0	0	0	0	0				
Aviation	242	267	290	299	344	396	435	469	502	1.8	1.7	2.4	1.5
Inland navigation	0	0	0	0	0	0	0	0	0				

Source: PRIMES

Czech Republic: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**40090**	**32221**	**29911**	**32845**	**30379**	**31221**	**32360**	**33625**	**34665**	**-2.9**	**0.2**	**0.6**	**0.7**
Solids	36321	27946	25049	23570	20374	19725	18723	18447	18757	-3.6	-2.0	-0.8	0.0
Oil	223	296	461	600	200	200	200	200	197	7.5	-8.0	0.0	-0.1
Natural gas	201	198	169	154	162	163	150	142	136	-1.7	-0.4	-0.8	-1.0
Nuclear	3246	3155	3506	6379	6834	7675	8841	10361	11053	0.8	6.9	2.6	2.3
Renewable energy sources	100	626	727	2142	2808	3458	4446	4475	4522	22.0	14.5	4.7	0.2
Hydro	100	172	151	205	195	198	203	206	209	4.2	2.6	0.4	0.3
Biomass & Waste	0	454	576	1933	2547	3037	3753	3780	3665		16.0	4.0	-0.2
Wind	0	0	0	2	30	61	93	108	122			12.0	2.8
Solar and others	0	0	0	2	36	162	397	381	526			27.0	2.8
Geothermal	0	0	0	0	0	0	0	0	0			8.1	-1.7
Net Imports	**7684**	**8716**	**9448**	**12896**	**14046**	**14606**	**14183**	**13549**	**12487**	**2.1**	**4.0**	**0.1**	**-1.3**
Solids	-5690	-5762	-4765	-3179	-3068	-3456	-3362	-3458	-3815				
Oil	8648	8019	7593	9813	10171	11202	11209	11229	10900	-1.3	3.0	1.0	-0.3
- Crude oil and Feedstocks	7440	7071	5655	7857	8227	9017	9020	9035	8900	-2.7	3.8	0.9	-0.1
- Oil products	1209	948	1937	1956	1944	2185	2189	2194	2000	4.8	0.0	1.2	-0.9
Natural gas	4786	6424	7482	7535	7949	7982	7353	6942	6662	4.6	0.6	-0.8	-1.0
Electricity	-60	36	-861	-1086	-818	-945	-839	-1019	-1152				
Gross Inland Consumption	**48992**	**41605**	**40506**	**45319**	**44424**	**45827**	**46543**	**47174**	**47152**	**-1.9**	**0.9**	**0.5**	**0.1**
Solids	31433	23062	21598	20300	17306	16269	15361	14990	14941	-3.7	-2.2	-1.2	-0.3
Oil	9025	8174	8036	10068	10371	11402	11409	11429	11097	-1.2	2.6	1.0	-0.3
Natural gas	5248	6552	7500	7703	8112	8145	7503	7084	6798	3.6	0.8	-0.8	-1.0
Nuclear	3246	3155	3506	6379	6834	7675	8841	10361	11053	0.8	6.9	2.6	2.3
Electricity	-60	36	-861	-1086	-818	-945	-839	-1019	-1152				
Renewable energy forms	100	626	727	1955	2619	3281	4267	4330	4416	22.0	13.7	5.0	0.3
as % in Gross Inland Consumption													
Solids	64.2	55.4	53.3	44.8	39.0	35.5	33.0	31.8	31.7				
Oil	18.4	19.6	19.8	22.2	23.3	24.9	24.5	24.2	23.5				
Natural gas	10.7	15.7	18.5	17.0	18.3	17.8	16.1	15.0	14.4				
Nuclear	6.6	7.6	8.7	14.1	15.4	16.7	19.0	22.0	23.4				
Renewable energy forms	0.2	1.5	1.8	4.3	5.9	7.2	9.2	9.2	9.4				
Gross Electricity Generation in GWh_e	**62260**	**60564**	**72898**	**81916**	**80310**	**89439**	**94731**	**104140**	**110724**	**1.6**	**1.0**	**1.7**	**1.6**
Self consumption and grid losses	8840	9047	10756	11776	11079	12269	13137	14788	15828	2.0	0.3	1.7	1.9
Fuel Inputs for Thermal Power Generation	**15255**	**11006**	**15753**	**15729**	**15063**	**14440**	**13798**	**13703**	**13824**	**0.3**	**-0.4**	**-0.9**	**0.0**
Solids	14213	10002	13911	14061	13426	12436	11836	11614	11601	-0.2	-0.4	-1.3	-0.2
Oil (including refinery gas)	741	311	203	152	41	72	38	37	30	-12.2	-14.8	-0.6	-2.3
Gas	300	573	1270	1292	1205	1357	1218	1278	1348	15.5	-0.5	0.1	1.0
Biomass & Waste	0	119	369	224	390	575	705	774	843		0.6	6.1	1.8
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**18077**	**14555**	**11640**	**13441**	**12136**	**12794**	**12712**	**12759**	**12663**	**-4.3**	**0.4**	**0.5**	**0.0**
Refineries	8005	7299	6218	8278	8496	9309	9321	9339	9205	-2.5	3.2	0.9	-0.1
Biofuels and hydrogen production	0	11	0	3	238	358	597	696	773			9.7	2.6
District heating	1830	1361	966	922	790	735	588	545	523	-6.2	-2.0	-2.9	-1.2
Others	8242	5885	4456	4239	2613	2392	2206	2179	2163	-6.0	-5.2	-1.7	-0.2
Energy Branch Consumption	**2116**	**1673**	**1919**	**1944**	**2041**	**2141**	**2154**	**2216**	**2236**	**-1.0**	**0.6**	**0.5**	**0.4**
Non-Energy Uses	**1713**	**2379**	**2090**	**2939**	**2853**	**3201**	**3340**	**3508**	**3563**	**2.0**	**3.2**	**1.6**	**0.6**
Final Energy Demand	**32224**	**25067**	**23562**	**25846**	**26652**	**28456**	**29075**	**29065**	**28773**	**-3.1**	**1.2**	**0.9**	**-0.1**
by sector													
Industry	16258	12339	9723	9593	9324	10057	10118	10093	9986	-5.0	-0.4	0.8	-0.1
- energy intensive industries	6961	5795	5990	6654	6068	6397	6299	6254	6162	-1.5	0.1	0.4	-0.2
- other industrial sectors	9297	6544	3733	2939	3256	3660	3819	3840	3824	-8.7	-1.4	1.6	0.0
Residential	7848	5433	5301	6019	6265	6467	6661	6524	6483	-3.8	1.7	0.6	-0.3
Tertiary	5306	4438	4161	4070	4182	4296	4421	4514	4581	-2.4	0.1	0.6	0.4
Transport	2812	2857	4377	6164	6881	7636	7875	7934	7724	4.5	4.6	1.4	-0.2
by fuel													
Solids	13719	5797	4778	3636	2638	2707	2548	2442	2377	-10.0	-5.8	-0.3	-0.7
Oil	6257	5048	5397	6940	7314	7918	7820	7710	7366	-1.5	3.1	0.7	-0.6
Gas	5146	6119	6419	6581	6747	6634	6163	5653	5295	2.2	0.5	-0.9	-1.5
Electricity	4142	4129	4243	4750	4947	5504	5992	6475	6820	0.2	1.5	1.9	1.3
Heat (from CHP and District Heating) [A]	2959	3664	2624	2478	3078	3334	3377	3607	3723	-1.2	1.6	0.9	1.0
Renewable energy forms	0	308	102	1461	1927	2358	3172	3173	3190		34.2	5.1	0.1
Other	0	0	0	0	1	1	4	4	3			20.9	-3.2
RES in Gross Final Energy Consumption [B]			**454**	**1663**	**2344**	**3021**	**4020**	**4110**	**4195**		**17.8**	**5.5**	**0.4**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**207.5**		**150.8**	**149.5**	**140.6**	**137.6**	**130.0**	**127.5**	**125.8**	**-3.1**	**-0.7**	**-0.8**	**-0.3**
of which ETS sectors GHGs emissions				86.5	77.9	74.2	70.9	70.3	70.5			-0.9	-0.1
CO_2 Emissions (energy related)	**158.4**	**104.2**	**117.9**	**118.5**	**111.4**	**109.3**	**103.9**	**101.0**	**98.9**	**-2.9**	**-0.6**	**-0.7**	**-0.5**
Power generation/District heating	67.0	48.0	64.0	64.2	60.5	56.7	53.4	52.6	52.7	-0.4	-0.6	-1.2	-0.1
Energy Branch	2.3	1.6	2.2	2.4	1.9	1.9	1.8	1.7	1.7	-0.4	-1.5	-0.7	-0.3
Industry	46.9	27.6	24.5	21.6	17.3	17.8	16.6	15.7	15.0	-6.3	-3.4	-0.4	-1.0
Residential	21.6	9.9	8.1	6.9	6.9	6.7	6.2	5.6	5.4	-9.3	-1.6	-1.0	-1.3
Tertiary	13.2	9.3	6.7	5.6	5.5	5.1	4.7	4.4	4.1	-6.5	-1.9	-1.5	-1.6
Transport	7.5	7.8	12.4	17.8	19.3	21.2	21.1	21.0	20.1	5.1	4.5	0.9	-0.5
CO_2 Emissions (non energy related)	**18.3**	**13.5**	**12.4**	**11.3**	**10.2**	**11.2**	**11.8**	**12.2**	**12.5**	**-3.8**	**-1.9**	**1.4**	**0.6**
Non-CO_2 GHGs Emissions	**30.8**		**20.5**	**19.7**	**19.0**	**17.1**	**14.4**	**14.3**	**14.4**	**-4.0**	**-0.8**	**-2.7**	**0.0**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**72.7**	**72.0**	**67.8**	**66.3**	**62.7**	**61.4**	**60.6**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)									Czech Republic: REFERENCE SCENARIO				
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	10.362	10.333	10.278	10.221	10.394	10.497	10.543	10.516	10.420	-0.1	0.1	0.1	-0.1
GDP (in 000 MEuro'05)	81.3	77.5	83.4	100.2	114.3	134.8	154.2	169.4	182.5	0.3	3.2	3.0	1.7
Gross Inl. Cons./GDP (toe/MEuro'05)	602.6	537.1	485.7	452.3	388.7	339.9	301.9	278.5	258.3	-2.1	-2.2	-2.5	-1.5
Carbon intensity (t of CO_2/toe of GIC)	3.23	2.50	2.91	2.62	2.51	2.39	2.23	2.14	2.10	-1.0	-1.5	-1.2	-0.6
Import Dependency %	15.7	21.0	23.3	28.5	31.6	31.9	30.5	28.7	26.5				
Total Energy-related Costs [C] (in 000 M€05)			15.3	18.1	19.9	24.7	30.9	35.0	36.0		2.6	4.5	1.5
as % of GDP			18.4	18.1	17.4	18.4	20.0	20.6	19.7				
Energy intensity indicators													
Industry (Energy on Value added)	196.2	170.1	100.0	73.8	61.6	56.3	50.6	46.6	43.3	-6.5	-4.7	-1.9	-1.5
Residential (Energy on Private Income)	163.9	117.2	100.0	97.2	90.2	79.5	71.7	64.1	59.4	-4.8	-1.0	-2.3	-1.9
Tertiary (Energy on Value added)	194.0	113.2	100.0	80.7	73.4	62.8	55.6	51.1	47.8	-6.4	-3.0	-2.7	-1.5
Passenger transport (toe/Mpkm)	19.6	19.5	25.5	31.2	30.7	28.6	26.9	25.4	23.4	2.6	1.9	-1.3	-1.4
Freight transport (toe/Mtkm)	18.9	18.1	31.8	45.8	46.1	45.9	44.0	42.0	39.6	5.4	3.8	-0.4	-1.1
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.64	0.44	0.57	0.53	0.46	0.39	0.35	0.32	0.31	-1.0	-2.2	-2.6	-1.3
Final energy demand (t of CO_2/toe)	2.77	2.18	2.19	2.01	1.84	1.78	1.67	1.61	1.55	-2.3	-1.8	-0.9	-0.8
Industry	2.88	2.24	2.52	2.25	1.86	1.77	1.64	1.55	1.50	-1.3	-3.0	-1.2	-0.9
Residential	2.75	1.83	1.53	1.15	1.10	1.04	0.93	0.86	0.84	-5.7	-3.3	-1.6	-1.1
Tertiary	2.48	2.09	1.61	1.37	1.32	1.19	1.07	0.98	0.88	-4.2	-2.0	-2.0	-1.9
Transport	2.68	2.71	2.83	2.89	2.80	2.77	2.68	2.65	2.60	0.6	-0.1	-0.4	-0.3
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			1.8	6.1	8.3	10.0	13.0	13.2	13.6				
RES in transport (%)			0.2	0.2	3.9	5.3	8.5	9.9	11.4				
Gross Electricity generation by fuel type (in GWh)			**72898**	**81916**	**80310**	**89439**	**94731**	**104140**	**110724**		**1.0**	**1.7**	**1.6**
Nuclear energy			13588	24724	26495	29753	34627	41160	44173		6.9	2.7	2.5
Coal and lignite			52069	48848	43021	45768	46181	48027	50932		-1.9	0.7	1.0
Petroleum products			421	416	181	374	201	183	148		-8.1	1.1	-3.1
Gas (including derived gases)			3893	4714	6385	7714	6894	7255	7419		5.1	0.8	0.7
Biomass & waste			1170	814	1548	2638	3162	3600	3923		2.8	7.4	2.2
Hydro			1758	2380	2263	2306	2361	2397	2433		2.6	0.4	0.3
Wind			0	21	348	713	1077	1256	1418			12.0	2.8
Solar, tidal etc.			0	0	70	172	228	261	278			12.6	2.0
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**13222**	**15228**	**14760**	**17014**	**18071**	**19530**	**20735**		**1.1**	**2.0**	**1.4**
Nuclear energy			1706	3621	3636	3651	4259	5052	5418		7.9	1.6	2.4
Renewable energy			948	1045	1508	1966	2421	2665	2860		4.7	4.8	1.7
Hydro (pumping excluded)			947	1016	1045	1053	1065	1084	1090		1.0	0.2	0.2
Wind			1	29	364	734	1119	1310	1483		80.3	11.9	2.9
Solar			0	0	99	179	236	271	288			9.1	2.0
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			10568	10563	9616	11396	11390	11812	12457		-0.9	1.7	0.9
of which cogeneration units			3510	3621	4107	5079	5720	6240	6385		1.6	3.4	1.1
of which CCS units			0	0	0	0	0	0	0				
Solids fired			9090	8987	7985	9484	9338	9207	9589		-1.3	1.6	0.3
Gas fired			1207	1300	1333	1325	1326	1836	2047		1.0	-0.1	4.4
Oil fired			129	133	136	271	200	187	171		0.6	3.9	-1.5
Biomass-waste fired			143	143	162	316	526	583	649		1.3	12.5	2.1
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			58.1	56.5	57.7	55.8	55.7	56.5	56.5				
Efficiency for thermal electricity production (%)			31.4	30.0	29.2	33.6	35.2	37.1	38.8				
CHP indicator (% of electricity from CHP)			19.4	18.1	25.8	37.6	39.3	39.4	39.2				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			22.7	34.1	38.3	39.8	43.8	46.7	47.2				
- nuclear			18.6	30.2	33.0	33.3	36.6	39.5	39.9				
- renewable energy forms and industrial waste			4.0	3.9	5.3	6.5	7.2	7.2	7.3				
Transport sector													
Passenger transport activity (Gpkm)	**85.3**	**96.3**	**103.4**	**111.9**	**122.0**	**139.1**	**151.0**	**160.3**	**168.2**	**1.9**	**1.7**	**2.2**	**1.1**
Public road transport	14.1	18.6	16.2	15.6	16.3	17.1	17.9	18.4	18.8	1.4	0.1	1.0	0.5
Private cars and motorcycles	45.7	58.1	66.8	71.8	79.8	91.8	98.1	101.3	105.0	3.9	1.8	2.1	0.7
Rail	20.9	15.7	15.4	14.6	14.7	15.3	16.1	16.7	17.2	-3.0	-0.4	0.9	0.7
Aviation	4.6	3.9	5.0	9.9	11.3	14.8	19.0	23.8	27.1	0.7	8.6	5.3	3.6
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**60.3**	**54.2**	**54.9**	**58.4**	**68.1**	**79.6**	**86.8**	**92.0**	**95.7**	**-0.9**	**2.2**	**2.5**	**1.0**
Trucks	18.6	31.3	37.3	43.4	51.3	60.5	65.8	69.8	72.7	7.2	3.2	2.5	1.0
Rail	38.0	22.6	17.5	14.9	16.7	19.0	20.9	22.1	22.8	-7.5	-0.4	2.2	0.9
Inland navigation	3.7	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-31.8	-1.0	1.8	0.5
Energy demand in transport (ktoe)	**2812**	**2857**	**4377**	**6164**	**6881**	**7636**	**7875**	**7934**	**7724**	**4.5**	**4.6**	**1.4**	**-0.2**
Public road transport	100	131	112	107	110	114	113	110	107	1.1	-0.1	0.3	-0.6
Private cars and motorcycles	1351	1518	2249	2961	3172	3308	3299	3228	3048	5.2	3.5	0.4	-0.8
Trucks	768	783	1509	2476	2915	3406	3571	3623	3586	7.0	6.8	2.0	0.0
Rail	272	200	304	272	290	313	306	295	259	1.1	-0.5	0.5	-1.6
Aviation	174	185	197	344	388	489	580	670	717	1.3	7.0	4.1	2.2
Inland navigation	147	40	5	5	6	6	7	7	7	-28.6	1.2	1.6	0.4

Source: PRIMES

Denmark: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**10062**	**15593**	**27665**	**31280**	**25857**	**22965**	**19816**	**17868**	**15632**	**10.6**	**-0.7**	**-2.6**	**-2.3**
Solids	0	0	0	0	0	0	0	0	0				
Oil	6093	9357	18189	18942	14670	12500	9500	8500	7500	11.6	-2.1	-4.3	-2.3
Natural gas	2770	4702	7412	9383	8100	6980	6040	4800	3500	10.3	0.9	-2.9	-5.3
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	1199	1534	2065	2955	3087	3485	4276	4568	4632	5.6	4.1	3.3	0.8
Hydro	2	3	3	2	2	2	2	2	2	1.1	-3.5	3.3	-0.2
Biomass & Waste	1140	1423	1687	2371	2369	2494	2744	2856	2795	4.0	3.5	1.5	0.2
Wind	52	101	365	569	683	888	1287	1398	1487	21.4	6.5	6.5	1.5
Solar and others	2	5	8	10	33	101	243	313	347	12.9	15.3	22.0	3.6
Geothermal	2	2	3	3	0	0	0	0	0	1.9	-36.1	3.3	-0.1
Net Imports	**8621**	**7544**	**-7259**	**-10433**	**-6047**	**-3330**	**-423**	**1200**	**3250**				
Solids	6216	7664	3784	3540	3212	2908	2350	2179	2153	-4.8	-1.6	-3.1	-0.9
Oil	2727	1439	-8277	-9388	-6452	-4508	-1687	-956	-164				
- Crude oil and Feedstocks	2036	804	-9803	-11214	-7192	-5136	-2229	-1364	-472				
- Oil products	691	635	1526	1826	740	628	541	408	308	8.3	-7.0	-3.1	-5.5
Natural gas	-928	-1496	-2882	-5010	-3385	-2599	-2180	-1271	17				
Electricity	606	-68	57	118	92	118	136	185	184	-21.0	4.9	3.9	3.1
Gross Inland Consumption	**17893**	**20283**	**19522**	**19702**	**19050**	**18850**	**18594**	**18250**	**18043**	**0.9**	**-0.2**	**-0.2**	**-0.3**
Solids	6088	6498	3987	3751	3212	2908	2350	2179	2153	-4.1	-2.1	-3.1	-0.9
Oil	8181	9143	8905	8171	7458	7206	7014	6725	6497	0.9	-1.8	-0.6	-0.8
Natural gas	1818	3170	4449	4399	4715	4381	3860	3529	3517	9.4	0.6	-2.0	-0.9
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	608	-68	57	118	92	118	136	185	184	-21.0	4.9	3.9	3.1
Renewable energy forms	1199	1540	2124	3262	3572	4236	5234	5632	5692	5.9	5.3	3.9	0.8
as % in Gross Inland Consumption													
Solids	34.0	32.0	20.4	19.0	16.9	15.4	12.6	11.9	11.9				
Oil	45.7	45.1	45.6	41.5	39.2	38.2	37.7	36.9	36.0				
Natural gas	10.2	15.6	22.8	22.3	24.7	23.2	20.8	19.3	19.5				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	6.7	7.6	10.9	16.6	18.8	22.5	28.2	30.9	31.5				
Gross Electricity Generation in GWh_e	**25733**	**36648**	**36043**	**36348**	**36646**	**37797**	**37137**	**39218**	**41364**	**3.4**	**0.2**	**0.1**	**1.1**
Self consumption and grid losses	3289	4389	3708	3457	3299	3245	2978	3566	3724	1.2	-1.2	-1.0	2.3
Fuel Inputs for Thermal Power Generation	**6016**	**8423**	**7821**	**7165**	**6265**	**6311**	**5686**	**5687**	**5771**	**2.7**	**-2.2**	**-1.0**	**0.1**
Solids	5541	6061	3667	3444	3000	2706	2153	1981	1955	-4.0	-2.0	-3.3	-1.0
Oil (including refinery gas)	237	1008	1344	344	67	55	49	40	35	19.0	-25.9	-3.1	-3.5
Gas	174	975	2112	2003	1874	1864	1624	1479	1459	28.4	-1.2	-1.4	-1.1
Biomass & Waste	65	378	699	1374	1323	1687	1859	2187	2322	26.9	6.6	3.5	2.2
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**9099**	**10781**	**9008**	**8362**	**8385**	**8171**	**8307**	**8116**	**7908**	**-0.1**	**-0.7**	**-0.1**	**-0.5**
Refineries	8048	9985	8472	7841	7478	7364	7271	7136	7028	0.5	-1.2	-0.3	-0.3
Biofuels and hydrogen production	0	0	0	0	134	233	384	438	487			11.1	2.4
District heating	1009	766	519	508	773	574	652	542	393	-6.4	4.1	-1.7	-4.9
Others	42	31	17	13	0	0	0	0	0	-8.4			
Energy Branch Consumption	**733**	**1010**	**1157**	**1264**	**1276**	**1179**	**1052**	**1015**	**977**	**4.7**	**1.0**	**-1.9**	**-0.7**
Non-Energy Uses	**299**	**298**	**298**	**285**	**263**	**277**	**287**	**301**	**317**	**0.0**	**-1.2**	**0.9**	**1.0**
Final Energy Demand	**13522**	**14750**	**14638**	**15457**	**15091**	**15274**	**15273**	**15066**	**14949**	**0.8**	**0.3**	**0.1**	**-0.2**
by sector													
Industry	2715	3031	2941	2866	2638	2508	2467	2502	2539	0.8	-1.1	-0.7	0.3
- energy intensive industries	1078	1125	1149	1117	984	931	921	930	937	0.6	-1.5	-0.7	0.2
- other industrial sectors	1637	1906	1792	1749	1654	1578	1546	1572	1601	0.9	-0.8	-0.7	0.4
Residential	3954	4474	4158	4462	4519	4712	4738	4648	4655	0.5	0.8	0.5	-0.2
Tertiary	2829	2786	2807	2861	2833	2848	2839	2834	2829	-0.1	0.1	0.0	0.0
Transport	4024	4460	4732	5269	5100	5205	5230	5083	4927	1.6	0.8	0.3	-0.6
by fuel													
Solids	396	405	290	253	211	201	195	197	196	-3.1	-3.2	-0.8	0.1
Oil	7127	7162	6979	7234	6628	6448	6230	5993	5790	-0.2	-0.5	-0.6	-0.7
Gas	1159	1691	1667	1702	1847	1756	1548	1461	1432	3.7	1.0	-1.8	-0.8
Electricity	2517	2655	2791	2877	2896	3027	3011	3189	3360	1.0	0.4	0.4	1.1
Heat (from CHP and District Heating) [A]	1758	2242	2255	2444	2393	2633	2658	2590	2498	2.5	0.6	1.1	-0.6
Renewable energy forms	566	595	657	947	1117	1208	1629	1634	1673	1.5	5.4	3.8	0.3
Other	0	0	0	0	0	1	2	2	1			18.4	-7.6
RES in Gross Final Energy Consumption [B]			**1812**	**2774**	**3071**	**3794**	**4790**	**5174**	**5277**		**5.4**	**4.5**	**1.0**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**69.5**		**69.4**	**64.5**	**59.9**	**56.6**	**52.2**	**49.9**	**49.2**	**0.0**	**-1.5**	**-1.4**	**-0.6**
of which ETS sectors GHGs emissions				29.2	25.1	23.3	21.1	19.9	20.1			-1.7	-0.5
CO_2 Emissions (energy related)	**51.7**	**59.3**	**52.3**	**48.9**	**44.8**	**42.0**	**38.1**	**35.8**	**35.0**	**0.1**	**-1.6**	**-1.6**	**-0.8**
Power generation/District heating	24.5	30.2	24.0	19.7	17.2	15.5	13.0	11.7	11.7	-0.2	-3.3	-2.8	-1.0
Energy Branch	1.5	2.0	2.4	2.5	2.5	2.3	2.0	1.9	1.8	4.9	0.7	-2.0	-1.4
Industry	5.4	5.9	5.2	4.9	4.3	3.6	3.4	3.5	3.6	-0.3	-1.9	-2.3	0.5
Residential	4.9	4.9	3.9	3.5	3.6	3.5	3.0	2.7	2.6	-2.3	-0.7	-1.9	-1.6
Tertiary	3.6	3.1	2.9	2.7	2.4	2.3	2.3	2.3	2.3	-2.0	-1.9	-0.5	-0.2
Transport	11.9	13.2	13.9	15.6	14.7	14.7	14.3	13.7	13.1	1.6	0.5	-0.2	-0.9
CO_2 Emissions (non energy related)	**1.5**	**1.9**	**2.4**	**2.2**	**2.1**	**2.2**	**2.2**	**2.3**	**2.4**	**4.8**	**-1.3**	**0.5**	**0.7**
Non-CO_2 GHGs Emissions	**16.3**		**14.7**	**13.4**	**13.1**	**12.3**	**11.9**	**11.8**	**11.8**	**-1.0**	**-1.2**	**-0.9**	**-0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**99.9**	**92.7**	**86.2**	**81.3**	**75.0**	**71.7**	**70.7**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)													Denmark: REFERENCE SCENARIO
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	5.135	5.216	5.330	5.411	5.512	5.591	5.661	5.736	5.808	0.4	0.3	0.3	0.3
GDP (in 000 MEuro'05)	150.8	169.2	194.8	207.4	209.0	226.9	245.9	268.3	289.6	2.6	0.7	1.6	1.7
Gross Inl. Cons./GDP (toe/MEuro'05)	118.7	119.8	100.2	95.0	91.2	83.1	75.6	68.0	62.3	-1.7	-0.9	-1.9	-1.9
Carbon intensity (t of CO_2/toe of GIC)	2.89	2.92	2.68	2.48	2.35	2.23	2.05	1.96	1.94	-0.7	-1.3	-1.4	-0.5
Import Dependency %	45.7	34.5	-34.8	-50.8	-30.5	-17.0	-2.2	6.3	17.2				
Total Energy-related Costs [C] (in 000 M€05)			16.9	18.2	18.6	21.2	24.8	27.2	28.2		1.0	2.9	1.3
as % of GDP			8.7	8.8	8.9	9.3	10.1	10.1	9.7				
Energy intensity indicators													
Industry (Energy on Value added)	105.2	105.9	100.0	91.7	85.3	76.0	69.9	65.0	61.6	-0.5	-1.6	-2.0	-1.3
Residential (Energy on Private Income)	114.7	115.7	100.0	96.2	100.0	97.0	90.5	81.8	75.3	-1.4	0.0	-1.0	-1.8
Tertiary (Energy on Value added)	127.4	113.7	100.0	97.5	94.1	86.1	78.9	72.1	66.5	-2.4	-0.6	-1.7	-1.7
Passenger transport (toe/Mpkm)	36.5	37.6	38.1	41.0	39.7	36.9	35.7	32.5	30.2	0.4	0.4	-1.1	-1.7
Freight transport (toe/Mtkm)	69.2	66.4	66.6	74.5	74.0	73.5	70.4	66.9	61.9	-0.4	1.1	-0.5	-1.3
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.48	0.43	0.35	0.27	0.24	0.20	0.17	0.15	0.15	-3.1	-3.7	-3.3	-1.2
Final energy demand (t of CO_2/toe)	1.91	1.84	1.77	1.73	1.66	1.59	1.51	1.47	1.44	-0.7	-0.7	-0.9	-0.5
Industry	1.98	1.95	1.77	1.70	1.62	1.45	1.38	1.39	1.41	-1.1	-0.9	-1.6	0.2
Residential	1.24	1.09	0.94	0.79	0.80	0.75	0.64	0.58	0.55	-2.8	-1.5	-2.3	-1.4
Tertiary	1.27	1.12	1.04	0.94	0.85	0.82	0.81	0.80	0.80	-1.9	-2.0	-0.5	-0.2
Transport	2.96	2.95	2.95	2.96	2.88	2.83	2.74	2.70	2.66	0.0	-0.2	-0.5	-0.3
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			11.7	16.9	19.2	23.5	30.0	32.9	34.0				
RES in transport (%)			0.1	0.2	3.5	6.0	10.1	12.1	14.5				
Gross Electricity generation by fuel type (in GWh)			**36043**	**36348**	**36646**	**37797**	**37137**	**39218**	**41364**		**0.2**	**0.1**	**1.1**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			15757	15052	13297	12142	8116	8091	8140		-1.7	-4.8	0.0
Petroleum products			4920	1371	352	238	203	169	141		-23.2	-5.3	-3.6
Gas (including derived gases)			9246	9308	10167	9531	7715	7071	7334		1.0	-2.7	-0.5
Biomass & waste			1849	3982	4865	5502	6008	7484	8279		10.2	2.1	3.3
Hydro			30	23	21	28	29	28	29		-3.5	3.3	-0.2
Wind			4240	6613	7938	10321	14964	16250	17295		6.5	6.5	1.5
Solar, tidal etc.			0	0	6	36	102	125	146			31.9	3.7
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**12431**	**13128**	**13199**	**13010**	**12955**	**13523**	**14203**		**0.6**	**-0.2**	**0.9**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			2403	3143	3746	4251	5850	6281	6698		4.5	4.6	1.4
Hydro (pumping excluded)			10	11	11	11	12	12	12		1.0	0.9	0.0
Wind			2392	3129	3719	4202	5731	6138	6530		4.5	4.4	1.3
Solar			1	3	16	38	107	131	156		32.0	20.8	3.8
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			10028	9985	9452	8759	7105	7242	7505		-0.6	-2.8	0.5
of which cogeneration units			4488	4691	4681	5198	4772	4969	5232		0.4	0.2	0.9
of which CCS units			0	0	0	0	0	0	0				
Solids fired			6232	5752	5269	4451	3321	3144	3104		-1.7	-4.5	-0.7
Gas fired			2092	2257	2227	2265	2169	2382	2524		0.6	-0.3	1.5
Oil fired			1124	1099	1022	982	387	228	118		-0.9	-9.2	-11.2
Biomass-waste fired			581	877	934	1061	1226	1488	1759		4.9	2.8	3.7
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			31.6	30.0	30.3	31.9	31.7	31.7	31.9				
Efficiency for thermal electricity production (%)			34.9	35.7	39.4	37.4	33.3	34.5	35.6				
CHP indicator (% of electricity from CHP)			55.4	59.0	66.3	70.4	56.3	56.3	56.5				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			17.0	29.2	35.0	42.0	56.8	60.9	62.2				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			17.0	29.2	35.0	42.0	56.8	60.9	62.2				
Transport sector													
Passenger transport activity (Gpkm)	**68.9**	**71.6**	**76.1**	**79.5**	**82.8**	**88.8**	**92.4**	**96.5**	**100.2**	**1.0**	**0.8**	**1.1**	**0.8**
Public road transport	6.4	7.3	7.4	7.3	7.4	7.8	8.0	8.3	8.5	1.4	0.0	0.8	0.6
Private cars and motorcycles	48.0	49.1	51.9	53.7	56.1	59.5	60.1	61.1	61.8	0.8	0.8	0.7	0.3
Rail	5.1	4.9	5.5	6.1	6.4	6.8	7.3	7.9	8.3	0.9	1.4	1.4	1.3
Aviation	5.2	6.5	7.9	9.3	9.8	11.5	13.5	15.7	18.0	4.3	2.2	3.2	2.9
Inland navigation	4.2	3.8	3.3	3.0	3.1	3.2	3.4	3.5	3.7	-2.5	-0.6	0.9	0.9
Freight transport activity (Gtkm)	**21.7**	**26.7**	**27.5**	**27.0**	**24.5**	**26.3**	**27.5**	**29.1**	**30.7**	**2.4**	**-1.1**	**1.1**	**1.1**
Trucks	18.1	22.4	24.0	23.3	21.0	22.6	23.6	25.0	26.4	2.9	-1.3	1.2	1.1
Rail	1.7	2.0	2.0	2.0	1.8	1.9	2.0	2.1	2.3	1.6	-1.2	1.0	1.4
Inland navigation	1.9	2.3	1.5	1.7	1.7	1.8	1.9	2.0	2.0	-2.4	1.5	0.8	0.7
Energy demand in transport (ktoe)	**4024**	**4460**	**4732**	**5269**	**5100**	**5205**	**5230**	**5083**	**4927**	**1.6**	**0.8**	**0.3**	**-0.6**
Public road transport	59	74	76	75	75	77	76	74	71	2.6	-0.1	0.0	-0.6
Private cars and motorcycles	1627	1776	1882	2100	2098	1992	1850	1651	1477	1.5	1.1	-1.3	-2.2
Trucks	1383	1636	1735	1908	1719	1832	1838	1853	1842	2.3	-0.1	0.7	0.0
Rail	114	118	103	107	97	100	95	90	55	-1.0	-0.6	-0.3	-5.3
Aviation	690	675	820	943	971	1059	1220	1257	1319	1.7	1.7	2.3	0.8
Inland navigation	150	182	116	136	139	145	151	158	163	-2.6	1.9	0.8	0.7

Source: PRIMES

Estonia: REFERENCE SCENARIO										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**5500**	**3354**	**3186**	**4210**	**3310**	**4060**	**4177**	**4108**	**4123**	**-5.3**	**0.4**	**2.4**	**-0.1**
Solids	5050	2868	2672	3176	2454	2893	2492	2429	2436	-6.2	-0.8	0.2	-0.2
Oil	0	0	2	354	120	90	74	60	38		51.3	-4.7	-6.4
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	450	487	512	680	736	1078	1612	1618	1649	1.3	3.7	8.2	0.2
Hydro	0	0	0	2	1	1	2	2	2		13.2	2.3	0.4
Biomass & Waste	450	486	512	674	715	1006	1426	1397	1371	1.3	3.4	7.2	-0.4
Wind	0	0	0	5	18	63	172	205	257		70.7	25.3	4.1
Solar and others	0	0	0	0	1	7	12	15	19			23.8	5.1
Geothermal	0	0	0	0	0	0	0	0	0			19.6	-0.7
Net Imports	**4470**	**1995**	**1593**	**1471**	**1697**	**1550**	**1338**	**1392**	**1451**	**-9.8**	**0.6**	**-2.3**	**0.8**
Solids	697	293	272	30	88	84	81	77	74	-9.0	-10.7	-0.7	-1.0
Oil	3153	1185	744	873	1089	1201	1223	1213	1223	-13.4	3.9	1.2	0.0
- Crude oil and Feedstocks	0	0	0	0	1	1	1	1	1			0.7	-0.1
- Oil products	3153	1185	744	873	1088	1200	1222	1212	1222	-13.4	3.9	1.2	0.0
Natural gas	1222	583	662	800	814	765	836	867	880	-5.9	2.1	0.3	0.5
Electricity	-602	-65	-80	-138	-150	-223	-296	-300	-300				
Gross Inland Consumption	**9919**	**5347**	**4696**	**5559**	**4880**	**5473**	**5372**	**5350**	**5417**	**-7.2**	**0.4**	**1.0**	**0.1**
Solids	5967	3310	2974	3191	2542	2976	2573	2506	2510	-6.7	-1.6	0.1	-0.3
Oil	2872	1039	627	1118	1082	1154	1154	1124	1104	-14.1	5.6	0.6	-0.4
Natural gas	1222	583	662	800	814	765	836	867	880	-5.9	2.1	0.3	0.5
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	-602	-65	-80	-138	-150	-223	-296	-300	-300				
Renewable energy forms	460	481	513	589	593	801	1106	1153	1223	1.1	1.5	6.4	1.0
as % in Gross Inland Consumption													
Solids	60.2	61.9	63.3	57.4	52.1	54.4	47.9	46.8	46.3				
Oil	28.9	19.4	13.4	20.1	22.2	21.1	21.5	21.0	20.4				
Natural gas	12.3	10.9	14.1	14.4	16.7	14.0	15.6	16.2	16.2				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	4.6	9.0	10.9	10.6	12.1	14.6	20.6	21.5	22.6				
Gross Electricity Generation in GWh_e	**17178**	**8691**	**8511**	**10203**	**10697**	**12883**	**13994**	**14580**	**15255**	**-6.8**	**2.3**	**2.7**	**0.9**
Self consumption and grid losses	2879	2858	2162	2194	2258	2524	2374	2344	2300	-2.8	0.4	0.5	-0.3
Fuel Inputs for Thermal Power Generation	**5654**	**2673**	**2439**	**2539**	**2561**	**2967**	**2752**	**2670**	**2708**	**-8.1**	**0.5**	**0.7**	**-0.2**
Solids	5085	2491	2200	2294	2383	2789	2354	2276	2276	-8.0	0.8	-0.1	-0.3
Oil (including refinery gas)	210	80	12	10	1	0	3	2	2	-25.2	-20.9	9.4	-2.9
Gas	357	100	226	227	158	72	125	107	97	-4.5	-3.5	-2.3	-2.5
Biomass & Waste	2	2	2	8	19	106	271	285	333	-0.3	24.6	30.6	2.1
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**1906**	**788**	**662**	**725**	**482**	**482**	**465**	**447**	**433**	**-10.0**	**-3.1**	**-0.3**	**-0.7**
Refineries	1	1	1	1	1	1	1	1	1	0.0	-0.1	0.7	-0.1
Biofuels and hydrogen production	0	0	0	0	18	29	46	56	69			9.5	4.2
District heating	1607	501	456	495	457	448	416	389	362	-11.8	0.0	-0.9	-1.4
Others	299	287	206	229	6	3	2	2	1	-3.7	-30.2	-8.8	-4.5
Energy Branch Consumption	**295**	**148**	**172**	**196**	**186**	**205**	**194**	**192**	**190**	**-5.3**	**0.8**	**0.4**	**-0.2**
Non-Energy Uses	**170**	**230**	**220**	**231**	**210**	**264**	**301**	**332**	**335**	**2.6**	**-0.4**	**3.6**	**1.1**
Final Energy Demand	**6018**	**2496**	**2365**	**2783**	**2807**	**3103**	**3235**	**3320**	**3398**	**-8.9**	**1.7**	**1.4**	**0.5**
by sector													
Industry	2735	787	529	645	694	842	908	964	1031	-15.2	2.8	2.7	1.3
- energy intensive industries	666	429	200	192	189	219	234	242	247	-11.3	-0.5	2.1	0.5
- other industrial sectors	2069	358	328	453	504	623	674	722	784	-16.8	4.4	2.9	1.5
Residential	1277	966	928	889	880	921	945	932	922	-3.1	-0.5	0.7	-0.2
Tertiary	1166	252	329	479	444	497	504	512	518	-11.9	3.0	1.3	0.3
Transport	841	492	579	769	789	843	878	911	927	-3.7	3.1	1.1	0.5
by fuel													
Solids	703	193	117	98	101	128	161	174	192	-16.4	-1.5	4.8	1.8
Oil	1808	858	750	965	966	1038	1041	1044	1009	-8.4	2.6	0.7	-0.3
Gas	439	202	134	207	240	261	268	283	297	-11.2	6.0	1.1	1.0
Electricity	585	386	427	518	547	640	676	726	788	-3.1	2.5	2.2	1.5
Heat (from CHP and District Heating) [A]	2086	593	511	547	519	553	573	578	594	-13.1	0.1	1.0	0.3
Renewable energy forms	397	265	425	447	434	482	514	514	517	0.7	0.2	1.7	0.1
Other	0	0	0	0	0	0	1	1	0			27.0	-4.5
RES in Gross Final Energy Consumption [B]			**426**	**548**	**569**	**760**	**1035**	**1082**	**1150**		**2.9**	**6.2**	**1.1**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**43.7**		**17.6**	**18.4**	**18.3**	**19.8**	**18.0**	**17.7**	**17.8**	**-8.7**	**0.4**	**-0.2**	**-0.1**
of which ETS sectors GHGs emissions				12.5	12.4	14.0	12.4	12.1	12.2			0.0	-0.2
CO_2 Emissions (energy related)	**37.1**	**16.0**	**13.9**	**15.0**	**15.2**	**17.0**	**15.4**	**15.0**	**15.0**	**-9.4**	**0.9**	**0.1**	**-0.3**
Power generation/District heating	27.3	12.1	10.7	11.1	11.2	12.6	10.8	10.4	10.4	-8.9	0.4	-0.3	-0.4
Energy Branch	0.4	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	-11.7	0.9	-0.3	-1.2
Industry	4.6	1.7	0.8	0.8	1.0	1.2	1.3	1.4	1.5	-16.1	1.9	3.5	0.8
Residential	1.2	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	-13.5	-3.1	-1.7	-0.9
Tertiary	1.2	0.3	0.3	0.5	0.4	0.4	0.4	0.5	0.5	-14.1	4.7	0.5	0.1
Transport	2.4	1.4	1.7	2.3	2.3	2.4	2.5	2.5	2.5	-3.6	3.0	0.8	0.0
CO_2 Emissions (non energy related)	**0.9**	**0.6**	**0.6**	**0.6**	**0.6**	**0.7**	**0.8**	**0.9**	**1.0**	**-4.7**	**-0.3**	**3.7**	**2.0**
Non-CO_2 GHGs Emissions	**5.6**		**3.1**	**2.8**	**2.5**	**2.1**	**1.8**	**1.8**	**1.8**	**-5.7**	**-2.0**	**-3.4**	**0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**40.2**	**42.2**	**41.9**	**45.3**	**41.2**	**40.6**	**40.8**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Estonia: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	1.571	1.448	1.372	1.348	1.333	1.323	1.311	1.292	1.267	-1.3	-0.3	-0.2	-0.3
GDP (in 000 MEuro'05)	8.3	5.7	7.6	11.1	11.2	13.5	15.4	17.4	19.4	-0.9	3.9	3.3	2.3
Gross Inl. Cons./GDP (toe/MEuro'05)	1196.0	943.4	618.0	501.2	436.1	406.9	348.1	308.3	279.4	-6.4	-3.4	-2.2	-2.2
Carbon intensity (t of CO_2/toe of GIC)	3.74	2.99	2.96	2.70	3.11	3.10	2.86	2.81	2.77	-2.3	0.5	-0.8	-0.3
Import Dependency %	44.3	36.7	33.2	25.9	33.9	27.6	24.3	25.3	26.0				
Total Energy-related Costs [C] (in 000 M€05)			1.3	1.8	2.0	2.5	3.2	3.7	3.9		4.6	4.8	2.1
as % of GDP			16.7	16.2	17.7	18.3	20.6	21.3	20.1				
Energy intensity indicators													
Industry (Energy on Value added)	319.4	219.8	100.0	69.4	62.5	59.0	55.1	51.4	48.6	-11.0	-4.6	-1.3	-1.2
Residential (Energy on Private Income)	136.3	146.4	100.0	60.7	69.8	63.5	59.0	53.8	48.6	-3.1	-3.5	-1.7	-1.9
Tertiary (Energy on Value added)	402.7	106.6	100.0	104.0	106.8	95.1	84.3	75.9	68.3	-13.0	0.7	-2.3	-2.1
Passenger transport (toe/Mpkm)	37.6	42.8	33.8	32.2	31.5	29.4	28.5	27.5	25.8	-1.1	-0.7	-1.0	-1.0
Freight transport (toe/Mtkm)	40.4	26.9	19.1	19.0	22.4	22.2	22.1	22.0	21.7	-7.2	1.6	-0.1	-0.2
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.64	0.70	0.67	0.62	0.62	0.61	0.49	0.46	0.44	0.5	-0.8	-2.2	-1.1
Final energy demand (t of CO_2/toe)	1.56	1.55	1.28	1.36	1.38	1.37	1.37	1.36	1.33	-2.0	0.7	-0.1	-0.3
Industry	1.66	2.18	1.50	1.27	1.38	1.46	1.48	1.43	1.41	-1.1	-0.8	0.7	-0.5
Residential	0.93	0.48	0.30	0.25	0.23	0.18	0.18	0.17	0.17	-10.6	-2.6	-2.4	-0.7
Tertiary	1.05	1.00	0.82	0.98	0.96	0.89	0.88	0.90	0.87	-2.5	1.7	-0.8	-0.2
Transport	2.89	2.90	2.92	2.95	2.89	2.86	2.80	2.76	2.66	0.1	-0.1	-0.3	-0.5
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			16.0	17.9	18.4	22.3	29.3	30.0	31.3				
RES in transport (%)			0.0	0.0	2.5	3.8	6.0	7.4	10.0				
Gross Electricity generation by fuel type (in GWh)			**8511**	**10203**	**10697**	**12883**	**13994**	**14580**	**15255**		**2.3**	**2.7**	**0.9**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			7604	9261	9824	11395	10114	10313	10313		2.6	0.3	0.2
Petroleum products			37	32	4	0	13	11	10		-20.4	13.3	-2.9
Gas (including derived gases)			859	809	554	325	725	672	600		-4.3	2.7	-1.9
Biomass & waste			6	25	87	406	1116	1178	1301		30.7	29.1	1.5
Hydro			5	22	17	17	22	22	22		13.2	2.3	0.4
Wind			1	54	210	737	2001	2379	2988		70.7	25.3	4.1
Solar, tidal etc.			0	0	1	2	4	5	20			15.8	19.1
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**2575**	**2293**	**2423**	**2660**	**3257**	**3573**	**3893**		**-0.6**	**3.0**	**1.8**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			3	36	115	406	940	1095	1329		45.2	23.4	3.5
Hydro (pumping excluded)			2	5	5	5	6	6	6		9.6	1.9	0.0
Wind			1	31	108	399	930	1084	1303		64.2	24.0	3.4
Solar			0	0	2	2	4	5	20			6.3	18.2
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			2572	2257	2308	2254	2317	2478	2564		-1.1	0.0	1.0
of which cogeneration units			486	345	374	330	412	469	500		-2.6	1.0	2.0
of which CCS units			0	0	0	0	0	0	0				
Solids fired			2348	2023	2056	1926	1918	1903	1903		-1.3	-0.7	-0.1
Gas fired			205	205	206	259	239	405	464		0.0	1.5	6.9
Oil fired			12	12	7	7	3	3	2		-5.6	-9.2	-3.5
Biomass-waste fired			7	16	39	62	157	168	195		19.5	14.9	2.2
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			33.7	45.4	44.9	49.4	44.6	42.4	40.9				
Efficiency for thermal electricity production (%)			30.0	34.3	35.2	35.1	37.4	39.2	38.8				
CHP indicator (% of electricity from CHP)			11.7	11.0	16.1	15.8	18.7	21.1	21.0				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			0.1	1.0	3.0	9.0	22.5	24.6	28.4				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			0.1	1.0	3.0	9.0	22.5	24.6	28.4				
Transport sector													
Passenger transport activity (Gpkm)	**10.0**	**8.1**	**10.3**	**14.2**	**14.4**	**15.5**	**16.1**	**16.7**	**17.4**	**0.3**	**3.4**	**1.1**	**0.8**
Public road transport	4.5	2.0	2.6	2.7	2.7	2.7	2.8	2.8	2.9	-5.1	0.1	0.3	0.4
Private cars and motorcycles	3.1	5.2	6.8	10.0	10.1	10.9	11.0	11.1	11.1	8.0	4.1	0.8	0.1
Rail	1.6	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.4	-13.8	-0.2	1.0	0.4
Aviation	0.4	0.1	0.2	0.7	0.8	1.1	1.5	2.0	2.6	-6.7	16.8	6.0	5.3
Inland navigation	0.4	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	-1.6	-0.3	0.6	0.4
Freight transport activity (Gtkm)	**11.5**	**5.4**	**12.0**	**16.5**	**15.1**	**17.4**	**19.0**	**20.5**	**22.1**	**0.5**	**2.3**	**2.4**	**1.5**
Trucks	4.5	1.5	3.9	5.8	6.6	7.6	8.3	9.2	10.1	-1.4	5.2	2.4	2.0
Rail	7.0	3.8	8.1	10.6	8.5	9.8	10.7	11.4	12.0	1.5	0.5	2.3	1.2
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Energy demand in transport (ktoe)	**841**	**492**	**579**	**769**	**789**	**843**	**878**	**911**	**927**	**-3.7**	**3.1**	**1.1**	**0.5**
Public road transport	59	13	15	16	16	16	15	15	14	-12.5	0.2	-0.3	-0.6
Private cars and motorcycles	267	308	305	385	375	367	354	338	309	1.4	2.1	-0.6	-1.4
Trucks	407	104	180	266	299	344	375	406	437	-7.8	5.2	2.3	1.5
Rail	66	45	52	49	39	44	45	46	43	-2.4	-2.8	1.5	-0.5
Aviation	36	18	20	42	49	61	76	93	112	-5.9	9.6	4.6	3.9
Inland navigation	7	4	7	11	11	12	12	12	12	0.0	4.9	0.5	0.2

Source: PRIMES

Finland: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**11860**	**13166**	**14991**	**16468**	**16156**	**19391**	**20522**	**20211**	**19334**	**2.4**	**0.8**	**2.4**	**-0.6**
Solids	1581	2061	1207	2129	1705	1268	1276	1308	1309	-2.7	3.5	-2.9	0.3
Oil	0	15	37	205	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	5006	4957	5799	6003	5997	8845	9131	9363	9341	1.5	0.3	4.3	0.2
Renewable energy sources	5273	6133	7949	8131	8454	9278	10115	9540	8684	4.2	0.6	1.8	-1.5
Hydro	934	1111	1261	1185	1136	1147	1152	1167	1179	3.0	-1.0	0.1	0.2
Biomass & Waste	4338	5021	6681	6930	7265	7933	8555	7833	6956	4.4	0.8	1.6	-2.0
Wind	0	1	7	15	45	139	295	414	443		21.0	20.6	4.2
Solar and others	0	0	1	1	8	59	113	126	105	3.8	30.6	30.3	-0.7
Geothermal	0	0	0	0	0	0	0	0	0			22.2	-12.0
Net Imports	**18124**	**15650**	**18587**	**19306**	**18730**	**17097**	**16273**	**16176**	**16328**	**0.3**	**0.1**	**-1.4**	**0.0**
Solids	4378	3774	3533	3338	4103	3092	3140	3109	2991	-2.1	1.5	-2.6	-0.5
Oil	10570	8314	10610	10985	9256	9074	8410	8130	8163	0.0	-1.4	-1.0	-0.3
- Crude oil and Feedstocks	8930	8579	12164	11068	10345	10171	9537	9268	9303	3.1	-1.6	-0.8	-0.2
- Oil products	1639	-265	-1553	-84	-1089	-1097	-1127	-1138	-1140				
Natural gas	2261	2839	3422	3598	4206	3721	3417	3544	3900	4.2	2.1	-2.1	1.3
Electricity	915	723	1021	1463	1088	860	662	559	539	1.1	0.6	-4.8	-2.0
Gross Inland Consumption	**29046**	**29070**	**32544**	**34666**	**34415**	**36008**	**36314**	**35898**	**35158**	**1.1**	**0.6**	**0.5**	**-0.3**
Solids	5327	5950	5087	4925	5808	4359	4416	4417	4299	-0.5	1.3	-2.7	-0.3
Oil	10029	8455	9266	10625	8784	8595	7929	7640	7660	-0.8	-0.5	-1.0	-0.3
Natural gas	2261	2839	3422	3598	4206	3721	3417	3544	3900	4.2	2.1	-2.1	1.3
Nuclear	5006	4957	5799	6003	5997	8845	9131	9363	9341	1.5	0.3	4.3	0.2
Electricity	915	723	1021	1463	1088	860	662	559	539	1.1	0.6	-4.8	-2.0
Renewable energy forms	5508	6146	7949	8053	8531	9628	10759	10375	9419	3.7	0.7	2.3	-1.3
as % in Gross Inland Consumption													
Solids	18.3	20.5	15.6	14.2	16.9	12.1	12.2	12.3	12.2				
Oil	34.5	29.1	28.5	30.7	25.5	23.9	21.8	21.3	21.8				
Natural gas	7.8	9.8	10.5	10.4	12.2	10.3	9.4	9.9	11.1				
Nuclear	17.2	17.1	17.8	17.3	17.4	24.6	25.1	26.1	26.6				
Renewable energy forms	19.0	21.1	24.4	23.2	24.8	26.7	29.6	28.9	26.8				
Gross Electricity Generation in GWh_e	**54367**	**64052**	**69976**	**70540**	**79215**	**86931**	**91064**	**94165**	**93798**	**2.6**	**1.2**	**1.4**	**0.3**
Self consumption and grid losses	5546	6510	5543	5756	6315	7367	7702	8390	8416	0.0	1.3	2.0	0.9
Fuel Inputs for Thermal Power Generation	**5451**	**6714**	**6923**	**7538**	**10545**	**8359**	**8667**	**8427**	**8383**	**2.4**	**4.3**	**-1.9**	**-0.3**
Solids	3216	3882	3168	2974	4439	2928	2952	2608	2371	-0.1	3.4	-4.0	-2.2
Oil (including refinery gas)	294	256	131	107	188	37	35	34	32	-7.8	3.7	-15.5	-0.8
Gas	1015	1581	2106	2384	2941	1672	1440	1673	1739	7.6	3.4	-6.9	1.9
Biomass & Waste	926	996	1518	2073	2977	3723	4240	4113	4241	5.1	7.0	3.6	0.0
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**12101**	**14065**	**15357**	**15526**	**12967**	**13454**	**12957**	**12632**	**13006**	**2.4**	**-1.7**	**0.0**	**0.0**
Refineries	10735	12067	13249	13248	10747	10602	9966	9695	9723	2.1	-2.1	-0.8	-0.2
Biofuels and hydrogen production	0	0	0	0	70	180	322	337	386			16.5	1.8
District heating	573	548	803	954	1150	1703	1682	1600	1879	3.4	3.7	3.9	1.1
Others	793	1451	1306	1325	999	969	988	1000	1017	5.1	-2.6	-0.1	0.3
Energy Branch Consumption	**776**	**959**	**1281**	**1263**	**1221**	**1266**	**1239**	**1254**	**1182**	**5.1**	**-0.5**	**0.1**	**-0.5**
Non-Energy Uses	**1492**	**1203**	**946**	**1149**	**1092**	**1156**	**1161**	**1157**	**1171**	**-4.4**	**1.4**	**0.6**	**0.1**
Final Energy Demand	**21758**	**22069**	**24176**	**25157**	**24664**	**25374**	**25265**	**24756**	**24081**	**1.1**	**0.2**	**0.2**	**-0.5**
by sector													
Industry	9620	9989	12046	11999	11308	11657	11734	11650	11455	2.3	-0.6	0.4	-0.2
- energy intensive industries	7353	7629	9446	9070	8234	8189	8150	7980	7779	2.5	-1.4	-0.1	-0.5
- other industrial sectors	2268	2360	2599	2929	3073	3467	3584	3670	3676	1.4	1.7	1.5	0.3
Residential	5333	5430	4541	4849	5071	5184	5143	4895	4730	-1.6	1.1	0.1	-0.8
Tertiary	2483	2487	3132	3478	3565	3781	3739	3685	3588	2.3	1.3	0.5	-0.4
Transport	4321	4162	4457	4831	4721	4753	4648	4527	4308	0.3	0.6	-0.2	-0.8
by fuel													
Solids	1621	1277	1099	966	745	799	818	1154	1282	-3.8	-3.8	0.9	4.6
Oil	8131	7591	7535	7920	6725	6578	6023	5754	5788	-0.8	-1.1	-1.1	-0.4
Gas	1501	1523	1328	1156	893	1263	1181	1172	1079	-1.2	-3.9	2.8	-0.9
Electricity	5068	5608	6487	6959	7284	7628	7760	7867	7817	2.5	1.2	0.6	0.1
Heat (from CHP and District Heating) [A]	1915	2126	2780	3597	5042	4851	4792	4496	4702	3.8	6.1	-0.5	-0.2
Renewable energy forms	3522	3944	4946	4559	3975	4255	4688	4312	3412	3.5	-2.2	1.7	-3.1
Other	0	0	0	0	0	1	2	2	1			18.4	-9.0
RES in Gross Final Energy Consumption [B]			**7256**	**7401**	**7848**	**9119**	**9976**	**9735**	**8792**		**0.8**	**2.4**	**-1.3**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**72.2**		**70.1**	**70.3**	**71.3**	**62.0**	**58.3**	**57.7**	**58.1**	**-0.3**	**0.2**	**-2.0**	**0.0**
of which ETS sectors GHGs emissions				37.5	40.4	32.0	31.4	31.0	31.7			-2.5	0.1
CO_2 Emissions (energy related)	**54.4**	**55.6**	**53.7**	**54.1**	**55.6**	**47.9**	**45.4**	**44.9**	**45.3**	**-0.1**	**0.3**	**-2.0**	**0.0**
Power generation/District heating	17.8	21.8	20.2	20.5	28.0	19.8	19.2	18.2	18.5	1.3	3.4	-3.7	-0.4
Energy Branch	1.4	1.6	2.6	2.5	1.8	1.9	1.7	1.6	1.2	6.6	-3.4	-0.8	-3.0
Industry	14.0	12.3	12.5	11.8	7.3	8.0	7.6	8.8	10.3	-1.2	-5.3	0.5	3.1
Residential	6.5	5.9	2.4	2.1	2.1	2.3	2.0	1.8	1.7	-9.6	-1.2	-0.7	-1.1
Tertiary	2.1	1.8	3.0	3.0	2.7	2.6	2.2	2.2	2.0	3.8	-1.2	-1.8	-1.0
Transport	12.7	12.2	13.1	14.2	13.7	13.4	12.7	12.3	11.5	0.3	0.4	-0.7	-1.0
CO_2 Emissions (non energy related)	**3.7**	**3.3**	**3.8**	**3.9**	**3.6**	**3.8**	**3.9**	**4.0**	**4.1**	**0.4**	**-0.5**	**0.8**	**0.5**
Non-CO_2 GHGs Emissions	**14.2**		**12.6**	**12.3**	**12.1**	**10.3**	**9.0**	**8.8**	**8.7**	**-1.2**	**-0.4**	**-2.9**	**-0.3**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**97.1**	**97.4**	**98.7**	**85.9**	**80.8**	**79.9**	**80.5**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Finland: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	4.974	5.099	5.171	5.237	5.337	5.429	5.501	5.549	5.569	0.4	0.3	0.3	0.1
GDP (in 000 MEuro'05)	114.0	109.7	138.8	157.1	165.5	183.9	201.4	217.3	233.5	2.0	1.8	2.0	1.5
Gross Inl. Cons./GDP (toe/MEuro'05)	254.9	265.0	234.5	220.7	207.9	195.8	180.3	165.2	150.6	-0.8	-1.2	-1.4	-1.8
Carbon intensity (t of CO_2/toe of GIC)	1.87	1.91	1.65	1.56	1.61	1.33	1.25	1.25	1.29	-1.3	-0.2	-2.5	0.3
Import Dependency %	61.2	53.2	56.0	54.9	53.7	46.9	44.2	44.5	45.8				
Total Energy-related Costs (C) (in 000 M€05)			15.2	17.9	19.3	22.6	26.5	28.3	28.8		2.5	3.2	0.8
as % of GDP			10.9	11.4	11.7	12.3	13.2	13.0	12.4				
Energy intensity indicators													
Industry (Energy on Value added)	134.0	126.6	100.0	82.1	73.7	67.2	62.1	58.0	54.2	-2.9	-3.0	-1.7	-1.4
Residential (Energy on Private Income)	132.1	141.3	100.0	91.2	93.9	87.8	80.4	71.3	63.8	-2.7	-0.6	-1.5	-2.3
Tertiary (Energy on Value added)	94.6	96.3	100.0	101.6	99.0	93.7	84.3	76.4	68.8	0.6	-0.1	-1.6	-2.0
Passenger transport (toe/Mpkm)	35.9	35.5	35.5	37.8	36.6	33.8	31.7	29.3	26.7	-0.1	0.3	-1.4	-1.7
Freight transport (toe/Mtkm)	46.0	45.8	38.2	36.9	35.8	35.5	33.9	32.4	30.5	-1.8	-0.7	-0.5	-1.1
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.23	0.24	0.19	0.18	0.20	0.13	0.13	0.12	0.12	-1.6	0.2	-4.3	-0.5
Final energy demand (t of CO_2/toe)	1.62	1.46	1.28	1.24	1.04	1.04	0.97	1.01	1.06	-2.3	-2.0	-0.7	0.9
Industry	1.46	1.24	1.03	0.98	0.64	0.68	0.65	0.75	0.90	-3.4	-4.7	0.1	3.3
Residential	1.21	1.09	0.52	0.43	0.41	0.44	0.38	0.37	0.37	-8.1	-2.3	-0.8	-0.3
Tertiary	0.84	0.70	0.97	0.87	0.75	0.69	0.60	0.59	0.56	1.4	-2.5	-2.2	-0.6
Transport	2.94	2.93	2.94	2.94	2.90	2.83	2.74	2.72	2.67	0.0	-0.2	-0.6	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			29.2	28.5	30.7	34.6	38.0	37.8	35.0				
RES in transport (%)			0.3	0.4	2.1	4.9	8.8	9.6	11.8				
Gross Electricity generation by fuel type (in GWh)			**69976**	**70540**	**79215**	**86931**	**91064**	**94165**	**93798**		**1.2**	**1.4**	**0.3**
Nuclear energy			22475	23267	23248	35057	36244	37242	37929		0.3	4.5	0.5
Coal and lignite			14241	11925	14270	9895	10007	9644	8633		0.0	-3.5	-1.5
Petroleum products			554	431	834	144	136	130	126		4.2	-16.6	-0.8
Gas (including derived gases)			10676	11917	14056	9290	8012	9472	8852		2.8	-5.5	1.0
Biomass & waste			7292	9047	13070	17548	19761	19185	19245		6.0	4.2	-0.3
Hydro			14657	13782	13206	13338	13396	13570	13715		-1.0	0.1	0.2
Wind			78	170	525	1614	3426	4810	5154		21.0	20.6	4.2
Solar, tidal etc.			2	3	7	44	81	113	144		13.8	27.3	5.9
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**16630**	**17045**	**17582**	**21512**	**21740**	**20981**	**21269**		**0.6**	**2.1**	**-0.2**
Nuclear energy			2687	2690	2691	4207	4207	4322	4396		0.0	4.6	0.4
Renewable energy			2882	3080	3291	3796	4527	5084	5280		1.3	3.2	1.5
Hydro (pumping excluded)			2841	2994	2994	3068	3104	3129	3144		0.5	0.4	0.1
Wind			38	82	289	682	1339	1838	1987		22.5	16.6	4.0
Solar			3	4	8	46	84	117	149		10.5	26.4	5.9
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			11060	11275	11601	13509	13006	11575	11593		0.5	1.1	-1.1
of which cogeneration units			5965	6033	6717	7122	6801	6758	6535		1.2	0.1	-0.4
of which CCS units			0	0	0	0	0	0	0				
Solids fired			5562	5607	5626	5386	5104	3272	2744		0.1	-1.0	-6.0
Gas fired			3042	3007	3074	3312	3091	3072	3414		0.1	0.1	1.0
Oil fired			898	897	899	478	346	325	176		0.0	-9.1	-6.5
Biomass-waste fired			1558	1763	2001	4333	4464	4906	5260		2.5	8.4	1.7
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			46.1	45.4	49.4	44.0	45.6	48.6	47.8				
Efficiency for thermal electricity production (%)			40.7	38.0	34.4	37.9	37.6	39.2	37.8				
CHP indicator (% of electricity from CHP)			38.3	41.0	39.5	40.8	38.0	39.1	37.7				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			63.6	65.6	63.2	77.8	80.1	79.6	81.2				
- nuclear			32.1	33.0	29.3	40.3	39.8	39.5	40.4				
- renewable energy forms and industrial waste			31.5	32.6	33.8	37.4	40.3	40.0	40.8				
Transport sector													
Passenger transport activity (Gpkm)	**74.6**	**72.8**	**80.0**	**87.0**	**89.5**	**96.2**	**100.1**	**103.8**	**106.7**	**0.7**	**1.1**	**1.1**	**0.6**
Public road transport	8.5	8.0	7.7	7.5	7.6	7.7	7.9	8.1	8.2	-1.0	-0.2	0.4	0.4
Private cars and motorcycles	52.0	50.9	56.6	62.8	64.5	68.9	70.4	71.6	71.8	0.9	1.3	0.9	0.2
Rail	3.7	3.6	3.9	4.0	4.3	4.7	5.0	5.3	5.5	0.6	1.0	1.5	0.9
Aviation	6.1	5.8	7.7	8.8	9.1	10.9	12.8	14.8	16.9	2.4	1.8	3.4	2.9
Inland navigation	4.3	4.5	4.2	3.8	3.9	4.0	4.1	4.1	4.1	-0.4	-0.6	0.4	0.1
Freight transport activity (Gtkm)	**35.8**	**34.5**	**42.4**	**41.8**	**40.4**	**42.3**	**43.5**	**45.7**	**47.9**	**1.7**	**-0.5**	**0.8**	**1.0**
Trucks	26.3	24.5	32.0	31.9	29.7	31.1	32.0	33.8	35.9	2.0	-0.7	0.7	1.2
Rail	8.4	9.6	10.1	9.7	10.4	10.9	11.4	11.7	11.8	1.9	0.3	0.9	0.4
Inland navigation	1.1	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	-12.2	-4.3	1.3	0.9
Energy demand in transport (ktoe)	**4321**	**4162**	**4457**	**4831**	**4721**	**4753**	**4648**	**4527**	**4308**	**0.3**	**0.6**	**-0.2**	**-0.8**
Public road transport	78	72	69	66	66	65	63	61	59	-1.3	-0.4	-0.4	-0.7
Private cars and motorcycles	2023	1967	2089	2459	2427	2322	2193	2019	1777	0.3	1.5	-1.0	-2.1
Trucks	1546	1479	1529	1448	1349	1401	1382	1394	1400	-0.1	-1.2	0.2	0.1
Rail	100	102	94	97	101	105	99	91	66	-0.6	0.7	-0.2	-3.9
Aviation	459	408	505	565	577	654	703	753	797	1.0	1.3	2.0	1.3
Inland navigation	116	134	170	196	202	206	208	208	209	3.9	1.7	0.3	0.0

Source: PRIMES

France: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**111013**	**127609**	**131920**	**136736**	**135229**	**144856**	**155930**	**158294**	**163058**	**1.7**	**0.2**	**1.4**	**0.4**
Solids	7625	5359	2267	383	337	207	0	3	3	-11.4	-17.3		
Oil	3514	3509	2897	1479	0	0	0	0	0	-1.9			
Natural gas	2516	2793	1505	909	0	0	0	0	0	-5.0			
Nuclear	81018	97308	107093	116474	114683	117571	114303	115272	117977	2.8	0.7	0.0	0.3
Renewable energy sources	16339	18641	18160	17492	20209	27078	41627	43019	45077	1.1	1.1	7.5	0.8
Hydro	4635	6322	5822	4496	4900	4921	4932	5147	5202	2.3	-1.7	0.1	0.5
Biomass & Waste	11575	12171	12181	12761	13953	18041	28858	27932	27640	0.5	1.4	7.5	-0.4
Wind	0	0	7	83	977	2865	4843	5496	5988		64.8	17.4	2.1
Solar and others	19	15	26	22	222	948	1999	2574	3196	2.8	24.1	24.6	4.8
Geothermal	110	132	124	130	156	304	995	1870	3051	1.2	2.4	20.3	11.9
Net Imports	**120596**	**116805**	**134196**	**144346**	**138037**	**128645**	**115383**	**112528**	**107106**	**1.1**	**0.3**	**-1.8**	**-0.7**
Solids	13004	9010	13201	13504	11308	7483	7152	6912	6593	0.2	-1.5	-4.5	-0.8
Oil	87127	86307	91185	95364	89902	85987	79409	75859	71682	0.5	-0.1	-1.2	-1.0
- Crude oil and Feedstocks	76561	79689	85250	85529	84026	82219	79072	77307	73674	1.1	-0.1	-0.6	-0.7
- Oil products	10566	6619	5936	9835	5876	3768	337	-1448	-1992	-5.6	-0.1	-24.9	
Natural gas	24371	27493	35778	40720	42005	40800	34572	34153	32444	3.9	1.6	-1.9	-0.6
Electricity	-3907	-6005	-5974	-5187	-5040	-5296	-5323	-4064	-3421				
Gross Inland Consumption	**227754**	**241418**	**259828**	**277086**	**270484**	**270593**	**268373**	**267818**	**267068**	**1.3**	**0.4**	**-0.1**	**0.0**
Solids	19955	15287	15240	14296	11646	7690	7152	6915	6596	-2.7	-2.7	-4.8	-0.8
Oil	88316	86611	89539	92991	87120	83079	76469	72855	68587	0.1	-0.3	-1.3	-1.1
Natural gas	26032	29577	35766	41077	42005	40800	34572	34153	32444	3.2	1.6	-1.9	-0.6
Nuclear	81018	97308	107093	116474	114683	117571	114303	115272	117977	2.8	0.7	0.0	0.3
Electricity	-3907	-6005	-5975	-5188	-5040	-5296	-5323	-4064	-3421				
Renewable energy forms	16339	18641	18165	17436	20071	26750	41200	42688	44885	1.1	1.0	7.5	0.9
as % in Gross Inland Consumption													
Solids	8.8	6.3	5.9	5.2	4.3	2.8	2.7	2.6	2.5				
Oil	38.8	35.9	34.5	33.6	32.2	30.7	28.5	27.2	25.7				
Natural gas	11.4	12.3	13.8	14.8	15.5	15.1	12.9	12.8	12.1				
Nuclear	35.6	40.3	41.2	42.0	42.4	43.4	42.6	43.0	44.2				
Renewable energy forms	7.2	7.7	7.0	6.3	7.4	9.9	15.4	15.9	16.8				
Gross Electricity Generation in GWh_e	**416667**	**490848**	**535963**	**571367**	**566841**	**598563**	**624606**	**654605**	**681000**	**2.5**	**0.6**	**1.0**	**0.9**
Self consumption and grid losses	61718	69726	72429	80428	59131	62982	66095	73857	77767	1.6	-2.0	1.1	1.6
Fuel Inputs for Thermal Power Generation	**10983**	**8553**	**13122**	**16669**	**14220**	**12444**	**15735**	**17571**	**18609**	**1.8**	**0.8**	**1.0**	**1.7**
Solids	7334	5441	6231	6404	5239	1675	1543	1416	1303	-1.6	-1.7	-11.5	-1.7
Oil (including refinery gas)	1920	605	1284	1952	192	459	0	1	1	-3.9	-17.3	-46.0	8.8
Gas	1423	1216	4062	6288	6183	6218	4398	5396	5544	11.1	4.3	-3.3	2.3
Biomass & Waste	306	1290	1545	2024	2597	4005	9279	9234	8999	17.6	5.3	13.6	-0.3
Geothermal heat	0	0	0	0	9	87	514	1524	2762			49.8	18.3
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**90122**	**91635**	**98266**	**95011**	**91862**	**90793**	**88530**	**87243**	**84050**	**0.9**	**-0.7**	**-0.4**	**-0.5**
Refineries	80205	83811	90956	88526	85561	83653	80356	78530	74864	1.3	-0.6	-0.6	-0.7
Biofuels and hydrogen production	0	155	328	408	1697	2667	3873	4628	5096		17.9	8.6	2.8
District heating	1019	588	312	239	206	271	312	304	281	-11.1	-4.1	4.3	-1.0
Others	8898	7081	6669	5838	4398	4203	3989	3781	3809	-2.8	-4.1	-1.0	-0.5
Energy Branch Consumption	**9413**	**10501**	**10829**	**10252**	**10564**	**9260**	**9079**	**9120**	**8805**	**1.4**	**-0.2**	**-1.5**	**-0.3**
Non-Energy Uses	**13454**	**16838**	**15903**	**16133**	**15055**	**14786**	**14521**	**14307**	**14258**	**1.7**	**-0.5**	**-0.4**	**-0.2**
Final Energy Demand	**137226**	**142756**	**152708**	**157515**	**156872**	**158429**	**158149**	**156214**	**153186**	**1.1**	**0.3**	**0.1**	**-0.3**
by sector													
Industry	36439	37119	36887	34001	33760	34210	34688	34880	35168	0.1	-0.9	0.3	0.1
- energy intensive industries	23706	21472	22331	20150	18915	18567	18297	17994	17685	-0.6	-1.6	-0.3	-0.3
- other industrial sectors	12733	15647	14556	13850	14845	15643	16391	16886	17484	1.3	0.2	1.0	0.6
Residential	37053	37201	42587	45295	45197	45717	45396	44100	43127	1.4	0.6	0.0	-0.5
Tertiary	21698	24144	21648	28279	28584	29166	28999	28436	28303	0.0	2.8	0.1	-0.2
Transport	42037	44292	51586	49941	49332	49336	49066	48798	46588	2.1	-0.4	-0.1	-0.5
by fuel													
Solids	9017	6905	5775	5148	4349	4038	3798	3818	3564	-4.4	-2.8	-1.3	-0.6
Oil	67695	68410	72242	71510	68739	65409	61582	58620	54629	0.7	-0.5	-1.1	-1.2
Gas	23400	27098	30880	33744	34648	32926	27974	25111	23320	2.8	1.2	-2.1	-1.8
Electricity	25960	29456	33096	36337	36233	39497	41492	44671	47268	2.5	0.9	1.4	1.3
Heat (from CHP and District Heating) (A)	774	447	237	182	1620	2220	3821	4021	4097	-11.1	21.2	9.0	0.7
Renewable energy forms	10380	10439	10478	10594	11281	14331	19469	19959	20299	0.1	0.7	5.6	0.4
Other	0	0	0	0	3	8	13	14	9			14.2	-3.4
RES in Gross Final Energy Consumption (B)			**16831**	**17055**	**19694**	**25863**	**37693**	**39464**	**40703**		**1.6**	**6.7**	**0.8**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**554.8**		**553.9**	**541.3**	**510.8**	**474.6**	**436.2**	**425.0**	**407.4**	**0.0**	**-0.8**	**-1.6**	**-0.7**
of which ETS sectors GHGs emissions				158.7	130.4	112.0	98.8	102.7	100.9			-2.7	0.2
CO_2 Emissions (energy related)	**352.9**	**344.8**	**372.9**	**379.9**	**356.3**	**327.0**	**292.4**	**280.5**	**262.8**	**0.6**	**-0.5**	**-2.0**	**-1.1**
Power generation/District heating	40.1	27.6	39.7	47.4	36.8	23.5	17.4	19.2	19.5	-0.1	-0.7	-7.2	1.2
Energy Branch	16.8	18.7	19.1	16.1	13.1	12.6	8.3	10.2	9.6	1.3	-3.7	-4.5	1.4
Industry	78.7	75.7	69.7	60.7	54.8	49.1	39.4	37.7	36.8	-1.2	-2.4	-3.2	-0.7
Residential	55.4	52.4	61.7	65.2	66.5	62.5	55.7	48.8	43.5	1.1	0.8	-1.8	-2.4
Tertiary	39.4	41.0	32.2	44.7	45.0	42.2	39.1	35.4	32.7	-2.0	3.4	-1.4	-1.8
Transport	122.5	129.5	150.6	145.8	140.1	137.1	132.5	129.2	120.8	2.1	-0.7	-0.6	-0.9
CO_2 Emissions (non energy related)	**32.4**	**28.5**	**26.7**	**26.7**	**25.2**	**25.8**	**26.4**	**26.6**	**26.7**	**-1.9**	**-0.6**	**0.5**	**0.1**
Non-CO_2 GHGs Emissions	**169.5**		**154.3**	**134.7**	**129.3**	**121.7**	**117.4**	**117.9**	**117.8**	**-0.9**	**-1.8**	**-1.0**	**0.0**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**99.8**	**97.6**	**92.1**	**85.5**	**78.6**	**76.6**	**73.4**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										France: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	56.577	57.753	58.850	60.825	62.583	64.203	65.607	66.846	67.982	0.4	0.6	0.5	0.4
GDP (in 000 MEuro'05)	1302.7	1384.7	1589.7	1726.1	1759.1	1945.7	2144.4	2342.0	2550.1	2.0	1.0	2.0	1.7
Gross Inl. Cons./GDP (toe/MEuro'05)	174.8	174.4	163.4	160.5	153.8	139.1	125.1	114.4	104.7	-0.7	-0.6	-2.0	-1.8
Carbon intensity (t of CO_2/toe of GIC)	1.55	1.43	1.44	1.37	1.32	1.21	1.09	1.05	0.98	-0.8	-0.9	-1.9	-1.0
Import Dependency %	52.4	47.9	51.1	51.6	50.5	47.0	42.5	41.6	39.6				
Total Energy-related Costs [C] (in 000 M€05)			144.7	160.1	165.4	189.0	227.9	250.7	256.1		1.3	3.3	1.2
as % of GDP			9.1	9.3	9.4	9.7	10.6	10.7	10.0				
Energy intensity indicators													
Industry (Energy on Value added)	128.3	120.9	100.0	86.6	86.1	80.6	74.8	68.9	64.0	-2.5	-1.5	-1.4	-1.6
Residential (Energy on Private Income)	103.2	99.3	100.0	94.4	94.9	87.2	79.7	72.1	65.5	-0.3	-0.5	-1.7	-1.9
Tertiary (Energy on Value added)	124.1	128.9	100.0	120.2	117.8	108.1	97.3	87.2	79.6	-2.1	1.7	-1.9	-2.0
Passenger transport (toe/Mpkm)	40.1	40.6	45.2	42.7	40.9	37.1	34.9	32.3	28.4	1.2	-1.0	-1.6	-2.1
Freight transport (toe/Mtkm)	51.9	47.3	38.9	39.0	38.9	38.6	37.8	37.3	35.9	-2.9	0.0	-0.3	-0.5
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.09	0.06	0.07	0.08	0.06	0.04	0.03	0.03	0.03	-2.4	-1.8	-8.4	0.3
Final energy demand (t of CO_2/toe)	2.16	2.09	2.06	2.01	1.95	1.84	1.69	1.61	1.53	-0.5	-0.5	-1.5	-1.0
Industry	2.16	2.04	1.89	1.78	1.62	1.44	1.14	1.08	1.05	-1.3	-1.5	-3.5	-0.8
Residential	1.50	1.41	1.45	1.44	1.47	1.37	1.23	1.11	1.01	-0.3	0.2	-1.8	-1.9
Tertiary	1.82	1.70	1.49	1.58	1.57	1.45	1.35	1.24	1.16	-2.0	0.6	-1.5	-1.5
Transport	2.91	2.92	2.92	2.92	2.84	2.78	2.70	2.65	2.59	0.0	-0.3	-0.5	-0.4
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			10.7	10.4	12.2	15.8	23.0	24.3	25.5				
RES in transport (%)			1.1	1.3	4.4	6.9	10.1	12.1	13.9				
Gross Electricity generation by fuel type (in GWh)			**535963**	**571367**	**566841**	**598563**	**624606**	**654605**	**681000**		**0.6**	**1.0**	**0.9**
Nuclear energy			415087	451448	444587	455782	443115	451764	463563		0.7	0.0	0.5
Coal and lignite			27802	28623	22015	7308	6397	5935	5840		-2.3	-11.6	-0.9
Petroleum products			5664	7913	451	1599	2	5	5		-22.4	-41.4	7.7
Gas (including derived gases)			16069	25269	24270	28818	24414	31319	31122		4.2	0.1	2.5
Biomass & waste			3561	4865	6038	11376	29458	28916	30870		5.4	17.2	0.5
Hydro			67698	52277	56979	57217	57354	59849	60485		-1.7	0.1	0.5
Wind			77	963	11361	33309	56310	63902	69629		64.8	17.4	2.1
Solar, tidal etc.			5	10	666	2509	5837	9123	13653		63.1	24.2	8.9
Geothermal and other renewables			0	0	473	647	1720	3791	5834			13.8	13.0
Net Generation Capacity in MW_e			**107892**	**111422**	**117609**	**133709**	**146244**	**148229**	**161628**		**0.9**	**2.2**	**1.0**
Nuclear energy			60309	63242	63242	64757	66272	56212	57688		0.5	0.5	-1.4
Renewable energy			20632	21290	27667	37576	48514	55124	61637		3.0	5.8	2.4
Hydro (pumping excluded)			20568	20551	20652	20706	20770	21141	21322		0.0	0.1	0.3
Wind			57	723	6022	14470	22569	25639	27886		59.4	14.1	2.1
Solar			7	16	753	2117	4593	7296	11069		59.7	19.8	9.2
Other renewables (tidal etc.)			0	0	240	283	582	1048	1361			9.3	8.9
Thermal power			26951	26891	26700	31375	31458	36893	42303		-0.1	1.7	3.0
of which cogeneration units			4599	5371	4353	4901	5775	6108	7363		-0.5	2.9	2.5
of which CCS units			0	0	0	0	0	335	482				
Solids fired			9942	8576	7087	5873	3846	2700	1249		-3.3	-5.9	-10.6
Gas fired			4574	5523	6789	12190	13227	21240	28281		4.0	6.9	7.9
Oil fired			11028	11219	10920	10560	8425	6838	6183		-0.1	-2.6	-3.0
Biomass-waste fired			1407	1572	1903	2741	5892	5913	6224		3.1	12.0	0.5
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	2	12	68	202	367			46.5	18.3
Load factor for net electric capacities (%)			52.5	53.8	52.6	49.0	46.8	48.3	46.1				
Efficiency for thermal electricity production (%)			34.8	34.4	31.9	34.0	33.3	33.3	32.8				
CHP indicator (% of electricity from CHP)			3.2	3.4	3.2	4.3	5.2	5.2	5.8				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.4	0.5				
Non fossil fuels in electricity generation (%)			90.8	89.2	91.8	93.7	95.1	94.3	94.6				
- nuclear			77.4	79.0	78.4	76.1	70.9	69.0	68.1				
- renewable energy forms and industrial waste			13.3	10.2	13.3	17.6	24.1	25.3	26.5				
Transport sector													
Passenger transport activity (Gpkm)	**772.5**	**819.1**	**908.2**	**937.7**	**952.1**	**1023.1**	**1069.1**	**1126.9**	**1193.0**	**1.6**	**0.5**	**1.2**	**1.1**
Public road transport	41.3	41.6	43.0	43.9	47.5	51.0	54.3	57.8	61.3	0.4	1.0	1.3	1.2
Private cars and motorcycles	599.8	652.5	711.9	740.3	740.3	787.3	810.6	844.2	886.5	1.7	0.4	0.9	0.9
Rail	73.9	64.5	80.7	88.9	94.0	103.7	111.7	122.0	132.2	0.9	1.5	1.7	1.7
Aviation	53.5	56.4	69.1	61.5	66.9	77.7	88.9	99.3	109.1	2.6	-0.3	2.9	2.1
Inland navigation	3.9	4.1	3.5	3.1	3.2	3.4	3.5	3.7	3.9	-1.3	-0.7	0.8	0.9
Freight transport activity (Gtkm)	**213.6**	**233.1**	**270.8**	**254.9**	**268.2**	**294.3**	**311.1**	**332.4**	**355.5**	**2.4**	**-0.1**	**1.5**	**1.3**
Trucks	153.7	178.2	204.0	205.3	216.5	238.5	251.1	267.9	286.3	2.9	0.6	1.5	1.3
Rail	52.2	48.3	57.7	40.7	42.7	46.4	50.1	54.1	58.3	1.0	-3.0	1.6	1.5
Inland navigation	7.6	6.6	9.1	8.9	9.0	9.5	9.9	10.4	10.9	1.9	-0.1	1.0	0.9
Energy demand in transport (ktoe)	**42037**	**44292**	**51586**	**49941**	**49332**	**49336**	**49066**	**48798**	**46588**	**2.1**	**-0.4**	**-0.1**	**-0.5**
Public road transport	440	438	446	446	480	503	509	511	510	0.1	0.7	0.6	0.0
Private cars and motorcycles	25694	27178	32862	32693	31237	29752	28388	27414	25422	2.5	-0.5	-1.0	-1.1
Trucks	10192	10029	9441	8938	9405	10286	10677	11309	11733	-0.8	0.0	1.3	0.9
Rail	1153	1222	1376	1267	1297	1366	1372	1388	1328	1.8	-0.6	0.6	-0.3
Aviation	3839	4690	6683	6291	6598	7101	7782	7823	7228	5.7	-0.1	1.7	-0.7
Inland navigation	718	735	778	306	315	328	340	353	368	0.8	-8.7	0.8	0.8

Source: PRIMES

Germany: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**186681**	**141981**	**133331**	**136015**	**119216**	**112309**	**94829**	**84027**	**85244**	**-3.3**	**-1.1**	**-2.3**	**-1.1**
Solids	125125	78834	59599	56488	45793	40356	31632	30546	29486	-7.1	-2.6	-3.6	-0.7
Oil	4031	3308	3525	5746	3120	2630	2200	0	0	-1.3	-1.2	-3.4	
Natural gas	13532	15099	15800	14224	12200	11000	10000	8000	6500	1.6	-2.6	-2.0	-4.2
Nuclear	37674	37322	43750	42061	33909	26429	8919	0	0	1.5	-2.5	-12.5	
Renewable energy sources	6320	7417	10656	17496	24195	31895	42078	45481	49258	5.4	8.5	5.7	1.6
Hydro	1498	1873	1869	1684	1811	1883	1922	1986	2052	2.2	-0.3	0.6	0.7
Biomass & Waste	4797	5348	7877	12980	16471	19204	22654	23152	23410	5.1	7.7	3.2	0.3
Wind	6	147	804	2341	4199	7606	11341	14003	17130	62.9	18.0	10.4	4.2
Solar and others	11	41	96	353	1300	2364	4213	4337	4680	24.3	29.8	12.5	1.1
Geothermal	7	9	10	138	413	837	1948	2003	1987	3.4	45.5	16.8	0.2
Net Imports	**166524**	**196270**	**205682**	**215281**	**212129**	**208588**	**208098**	**201648**	**184794**	**2.1**	**0.3**	**-0.2**	**-1.2**
Solids	3182	10963	21603	26805	29085	30137	36857	37424	32355	21.1	3.0	2.4	-1.3
Oil	121527	131988	126951	123134	112346	108069	101322	96133	87023	0.4	-1.2	-1.0	-1.5
- Crude oil and Feedstocks	89820	102213	102638	113980	110079	108172	102481	98334	90407	1.3	0.7	-0.7	-1.2
- Oil products	31707	29775	24312	9154	2266	-103	-1159	-2201	-3384	-2.6	-21.1		
Natural gas	41747	52904	56865	65734	71856	69988	68336	66156	63341	3.1	2.4	-0.5	-0.8
Electricity	68	415	263	-393	-1439	22	1098	1403	1475	14.5			3.0
Gross Inland Consumption	**356271**	**339454**	**341166**	**347147**	**328775**	**318240**	**300283**	**283054**	**267429**	**-0.4**	**-0.4**	**-0.9**	**-1.2**
Solids	131521	92175	83725	82803	74878	70492	68488	67970	61840	-4.4	-1.1	-0.9	-1.0
Oil	125712	134828	130919	124323	112895	108042	100878	93513	84414	0.4	-1.5	-1.1	-1.8
Natural gas	54976	67298	71853	80856	84056	80988	78336	74156	69841	2.7	1.6	-0.7	-1.1
Nuclear	37674	37322	43750	42061	33909	26429	8919	0	0	1.5	-2.5	-12.5	
Electricity	68	415	263	-393	-1439	22	1098	1403	1475	14.5			3.0
Renewable energy forms	6320	7417	10656	17496	24476	32267	42564	46012	49859	5.4	8.7	5.7	1.6
as % in Gross Inland Consumption													
Solids	36.9	27.2	24.5	23.9	22.8	22.2	22.8	24.0	23.1				
Oil	35.3	39.7	38.4	35.8	34.3	33.9	33.6	33.0	31.6				
Natural gas	15.4	19.8	21.1	23.3	25.6	25.4	26.1	26.2	26.1				
Nuclear	10.6	11.0	12.8	12.1	10.3	8.3	3.0	0.0	0.0				
Renewable energy forms	1.8	2.2	3.1	5.0	7.4	10.1	14.2	16.3	18.6				
Gross Electricity Generation in GWh_e	**547549**	**533711**	**567219**	**613054**	**631888**	**637039**	**626820**	**639084**	**647163**	**0.4**	**1.1**	**-0.1**	**0.3**
Self consumption and grid losses	66295	62666	74161	73028	71055	68729	67324	68840	68480	1.1	-0.4	-0.5	0.2
Fuel Inputs for Thermal Power Generation	**92914**	**85884**	**85258**	**92517**	**90813**	**87681**	**88997**	**89998**	**83263**	**-0.9**	**0.6**	**-0.2**	**-0.7**
Solids	75541	69147	68066	66172	62709	58944	56316	55851	50066	-1.0	-0.8	-1.1	-1.2
Oil (including refinery gas)	2873	2090	1113	2051	791	1499	1930	2151	1159	-9.0	-3.4	9.3	-5.0
Gas	12676	11982	12906	19356	20829	19759	20714	21610	21534	0.2	4.9	-0.1	0.4
Biomass & Waste	1824	2665	3174	4938	6305	7056	8759	9109	9226	5.7	7.1	3.3	0.5
Geothermal heat	0	0	0	0	179	423	1278	1278	1278			21.7	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**165992**	**141292**	**137838**	**145413**	**136008**	**133398**	**128493**	**121191**	**113277**	**-1.8**	**-0.1**	**-0.6**	**-1.3**
Refineries	108022	117793	120748	127966	120590	117953	111376	104442	95855	1.1	0.0	-0.8	-1.5
Biofuels and hydrogen production	0	31	222	1948	3596	4548	5585	6029	6394		32.1	4.5	1.4
District heating	6392	3638	1437	868	1528	1404	1279	733	1299	-13.9	0.6	-1.8	0.2
Others	51578	19831	15431	14632	10295	9494	10253	9987	9729	-11.4	-4.0	0.0	-0.5
Energy Branch Consumption	**15451**	**14982**	**14383**	**15267**	**13952**	**13457**	**12774**	**12148**	**11169**	**-0.7**	**-0.3**	**-0.9**	**-1.3**
Non-Energy Uses	**23473**	**23323**	**25457**	**24974**	**24212**	**24136**	**23971**	**23094**	**22201**	**0.8**	**-0.5**	**-0.1**	**-0.8**
Final Energy Demand	**227197**	**222795**	**218098**	**218369**	**217495**	**218006**	**213505**	**204618**	**194976**	**-0.4**	**0.0**	**-0.2**	**-0.9**
by sector													
Industry	71457	62001	57896	55666	52500	53052	53751	53097	51868	-2.1	-1.0	0.2	-0.4
- energy intensive industries	48775	42867	39110	37592	34340	34286	34642	33725	32711	-2.2	-1.3	0.1	-0.6
- other industrial sectors	22682	19134	18787	18074	18160	18765	19109	19372	19157	-1.9	-0.3	0.5	0.0
Residential	58417	63145	62142	67731	69449	68719	65616	61255	58389	0.6	1.1	-0.6	-1.2
Tertiary	38691	34569	31872	32823	32799	32422	30836	29024	27493	-1.9	0.3	-0.6	-1.1
Transport	58631	63080	66188	62149	62747	63813	63301	61242	57227	1.2	-0.5	0.1	-1.0
by fuel													
Solids	37141	14915	10949	9829	7362	7052	7226	7239	6956	-11.5	-3.9	-0.2	-0.4
Oil	96799	104905	98462	88706	81466	77618	71871	66301	59989	0.2	-1.9	-1.2	-1.8
Gas	42724	52595	56064	59821	61174	58600	54676	49852	45138	2.8	0.9	-1.1	-1.9
Electricity	38391	38912	41496	44497	45385	47525	47858	49117	49968	0.8	0.9	0.5	0.4
Heat (from CHP and District Heating) [A]	9150	8737	6323	7428	11079	13355	14764	14947	15528	-3.6	5.8	2.9	0.5
Renewable energy forms	2991	2731	4804	8088	11024	13846	17092	17144	17388	4.9	8.7	4.5	0.2
Other	0	0	0	0	5	10	18	19	10			14.2	-5.4
RES in Gross Final Energy Consumption [B]			**8852**	**14393**	**22739**	**30238**	**39785**	**43066**	**47131**		**9.9**	**5.8**	**1.7**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**1210.3**		**1025.5**	**997.3**	**931.7**	**883.6**	**836.7**	**805.2**	**743.4**	**-1.6**	**-1.0**	**-1.1**	**-1.2**
of which ETS sectors GHGs emissions				544.6	484.8	464.9	457.9	454.5	424.0			-0.6	-0.8
CO_2 Emissions (energy related)	**943.1**	**858.6**	**817.9**	**803.4**	**756.5**	**718.6**	**679.9**	**649.2**	**590.6**	**-1.4**	**-0.8**	**-1.1**	**-1.4**
Power generation/District heating	373.3	328.6	315.8	325.0	311.0	295.3	283.3	282.4	256.9	-1.7	-0.2	-0.9	-1.0
Energy Branch	25.9	27.2	26.6	28.3	25.2	22.1	20.7	19.0	17.2	0.3	-0.6	-2.0	-1.8
Industry	165.4	129.6	113.0	101.0	78.6	72.4	71.4	67.3	62.7	-3.7	-3.6	-0.9	-1.3
Residential	127.3	126.8	117.8	122.2	120.1	110.9	96.4	84.6	76.0	-0.8	0.2	-2.2	-2.4
Tertiary	81.9	63.9	53.2	52.0	49.6	45.5	40.4	35.6	30.9	-4.2	-0.7	-2.0	-2.6
Transport	169.4	182.4	191.5	174.8	171.9	172.3	167.7	160.2	147.0	1.2	-1.1	-0.2	-1.3
CO_2 Emissions (non energy related)	**84.2**	**80.6**	**82.8**	**77.7**	**68.2**	**68.7**	**72.9**	**73.7**	**74.3**	**-0.2**	**-1.9**	**0.7**	**0.2**
Non-CO_2 GHGs Emissions	**183.0**		**124.8**	**116.2**	**107.0**	**96.3**	**84.0**	**82.4**	**78.4**	**-3.8**	**-1.5**	**-2.4**	**-0.7**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**84.7**	**82.4**	**77.0**	**73.0**	**69.1**	**66.5**	**61.4**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Germany: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	79.113	81.539	82.163	82.501	82.145	81.858	81.472	80.907	80.152	0.4	0.0	-0.1	-0.2
GDP (in 000 MEuro'05)	1830.3	1971.3	2177.2	2243.2	2281.5	2510.7	2723.6	2867.1	3008.8	1.8	0.5	1.8	1.0
Gross Inl. Cons./GDP (toe/MEuro'05)	194.7	172.2	156.7	154.8	144.1	126.8	110.3	98.7	88.9	-2.1	-0.8	-2.6	-2.1
Carbon intensity (t of CO_2/toe of GIC)	2.65	2.53	2.40	2.31	2.30	2.26	2.26	2.29	2.21	-1.0	-0.4	-0.2	-0.2
Import Dependency %	46.4	57.5	59.9	61.6	64.0	65.0	68.7	70.6	68.4				
Total Energy-related Costs (C) (in 000 M€05)			200.9	240.5	253.8	287.0	337.6	363.3	362.1		2.4	2.9	0.7
as % of GDP			9.2	10.7	11.1	11.4	12.4	12.7	12.0				
Energy intensity indicators													
Industry (Energy on Value added)	132.8	118.3	100.0	89.5	83.1	77.8	72.4	68.4	64.2	-2.8	-1.8	-1.4	-1.2
Residential (Energy on Private Income)	113.2	111.0	100.0	107.4	110.1	99.0	87.8	78.1	70.8	-1.2	1.0	-2.2	-2.1
Tertiary (Energy on Value added)	156.4	123.5	100.0	98.2	95.3	85.8	75.2	67.0	60.3	-4.4	-0.5	-2.3	-2.2
Passenger transport (toe/Mpkm)	49.7	45.4	45.0	40.5	39.2	35.9	34.2	32.3	29.3	-1.0	-1.4	-1.3	-1.5
Freight transport (toe/Mtkm)	43.7	43.4	42.5	37.7	37.8	37.2	35.4	33.6	31.3	-0.3	-1.2	-0.6	-1.2
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.56	0.51	0.48	0.45	0.40	0.36	0.34	0.34	0.30	-1.4	-1.9	-1.5	-1.3
Final energy demand (t of CO_2/toe)	2.39	2.26	2.18	2.06	1.93	1.84	1.76	1.70	1.62	-0.9	-1.2	-0.9	-0.8
Industry	2.31	2.09	1.95	1.81	1.50	1.37	1.33	1.27	1.21	-1.7	-2.6	-1.2	-0.9
Residential	2.18	2.01	1.90	1.80	1.73	1.61	1.47	1.38	1.30	-1.4	-0.9	-1.6	-1.2
Tertiary	2.12	1.85	1.67	1.58	1.51	1.40	1.31	1.23	1.12	-2.4	-1.0	-1.4	-1.5
Transport	2.89	2.89	2.89	2.81	2.74	2.70	2.65	2.62	2.57	0.0	-0.5	-0.3	-0.3
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			3.9	6.4	10.1	13.4	18.0	20.3	23.3				
RES in transport (%)			0.6	3.9	7.1	9.1	11.7	13.4	15.5				
Gross Electricity generation by fuel type (in GWh)			**567219**	**613054**	**631888**	**637039**	**626820**	**639084**	**647163**		**1.1**	**-0.1**	**0.3**
Nuclear energy			169575	163026	131452	102456	34576	0	0		-2.5	-12.5	
Coal and lignite			292440	285286	275951	259307	249575	251300	224747		-0.6	-1.0	-1.0
Petroleum products			4733	8811	4032	6999	8980	10013	5221		-1.6	8.3	-5.3
Gas (including derived gases)			59321	91860	117806	113672	119102	125924	123688		7.1	0.1	0.4
Biomass & waste			10011	15988	24412	29942	36759	38609	39645		9.3	4.2	0.8
Hydro			21728	19577	21054	21893	22349	23094	23856		-0.3	0.6	0.7
Wind			9350	27224	48827	88445	131872	162822	199189		18.0	10.4	4.2
Solar, tidal etc.			60	1282	8146	13833	22121	25836	29331		63.4	10.5	2.9
Geothermal and other renewables			0	0	208	492	1486	1486	1486			21.7	0.0
Net Generation Capacity in MW_e			**112510**	**121873**	**141003**	**166811**	**182458**	**194064**	**206739**		**2.3**	**2.6**	**1.3**
Nuclear energy			21301	20680	15521	12031	4049	0	0		-3.1	-12.6	
Renewable energy			10477	24021	40427	59342	83826	95571	110251		14.5	7.6	2.8
Hydro (pumping excluded)			4268	4081	4246	4310	4427	4616	4694		-0.1	0.4	0.6
Wind			6095	18433	27723	40672	56926	64628	75626		16.4	7.5	2.9
Solar			114	1508	8458	14360	22472	26327	29932		53.8	10.3	2.9
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			80731	77172	85055	95438	94584	98493	96488		0.5	1.1	0.2
of which cogeneration units			13526	16773	21040	22899	23681	25410	27690		4.5	1.2	1.6
of which CCS units			0	0	0	0	646	646	646				0.0
Solids fired			51482	48960	47689	47882	44700	39694	35620		-0.8	-0.6	-2.2
Gas fired			20674	19428	26974	36244	35836	41141	42538		2.7	2.9	1.7
Oil fired			6659	6354	5356	4635	6205	8600	8114		-2.2	1.5	2.7
Biomass-waste fired			1916	2430	5006	6621	7673	8889	10046		10.1	4.4	2.7
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	30	56	170	170	170			19.0	0.0
Load factor for net electric capacities (%)			53.7	53.6	48.1	41.3	37.3	35.8	34.1				
Efficiency for thermal electricity production (%)			37.0	37.4	40.0	40.3	40.2	40.8	40.8				
CHP indicator (% of electricity from CHP)			11.7	13.9	19.4	23.6	24.6	24.6	25.0				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.9	0.9	1.0				
Non fossil fuels in electricity generation (%)			37.2	37.0	37.0	40.4	39.8	39.4	45.4				
- nuclear			29.9	26.6	20.8	16.1	5.5	0.0	0.0				
- renewable energy forms and industrial waste			7.3	10.5	16.2	24.3	34.2	39.4	45.4				
Transport sector													
Passenger transport activity (Gpkm)	**888.1**	**1033.4**	**1065.5**	**1098.9**	**1112.3**	**1208.0**	**1262.7**	**1295.3**	**1329.2**	**1.8**	**0.4**	**1.3**	**0.5**
Public road transport	73.1	68.5	69.0	67.1	68.5	73.3	76.9	78.9	80.6	-0.6	-0.1	1.2	0.5
Private cars and motorcycles	698.4	830.5	849.6	875.7	881.4	949.6	978.9	990.1	1004.9	2.0	0.4	1.1	0.3
Rail	76.1	85.4	90.0	92.3	93.4	101.8	109.5	114.6	119.3	1.7	0.4	1.6	0.9
Aviation	37.4	46.3	54.7	61.7	66.9	81.1	95.0	109.3	121.9	3.9	2.0	3.6	2.5
Inland navigation	3.1	2.7	2.2	2.0	2.1	2.2	2.3	2.4	2.4	-3.1	-0.7	1.0	0.4
Freight transport activity (Gtkm)	**331.7**	**372.3**	**429.8**	**469.6**	**507.7**	**550.4**	**568.1**	**577.3**	**584.4**	**2.6**	**1.7**	**1.1**	**0.3**
Trucks	175.2	237.8	280.7	310.1	338.9	366.0	373.1	377.0	380.5	4.8	1.9	1.0	0.2
Rail	101.7	70.5	82.7	95.4	103.6	113.5	120.2	123.4	125.3	-2.0	2.3	1.5	0.4
Inland navigation	54.8	64.0	66.5	64.1	65.2	71.0	74.8	76.9	78.6	1.9	-0.2	1.4	0.5
Energy demand in transport (ktoe)	**58631**	**63080**	**66188**	**62149**	**62747**	**63813**	**63301**	**61242**	**57227**	**1.2**	**-0.5**	**0.1**	**-1.0**
Public road transport	779	721	716	682	690	716	714	692	664	-0.8	-0.4	0.3	-0.7
Private cars and motorcycles	37559	39747	39405	35052	33748	32415	30987	29178	26642	0.5	-1.5	-0.9	-1.5
Trucks	12208	13949	16490	15960	17381	18539	18195	17514	16658	3.1	0.5	0.5	-0.9
Rail	2118	2131	1950	1830	1887	1963	1932	1857	1634	-0.8	-0.3	0.2	-1.7
Aviation	5307	5975	7345	8304	8714	9829	11107	11627	11250	3.3	1.7	2.5	0.1
Inland navigation	660	558	281	321	327	352	367	374	379	-8.2	1.5	1.2	0.3

Source: PRIMES

Greece: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**9155**	**9741**	**10011**	**10316**	**9805**	**10765**	**11479**	**11650**	**12198**	**0.9**	**-0.2**	**1.6**	**0.6**
Solids	7077	7911	8222	8538	7948	7942	7361	7488	7474	1.5	-0.3	-0.8	0.2
Oil	835	460	281	101	82	60	40	0	0	-10.3	-11.6	-6.9	
Natural gas	138	44	42	18	24	0	0	0	0	-11.2	-5.5		
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	1105	1326	1466	1659	1750	2763	4078	4162	4724	2.9	1.8	8.8	1.5
Hydro	152	303	318	431	344	355	375	385	413	7.6	0.8	0.9	1.0
Biomass & Waste	893	935	1010	1015	998	1259	1670	1393	1489	1.2	-0.1	5.3	-1.1
Wind	0	3	39	109	269	614	1116	1304	1499	74.7	21.4	15.3	3.0
Solar and others	56	82	99	102	138	470	684	738	801	5.8	3.4	17.4	1.6
Geothermal	3	3	2	1	1	65	233	341	521	-4.7	-4.1	71.5	8.4
Net Imports	**15473**	**18268**	**22065**	**23448**	**23675**	**24412**	**24201**	**25018**	**25310**	**3.6**	**0.7**	**0.2**	**0.4**
Solids	988	925	768	371	208	222	249	273	294	-2.5	-12.2	1.8	1.7
Oil	14424	17275	19610	20419	19817	19795	18883	18778	18343	3.1	0.1	-0.5	-0.3
- Crude oil and Feedstocks	14802	16997	20508	19443	20129	20108	19317	19228	18848	3.3	-0.2	-0.4	-0.2
- Oil products	-378	277	-898	977	-311	-313	-434	-450	-505				
Natural gas	0	0	1689	2332	3173	3688	3991	5022	5709		6.5	2.3	3.6
Electricity	61	69	-1	325	401	436	404	390	385			0.1	-0.5
Gross Inland Consumption	**22338**	**24228**	**28217**	**31352**	**30867**	**32448**	**32854**	**33721**	**34450**	**2.4**	**0.9**	**0.6**	**0.5**
Solids	8091	8783	9040	8952	8157	8163	7610	7761	7767	1.1	-1.0	-0.7	0.2
Oil	12942	14006	16007	18063	17288	17125	16096	15830	15285	2.1	0.8	-0.7	-0.5
Natural gas	138	44	1705	2354	3197	3688	3991	5022	5709	28.6	6.5	2.2	3.6
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	61	69	-1	325	401	436	404	390	385			0.1	-0.5
Renewable energy forms	1105	1326	1466	1659	1825	3035	4752	4718	5303	2.9	2.2	10.0	1.1
as % in Gross Inland Consumption													
Solids	36.2	36.3	32.0	28.6	26.4	25.2	23.2	23.0	22.5				
Oil	57.9	57.8	56.7	57.6	56.0	52.8	49.0	46.9	44.4				
Natural gas	0.6	0.2	6.0	7.5	10.4	11.4	12.1	14.9	16.6				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	4.9	5.5	5.2	5.3	5.9	9.4	14.5	14.0	15.4				
Gross Electricity Generation in GWh_e	**34767**	**41291**	**53415**	**59416**	**61331**	**67826**	**73377**	**80681**	**86012**	**4.4**	**1.4**	**1.8**	**1.6**
Self consumption and grid losses	5818	6451	8430	10124	10127	10847	11197	12248	12899	3.8	1.9	1.0	1.4
Fuel Inputs for Thermal Power Generation	**8619**	**9938**	**11693**	**12405**	**11529**	**11957**	**11729**	**12634**	**13331**	**3.1**	**-0.1**	**0.2**	**1.3**
Solids	6890	7810	8234	8693	7894	7910	7336	7468	7458	1.8	-0.4	-0.7	0.2
Oil (including refinery gas)	1711	2076	2114	2055	1542	1374	1039	623	455	2.1	-3.1	-3.9	-7.9
Gas	18	14	1280	1605	2058	2572	2597	3623	4250	53.1	4.9	2.4	5.0
Biomass & Waste	0	38	64	52	34	38	525	580	649		-6.0	31.3	2.1
Geothermal heat	0	0	0	0	0	63	231	340	519				8.4
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**16747**	**17954**	**22504**	**21602**	**20672**	**20787**	**20266**	**20140**	**19825**	**3.0**	**-0.8**	**-0.2**	**-0.2**
Refineries	16670	17901	22473	21510	20525	20510	19724	19618	19242	3.0	-0.9	-0.4	-0.2
Biofuels and hydrogen production	0	0	0	0	144	274	539	519	580			14.1	0.7
District heating	0	0	0	0	0	0	0	0	0				
Others	77	52	30	93	3	3	2	2	2	-8.8	-21.0	-1.8	-1.4
Energy Branch Consumption	**1194**	**1172**	**1558**	**1755**	**1731**	**1743**	**1677**	**1758**	**1733**	**2.7**	**1.1**	**-0.3**	**0.3**
Non-Energy Uses	**672**	**456**	**719**	**761**	**771**	**831**	**902**	**942**	**970**	**0.7**	**0.7**	**1.6**	**0.7**
Final Energy Demand	**14541**	**15838**	**18560**	**20800**	**21205**	**22472**	**22989**	**23203**	**23361**	**2.5**	**1.3**	**0.8**	**0.2**
by sector													
Industry	3945	4114	4445	4143	4039	4181	4335	4399	4461	1.2	-1.0	0.7	0.3
- energy intensive industries	2535	2493	2727	2573	2398	2498	2623	2670	2711	0.7	-1.3	0.9	0.3
- other industrial sectors	1410	1621	1718	1570	1640	1683	1712	1728	1750	2.0	-0.5	0.4	0.2
Residential	3057	3332	4486	5489	5703	6250	6435	6355	6377	3.9	2.4	1.2	-0.1
Tertiary	1718	1947	2417	3083	3163	3438	3522	3610	3711	3.5	2.7	1.1	0.5
Transport	5821	6445	7212	8085	8300	8603	8697	8839	8812	2.2	1.4	0.5	0.1
by fuel													
Solids	1053	1074	888	446	262	252	273	292	309	-1.7	-11.5	0.4	1.2
Oil	10073	10837	12631	14278	14247	14434	13991	13813	13471	2.3	1.2	-0.2	-0.4
Gas	15	14	257	585	675	532	633	668	699	33.0	10.1	-0.6	1.0
Electricity	2448	2931	3710	4377	4644	5172	5584	6104	6501	4.2	2.3	1.9	1.5
Heat (from CHP and District Heating) [A]	0	0	28	49	207	321	442	515	524		22.1	7.9	1.7
Renewable energy forms	952	982	1046	1066	1169	1758	2061	1808	1856	0.9	1.1	5.8	-1.0
Other	0	0	0	0	1	1	4	3	3			20.9	-3.2
RES in Gross Final Energy Consumption [B]			**1370**	**1507**	**1815**	**2843**	**4262**	**4298**	**4724**		**2.8**	**8.9**	**1.0**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**101.4**		**120.5**	**127.5**	**117.6**	**118.2**	**112.9**	**115.8**	**116.4**	**1.7**	**-0.2**	**-0.4**	**0.3**
of which ETS sectors GHGs emissions				67.9	61.9	63.2	60.9	64.5	66.5			-0.2	0.9
CO_2 Emissions (energy related)	**71.1**	**78.0**	**88.9**	**95.8**	**90.7**	**91.2**	**86.3**	**88.4**	**88.3**	**2.3**	**0.2**	**-0.5**	**0.2**
Power generation/District heating	34.1	39.0	43.9	46.3	42.4	43.1	39.8	41.4	42.3	2.6	-0.3	-0.6	0.6
Energy Branch	2.4	2.2	3.1	3.5	3.0	2.6	2.1	2.8	2.7	2.3	-0.1	-3.8	2.9
Industry	9.3	9.8	9.9	8.2	7.1	6.6	6.6	6.5	6.6	0.6	-3.3	-0.6	-0.1
Residential	4.6	4.8	7.5	9.7	10.2	10.7	10.4	9.9	9.5	4.9	3.2	0.1	-0.9
Tertiary	3.4	3.2	3.4	4.2	4.0	3.6	3.4	3.1	2.9	0.1	1.6	-1.4	-1.8
Transport	17.2	19.1	21.3	23.9	24.0	24.6	24.1	24.6	24.4	2.1	1.2	0.0	0.1
CO_2 Emissions (non energy related)	**7.2**	**7.7**	**8.1**	**8.3**	**8.2**	**8.9**	**9.8**	**10.5**	**11.2**	**1.2**	**0.1**	**1.9**	**1.3**
Non-CO_2 GHGs Emissions	**23.1**		**23.5**	**23.5**	**18.7**	**18.1**	**16.7**	**16.9**	**17.0**	**0.1**	**-2.3**	**-1.1**	**0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**118.9**	**125.8**	**115.9**	**116.6**	**111.3**	**114.2**	**114.8**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Greece: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	10.121	10.595	10.904	11.083	11.307	11.476	11.556	11.575	11.573	0.7	0.4	0.2	0.0
GDP (in 000 MEuro'05)	127.6	135.8	160.9	197.6	219.4	251.9	290.6	323.2	351.6	2.3	3.2	2.9	1.9
Gross Inl. Cons./GDP (toe/MEuro'05)	175.0	178.4	175.4	158.6	140.7	128.8	113.0	104.3	98.0	0.0	-2.2	-2.2	-1.4
Carbon intensity (t of CO_2/toe of GIC)	3.18	3.22	3.15	3.05	2.94	2.81	2.63	2.62	2.56	-0.1	-0.7	-1.1	-0.3
Import Dependency %	62.2	65.8	69.4	68.6	70.7	69.4	67.8	68.2	67.5				
Total Energy-related Costs (C) (in 000 M€05)			17.2	21.1	22.8	26.9	34.0	38.3	40.5		2.8	4.1	1.8
as % of GDP			10.7	10.7	10.4	10.7	11.7	11.8	11.5				
Energy intensity indicators													
Industry (Energy on Value added)	84.1	92.5	100.0	74.3	68.0	62.6	57.1	53.5	50.6	1.7	-3.8	-1.7	-1.2
Residential (Energy on Private Income)	79.7	79.3	100.0	99.6	95.7	91.0	82.2	73.7	68.3	2.3	-0.4	-1.5	-1.8
Tertiary (Energy on Value added)	99.0	104.6	100.0	102.6	95.5	89.5	79.1	72.5	68.3	0.1	-0.5	-1.9	-1.5
Passenger transport (toe/Mpkm)	41.7	39.9	36.3	35.0	34.3	31.9	30.0	28.6	26.8	-1.4	-0.6	-1.3	-1.1
Freight transport (toe/Mtkm)	79.8	79.3	66.6	63.2	61.1	60.8	58.5	56.1	53.5	-1.8	-0.9	-0.4	-0.9
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.98	0.94	0.82	0.77	0.65	0.59	0.50	0.47	0.45	-1.8	-2.3	-2.6	-0.9
Final energy demand (t of CO_2/toe)	2.38	2.32	2.26	2.21	2.14	2.02	1.94	1.90	1.85	-0.5	-0.6	-1.0	-0.4
Industry	2.36	2.37	2.22	1.98	1.75	1.57	1.53	1.48	1.47	-0.6	-2.3	-1.3	-0.4
Residential	1.51	1.43	1.66	1.77	1.79	1.71	1.61	1.56	1.49	0.9	0.8	-1.1	-0.8
Tertiary	1.96	1.65	1.40	1.37	1.25	1.05	0.98	0.86	0.77	-3.3	-1.1	-2.5	-2.3
Transport	2.96	2.96	2.95	2.95	2.90	2.86	2.77	2.78	2.76	0.0	-0.2	-0.4	0.0
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			7.2	7.0	8.2	12.2	18.0	18.0	19.7				
RES in transport (%)			0.0	0.0	2.2	4.1	8.1	7.8	9.0				
Gross Electricity generation by fuel type (in GWh)			**53415**	**59416**	**61331**	**67826**	**73377**	**80681**	**86012**		**1.4**	**1.8**	**1.6**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			33585	35610	33543	33616	31301	32318	32318		0.0	-0.7	0.3
Petroleum products			9354	9188	8108	6572	4984	2809	2045		-1.4	-4.7	-8.5
Gas (including derived gases)			6149	8154	12305	15197	14747	19778	22024		7.2	1.8	4.1
Biomass & waste			183	182	151	153	2054	2276	2560		-1.9	29.8	2.2
Hydro			3692	5016	3999	4129	4358	4477	4805		0.8	0.9	1.0
Wind			451	1266	3131	7144	12971	15167	17431		21.4	15.3	3.0
Solar, tidal etc.			0	1	94	941	2693	3460	4224			39.8	4.6
Geothermal and other renewables			0	0	0	74	269	395	604				8.4
Net Generation Capacity in MW_e			**10288**	**11926**	**14966**	**19061**	**23212**	**26048**	**29471**		**3.8**	**4.5**	**2.4**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			2585	2887	3843	6195	9612	11126	13001		4.0	9.6	3.1
Hydro (pumping excluded)			2359	2395	2395	2576	2871	2926	3329		0.2	1.8	1.5
Wind			226	491	1371	2936	5138	6137	7187		19.8	14.1	3.4
Solar			0	1	76	682	1602	2062	2485			35.6	4.5
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			7703	9039	11124	12866	13600	14922	16469		3.7	2.0	1.9
of which cogeneration units			200	361	575	760	905	1115	1116		11.2	4.6	2.1
of which CCS units			0	0	0	0	0	0	0				
Solids fired			4507	4799	4799	4241	4375	4056	4056		0.6	-0.9	-0.8
Gas fired			1114	1899	3618	6198	6743	8635	10122		12.5	6.4	4.1
Oil fired			2054	2282	2622	2335	1940	1607	1575		2.5	-3.0	-2.1
Biomass-waste fired			28	59	85	85	511	579	647		11.8	19.7	2.4
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	8	31	45	69				8.4
Load factor for net electric capacities (%)			54.9	52.8	43.8	38.3	34.3	33.6	31.7				
Efficiency for thermal electricity production (%)			36.2	36.8	40.4	40.0	39.1	39.2	38.4				
CHP indicator (% of electricity from CHP)			1.6	1.9	5.0	6.0	5.7	7.2	6.7				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			8.1	10.9	12.0	18.3	30.5	31.9	34.4				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			8.1	10.9	12.0	18.3	30.5	31.9	34.4				
Transport sector													
Passenger transport activity (Gpkm)	**85.8**	**99.2**	**128.7**	**152.9**	**170.2**	**185.5**	**197.1**	**207.1**	**217.3**	**4.1**	**2.8**	**1.5**	**1.0**
Public road transport	17.7	20.2	21.7	21.7	22.2	22.6	23.1	23.3	23.4	2.0	0.2	0.4	0.1
Private cars and motorcycles	37.5	47.5	66.7	89.7	102.7	108.7	110.5	110.3	110.5	5.9	4.4	0.7	0.0
Rail	2.8	2.3	3.1	3.4	3.7	4.2	4.6	4.8	5.0	0.9	2.0	2.0	0.9
Aviation	22.1	22.8	29.9	31.1	34.1	42.3	50.9	60.6	70.1	3.1	1.3	4.1	3.2
Inland navigation	5.7	6.3	7.3	7.1	7.4	7.7	8.0	8.2	8.3	2.6	0.1	0.7	0.4
Freight transport activity (Gtkm)	**28.0**	**31.4**	**38.1**	**43.2**	**40.3**	**44.0**	**47.5**	**52.0**	**55.8**	**3.1**	**0.6**	**1.7**	**1.6**
Trucks	20.8	24.0	29.0	32.5	28.7	31.5	33.8	37.1	40.0	3.4	-0.1	1.6	1.7
Rail	0.6	0.3	0.4	0.6	0.9	1.0	1.1	1.2	1.2	-3.5	7.4	2.3	1.2
Inland navigation	6.6	7.1	8.7	10.1	10.7	11.6	12.6	13.7	14.6	2.8	2.1	1.7	1.4
Energy demand in transport (ktoe)	**5821**	**6445**	**7212**	**8085**	**8300**	**8603**	**8697**	**8839**	**8812**	**2.2**	**1.4**	**0.5**	**0.1**
Public road transport	190	214	225	220	222	221	214	205	195	1.7	-0.1	-0.4	-0.9
Private cars and motorcycles	1657	2092	2729	3464	3816	3647	3461	3299	3042	5.1	3.4	-1.0	-1.3
Trucks	2066	2309	2380	2517	2223	2419	2501	2624	2686	1.4	-0.7	1.2	0.7
Rail	75	57	60	58	76	85	88	88	82	-2.2	2.4	1.4	-0.6
Aviation	1264	1226	1325	1181	1284	1524	1695	1858	2024	0.5	-0.3	2.8	1.8
Inland navigation	568	546	493	645	678	708	738	764	782	-1.4	3.2	0.8	0.6

Source: PRIMES

Hungary: REFERENCE SCENARIO										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**14157**	**13466**	**11215**	**10644**	**10561**	**11162**	**12107**	**12499**	**12759**	**-2.3**	**-0.6**	**1.4**	**0.5**
Solids	3948	3095	2893	1748	1720	1519	1527	1523	1497	-3.1	-5.1	-1.2	-0.2
Oil	2330	2339	1673	1780	1200	1000	1000	900	800	-3.3	-3.3	-1.8	-2.2
Natural gas	3812	3788	2475	2331	2200	2000	1842	1742	1700	-4.2	-1.2	-1.8	-0.8
Nuclear	3544	3618	3658	3569	3787	4465	4497	4497	4497	0.3	0.3	1.7	0.0
Renewable energy sources	523	626	516	1217	1654	2178	3240	3837	4265	-0.1	12.4	7.0	2.8
Hydro	15	14	15	17	13	21	90	198	202	0.0	-1.9	21.6	8.4
Biomass & Waste	422	526	415	1110	1552	2008	2602	2793	2840	-0.2	14.1	5.3	0.9
Wind	0	0	0	1	15	26	47	59	69			11.9	4.0
Solar and others	0	0	0	2	10	29	229	257	315			37.4	3.2
Geothermal	86	86	86	87	65	93	273	531	840	0.0	-2.8	15.5	11.9
Net Imports	**14465**	**12652**	**14026**	**17519**	**17738**	**18783**	**18055**	**17536**	**17235**	**-0.3**	**2.4**	**0.2**	**-0.5**
Solids	1686	1395	1081	1303	1324	1337	1318	1318	1307	-4.3	2.0	0.0	-0.1
Oil	6651	5519	5366	5872	6508	7358	7407	7467	7361	-2.1	1.9	1.3	-0.1
- Crude oil and Feedstocks	6505	5962	5893	6334	6609	7430	7477	7543	7472	-1.0	1.2	1.2	0.0
- Oil products	145	-444	-527	-462	-101	-72	-70	-76	-111				
Natural gas	5170	5532	7283	9807	9488	9700	8934	8446	8284	3.5	2.7	-0.6	-0.8
Electricity	958	207	296	535	396	356	283	248	218	-11.1	3.0	-3.3	-2.6
Gross Inland Consumption	**28681**	**25896**	**25016**	**28006**	**28299**	**29945**	**30162**	**30035**	**29993**	**-1.4**	**1.2**	**0.6**	**-0.1**
Solids	5969	4549	3967	3054	3045	2857	2845	2841	2804	-4.0	-2.6	-0.7	-0.1
Oil	8774	7721	6923	7537	7708	8358	8407	8367	8161	-2.3	1.1	0.9	-0.3
Natural gas	8913	9175	9657	12094	11688	11700	10776	10188	9984	0.8	1.9	-0.8	-0.8
Nuclear	3544	3618	3658	3569	3787	4465	4497	4497	4497	0.3	0.3	1.7	0.0
Electricity	958	207	296	535	396	356	283	248	218	-11.1	3.0	-3.3	-2.6
Renewable energy forms	523	626	516	1217	1676	2210	3354	3894	4329	-0.1	12.5	7.2	2.6
as % in Gross Inland Consumption													
Solids	20.8	17.6	15.9	10.9	10.8	9.5	9.4	9.5	9.3				
Oil	30.6	29.8	27.7	26.9	27.2	27.9	27.9	27.9	27.2				
Natural gas	31.1	35.4	38.6	43.2	41.3	39.1	35.7	33.9	33.3				
Nuclear	12.4	14.0	14.6	12.7	13.4	14.9	14.9	15.0	15.0				
Renewable energy forms	1.8	2.4	2.1	4.3	5.9	7.4	11.1	13.0	14.4				
Gross Electricity Generation in GWh_e	**28431**	**34011**	**35185**	**35749**	**37696**	**41740**	**44696**	**48272**	**51161**	**2.2**	**0.7**	**1.7**	**1.4**
Self consumption and grid losses	6572	7502	7991	6769	6104	6378	6760	7232	7453	2.0	-2.7	1.0	1.0
Fuel Inputs for Thermal Power Generation	**4970**	**6113**	**6107**	**5659**	**5276**	**5374**	**5798**	**6284**	**6821**	**2.1**	**-1.5**	**0.9**	**1.6**
Solids	2871	2977	2853	1924	1983	1753	1768	1778	1758	-0.1	-3.6	-1.1	-0.1
Oil (including refinery gas)	440	1447	1052	122	55	49	52	151	88	9.1	-25.5	-0.7	5.5
Gas	1636	1634	2140	3078	2490	2613	2326	2328	2534	2.7	1.5	-0.7	0.9
Biomass & Waste	24	55	62	534	747	944	1486	1614	1709	10.2	28.3	7.1	1.4
Geothermal heat	0	0	0	0	0	15	166	414	731				15.9
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**11720**	**10716**	**9261**	**10031**	**10481**	**11291**	**11252**	**11239**	**11044**	**-2.3**	**1.2**	**0.7**	**-0.2**
Refineries	8870	8536	7622	8584	8837	9518	9572	9531	9312	-1.5	1.5	0.8	-0.3
Biofuels and hydrogen production	0	0	0	5	163	245	386	439	478			9.0	2.1
District heating	1146	789	471	629	710	703	478	460	459	-8.5	4.2	-3.9	-0.4
Others	1704	1392	1168	813	771	825	814	809	794	-3.7	-4.1	0.5	-0.2
Energy Branch Consumption	**1459**	**1390**	**1243**	**1657**	**1693**	**1795**	**1805**	**1788**	**1711**	**-1.6**	**3.1**	**0.6**	**-0.5**
Non-Energy Uses	**1584**	**1631**	**1596**	**2326**	**2288**	**2382**	**2451**	**2458**	**2463**	**0.1**	**3.7**	**0.7**	**0.0**
Final Energy Demand	**19184**	**15711**	**15759**	**18080**	**18686**	**19788**	**19948**	**19656**	**19446**	**-1.9**	**1.7**	**0.7**	**-0.3**
by sector													
Industry	6525	3808	3461	3430	3400	3499	3488	3424	3383	-6.1	-0.2	0.3	-0.3
- energy intensive industries	4160	2691	2536	2314	2250	2303	2285	2226	2175	-4.8	-1.2	0.2	-0.5
- other industrial sectors	2365	1117	925	1116	1149	1196	1204	1198	1208	-9.0	2.2	0.5	0.0
Residential	6377	5833	5276	6381	6335	6544	6525	6281	6193	-1.9	1.8	0.3	-0.5
Tertiary	3251	3411	3759	4073	4035	4182	4114	4038	4026	1.5	0.7	0.2	-0.2
Transport	3031	2660	3263	4196	4916	5564	5821	5912	5844	0.7	4.2	1.7	0.0
by fuel													
Solids	2502	965	668	692	654	686	694	705	701	-12.4	-0.2	0.6	0.1
Oil	6029	4158	4186	4812	5289	5899	5955	5946	5792	-3.6	2.4	1.2	-0.3
Gas	5941	6370	6503	7852	7769	7571	7097	6415	6087	0.9	1.8	-0.9	-1.5
Electricity	2717	2385	2531	2780	2837	3106	3252	3484	3690	-0.7	1.1	1.4	1.3
Heat (from CHP and District Heating) [A]	1570	1287	1440	1297	1261	1351	1407	1518	1584	-0.9	-1.3	1.1	1.2
Renewable energy forms	425	545	430	647	875	1173	1541	1586	1591	0.1	7.4	5.8	0.3
Other	0	0	0	0	1	1	3	3	2			17.5	-4.5
RES in Gross Final Energy Consumption [B]			**469**	**798**	**1284**	**1720**	**2667**	**2982**	**3295**		**10.6**	**7.6**	**2.1**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**96.9**		**76.3**	**77.5**	**75.4**	**75.0**	**72.2**	**71.0**	**69.6**	**-2.4**	**-0.1**	**-0.4**	**-0.4**
of which ETS sectors GHGs emissions				29.6	27.7	26.9	26.0	26.2	26.5			-0.6	0.2
CO_2 Emissions (energy related)	**65.7**	**57.0**	**53.7**	**55.0**	**55.1**	**56.1**	**53.9**	**52.5**	**51.3**	**-2.0**	**0.3**	**-0.2**	**-0.5**
Power generation/District heating	20.5	23.0	21.5	17.3	16.1	15.4	14.3	14.5	14.8	0.5	-2.9	-1.2	0.4
Energy Branch	2.6	2.4	1.6	2.0	2.2	2.4	2.3	2.2	2.0	-4.7	3.4	0.2	-1.4
Industry	14.7	8.7	6.3	6.2	6.0	5.9	5.7	5.1	4.8	-8.1	-0.5	-0.6	-1.6
Residential	13.7	9.9	8.6	10.5	10.2	10.2	9.7	8.9	8.5	-4.6	1.8	-0.5	-1.3
Tertiary	5.6	5.5	6.2	6.7	6.7	6.6	6.1	5.7	5.5	1.1	0.7	-0.9	-1.0
Transport	8.6	7.6	9.5	12.2	14.0	15.6	16.0	16.0	15.7	0.9	4.0	1.4	-0.2
CO_2 Emissions (non energy related)	**5.3**	**3.7**	**3.7**	**3.8**	**3.7**	**4.0**	**4.2**	**4.3**	**4.4**	**-3.5**	**-0.1**	**1.3**	**0.4**
Non-CO_2 GHGs Emissions	**25.9**		**18.8**	**18.8**	**16.5**	**14.9**	**14.1**	**14.2**	**14.0**	**-3.1**	**-1.3**	**-1.6**	**-0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**78.7**	**80.0**	**77.8**	**77.3**	**74.5**	**73.3**	**71.8**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)									Hungary: REFERENCE SCENARIO				
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	10.375	10.337	10.222	10.098	10.023	9.964	9.893	9.790	9.651	-0.1	-0.2	-0.1	-0.2
GDP (in 000 MEuro'05)	66.0	59.1	72.0	88.7	87.6	101.1	114.8	127.6	141.2	0.9	2.0	2.7	2.1
Gross Inl. Cons./GDP (toe/MEuro'05)	434.3	437.9	347.4	315.8	323.0	296.1	262.8	235.4	212.4	-2.2	-0.7	-2.0	-2.1
Carbon intensity (t of CO_2/toe of GIC)	2.29	2.20	2.15	1.96	1.95	1.87	1.79	1.75	1.71	-0.6	-1.0	-0.9	-0.4
Import Dependency %	50.4	48.9	56.1	62.6	62.7	62.7	59.9	58.4	57.5				
Total Energy-related Costs [C] (in 000 M€05)			13.0	14.5	16.0	19.5	24.1	27.3	28.7		2.1	4.2	1.8
as % of GDP			18.0	16.4	18.3	19.3	21.0	21.4	20.3				
Energy intensity indicators													
Industry (Energy on Value added)	248.3	156.7	100.0	79.0	81.5	76.0	69.6	63.4	59.0	-8.7	-2.0	-1.6	-1.6
Residential (Energy on Private Income)	123.0	126.8	100.0	89.6	93.8	80.7	70.6	61.2	53.7	-2.1	-0.6	-2.8	-2.7
Tertiary (Energy on Value added)	81.4	103.5	100.0	86.0	86.8	76.1	65.4	57.3	51.2	2.1	-1.4	-2.8	-2.4
Passenger transport (toe/Mpkm)	25.9	25.3	24.2	24.9	25.2	25.1	25.3	24.8	23.6	-0.7	0.4	0.0	-0.7
Freight transport (toe/Mtkm)	26.1	32.6	45.9	59.7	63.0	63.3	60.5	57.2	53.1	5.8	3.2	-0.4	-1.3
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.42	0.45	0.40	0.33	0.28	0.25	0.22	0.21	0.20	-0.6	-3.3	-2.7	-0.8
Final energy demand (t of CO_2/toe)	2.22	2.02	1.94	1.97	1.97	1.94	1.87	1.82	1.77	-1.3	0.2	-0.5	-0.5
Industry	2.25	2.28	1.83	1.81	1.76	1.68	1.62	1.49	1.43	-2.1	-0.4	-0.8	-1.2
Residential	2.15	1.70	1.62	1.65	1.61	1.55	1.48	1.41	1.37	-2.8	-0.1	-0.8	-0.8
Tertiary	1.71	1.60	1.66	1.65	1.65	1.58	1.48	1.42	1.37	-0.3	0.0	-1.1	-0.8
Transport	2.84	2.85	2.90	2.91	2.84	2.81	2.74	2.71	2.68	0.2	-0.2	-0.3	-0.2
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			2.9	4.3	6.7	8.5	13.0	14.7	16.4				
RES in transport (%)			0.0	0.2	3.7	4.9	7.4	8.4	9.4				
Gross Electricity generation by fuel type (in GWh)			**35185**	**35749**	**37696**	**41740**	**44696**	**48272**	**51161**		**0.7**	**1.7**	**1.4**
Nuclear energy			14177	13832	14681	17308	17432	17432	17432		0.3	1.7	0.0
Coal and lignite			9924	6910	7208	6320	6898	7711	7626		-3.1	-0.4	1.0
Petroleum products			3901	505	268	212	233	690	433		-23.5	-1.4	6.4
Gas (including derived gases)			6885	12572	12038	13416	12115	12142	14593		5.7	0.1	1.9
Biomass & waste			120	1717	3174	3891	6163	6691	6843		38.8	6.9	1.1
Hydro			178	203	147	241	1043	2297	2345		-1.9	21.6	8.4
Wind			0	10	177	306	541	681	798			11.9	4.0
Solar, tidal etc.			0	0	3	29	77	147	241			38.3	12.1
Geothermal and other renewables			0	0	0	18	194	481	850				15.9
Net Generation Capacity in MW_e			**7956**	**8749**	**9385**	**9821**	**9695**	**9238**	**10105**		**1.7**	**0.3**	**0.4**
Nuclear energy			1804	1827	1854	2161	2174	2174	2174		0.3	1.6	0.0
Renewable energy			44	64	256	441	1135	1391	1670		19.2	16.1	3.9
Hydro (pumping excluded)			44	47	47	61	437	461	509		0.7	25.0	1.5
Wind			0	17	205	349	618	777	911			11.7	4.0
Solar			0	0	4	30	80	153	250			34.9	12.1
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			6109	6859	7276	7220	6386	5672	6261		1.8	-1.3	-0.2
of which cogeneration units			1125	1339	1710	2099	2549	2821	3069		4.3	4.1	1.9
of which CCS units			0	0	0	0	0	0	0				
Solids fired			1664	1475	1511	1130	936	1048	950		-1.0	-4.7	0.1
Gas fired			3599	4648	5021	5285	4274	3322	3870		3.4	-1.6	-1.0
Oil fired			762	309	317	263	183	144	92		-8.4	-5.4	-6.7
Biomass-waste fired			84	427	427	539	970	1103	1252		17.6	8.6	2.6
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	2	22	55	97				15.9
Load factor for net electric capacities (%)			46.0	43.0	43.3	46.2	49.9	56.5	54.9				
Efficiency for thermal electricity production (%)			29.3	33.0	37.0	38.2	38.0	37.9	38.3				
CHP indicator (% of electricity from CHP)			14.3	20.0	29.5	31.7	35.9	36.5	34.8				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			41.1	44.1	48.2	52.2	56.9	57.4	55.7				
- nuclear			40.3	38.7	38.9	41.5	39.0	36.1	34.1				
- renewable energy forms and industrial waste			0.8	5.4	9.3	10.7	17.9	21.3	21.7				
Transport sector													
Passenger transport activity (Gpkm)	**82.7**	**75.1**	**80.1**	**81.4**	**79.4**	**91.7**	**100.7**	**108.6**	**116.8**	**-0.3**	**-0.1**	**2.4**	**1.5**
Public road transport	19.3	16.6	18.7	17.8	17.0	17.2	17.4	17.7	18.1	-0.3	-0.9	0.2	0.4
Private cars and motorcycles	47.6	46.2	47.0	47.7	47.1	57.8	64.2	69.1	74.3	-0.1	0.0	3.1	1.5
Rail	13.9	10.9	12.3	12.2	11.0	11.3	12.1	13.0	14.1	-1.2	-1.1	0.9	1.6
Aviation	1.9	1.4	2.1	3.7	4.2	5.4	7.0	8.7	10.4	0.6	7.3	5.3	4.0
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**34.0**	**23.4**	**28.8**	**36.4**	**46.3**	**51.6**	**54.2**	**56.3**	**58.1**	**-1.6**	**4.8**	**1.6**	**0.7**
Trucks	15.2	13.8	19.1	25.2	34.4	39.0	40.7	42.1	43.1	2.4	6.0	1.7	0.6
Rail	16.8	8.4	8.8	9.1	9.8	10.3	11.0	11.6	12.3	-6.3	1.1	1.2	1.1
Inland navigation	2.0	1.2	0.9	2.1	2.1	2.3	2.4	2.6	2.7	-7.9	9.0	1.5	1.1
Energy demand in transport (ktoe)	**3031**	**2660**	**3263**	**4196**	**4916**	**5564**	**5821**	**5912**	**5844**	**0.7**	**4.2**	**1.7**	**0.0**
Public road transport	123	141	156	184	174	170	165	159	153	2.3	1.1	-0.5	-0.7
Private cars and motorcycles	1825	1546	1532	1583	1545	1788	1977	2070	2092	-1.7	0.1	2.5	0.6
Trucks	637	595	1181	2040	2782	3126	3144	3095	2988	6.4	8.9	1.2	-0.5
Rail	272	191	176	159	156	162	158	152	122	-4.3	-1.1	0.1	-2.6
Aviation	164	182	219	230	258	316	376	435	488	2.9	1.7	3.8	2.7
Inland navigation	9	5	1	1	1	1	1	1	1	-24.1	5.8	1.3	0.9

Source: PRIMES

Ireland: REFERENCE SCENARIO										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**3353**	**4010**	**2152**	**1616**	**1636**	**1976**	**2737**	**2888**	**3045**	**-4.3**	**-2.7**	**5.3**	**1.1**
Solids	1312	1606	959	789	617	611	602	639	619	-3.1	-4.3	-0.2	0.3
Oil	0	0	0	0	0	0	0	0	0				
Natural gas	1873	2249	958	461	410	461	363	421	441	-6.5	-8.1	-1.2	2.0
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	168	155	235	367	609	905	1772	1828	1986	3.4	10.0	11.3	1.1
Hydro	60	61	73	54	59	61	61	61	61	2.0	-2.0	0.2	0.0
Biomass & Waste	108	92	141	216	248	331	506	528	560	2.7	5.8	7.4	1.0
Wind	0	1	21	96	286	432	925	961	992		29.9	12.4	0.7
Solar and others	0	0	0	0	13	75	258	257	345	14.9	52.1	35.2	2.9
Geothermal	0	0	0	0	2	6	23	22	29	0.0	48.3	24.9	2.4
Net Imports	**7093**	**7631**	**12266**	**13657**	**13998**	**14827**	**14304**	**14813**	**15062**	**5.6**	**1.3**	**0.2**	**0.5**
Solids	2064	1823	1789	1969	1718	1581	1615	1635	1724	-1.4	-0.4	-0.6	0.7
Oil	5029	5725	7991	8503	8680	9086	8983	9141	9202	4.7	0.8	0.3	0.2
- Crude oil and Feedstocks	2023	2269	3008	3305	3156	3276	3233	3267	3268	4.0	0.5	0.2	0.1
- Oil products	3006	3456	4982	5198	5524	5810	5750	5874	5934	5.2	1.0	0.4	0.3
Natural gas	0	85	2478	3010	3374	3795	2987	3462	3625		3.1	-1.2	2.0
Electricity	0	-1	8	176	156	163	172	162	153		33.9	1.0	-1.1
Gross Inland Consumption	**10246**	**10861**	**14328**	**15123**	**15535**	**16695**	**16929**	**17583**	**17983**	**3.4**	**0.8**	**0.9**	**0.6**
Solids	3416	2775	2711	2685	2335	2191	2218	2274	2343	-2.3	-1.5	-0.5	0.6
Oil	4789	5598	7938	8426	8581	8978	8870	9022	9077	5.2	0.8	0.3	0.2
Natural gas	1873	2334	3436	3470	3784	4257	3350	3883	4066	6.3	1.0	-1.2	2.0
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	0	-1	8	176	156	163	172	162	153		33.9	1.0	-1.1
Renewable energy forms	168	155	235	367	679	1106	2319	2241	2343	3.4	11.2	13.1	0.1
as % in Gross Inland Consumption													
Solids	33.3	25.6	18.9	17.8	15.0	13.1	13.1	12.9	13.0				
Oil	46.7	51.5	55.4	55.7	55.2	53.8	52.4	51.3	50.5				
Natural gas	18.3	21.5	24.0	22.9	24.4	25.5	19.8	22.1	22.6				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	1.6	1.4	1.6	2.4	4.4	6.6	13.7	12.7	13.0				
Gross Electricity Generation in GWh_e	**14232**	**17622**	**23695**	**25008**	**26612**	**30214**	**31746**	**35666**	**38396**	**5.2**	**1.2**	**1.8**	**1.9**
Self consumption and grid losses	2261	2658	3457	3869	3630	4002	4066	4539	4799	4.3	0.5	1.1	1.7
Fuel Inputs for Thermal Power Generation	**3019**	**3711**	**4792**	**4747**	**4181**	**4459**	**3717**	**4227**	**4397**	**4.7**	**-1.4**	**-1.2**	**1.7**
Solids	1839	2028	1925	1903	1738	1660	1695	1788	1892	0.5	-1.0	-0.2	1.1
Oil (including refinery gas)	339	622	1019	775	369	317	288	255	241	11.6	-9.7	-2.4	-1.8
Gas	841	1060	1825	2040	2010	2353	1479	1922	2046	8.1	1.0	-3.0	3.3
Biomass & Waste	0	0	24	30	65	129	255	262	219		10.7	14.6	-1.5
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**1943**	**2439**	**3488**	**3479**	**3336**	**3540**	**3715**	**3701**	**3754**	**6.0**	**-0.4**	**1.1**	**0.1**
Refineries	1746	2272	3317	3343	3156	3276	3233	3267	3268	6.6	-0.5	0.2	0.1
Biofuels and hydrogen production	0	0	0	1	93	193	419	381	443			16.2	0.6
District heating	0	0	0	0	0	0	0	0	0				
Others	197	167	171	135	87	71	63	52	43	-1.4	-6.5	-3.2	-3.8
Energy Branch Consumption	**168**	**185**	**245**	**379**	**338**	**350**	**347**	**359**	**355**	**3.9**	**3.3**	**0.3**	**0.2**
Non-Energy Uses	**624**	**552**	**552**	**308**	**177**	**208**	**220**	**230**	**242**	**-1.2**	**-10.8**	**2.2**	**0.9**
Final Energy Demand	**7368**	**7910**	**10681**	**12340**	**12505**	**13542**	**14129**	**14530**	**14976**	**3.8**	**1.6**	**1.2**	**0.6**
by sector													
Industry	1745	1854	2348	2481	2283	2496	2677	2814	2937	3.0	-0.3	1.6	0.9
- energy intensive industries	870	881	1174	1237	1024	1053	1082	1111	1135	3.0	-1.4	0.6	0.5
- other industrial sectors	876	973	1174	1244	1259	1443	1595	1703	1802	3.0	0.7	2.4	1.2
Residential	2406	2200	2489	2895	3257	3463	3567	3554	3665	0.3	2.7	0.9	0.3
Tertiary	1227	1507	1826	1967	1965	2124	2139	2142	2156	4.1	0.7	0.8	0.1
Transport	1989	2349	4018	4997	5000	5459	5747	6020	6218	7.3	2.2	1.4	0.8
by fuel													
Solids	1784	933	699	704	585	519	512	475	441	-9.0	-1.8	-1.3	-1.5
Oil	3887	4813	6919	8020	7709	8141	8076	8280	8385	5.9	1.1	0.5	0.4
Gas	568	796	1201	1337	1696	1821	1807	1890	1933	7.8	3.5	0.6	0.7
Electricity	1020	1277	1744	2094	2119	2404	2539	2826	3030	5.5	2.0	1.8	1.8
Heat (from CHP and District Heating) [A]	0	0	0	0	128	174	162	178	249			2.4	4.4
Renewable energy forms	108	92	118	184	268	482	1032	881	936	0.9	8.6	14.4	-1.0
Other	0	0	0	0	0	1	2	2	2			15.3	-0.6
RES in Gross Final Energy Consumption [B]			**218**	**349**	**528**	**1064**	**2272**	**2194**	**2303**		**9.3**	**15.7**	**0.1**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**56.0**		**69.0**	**70.7**	**66.3**	**68.1**	**65.5**	**68.0**	**68.9**	**2.1**	**-0.4**	**-0.1**	**0.5**
of which ETS sectors GHGs emissions				24.6	19.9	20.8	19.2	20.8	21.8			-0.4	1.3
CO_2 Emissions (energy related)	**30.8**	**32.9**	**41.9**	**45.5**	**42.8**	**44.5**	**42.3**	**44.3**	**45.2**	**3.1**	**0.2**	**-0.1**	**0.7**
Power generation/District heating	10.4	12.6	15.2	14.8	12.8	13.2	11.2	12.5	13.1	3.9	-1.7	-1.4	1.6
Energy Branch	0.2	0.2	0.3	0.6	0.6	0.6	0.6	0.6	0.6	4.0	5.6	0.7	-0.3
Industry	4.0	3.8	4.6	4.9	3.9	4.1	3.9	4.2	4.3	1.5	-1.6	0.0	0.8
Residential	7.5	6.0	6.0	6.8	7.6	7.6	7.4	7.2	7.2	-2.1	2.3	-0.2	-0.3
Tertiary	2.9	3.4	3.8	3.4	3.3	3.4	3.3	3.0	2.8	2.8	-1.3	0.0	-1.7
Transport	5.9	6.9	12.0	14.9	14.6	15.7	15.8	16.8	17.2	7.4	2.0	0.8	0.8
CO_2 Emissions (non energy related)	**2.3**	**2.3**	**2.9**	**2.7**	**1.5**	**1.7**	**1.7**	**1.8**	**1.9**	**2.4**	**-6.5**	**1.5**	**1.1**
Non-CO_2 GHGs Emissions	**22.8**		**24.1**	**22.6**	**22.0**	**21.9**	**21.5**	**21.9**	**21.9**	**0.5**	**-0.9**	**-0.2**	**0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**123.2**	**126.4**	**118.4**	**121.7**	**117.0**	**121.5**	**123.1**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Ireland: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	3.507	3.598	3.778	4.109	4.614	5.052	5.404	5.673	5.881	0.7	2.0	1.6	0.8
GDP (in 000 MEuro'05)	61.2	77.7	123.7	162.2	158.8	190.3	221.7	253.4	285.9	7.3	2.5	3.4	2.6
Gross Inl. Cons./GDP (toe/MEuro'05)	167.4	139.9	115.8	93.3	97.8	87.7	76.4	69.4	62.9	-3.6	-1.7	-2.4	-1.9
Carbon intensity (t of CO_2/toe of GIC)	3.01	3.03	2.93	3.01	2.76	2.67	2.50	2.52	2.51	-0.3	-0.6	-1.0	0.1
Import Dependency %	69.1	69.5	84.7	89.7	89.5	88.2	83.9	83.7	83.2				
Total Energy-related Costs [C] (in 000 M€05)			10.2	13.0	12.9	15.1	19.4	22.0	23.4		2.3	4.2	1.9
as % of GDP			8.3	8.0	8.1	7.9	8.8	8.7	8.2				
Energy intensity indicators													
Industry (Energy on Value added)	222.5	150.3	100.0	80.1	68.8	64.3	59.7	56.0	52.5	-7.7	-3.7	-1.4	-1.3
Residential (Energy on Private Income)	167.3	129.6	100.0	93.3	99.0	94.5	85.2	77.0	73.0	-5.0	-0.1	-1.5	-1.5
Tertiary (Energy on Value added)	111.3	119.2	100.0	81.9	80.3	72.1	61.9	53.7	47.6	-1.1	-2.2	-2.6	-2.6
Passenger transport (toe/Mpkm)	48.7	45.2	51.0	48.5	47.4	44.0	41.1	37.9	34.9	0.5	-0.7	-1.4	-1.6
Freight transport (toe/Mtkm)	95.9	115.5	121.2	116.0	115.6	114.2	109.9	105.0	99.4	2.4	-0.5	-0.5	-1.0
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.73	0.71	0.64	0.59	0.46	0.41	0.33	0.33	0.32	-1.3	-3.3	-3.1	-0.4
Final energy demand (t of CO_2/toe)	2.74	2.55	2.47	2.43	2.35	2.27	2.16	2.15	2.10	-1.0	-0.5	-0.9	-0.3
Industry	2.28	2.05	1.98	1.99	1.72	1.63	1.46	1.49	1.45	-1.4	-1.4	-1.6	-0.1
Residential	3.10	2.71	2.42	2.34	2.33	2.20	2.08	2.02	1.97	-2.4	-0.4	-1.1	-0.5
Tertiary	2.34	2.28	2.07	1.74	1.69	1.62	1.56	1.41	1.30	-1.2	-2.0	-0.8	-1.8
Transport	2.96	2.96	2.97	2.98	2.92	2.87	2.76	2.79	2.76	0.1	-0.2	-0.6	0.0
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			2.0	2.8	4.2	7.8	16.0	15.0	15.3				
RES in transport (%)			0.0	0.0	2.3	4.5	9.3	8.1	9.2				
Gross Electricity generation by fuel type (in GWh)			**23695**	**25008**	**26612**	**30214**	**31746**	**35666**	**38396**		**1.2**	**1.8**	**1.9**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			8830	8822	8336	7971	8159	8602	9119		-0.6	-0.2	1.1
Petroleum products			4387	3389	1728	1535	1380	1242	1269		-8.9	-2.2	-0.8
Gas (including derived gases)			9311	10959	12317	14524	9306	12069	13367		2.8	-2.8	3.7
Biomass & waste			76	95	212	439	921	1013	843		10.8	15.8	-0.9
Hydro			846	631	691	708	707	704	705		-2.0	0.2	0.0
Wind			244	1112	3327	5024	10751	11173	11532		29.9	12.4	0.7
Solar, tidal etc.			0	0	2	14	29	45	62			31.4	7.8
Geothermal and other renewables			0	0	0	0	492	819	1499				11.8
Net Generation Capacity in MW_e			**4399**	**5718**	**9589**	**9573**	**11462**	**11311**	**12417**		**8.1**	**1.8**	**0.8**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			346	743	1590	2071	4203	4526	5011		16.5	10.2	1.8
Hydro (pumping excluded)			230	225	225	229	230	230	230		-0.2	0.2	0.0
Wind			116	517	1360	1828	3687	3824	3938		27.9	10.5	0.7
Solar			0	0	5	14	30	46	64			19.7	7.8
Other renewables (tidal etc.)			0	0	0	0	255	425	778				11.8
Thermal power			4053	4976	7999	7502	7259	6785	7406		7.0	-1.0	0.2
of which cogeneration units			133	127	273	390	342	396	632		7.4	2.3	6.3
of which CCS units			0	0	0	0	0	0	0				
Solids fired			1276	1229	1230	1204	1181	1179	1179		-0.4	-0.4	0.0
Gas fired			1966	2927	5903	6115	5853	5317	5817		11.6	-0.1	-0.1
Oil fired			783	772	781	55	26	75	196		0.0	-28.8	22.2
Biomass-waste fired			27	49	85	129	199	214	214		12.0	8.9	0.8
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			58.1	46.6	30.1	34.4	30.4	34.6	34.1				
Efficiency for thermal electricity production (%)			40.6	42.2	46.5	47.2	45.7	46.6	48.1				
CHP indicator (% of electricity from CHP)			2.6	2.6	3.3	5.4	4.5	4.8	8.2				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			4.9	7.3	15.9	20.5	40.6	38.6	38.1				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			4.9	7.3	15.9	20.5	40.6	38.6	38.1				
Transport sector													
Passenger transport activity (Gpkm)	**29.2**	**35.6**	**47.1**	**58.1**	**62.9**	**71.2**	**80.2**	**90.1**	**100.3**	**4.9**	**2.9**	**2.5**	**2.3**
Public road transport	3.9	5.2	6.1	6.7	7.2	7.7	8.1	8.6	9.1	4.7	1.6	1.3	1.2
Private cars and motorcycles	21.3	25.3	32.4	38.4	40.8	45.9	51.4	58.2	65.0	4.3	2.3	2.3	2.4
Rail	1.2	1.3	1.4	1.9	2.1	2.4	2.7	3.1	3.5	1.3	4.1	2.7	2.4
Aviation	2.0	3.0	6.3	10.1	11.9	14.2	16.8	19.0	21.3	12.3	6.6	3.5	2.4
Inland navigation	0.9	0.9	0.9	1.0	1.0	1.1	1.2	1.2	1.3	0.5	0.6	1.6	1.4
Freight transport activity (Gtkm)	**5.9**	**6.4**	**13.3**	**18.8**	**17.4**	**20.4**	**22.3**	**24.8**	**27.3**	**8.5**	**2.7**	**2.5**	**2.0**
Trucks	5.1	5.5	12.3	17.9	16.7	19.5	21.4	23.8	26.2	9.2	3.1	2.5	2.1
Rail	0.6	0.6	0.5	0.3	0.1	0.2	0.2	0.2	0.3	-1.8	-12.5	4.4	3.0
Inland navigation	0.2	0.3	0.6	0.6	0.6	0.7	0.7	0.8	0.8	9.3	0.3	2.4	1.4
Energy demand in transport (ktoe)	**1989**	**2349**	**4018**	**4997**	**5000**	**5459**	**5747**	**6020**	**6218**	**7.3**	**2.2**	**1.4**	**0.8**
Public road transport	31	41	48	51	54	57	57	58	58	4.4	1.3	0.5	0.1
Private cars and motorcycles	994	1146	1713	1897	1935	1950	2023	2075	2093	5.6	1.2	0.4	0.3
Trucks	525	694	1577	2150	1999	2309	2432	2586	2696	11.6	2.4	2.0	1.0
Rail	48	50	42	45	28	30	25	27	25	-1.4	-4.0	-1.0	-0.2
Aviation	365	390	613	836	966	1093	1188	1251	1323	5.3	4.6	2.1	1.1
Inland navigation	26	28	25	18	18	20	21	23	24	-0.5	-3.2	1.7	1.2

Source: PRIMES

Italy: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**25558**	**29435**	**27128**	**28111**	**29186**	**32066**	**40392**	**50403**	**60335**	**0.6**	**0.7**	**3.3**	**4.1**
Solids	218	44	4	60	0	0	0	0	0	-33.8			
Oil	4766	5405	4811	6520	5442	5313	5028	4958	4851	0.1	1.2	-0.8	-0.4
Natural gas	14030	16347	13622	9886	8500	7900	7300	6700	6000	-0.3	-4.6	-1.5	-1.9
Nuclear	0	0	0	0	0	0	3277	12663	21666				20.8
Renewable energy sources	6544	7640	8691	11645	15244	18853	24786	26082	27818	2.9	5.8	5.0	1.2
Hydro	2719	3249	3812	3101	3300	3308	3329	3329	3353	3.4	-1.4	0.1	0.1
Biomass & Waste	849	1215	1716	3521	5401	6607	8438	7815	7831	7.3	12.2	4.6	-0.7
Wind	0	1	48	202	528	1484	3125	3265	3390	73.3	27.0	19.5	0.8
Solar and others	5	8	12	30	246	1412	3379	3988	4416	9.2	34.8	29.9	2.7
Geothermal	2971	3167	3103	4791	5770	6042	6515	7684	8828	0.4	6.4	1.2	3.1
Net Imports	**132454**	**135059**	**153428**	**160955**	**154712**	**156567**	**154718**	**150377**	**146894**	**1.5**	**0.1**	**0.0**	**-0.5**
Solids	13792	12987	13188	16366	16178	16802	16485	15997	16087	-0.4	2.1	0.2	-0.2
Oil	90279	90092	88933	79901	70365	68840	64462	63430	61819	-0.2	-2.3	-0.9	-0.4
- Crude oil and Feedstocks	84617	82939	90784	95053	82952	81444	77079	76043	74420	0.7	-0.9	-0.7	-0.4
- Oil products	5662	7153	-1852	-15153	-12587	-12604	-12617	-12613	-12602				
Natural gas	25311	28530	47008	59840	63075	65148	64711	63228	60710	6.4	3.0	0.3	-0.6
Electricity	2980	3218	3813	4227	3630	3333	2914	2512	2126	2.5	-0.5	-2.2	-3.1
Gross Inland Consumption	**153512**	**161674**	**172955**	**187312**	**180825**	**185426**	**191845**	**197420**	**203751**	**1.2**	**0.4**	**0.6**	**0.6**
Solids	14621	12272	12659	16477	16178	16802	16485	15997	16087	-1.4	2.5	0.2	-0.2
Oil	90274	93660	89365	83691	72733	70946	66225	65028	63191	-0.1	-2.0	-0.9	-0.5
Natural gas	39001	44652	57940	70651	71575	73048	72011	69928	66710	4.0	2.1	0.1	-0.8
Nuclear	0	0	0	0	0	0	3277	12663	21666				20.8
Electricity	2980	3218	3813	4227	3630	3333	2914	2512	2126	2.5	-0.5	-2.2	-3.1
Renewable energy forms	6636	7871	9177	12266	16709	21297	30934	31292	33971	3.3	6.2	6.4	0.9
as % in Gross Inland Consumption													
Solids	9.5	7.6	7.3	8.8	8.9	9.1	8.6	8.1	7.9				
Oil	58.8	57.9	51.7	44.7	40.2	38.3	34.5	32.9	31.0				
Natural gas	25.4	27.6	33.5	37.7	39.6	39.4	37.5	35.4	32.7				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	1.7	6.4	10.6				
Renewable energy forms	4.3	4.9	5.3	6.5	9.2	11.5	16.1	15.9	16.7				
Gross Electricity Generation in GWh_e	**213400**	**237312**	**270016**	**296786**	**300118**	**327811**	**361035**	**388536**	**408517**	**2.4**	**1.1**	**1.9**	**1.2**
Self consumption and grid losses	29388	31368	35087	36142	33422	36790	40877	44021	46657	1.8	-0.5	2.0	1.3
Fuel Inputs for Thermal Power Generation	**40328**	**43578**	**47763**	**54689**	**52875**	**54965**	**53508**	**52867**	**49798**	**1.7**	**1.0**	**0.1**	**-0.7**
Solids	7017	5287	5836	10001	10924	11105	10647	9904	9934	-1.8	6.5	-0.3	-0.7
Oil (including refinery gas)	21531	25009	18954	9640	3486	3142	322	1529	1547	-1.3	-15.6	-21.2	17.0
Gas	8971	10234	19665	28200	29992	30648	28831	26861	22261	8.2	4.3	-0.4	-2.6
Biomass & Waste	39	94	419	2270	2933	4368	7783	7388	7612	26.8	21.5	10.3	-0.2
Geothermal heat	2770	2954	2890	4578	5540	5703	5925	7185	8445	0.4	6.7	0.7	3.6
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**99583**	**99070**	**103125**	**107857**	**95888**	**95260**	**92116**	**91397**	**90190**	**0.4**	**-0.7**	**-0.4**	**-0.2**
Refineries	91895	92690	97315	102905	90452	88635	83891	82717	80932	0.6	-0.7	-0.8	-0.4
Biofuels and hydrogen production	0	0	0	179	1282	2028	3571	3793	4337			10.8	2.0
District heating	0	0	0	0	0	0	0	0	0				
Others	7688	6380	5811	4773	4154	4598	4654	4887	4921	-2.8	-3.3	1.1	0.6
Energy Branch Consumption	**7028**	**7345**	**7289**	**10110**	**9415**	**9429**	**9452**	**9368**	**9084**	**0.4**	**2.6**	**0.0**	**-0.4**
Non-Energy Uses	**10095**	**13807**	**11039**	**11267**	**10617**	**10804**	**11120**	**11317**	**11510**	**0.9**	**-0.4**	**0.5**	**0.3**
Final Energy Demand	**107380**	**113897**	**123465**	**135679**	**131856**	**136699**	**140749**	**141760**	**143500**	**1.4**	**0.7**	**0.7**	**0.2**
by sector													
Industry	36259	36459	39526	41924	39829	40223	41993	43073	44653	0.9	0.1	0.5	0.6
- energy intensive industries	25255	24765	24933	26667	24705	24858	25513	25706	26115	-0.1	-0.1	0.3	0.2
- other industrial sectors	11004	11694	14593	15257	15123	15365	16480	17367	18538	2.9	0.4	0.9	1.2
Residential	26334	26707	28361	32040	32618	34552	35583	35263	35467	0.7	1.4	0.9	0.0
Tertiary	11271	12990	14190	17934	16851	17401	17848	17558	17604	2.3	1.7	0.6	-0.1
Transport	33514	37741	41388	43782	42558	44524	45325	45866	45776	2.1	0.3	0.6	0.1
by fuel													
Solids	4209	4012	3681	4220	3417	3724	3826	3990	4007	-1.3	-0.7	1.1	0.5
Oil	53841	53287	56357	58458	53342	52313	50667	50530	49470	0.5	-0.5	-0.5	-0.2
Gas	29813	34652	37984	41979	41065	41520	41985	39750	40535	2.5	0.8	0.2	-0.4
Electricity	18409	20442	23435	25828	25787	27582	29671	31368	32502	2.4	1.0	1.4	0.9
Heat (from CHP and District Heating) [A]	0	0	0	3082	3984	5435	4424	6830	6930			1.1	4.6
Renewable energy forms	1107	1505	2007	2112	4258	6119	10167	9282	10049	6.1	7.8	9.1	-0.1
Other	0	0	0	0	2	5	9	8	7			13.9	-3.2
RES in Gross Final Energy Consumption [B]			**6180**	**7829**	**10414**	**15148**	**23864**	**23327**	**24961**		**5.4**	**8.6**	**0.5**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**499.0**		**532.3**	**561.6**	**514.8**	**510.7**	**485.4**	**474.9**	**462.3**	**0.6**	**-0.3**	**-0.6**	**-0.5**
of which ETS sectors GHGs emissions				254.4	219.2	219.3	202.9	197.8	188.5			-0.8	-0.7
CO_2 Emissions (energy related)	**384.7**	**399.5**	**418.8**	**447.6**	**413.3**	**413.4**	**390.9**	**379.9**	**366.9**	**0.9**	**-0.1**	**-0.6**	**-0.6**
Power generation/District heating	118.8	125.9	130.5	137.8	125.9	127.4	108.9	104.9	94.3	0.9	-0.4	-1.4	-1.4
Energy Branch	16.0	16.4	15.9	19.1	17.6	17.2	16.6	14.6	13.6	-0.1	1.0	-0.6	-2.0
Industry	77.6	73.8	75.5	74.9	62.5	58.8	62.2	59.5	62.0	-0.3	-1.9	0.0	0.0
Residential	55.7	52.9	54.8	61.4	62.8	64.1	61.7	59.9	58.7	-0.2	1.4	-0.2	-0.5
Tertiary	19.1	21.2	22.0	27.2	24.4	22.2	20.2	18.7	18.1	1.4	1.0	-1.9	-1.1
Transport	97.5	109.2	120.1	127.3	120.1	123.6	121.3	122.2	120.2	2.1	0.0	0.1	-0.1
CO_2 Emissions (non energy related)	**32.7**	**30.6**	**28.2**	**30.5**	**27.8**	**28.6**	**29.5**	**30.4**	**31.3**	**-1.5**	**-0.2**	**0.6**	**0.6**
Non-CO_2 GHGs Emissions	**81.5**		**85.2**	**83.5**	**73.7**	**68.7**	**65.0**	**64.6**	**64.2**	**0.4**	**-1.4**	**-1.3**	**-0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**106.7**	**112.6**	**103.2**	**102.4**	**97.3**	**95.2**	**92.7**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Italy: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	56.694	56.844	56.924	58.462	60.017	60.929	61.421	61.683	61.868	0.0	0.5	0.2	0.1
GDP (in 000 MEuro'05)	1168.7	1244.9	1367.8	1429.5	1403.5	1526.1	1678.7	1832.9	1974.0	1.6	0.3	1.8	1.6
Gross Inl. Cons./GDP (toe/MEuro'05)	131.4	129.9	126.4	131.0	128.8	121.5	114.3	107.7	103.2	-0.4	0.2	-1.2	-1.0
Carbon intensity (t of CO_2/toe of GIC)	2.51	2.47	2.42	2.39	2.29	2.23	2.04	1.92	1.80	-0.3	-0.6	-1.1	-1.2
Import Dependency %	84.8	82.3	87.3	84.4	84.1	83.0	79.3	74.9	70.9				
Total Energy-related Costs [C] (in 000 M€05)			137.3	158.1	158.3	186.9	227.2	255.1	266.6		1.4	3.7	1.6
as % of GDP			10.0	11.1	11.3	12.2	13.5	13.9	13.5				
Energy intensity indicators													
Industry (Energy on Value added)	105.9	98.6	100.0	110.7	111.7	106.0	100.0	91.7	86.2	-0.6	1.1	-1.1	-1.5
Residential (Energy on Private Income)	109.6	106.6	100.0	108.8	110.4	105.0	98.4	90.2	85.2	-0.9	1.0	-1.1	-1.4
Tertiary (Energy on Value added)	93.4	101.2	100.0	119.0	111.8	105.0	97.4	87.6	81.6	0.7	1.1	-1.4	-1.8
Passenger transport (toe/Mpkm)	33.5	32.5	31.3	32.3	31.6	30.9	30.1	28.9	27.6	-0.7	0.1	-0.5	-0.9
Freight transport (toe/Mtkm)	48.4	44.6	45.2	47.5	46.4	46.5	45.6	44.0	41.9	-0.7	0.3	-0.2	-0.8
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.56	0.53	0.48	0.39	0.35	0.31	0.25	0.22	0.19	-1.4	-3.3	-3.1	-3.0
Final energy demand (t of CO_2/toe)	2.33	2.26	2.21	2.14	2.05	1.97	1.89	1.84	1.80	-0.5	-0.8	-0.8	-0.4
Industry	2.14	2.03	1.91	1.79	1.57	1.46	1.48	1.38	1.39	-1.1	-2.0	-0.6	-0.6
Residential	2.12	1.98	1.93	1.92	1.92	1.86	1.74	1.70	1.65	-0.9	0.0	-1.0	-0.5
Tertiary	1.70	1.63	1.55	1.51	1.45	1.28	1.13	1.07	1.03	-0.9	-0.7	-2.5	-0.9
Transport	2.91	2.89	2.90	2.91	2.82	2.78	2.68	2.66	2.62	0.0	-0.3	-0.5	-0.2
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			4.9	5.6	7.7	10.8	16.5	16.0	16.9				
RES in transport (%)			0.3	0.9	3.9	5.8	9.9	10.5	12.0				
Gross Electricity generation by fuel type (in GWh)			**270016**	**296786**	**300118**	**327811**	**361035**	**388536**	**408517**		**1.1**	**1.9**	**1.2**
Nuclear energy			0	0	0	0	13681	54017	93261				21.2
Coal and lignite			27603	46304	48950	53132	52022	48397	48498		5.9	0.6	-0.7
Petroleum products			85749	45284	16853	15046	1531	6157	6789		-15.0	-21.3	16.1
Gas (including derived gases)			105453	152542	169944	178221	178332	157732	129714		4.9	0.5	-3.1
Biomass & waste			1604	8901	11710	15467	26616	27510	29063		22.0	8.6	0.9
Hydro			44328	36061	38369	38468	38710	38707	38992		-1.4	0.1	0.1
Wind			563	2344	6138	17251	36337	37960	39420		27.0	19.5	0.8
Solar, tidal etc.			18	31	1711	3594	6916	9701	12961		57.7	15.0	6.5
Geothermal and other renewables			4698	5320	6442	6632	6889	8354	9819		3.2	0.7	3.6
Net Generation Capacity in MW_e			**67747**	**81560**	**96802**	**103365**	**114175**	**120397**	**128673**		**3.6**	**1.7**	**1.2**
Nuclear energy			0	0	0	0	1579	6236	10766				21.2
Renewable energy			13784	19213	22856	30566	43886	46480	49061		5.2	6.7	1.1
Hydro (pumping excluded)			13212	17095	17095	17440	17440	17440	17440		2.6	0.2	0.0
Wind			363	1635	4507	10602	22262	23395	24417		28.6	17.3	0.9
Solar			209	483	1254	2524	4184	5645	7203		19.6	12.8	5.6
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			53963	62347	73946	72798	68710	67682	68847		3.2	-0.7	0.0
of which cogeneration units			3956	5817	7500	9669	8081	11276	12783		6.6	0.7	4.7
of which CCS units			0	0	0	0	460	460	460				0.0
Solids fired			8719	8816	9772	11776	10248	8861	8862		1.1	0.5	-1.4
Gas fired			23805	34917	50453	49750	47890	46749	46166		7.8	-0.5	-0.4
Oil fired			20261	16623	10546	6041	3526	3423	3631		-6.3	-10.4	0.3
Biomass-waste fired			588	1322	2440	4474	6259	7695	9067		15.3	9.9	3.8
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			590	671	735	757	786	954	1121		2.2	0.7	3.6
Load factor for net electric capacities (%)			43.3	39.7	34.2	34.9	34.7	35.4	34.8				
Efficiency for thermal electricity production (%)			40.5	40.6	41.3	42.0	42.7	40.4	38.7				
CHP indicator (% of electricity from CHP)			9.1	9.7	13.5	17.0	13.7	16.8	16.6				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	1.4	1.2	1.2				
Non fossil fuels in electricity generation (%)			19.0	17.7	21.4	24.8	35.8	45.4	54.7				
- nuclear			0.0	0.0	0.0	0.0	3.8	13.9	22.8				
- renewable energy forms and industrial waste			19.0	17.7	21.4	24.8	32.0	31.5	31.9				
Transport sector													
Passenger transport activity (Gpkm)	**739.1**	**842.8**	**980.7**	**968.1**	**1001.0**	**1054.6**	**1095.2**	**1143.2**	**1186.3**	**2.9**	**0.2**	**0.9**	**0.8**
Public road transport	84.0	87.1	93.6	101.2	103.7	106.3	109.1	112.0	114.4	1.1	1.0	0.5	0.5
Private cars and motorcycles	582.7	674.6	793.5	763.0	788.1	830.3	855.5	886.7	914.6	3.1	-0.1	0.8	0.7
Rail	48.9	51.9	55.2	56.5	55.7	56.9	60.6	65.2	69.8	1.2	0.1	0.9	1.4
Aviation	18.4	24.3	33.5	42.7	48.6	56.2	64.9	73.9	82.1	6.2	3.8	2.9	2.4
Inland navigation	5.1	4.9	5.0	4.7	4.8	4.9	5.1	5.3	5.4	-0.4	-0.3	0.5	0.7
Freight transport activity (Gtkm)	**180.7**	**231.6**	**237.6**	**262.6**	**235.8**	**256.4**	**271.2**	**290.0**	**309.9**	**2.8**	**-0.1**	**1.4**	**1.3**
Trucks	125.5	174.4	184.7	211.8	184.0	201.9	214.3	230.8	248.6	3.9	0.0	1.5	1.5
Rail	19.4	21.7	22.8	22.8	24.6	25.7	26.9	27.8	28.5	1.7	0.7	0.9	0.6
Inland navigation	35.8	35.4	30.2	28.0	27.2	28.7	30.0	31.4	32.8	-1.7	-1.0	1.0	0.9
Energy demand in transport (ktoe)	**33514**	**37741**	**41388**	**43782**	**42558**	**44524**	**45325**	**45866**	**45776**	**2.1**	**0.3**	**0.6**	**0.1**
Public road transport	739	706	793	932	945	940	917	892	864	0.7	1.8	-0.3	-0.6
Private cars and motorcycles	21620	23735	25970	26093	25971	26632	26721	26537	26148	1.8	0.0	0.3	-0.2
Trucks	8154	9612	10097	11738	10175	11130	11575	12011	12283	2.2	0.1	1.3	0.6
Rail	739	821	835	908	931	919	899	884	844	1.2	1.1	-0.3	-0.6
Aviation	1872	2418	3491	3863	4289	4646	4949	5268	5356	6.4	2.1	1.4	0.8
Inland navigation	391	450	203	249	248	256	264	273	283	-6.3	2.0	0.6	0.7

Source: PRIMES

Latvia: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**1124**	**1432**	**1409**	**1870**	**1911**	**2264**	**2461**	**2459**	**2323**	**2.3**	**3.1**	**2.6**	**-0.6**
Solids	61	78	16	3	1	1	1	1	1	-12.3	-21.7	-3.2	-0.2
Oil	1	0	0	10	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	1062	1354	1393	1858	1910	2263	2460	2458	2322	2.8	3.2	2.6	-0.6
Hydro	387	253	242	286	248	250	252	256	291	-4.6	0.2	0.2	1.4
Biomass & Waste	675	1101	1150	1568	1648	1973	2140	2105	1924	5.5	3.7	2.6	-1.1
Wind	0	0	0	4	14	38	64	92	99		44.4	16.7	4.4
Solar and others	0	0	0	0	0	1	4	6	9			32.5	7.9
Geothermal	0	0	0	0	0	0	0	0	0			4.6	0.9
Net Imports	**7468**	**3366**	**2245**	**2994**	**3152**	**3222**	**3185**	**3118**	**3224**	**-11.3**	**3.5**	**0.1**	**0.1**
Solids	627	170	63	77	52	43	463	452	555	-20.5	-2.0	24.5	1.8
Oil	3972	2094	1116	1676	1944	2169	2143	2118	2099	-11.9	5.7	1.0	-0.2
- Crude oil and Feedstocks	1	2	94	4	1	1	1	1	1	55.9	-35.0	1.0	-0.6
- Oil products	3971	2092	1022	1672	1943	2168	2141	2117	2097	-12.7	6.6	1.0	-0.2
Natural gas	2561	999	1113	1434	1414	1386	987	906	923	-8.0	2.4	-3.5	-0.7
Electricity	308	194	154	185	121	43	20	21	20	-6.7	-2.3	-16.4	-0.2
Gross Inland Consumption	**7931**	**4628**	**3746**	**4491**	**4749**	**5142**	**5289**	**5212**	**5175**	**-7.2**	**2.4**	**1.1**	**-0.2**
Solids	711	273	135	82	53	44	464	453	556	-15.3	-8.8	24.2	1.8
Oil	3487	1893	1175	1382	1631	1825	1786	1753	1727	-10.3	3.3	0.9	-0.3
Natural gas	2380	1010	1092	1358	1414	1386	987	906	923	-7.5	2.6	-3.5	-0.7
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	308	194	154	185	121	43	20	21	20	-6.7	-2.3	-16.4	-0.2
Renewable energy forms	1045	1258	1191	1485	1529	1844	2032	2079	1949	1.3	2.5	2.9	-0.4
as % in Gross Inland Consumption													
Solids	9.0	5.9	3.6	1.8	1.1	0.8	8.8	8.7	10.7				
Oil	44.0	40.9	31.4	30.8	34.3	35.5	33.8	33.6	33.4				
Natural gas	30.0	21.8	29.2	30.2	29.8	27.0	18.7	17.4	17.8				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	13.2	27.2	31.8	33.1	32.2	35.9	38.4	39.9	37.7				
Gross Electricity Generation in GWh_e	**6647**	**3978**	**4135**	**4904**	**5821**	**7725**	**8885**	**9457**	**10110**	**-4.6**	**3.5**	**4.3**	**1.3**
Self consumption and grid losses	1445	1428	1148	1027	1073	1168	1361	1380	1398	-2.3	-0.7	2.4	0.3
Fuel Inputs for Thermal Power Generation	**887**	**592**	**513**	**576**	**756**	**960**	**1204**	**1263**	**1271**	**-5.3**	**4.0**	**4.8**	**0.6**
Solids	20	65	47	0	0	0	425	426	530	9.2			2.2
Oil (including refinery gas)	177	242	77	13	11	12	12	10	10	-8.0	-17.5	0.8	-1.5
Gas	690	286	388	541	642	688	374	339	315	-5.6	5.2	-5.3	-1.7
Biomass & Waste	0	0	0	21	102	259	393	489	416			14.4	0.6
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**2570**	**892**	**562**	**476**	**445**	**438**	**384**	**347**	**334**	**-14.1**	**-2.3**	**-1.4**	**-1.4**
Refineries	1	1	1	1	1	1	1	1	1	0.0	1.3	1.0	-0.6
Biofuels and hydrogen production	0	0	0	2	33	53	82	101	117			9.7	3.6
District heating	2542	881	560	473	411	383	301	245	216	-14.0	-3.0	-3.1	-3.3
Others	27	9	1	0	0	0	0	0	0	-28.3			
Energy Branch Consumption	**126**	**127**	**147**	**100**	**128**	**135**	**145**	**143**	**144**	**1.5**	**-1.4**	**1.3**	**-0.1**
Non-Energy Uses	**78**	**46**	**79**	**93**	**56**	**58**	**59**	**56**	**55**	**0.2**	**-3.5**	**0.7**	**-0.8**
Final Energy Demand	**6389**	**3814**	**3239**	**4029**	**4161**	**4456**	**4484**	**4431**	**4420**	**-6.6**	**2.5**	**0.8**	**-0.1**
by sector													
Industry	1980	692	573	705	654	654	623	599	600	-11.7	1.3	-0.5	-0.4
- energy intensive industries	712	308	224	287	259	235	215	200	192	-10.9	1.4	-1.8	-1.1
- other industrial sectors	1267	384	349	419	396	418	408	400	408	-12.1	1.3	0.3	0.0
Residential	1586	1603	1327	1514	1504	1555	1573	1542	1514	-1.8	1.3	0.4	-0.4
Tertiary	1727	806	592	743	705	745	743	723	720	-10.1	1.8	0.5	-0.3
Transport	1097	714	747	1066	1297	1502	1545	1567	1586	-3.8	5.7	1.8	0.3
by fuel													
Solids	316	124	57	73	46	37	30	18	17	-15.7	-2.1	-4.2	-5.4
Oil	2062	1157	1057	1331	1554	1739	1700	1673	1648	-6.5	3.9	0.9	-0.3
Gas	672	366	329	508	490	467	472	483	501	-6.9	4.1	-0.4	0.6
Electricity	711	381	382	490	506	583	644	694	748	-6.0	2.9	2.4	1.5
Heat (from CHP and District Heating) [A]	2013	905	590	598	543	503	485	490	481	-11.5	-0.8	-1.1	-0.1
Renewable energy forms	616	881	824	1028	1021	1126	1152	1072	1024	3.0	2.2	1.2	-1.2
Other	0	0	0	0	0	1	1	1	0			31.7	-11.3
RES in Gross Final Energy Consumption [B]			**1178**	**1387**	**1459**	**1718**	**1873**	**1900**	**1828**		**2.2**	**2.5**	**-0.2**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**26.9**		**10.0**	**11.4**	**11.7**	**12.0**	**12.4**	**12.2**	**12.5**	**-9.5**	**1.6**	**0.6**	**0.1**
of which ETS sectors GHGs emissions				3.0	3.0	3.0	3.8	3.6	4.1			2.5	0.9
CO_2 Emissions (energy related)	**18.8**	**8.8**	**6.7**	**7.6**	**8.2**	**8.7**	**9.3**	**9.0**	**9.4**	**-9.9**	**2.2**	**1.2**	**0.0**
Power generation/District heating	9.7	3.9	2.4	2.1	2.2	2.2	2.9	2.7	3.1	-13.1	-0.9	2.9	0.6
Energy Branch	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	5.0	-10.3	2.2	-0.8
Industry	2.5	1.3	0.9	1.1	1.0	1.0	0.8	0.8	0.7	-9.5	1.1	-2.2	-1.7
Residential	1.2	0.5	0.3	0.4	0.5	0.5	0.5	0.6	0.7	-13.3	4.6	1.5	2.4
Tertiary	2.1	0.9	0.7	0.8	0.7	0.7	0.6	0.6	0.5	-10.8	1.1	-1.7	-1.6
Transport	3.2	2.1	2.2	3.1	3.7	4.3	4.3	4.3	4.3	-3.7	5.6	1.4	-0.2
CO_2 Emissions (non energy related)	**0.6**	**0.2**	**0.2**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**-8.5**	**1.4**	**0.4**	**-0.1**
Non-CO_2 GHGs Emissions	**7.5**		**3.1**	**3.5**	**3.2**	**3.0**	**2.8**	**2.9**	**2.9**	**-8.6**	**0.3**	**-1.2**	**0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**37.0**	**42.4**	**43.3**	**44.4**	**46.1**	**45.2**	**46.4**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Latvia: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	2.668	2.501	2.382	2.306	2.247	2.200	2.151	2.095	2.033	-1.1	-0.6	-0.4	-0.6
GDP (in 000 MEuro'05)	12.5	6.8	8.8	13.0	12.9	15.4	17.4	19.2	21.0	-3.5	3.9	3.0	1.9
Gross Inl. Cons./GDP (toe/MEuro'05)	632.3	684.6	426.7	345.2	368.0	333.1	303.7	271.7	246.2	-3.9	-1.5	-1.9	-2.1
Carbon intensity (t of CO_2/toe of GIC)	2.37	1.91	1.78	1.70	1.73	1.69	1.76	1.72	1.81	-2.9	-0.2	0.2	0.3
Import Dependency %	88.9	70.5	59.8	63.0	62.3	58.7	56.4	55.9	58.1				
Total Energy-related Costs (C) (in 000 M€05)			1.8	2.7	3.1	4.0	5.0	5.6	5.9		5.3	4.9	1.7
as % of GDP			20.8	21.0	23.7	25.8	28.4	29.3	28.0				
Energy intensity indicators													
Industry (Energy on Value added)	157.6	153.2	100.0	84.9	84.4	76.6	69.6	64.8	60.8	-4.4	-1.7	-1.9	-1.3
Residential (Energy on Private Income)	84.9	156.2	100.0	75.0	80.6	68.0	58.9	51.8	46.0	1.7	-2.1	-3.1	-2.4
Tertiary (Energy on Value added)	322.8	180.2	100.0	84.3	80.7	68.9	60.3	52.6	47.4	-11.1	-2.1	-2.9	-2.4
Passenger transport (toe/Mpkm)	19.6	37.3	26.2	26.1	27.0	27.2	27.0	26.7	26.2	2.9	0.3	0.0	-0.3
Freight transport (toe/Mtkm)	27.8	24.9	19.0	19.6	24.8	24.8	23.1	21.3	19.8	-3.7	2.7	-0.7	-1.5
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.28	0.23	0.18	0.16	0.15	0.14	0.18	0.16	0.18	-4.3	-1.6	1.5	0.1
Final energy demand (t of CO_2/toe)	1.41	1.26	1.26	1.35	1.44	1.45	1.41	1.40	1.40	-1.2	1.4	-0.2	-0.1
Industry	1.28	1.92	1.63	1.52	1.60	1.49	1.35	1.32	1.19	2.4	-0.2	-1.7	-1.3
Residential	0.76	0.33	0.22	0.28	0.30	0.31	0.34	0.37	0.44	-11.7	3.3	1.0	2.8
Tertiary	1.21	1.12	1.13	1.09	1.05	0.94	0.84	0.78	0.74	-0.7	-0.7	-2.2	-1.3
Transport	2.90	2.89	2.92	2.95	2.89	2.86	2.80	2.74	2.69	0.1	-0.1	-0.3	-0.4
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			33.7	32.6	33.5	36.9	40.0	41.1	39.7				
RES in transport (%)			0.7	0.7	3.1	4.3	6.6	8.7	10.4				
Gross Electricity generation by fuel type (in GWh)			**4135**	**4904**	**5821**	**7725**	**8885**	**9457**	**10110**		**3.5**	**4.3**	**1.3**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			78	0	0	0	1869	1918	2483				2.9
Petroleum products			107	26	45	46	47	38	41		-8.2	0.3	-1.2
Gas (including derived gases)			1128	1465	2364	3445	1834	1604	1502		7.7	-2.5	-2.0
Biomass & waste			0	42	371	873	1453	1840	1534			14.6	0.5
Hydro			2818	3324	2881	2911	2931	2978	3380		0.2	0.2	1.4
Wind			4	47	158	445	742	1065	1146		44.4	16.7	4.4
Solar, tidal etc.			0	0	1	5	10	15	23			26.6	9.2
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**2079**	**2171**	**2359**	**2785**	**3092**	**3312**	**3612**		**1.3**	**2.7**	**1.6**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			1499	1544	1616	1782	1940	2094	2289		0.8	1.8	1.7
Hydro (pumping excluded)			1497	1518	1520	1522	1525	1535	1672		0.2	0.0	0.9
Wind			2	26	94	254	404	543	593		46.9	15.8	3.9
Solar			0	0	2	5	10	15	24			17.5	9.0
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			581	627	743	1003	1152	1218	1323		2.5	4.5	1.4
of which cogeneration units			354	386	442	507	531	593	629		2.2	1.9	1.7
of which CCS units			0	0	0	0	0	0	0				
Solids fired			29	0	0	0	229	235	304				2.9
Gas fired			449	548	608	816	633	633	658		3.1	0.4	0.4
Oil fired			91	53	54	54	54	54	45		-5.1	0.1	-1.8
Biomass-waste fired			11	26	81	134	236	296	316		22.2	11.3	2.9
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			21.8	24.8	27.1	30.8	31.4	31.2	30.6				
Efficiency for thermal electricity production (%)			22.0	22.9	31.6	39.1	37.2	36.8	37.6				
CHP indicator (% of electricity from CHP)			39.8	33.1	37.9	33.9	34.8	35.8	34.4				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			68.3	69.6	58.6	54.8	57.8	62.4	60.2				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			68.3	69.6	58.6	54.8	57.8	62.4	60.2				
Transport sector													
Passenger transport activity (Gpkm)	**21.1**	**11.4**	**15.4**	**19.7**	**21.5**	**24.6**	**26.0**	**27.3**	**28.6**	**-3.1**	**3.4**	**1.9**	**0.9**
Public road transport	5.9	1.8	2.3	2.9	2.5	2.7	2.9	3.0	3.2	-8.7	0.8	1.2	1.2
Private cars and motorcycles	6.6	7.7	11.8	14.8	16.6	18.9	19.5	19.8	20.0	6.0	3.5	1.6	0.3
Rail	6.1	1.7	1.0	1.2	1.2	1.3	1.5	1.5	1.6	-16.7	2.0	2.0	1.1
Aviation	2.5	0.2	0.3	0.8	1.2	1.7	2.3	3.0	3.8	-18.7	14.9	6.1	5.3
Inland navigation	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**24.5**	**11.6**	**18.1**	**28.2**	**28.8**	**33.5**	**36.6**	**39.3**	**42.2**	**-3.0**	**4.8**	**2.4**	**1.5**
Trucks	5.9	1.8	4.8	8.4	11.6	13.7	14.4	15.1	15.7	-2.0	9.3	2.2	0.9
Rail	18.5	9.8	13.3	19.8	17.2	19.8	22.1	24.2	26.5	-3.3	2.6	2.6	1.8
Inland navigation	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Energy demand in transport (ktoe)	**1097**	**714**	**747**	**1066**	**1297**	**1502**	**1545**	**1567**	**1586**	**-3.8**	**5.7**	**1.8**	**0.3**
Public road transport	46	15	17	21	18	19	19	20	21	-9.3	0.6	0.5	0.9
Private cars and motorcycles	242	378	356	433	476	540	546	542	528	4.0	2.9	1.4	-0.3
Trucks	512	205	270	460	637	744	758	780	797	-6.2	9.0	1.7	0.5
Rail	189	90	76	94	81	90	88	60	42	-8.7	0.6	0.8	-7.1
Aviation	73	26	27	59	85	108	135	165	198	-9.6	12.2	4.8	3.9
Inland navigation	35	0	0	0	0	0	0	0	0				

Source: PRIMES

Lithuania: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**4740**	**3695**	**3188**	**3702**	**1007**	**1443**	**3334**	**4880**	**5035**	**-3.9**	**-10.9**	**12.7**	**4.2**
Solids	14	15	12	20	4	3	2	2	2	-1.8	-11.0	-4.5	-3.4
Oil	12	130	349	240	155	130	100	85	70	40.0	-7.8	-4.3	-3.5
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	4394	3050	2172	2666	0	0	1572	3099	3034	-6.8			6.8
Renewable energy sources	321	501	656	776	848	1310	1660	1694	1929	7.4	2.6	6.9	1.5
Hydro	36	32	29	39	36	37	39	39	40	-2.0	2.1	0.7	0.4
Biomass & Waste	285	469	627	734	798	1243	1559	1569	1780	8.2	2.4	6.9	1.3
Wind	0	0	0	0	14	29	54	72	86			14.5	4.8
Solar and others	0	0	0	0	0	2	8	14	22			36.7	10.4
Geothermal	0	0	0	3	0	0	0	0	0			7.8	-2.1
Net Imports	**11688**	**5650**	**4343**	**5120**	**6557**	**6791**	**6081**	**5532**	**5382**	**-9.4**	**4.2**	**-0.8**	**-1.2**
Solids	758	157	87	190	117	100	90	75	64	-19.5	3.0	-2.5	-3.4
Oil	7281	3693	2313	2700	2530	2804	2895	2985	2999	-10.8	0.9	1.4	0.4
- Crude oil and Feedstocks	9560	3619	4846	9093	8830	9700	9961	10232	10251	-6.6	6.2	1.2	0.3
- Oil products	-2279	74	-2533	-6393	-6299	-6896	-7066	-7247	-7252				
Natural gas	4678	2029	2065	2492	3561	3508	3175	2904	2773	-7.9	5.6	-1.1	-1.3
Electricity	-1030	-230	-115	-255	366	412	-31	-372	-361				
Gross Inland Consumption	**16059**	**8672**	**7070**	**8616**	**7408**	**8064**	**9239**	**10234**	**10236**	**-7.9**	**0.5**	**2.2**	**1.0**
Solids	797	246	98	201	120	103	93	77	65	-18.9	2.0	-2.6	-3.4
Oil	6899	3085	2203	2769	2529	2763	2819	2892	2889	-10.8	1.4	1.1	0.2
Natural gas	4678	2029	2064	2476	3561	3508	3175	2904	2773	-7.9	5.6	-1.1	-1.3
Nuclear	4394	3050	2172	2666	0	0	1572	3099	3034	-6.8			6.8
Electricity	-1030	-230	-115	-255	366	412	-31	-372	-361				
Renewable energy forms	320	493	649	758	832	1277	1611	1634	1836	7.3	2.5	6.8	1.3
as % in Gross Inland Consumption													
Solids	5.0	2.8	1.4	2.3	1.6	1.3	1.0	0.8	0.6				
Oil	43.0	35.6	31.2	32.1	34.1	34.3	30.5	28.3	28.2				
Natural gas	29.1	23.4	29.2	28.7	48.1	43.5	34.4	28.4	27.1				
Nuclear	27.4	35.2	30.7	30.9	0.0	0.0	17.0	30.3	29.6				
Renewable energy forms	2.0	5.7	9.2	8.8	11.2	15.8	17.4	16.0	17.9				
Gross Electricity Generation in GWh_e	**28400**	**13518**	**11118**	**14412**	**6416**	**7102**	**13682**	**18625**	**18513**	**-9.0**	**-5.3**	**7.9**	**3.1**
Self consumption and grid losses	3959	4152	3075	2782	1759	1775	2105	2352	2229	-2.5	-5.4	1.8	0.6
Fuel Inputs for Thermal Power Generation	**2610**	**950**	**912**	**1221**	**1926**	**1894**	**1713**	**1606**	**1768**	**-10.0**	**7.8**	**-1.2**	**0.3**
Solids	0	0	0	0	0	0	0	0	0				
Oil (including refinery gas)	1067	517	196	172	72	64	57	84	117	-15.6	-9.5	-2.4	7.5
Gas	1543	433	716	1044	1772	1653	1364	1174	1256	-7.4	9.5	-2.6	-0.8
Biomass & Waste	0	0	0	5	82	177	292	348	395			13.6	3.1
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**11418**	**4482**	**5762**	**9984**	**9516**	**10418**	**10721**	**10985**	**11006**	**-6.6**	**5.1**	**1.2**	**0.3**
Refineries	9591	3402	5105	9458	8935	9800	10047	10310	10317	-6.1	5.8	1.2	0.3
Biofuels and hydrogen production	0	0	0	3	11	41	107	137	158			25.1	4.0
District heating	1819	1074	653	519	567	575	564	536	530	-9.7	-1.4	-0.1	-0.6
Others	8	6	4	4	3	2	2	1	1	-7.0	-4.4	-2.8	-8.2
Energy Branch Consumption	**996**	**600**	**670**	**958**	**848**	**913**	**976**	**1035**	**1024**	**-3.9**	**2.4**	**1.4**	**0.5**
Non-Energy Uses	**864**	**544**	**657**	**795**	**1007**	**1102**	**1100**	**1092**	**1073**	**-2.7**	**4.4**	**0.9**	**-0.3**
Final Energy Demand	**9679**	**4592**	**3740**	**4465**	**4634**	**5183**	**5431**	**5511**	**5530**	**-9.1**	**2.2**	**1.6**	**0.2**
by sector													
Industry	3327	1017	780	995	973	1106	1119	1092	1069	-13.5	2.2	1.4	-0.5
- energy intensive industries	1670	473	361	442	436	486	485	475	466	-14.2	1.9	1.1	-0.4
- other industrial sectors	1657	544	419	552	537	620	634	617	603	-12.8	2.5	1.7	-0.5
Residential	1843	1641	1342	1384	1365	1496	1569	1546	1543	-3.1	0.2	1.4	-0.2
Tertiary	2512	894	566	678	678	731	750	724	714	-13.8	1.8	1.0	-0.5
Transport	1996	1040	1051	1408	1618	1849	1994	2149	2204	-6.2	4.4	2.1	1.0
by fuel													
Solids	748	225	87	190	116	100	91	74	62	-19.4	2.9	-2.4	-3.7
Oil	4064	1670	1352	1610	1792	2018	2085	2187	2209	-10.4	2.9	1.5	0.6
Gas	1483	510	363	503	405	448	431	416	417	-13.1	1.1	0.6	-0.3
Electricity	1033	546	531	682	699	797	877	926	939	-6.4	2.8	2.3	0.7
Heat (from CHP and District Heating) [A]	2078	1193	828	905	1083	1059	1030	1145	1242	-8.8	2.7	-0.5	1.9
Renewable energy forms	272	448	579	574	538	761	914	760	657	7.9	-0.7	5.4	-3.3
Other	0	0	0	0	0	1	2	2	3			32.0	3.8
RES in Gross Final Energy Consumption [B]			**642**	**727**	**767**	**1100**	**1403**	**1247**	**1319**		**1.8**	**6.2**	**-0.6**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**48.8**		**18.9**	**22.5**	**23.7**	**22.0**	**21.2**	**20.6**	**20.4**	**-9.0**	**2.3**	**-1.1**	**-0.4**
of which ETS sectors GHGs emissions				10.1	11.1	9.5	8.9	8.5	8.3			-2.2	-0.7
CO_2 Emissions (energy related)	**32.4**	**13.5**	**10.2**	**12.5**	**13.6**	**13.8**	**13.1**	**12.7**	**12.4**	**-10.9**	**2.8**	**-0.3**	**-0.6**
Power generation/District heating	12.0	5.6	3.9	3.9	5.3	5.1	4.3	4.1	4.0	-10.6	3.1	-2.1	-0.9
Energy Branch	1.6	0.8	1.1	1.9	1.5	1.4	1.3	0.9	0.7	-3.5	3.1	-1.7	-6.4
Industry	6.1	1.7	1.1	1.3	0.9	0.9	0.9	0.8	0.7	-15.9	-2.0	-0.3	-1.3
Residential	2.3	0.8	0.5	0.6	0.6	0.7	0.7	0.6	0.6	-13.6	1.1	1.1	-0.7
Tertiary	4.5	1.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	-19.8	-0.2	-0.7	-1.4
Transport	5.8	3.0	3.1	4.1	4.7	5.3	5.5	5.9	6.0	-6.2	4.4	1.6	0.8
CO_2 Emissions (non energy related)	**3.5**	**1.5**	**1.6**	**1.7**	**1.9**	**2.1**	**2.2**	**2.3**	**2.4**	**-7.7**	**1.9**	**1.6**	**0.9**
Non-CO_2 GHGs Emissions	**12.9**		**7.1**	**8.3**	**8.3**	**6.1**	**5.8**	**5.6**	**5.6**	**-5.8**	**1.5**	**-3.4**	**-0.4**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**38.8**	**46.1**	**48.6**	**45.0**	**43.4**	**42.1**	**41.8**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)									Lithuania: REFERENCE SCENARIO				
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	3.694	3.643	3.512	3.425	3.337	3.275	3.220	3.158	3.083	-0.5	-0.5	-0.4	-0.4
GDP (in 000 MEuro'05)	19.4	11.4	14.3	20.9	21.5	26.3	30.3	33.5	36.3	-3.0	4.1	3.5	1.8
Gross Inl. Cons./GDP (toe/MEuro'05)	829.6	761.0	493.0	412.8	345.3	307.1	304.4	305.0	282.1	-5.1	-3.5	-1.3	-0.8
Carbon intensity (t of CO_2/toe of GIC)	2.02	1.55	1.45	1.45	1.83	1.71	1.42	1.24	1.21	-3.3	2.4	-2.5	-1.6
Import Dependency %	72.4	64.1	60.6	58.5	86.7	82.5	64.6	53.1	51.7				
Total Energy-related Costs (C) (in 000 M€05)			2.3	3.4	3.9	5.0	6.6	7.8	8.6		5.3	5.4	2.7
as % of GDP			16.1	16.2	18.0	19.1	21.6	23.3	23.7				
Energy intensity indicators													
Industry (Energy on Value added)	258.4	180.8	100.0	78.3	68.7	63.7	56.9	52.2	49.2	-9.1	-3.7	-1.9	-1.4
Residential (Energy on Private Income)	103.1	158.3	100.0	67.4	68.6	61.5	56.8	51.1	47.2	-0.3	-3.7	-1.9	-1.8
Tertiary (Energy on Value added)	452.0	203.3	100.0	87.1	86.4	76.0	66.7	57.0	50.9	-14.0	-1.5	-2.6	-2.7
Passenger transport (toe/Mpkm)	30.8	26.6	20.7	18.0	18.1	18.6	20.4	22.8	23.6	-3.9	-1.3	1.2	1.5
Freight transport (toe/Mtkm)	46.9	37.1	25.8	24.2	24.9	24.9	24.2	23.5	22.8	-5.8	-0.3	-0.3	-0.6
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.21	0.17	0.16	0.14	0.23	0.21	0.14	0.11	0.11	-2.8	3.6	-4.5	-2.9
Final energy demand (t of CO_2/toe)	1.94	1.54	1.39	1.49	1.44	1.43	1.38	1.40	1.40	-3.3	0.4	-0.4	0.1
Industry	1.83	1.69	1.37	1.35	0.90	0.84	0.76	0.71	0.70	-2.8	-4.1	-1.7	-0.9
Residential	1.27	0.48	0.40	0.46	0.44	0.44	0.43	0.42	0.41	-10.8	0.9	-0.3	-0.5
Tertiary	1.80	1.73	0.88	0.85	0.72	0.66	0.61	0.56	0.55	-6.9	-2.0	-1.7	-1.0
Transport	2.93	2.91	2.93	2.93	2.91	2.87	2.77	2.73	2.70	0.0	-0.1	-0.5	-0.3
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			15.1	14.8	15.4	19.9	24.2	21.2	22.4				
RES in transport (%)			0.0	0.3	0.9	2.8	6.9	8.3	9.4				
Gross Electricity generation by fuel type (in GWh)			**11118**	**14412**	**6416**	**7102**	**13682**	**18625**	**18513**		**-5.3**	**7.9**	**3.1**
Nuclear energy			8417	10335	0	0	6563	13127	12855				7.0
Coal and lignite			0	0	0	0	0	0	0				
Petroleum products			405	476	207	189	168	167	242		-6.5	-2.1	3.7
Gas (including derived gases)			1957	3136	5393	5565	4770	2917	2864		10.7	-1.2	-5.0
Biomass & waste			0	12	233	578	1063	1056	971			16.4	-0.9
Hydro			339	451	419	425	449	457	466		2.1	0.7	0.4
Wind			0	2	162	336	630	832	1003			14.5	4.8
Solar, tidal etc.			0	0	2	9	39	68	112			36.8	11.1
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**4586**	**3692**	**2756**	**3034**	**4275**	**4930**	**5056**		**-5.0**	**4.5**	**1.7**
Nuclear energy			2291	1200	0	0	758	1515	1515				7.2
Renewable energy			100	115	299	497	848	1099	1325		11.6	11.0	4.6
Hydro (pumping excluded)			100	114	122	123	148	155	159		2.0	1.9	0.7
Wind			0	1	175	365	662	876	1055			14.2	4.8
Solar			0	0	2	9	38	67	111			34.2	11.3
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			2196	2377	2457	2537	2670	2316	2216		1.1	0.8	-1.8
of which cogeneration units			873	824	873	960	1023	920	977		0.0	1.6	-0.5
of which CCS units			0	0	0	0	0	0	0				
Solids fired			0	0	0	0	0	0	0				
Gas fired			1661	2057	2124	2158	2179	1905	1910		2.5	0.3	-1.3
Oil fired			528	303	315	308	314	203	77		-5.0	0.0	-13.1
Biomass-waste fired			7	17	18	71	177	208	228		9.6	26.0	2.6
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			23.5	40.2	24.9	25.5	34.9	41.1	39.8				
Efficiency for thermal electricity production (%)			22.3	25.5	26.0	28.7	30.1	22.2	19.8				
CHP indicator (% of electricity from CHP)			18.3	17.8	62.6	62.9	35.6	21.9	21.4				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			78.8	74.9	12.7	19.0	63.9	83.4	83.2				
- nuclear			75.7	71.7	0.0	0.0	48.0	70.5	69.4				
- renewable energy forms and industrial waste			3.0	3.2	12.7	19.0	15.9	13.0	13.8				
Transport sector													
Passenger transport activity (Gpkm)	**24.1**	**21.7**	**30.0**	**40.1**	**44.9**	**49.0**	**49.6**	**49.9**	**50.1**	**2.2**	**4.1**	**1.0**	**0.1**
Public road transport	7.9	4.2	2.8	3.7	3.6	3.9	4.1	4.2	4.2	-10.0	2.7	1.4	0.3
Private cars and motorcycles	11.3	16.2	26.3	35.1	39.8	43.1	43.1	42.5	42.0	8.8	4.2	0.8	-0.3
Rail	3.6	1.1	0.6	0.4	0.4	0.4	0.5	0.5	0.5	-16.3	-4.0	1.7	1.3
Aviation	1.0	0.2	0.3	0.8	1.0	1.4	1.9	2.5	3.3	-10.3	12.4	6.0	5.8
Inland navigation	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-12.8	0.2	0.8	0.6
Freight transport activity (Gtkm)	**26.8**	**12.4**	**16.7**	**28.4**	**32.3**	**37.7**	**40.7**	**42.9**	**44.8**	**-4.6**	**6.8**	**2.3**	**1.0**
Trucks	7.3	5.2	7.8	15.9	19.0	22.4	23.9	24.9	25.6	0.6	9.3	2.3	0.7
Rail	19.3	7.2	8.9	12.5	13.4	15.3	16.8	18.0	19.2	-7.4	4.1	2.3	1.4
Inland navigation	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Energy demand in transport (ktoe)	**1996**	**1040**	**1051**	**1408**	**1618**	**1849**	**1994**	**2149**	**2204**	**-6.2**	**4.4**	**2.1**	**1.0**
Public road transport	46	25	16	21	21	23	24	25	26	-9.8	2.5	1.5	0.5
Private cars and motorcycles	539	504	572	648	725	802	882	990	1004	0.6	2.4	2.0	1.3
Trucks	1139	383	358	608	723	848	887	908	916	-10.9	7.3	2.1	0.3
Rail	133	87	76	79	84	94	99	103	108	-5.5	1.0	1.7	0.9
Aviation	135	41	27	46	60	77	96	118	145	-14.9	8.5	4.8	4.1
Inland navigation	5	1	3	5	5	5	5	6	6	-5.0	5.3	0.7	0.4

Source: PRIMES

Luxembourg: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**47**	**47**	**57**	**74**	**99**	**169**	**249**	**286**	**305**	**1.9**	**5.7**	**9.7**	**2.0**
Solids	0	0	0	0	0	0	0	0	0				
Oil	0	0	0	0	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	47	47	57	74	99	169	249	286	305	1.9	5.7	9.7	2.0
Hydro	6	7	10	8	8	7	8	8	8	5.8	-2.9	0.2	0.2
Biomass & Waste	41	39	44	59	79	111	139	174	185	0.7	6.0	5.9	2.9
Wind	0	0	2	5	6	15	27	30	34		10.8	15.2	2.3
Solar and others	0	0	0	2	6	35	75	74	78			29.0	0.4
Geothermal	0	0	0	0	0	0	0	0	0			16.9	-8.8
Net Imports	**3526**	**3264**	**3630**	**4622**	**4695**	**5047**	**5013**	**4992**	**4893**	**0.3**	**2.6**	**0.7**	**-0.2**
Solids	1134	514	125	82	37	31	26	18	13	-19.8	-11.5	-3.4	-6.5
Oil	1626	1763	2342	3081	3067	3242	3099	3003	2846	3.7	2.7	0.1	-0.8
- Crude oil and Feedstocks	0	0	0	0	0	0	0	0	0				
- Oil products	1626	1763	2342	3081	3067	3242	3099	3003	2846	3.7	2.7	0.1	-0.8
Natural gas	430	557	670	1179	1248	1356	1386	1519	1558	4.6	6.4	1.1	1.2
Electricity	336	430	492	280	318	327	300	274	284	3.9	-4.3	-0.6	-0.6
Gross Inland Consumption	**3561**	**3342**	**3637**	**4714**	**4794**	**5216**	**5262**	**5278**	**5198**	**0.2**	**2.8**	**0.9**	**-0.1**
Solids	1134	514	125	82	37	31	26	18	13	-19.8	-11.5	-3.4	-6.5
Oil	1614	1794	2292	3100	3067	3242	3099	3003	2846	3.6	3.0	0.1	-0.8
Natural gas	430	557	670	1179	1248	1356	1386	1519	1558	4.6	6.4	1.1	1.2
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	336	430	492	280	318	327	300	274	284	3.9	-4.3	-0.6	-0.6
Renewable energy forms	47	47	57	74	125	259	451	464	497	1.9	8.3	13.7	1.0
as % in Gross Inland Consumption													
Solids	31.9	15.4	3.4	1.7	0.8	0.6	0.5	0.3	0.3				
Oil	45.3	53.7	63.0	65.8	64.0	62.2	58.9	56.9	54.8				
Natural gas	12.1	16.7	18.4	25.0	26.0	26.0	26.3	28.8	30.0				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	1.3	1.4	1.6	1.6	2.6	5.0	8.6	8.8	9.6				
Gross Electricity Generation in GWh_e	**627**	**498**	**433**	**3344**	**3475**	**4358**	**5207**	**6317**	**6535**	**-3.6**	**23.2**	**4.1**	**2.3**
Self consumption and grid losses	410	497	439	448	545	641	699	782	815	0.7	2.2	2.5	1.6
Fuel Inputs for Thermal Power Generation	**190**	**132**	**75**	**568**	**574**	**704**	**802**	**962**	**988**	**-8.8**	**22.5**	**3.4**	**2.1**
Solids	0	0	0	0	0	0	0	0	0				
Oil (including refinery gas)	3	2	0	0	0	1	1	1	1				2.5
Gas	162	106	47	525	537	647	708	870	894	-11.6	27.5	2.8	2.4
Biomass & Waste	25	24	28	43	37	56	93	91	93	1.0	2.8	9.7	-0.1
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**378**	**144**	**0**	**1**	**55**	**132**	**232**	**245**	**261**			**15.5**	**1.2**
Refineries	0	0	0	0	0	0	0	0	0				
Biofuels and hydrogen production	0	0	0	1	55	132	232	245	261			15.5	1.2
District heating	0	0	0	0	0	0	0	0	0				
Others	378	144	0	0	0	0	0	0	0				
Energy Branch Consumption	**31**	**30**	**26**	**30**	**37**	**44**	**48**	**53**	**55**	**-1.8**	**3.8**	**2.6**	**1.3**
Non-Energy Uses	**20**	**23**	**14**	**20**	**22**	**27**	**29**	**31**	**33**	**-3.9**	**5.0**	**2.7**	**1.3**
Final Energy Demand	**3335**	**3171**	**3558**	**4439**	**4492**	**4845**	**4860**	**4804**	**4713**	**0.7**	**2.4**	**0.8**	**-0.3**
by sector													
Industry	1729	1197	958	938	899	997	1029	1052	1082	-5.7	-0.6	1.4	0.5
- energy intensive industries	1525	901	506	461	431	468	479	482	486	-10.5	-1.6	1.1	0.1
- other industrial sectors	204	296	453	477	468	528	550	570	596	8.3	0.3	1.6	0.8
Residential	521	565	598	651	676	697	700	683	688	1.4	1.2	0.3	-0.2
Tertiary	74	99	118	130	137	147	151	156	160	4.7	1.5	1.0	0.6
Transport	1010	1311	1884	2721	2780	3005	2980	2914	2784	6.4	4.0	0.7	-0.7
by fuel													
Solids	756	369	125	82	37	31	26	18	13	-16.5	-11.5	-3.4	-6.5
Oil	1587	1758	2276	3080	3044	3215	3069	2971	2812	3.7	3.0	0.1	-0.9
Gas	622	585	623	678	711	709	678	648	663	0.0	1.3	-0.5	-0.2
Electricity	355	430	491	529	570	646	688	750	776	3.3	1.5	1.9	1.2
Heat (from CHP and District Heating) [A]	0	14	27	55	59	68	84	90	95		8.2	3.5	1.3
Renewable energy forms	15	15	16	16	70	175	315	327	353	0.4	16.0	16.2	1.1
Other	0	0	0	0	0	0	1	1	1			8.4	1.2
RES in Gross Final Energy Consumption [B]			**32**	**41**	**111**	**241**	**433**	**449**	**481**		**13.4**	**14.6**	**1.1**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**13.1**		**10.5**	**14.3**	**14.1**	**14.9**	**14.6**	**14.5**	**14.1**	**-2.2**	**3.0**	**0.3**	**-0.3**
of which ETS sectors GHGs emissions				4.0	3.8	4.2	4.4	4.7	4.6			1.5	0.6
CO_2 Emissions (energy related)	**10.7**	**8.7**	**8.9**	**12.4**	**12.3**	**13.0**	**12.6**	**12.6**	**12.2**	**-1.8**	**3.3**	**0.3**	**-0.3**
Power generation/District heating	0.7	0.4	0.1	1.2	1.3	1.5	1.7	2.0	2.1	-17.0	27.5	2.8	2.4
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Industry	5.7	3.1	1.7	1.5	1.3	1.4	1.4	1.3	1.3	-11.5	-2.4	0.5	-0.3
Residential	1.3	1.3	1.4	1.4	1.4	1.4	1.3	1.2	1.1	1.1	0.2	-1.3	-1.1
Tertiary	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	17.3	-3.1	-0.6	-1.7
Transport	3.0	3.9	5.6	8.2	8.2	8.7	8.3	8.0	7.6	6.5	3.9	0.1	-0.9
CO_2 Emissions (non energy related)	**1.6**	**1.0**	**0.7**	**0.8**	**0.7**	**0.8**	**0.9**	**0.8**	**0.8**	**-7.6**	**0.2**	**1.7**	**-0.3**
Non-CO_2 GHGs Emissions	**0.9**		**0.9**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**1.1**	**0.4**	**2.0**	**-0.5**	**-0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**80.2**	**109.1**	**107.5**	**113.7**	**110.9**	**110.6**	**107.3**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Luxembourg: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	0.379	0.406	0.434	0.461	0.494	0.523	0.551	0.579	0.607	1.3	1.3	1.1	1.0
GDP (in 000 MEuro'05)	13.6	18.8	25.4	30.2	32.6	40.5	47.3	53.4	59.4	6.5	2.5	3.8	2.3
Gross Inl. Cons./GDP (toe/MEuro'05)	262.3	177.4	143.4	155.9	147.2	128.6	111.2	98.8	87.5	-5.9	0.3	-2.8	-2.4
Carbon intensity (t of CO_2/toe of GIC)	2.99	2.62	2.44	2.64	2.56	2.50	2.40	2.39	2.35	-2.0	0.5	-0.6	-0.2
Import Dependency %	99.0	97.7	99.8	98.0	97.9	96.8	95.3	94.6	94.1				
Total Energy-related Costs (C) (in 000 M€05)			2.7	3.7	3.9	4.7	5.8	6.4	6.6		3.5	4.2	1.1
as % of GDP			10.8	12.3	12.0	11.6	12.4	12.0	11.0				
Energy intensity indicators													
Industry (Energy on Value added)	259.7	159.1	100.0	93.6	86.4	78.9	71.6	66.6	63.3	-9.1	-1.5	-1.9	-1.2
Residential (Energy on Private Income)	125.3	116.2	100.0	100.4	98.1	80.5	68.9	59.5	53.7	-2.2	-0.2	-3.5	-2.5
Tertiary (Energy on Value added)	103.2	111.6	100.0	91.5	88.9	76.7	67.1	61.1	56.2	-0.3	-1.2	-2.8	-1.8
Passenger transport (toe/Mpkm)	119.7	125.6	136.5	150.7	143.3	131.9	120.8	107.9	97.4	1.3	0.5	-1.7	-2.1
Freight transport (toe/Mtkm)	92.1	84.1	102.9	156.5	154.7	151.1	146.0	139.0	127.6	1.1	4.2	-0.6	-1.3
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	1.13	0.59	0.15	0.31	0.30	0.29	0.27	0.28	0.27	-18.4	7.4	-1.2	0.2
Final energy demand (t of CO_2/toe)	2.98	2.63	2.46	2.52	2.45	2.37	2.26	2.20	2.14	-1.9	-0.1	-0.8	-0.5
Industry	3.28	2.58	1.74	1.63	1.45	1.41	1.33	1.25	1.23	-6.1	-1.8	-0.9	-0.8
Residential	2.45	2.39	2.37	2.21	2.14	1.99	1.81	1.71	1.65	-0.3	-1.0	-1.6	-0.9
Tertiary	0.21	0.35	0.65	0.48	0.41	0.39	0.35	0.30	0.28	12.0	-4.5	-1.6	-2.3
Transport	2.96	2.96	2.97	3.00	2.95	2.88	2.78	2.76	2.73	0.1	-0.1	-0.6	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			0.9	0.9	2.5	5.1	9.1	9.6	10.4				
RES in transport (%)			0.0	0.1	2.3	5.2	9.3	10.1	11.2				
Gross Electricity generation by fuel type (in GWh)			**433**	**3344**	**3475**	**4358**	**5207**	**6317**	**6535**		**23.2**	**4.1**	**2.3**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			0	0	0	0	0	0	0				
Petroleum products			0	0	0	3	3	4	4				2.5
Gas (including derived gases)			231	3050	3147	3885	4360	5425	5579		29.9	3.3	2.5
Biomass & waste			55	130	123	155	362	352	360		8.3	11.4	-0.1
Hydro			120	93	90	84	92	92	94		-2.9	0.2	0.2
Wind			27	53	75	173	310	353	391		10.8	15.2	2.3
Solar, tidal etc.			0	18	40	59	79	91	107			7.2	3.0
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**165**	**609**	**607**	**841**	**1090**	**1290**	**1355**		**13.9**	**6.0**	**2.2**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			54	101	131	234	331	375	418		9.3	9.7	2.4
Hydro (pumping excluded)			39	40	40	40	40	40	40		0.2	0.0	0.1
Wind			14	35	50	134	210	242	270		13.5	15.5	2.6
Solar			1	26	41	61	81	93	108		45.1	7.0	2.9
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			111	509	477	607	759	915	937		15.7	4.8	2.1
of which cogeneration units			37	54	96	115	154	189	207		10.0	4.9	3.0
of which CCS units			0	0	0	0	0	0	0				
Solids fired			0	0	0	0	0	0	0				
Gas fired			95	483	452	580	696	851	872		16.8	4.4	2.3
Oil fired			0	0	0	1	1	1	1				2.5
Biomass-waste fired			16	25	25	25	62	62	63		4.5	9.7	0.1
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			28.0	62.2	63.7	57.5	53.1	54.5	53.7				
Efficiency for thermal electricity production (%)			32.7	48.1	49.0	49.4	50.7	51.7	51.8				
CHP indicator (% of electricity from CHP)			52.7	12.6	16.1	13.0	16.9	15.7	16.8				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			46.7	8.8	9.4	10.8	16.2	14.1	14.6				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			46.7	8.8	9.4	10.8	16.2	14.1	14.6				
Transport sector													
Passenger transport activity (Gpkm)	**5.2**	**6.2**	**7.3**	**8.1**	**8.6**	**9.4**	**9.7**	**10.1**	**10.6**	**3.4**	**1.6**	**1.3**	**0.9**
Public road transport	0.5	0.5	0.6	0.8	0.9	0.9	1.0	1.0	1.1	2.6	3.3	1.1	1.0
Private cars and motorcycles	4.0	4.8	5.7	6.5	6.7	7.4	7.4	7.7	7.9	3.6	1.6	1.0	0.7
Rail	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	4.8	-0.5	1.8	1.0
Aviation	0.5	0.5	0.6	0.6	0.7	0.8	1.0	1.1	1.2	2.2	0.7	3.6	2.5
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**4.2**	**6.4**	**8.6**	**9.5**	**10.0**	**11.6**	**12.4**	**13.1**	**13.7**	**7.5**	**1.5**	**2.1**	**1.0**
Trucks	3.2	5.5	7.6	8.8	9.3	10.8	11.5	12.2	12.8	9.0	2.0	2.2	1.1
Rail	0.6	0.5	0.6	0.4	0.4	0.5	0.5	0.5	0.5	0.3	-4.1	1.8	0.4
Inland navigation	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	-1.0	0.9	0.9
Energy demand in transport (ktoe)	**1010**	**1311**	**1884**	**2721**	**2780**	**3005**	**2980**	**2914**	**2784**	**6.4**	**4.0**	**0.7**	**-0.7**
Public road transport	10	11	13	17	18	18	18	18	18	2.3	3.2	0.2	0.0
Private cars and motorcycles	483	574	662	779	769	750	667	597	566	3.2	1.5	-1.4	-1.6
Trucks	364	520	866	1479	1540	1743	1791	1803	1733	9.1	5.9	1.5	-0.3
Rail	13	9	15	9	10	11	11	10	10	2.0	-4.5	0.8	-0.5
Aviation	131	189	320	431	438	477	488	479	450	9.3	3.2	1.1	-0.8
Inland navigation	9	8	7	6	6	6	6	6	7	-2.4	-1.5	0.7	0.8

Source: PRIMES

Malta: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**0**	**0**	**0**	**0**	**5**	**28**	**46**	**58**	**71**			**26.1**	**4.4**
Solids	0	0	0	0	0	0	0	0	0				
Oil	0	0	0	0	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	0	0	0	0	5	28	46	58	71			26.1	4.4
Hydro	0	0	0	0	0	0	0	0	0				
Biomass & Waste	0	0	0	0	0	3	4	5	7			50.7	4.8
Wind	0	0	0	0	0	3	8	16	25				11.7
Solar and others	0	0	0	0	4	23	33	36	39			22.5	1.7
Geothermal	0	0	0	0	0	0	0	0	0			18.7	-0.3
Net Imports	**612**	**891**	**822**	**958**	**911**	**796**	**770**	**760**	**746**	**3.0**	**1.0**	**-1.7**	**-0.3**
Solids	0	0	0	0	0	0	0	0	0				
Oil	612	891	822	958	911	649	591	526	488	3.0	1.0	-4.2	-1.9
- Crude oil and Feedstocks	0	0	0	0	0	0	0	0	0				
- Oil products	612	891	822	958	911	649	591	526	488	3.0	1.0	-4.2	-1.9
Natural gas	0	0	0	0	0	142	148	203	222			132.7	4.2
Electricity	0	0	0	0	0	0	22	24	26				1.7
Gross Inland Consumption	**582**	**809**	**773**	**958**	**916**	**824**	**816**	**817**	**817**	**2.9**	**1.7**	**-1.1**	**0.0**
Solids	0	0	0	0	0	0	0	0	0				
Oil	582	809	773	958	911	649	591	526	488	2.9	1.7	-4.2	-1.9
Natural gas	0	0	0	0	0	142	148	203	222			132.7	4.2
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	0	0	0	0	0	0	22	24	26				1.7
Renewable energy forms	0	0	0	0	5	33	55	65	80			27.4	3.8
as % in Gross Inland Consumption													
Solids	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Oil	100.0	100.0	100.0	100.0	99.5	78.8	72.4	64.3	59.8				
Natural gas	0.0	0.0	0.0	0.0	0.0	17.3	18.1	24.8	27.2				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	0.0	0.0	0.0	0.0	0.5	4.0	6.8	7.9	9.8				
Gross Electricity Generation in GWh_e	**1100**	**1632**	**1917**	**2240**	**2165**	**2223**	**2055**	**2134**	**2149**	**5.7**	**1.2**	**-0.5**	**0.4**
Self consumption and grid losses	190	373	350	396	382	361	334	306	271	6.3	0.9	-1.3	-2.1
Fuel Inputs for Thermal Power Generation	**322**	**463**	**495**	**580**	**539**	**409**	**354**	**328**	**302**	**4.4**	**0.9**	**-4.1**	**-1.6**
Solids	0	0	0	0	0	0	0	0	0				
Oil (including refinery gas)	322	463	495	580	539	264	208	145	118	4.4	0.9	-9.1	-5.5
Gas	0	0	0	0	0	140	140	176	176				2.3
Biomass & Waste	0	0	0	0	0	4	6	7	8				2.9
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**0**	**0**	**0**	**0**	**0**	**3**	**7**	**5**	**7**			**32.3**	**0.3**
Refineries	0	0	0	0	0	0	0	0	0				
Biofuels and hydrogen production	0	0	0	0	0	3	7	5	7			34.4	0.2
District heating	0	0	0	0	0	0	0	0	0			2.8	3.0
Others	0	0	0	0	0	0	0	0	0				
Energy Branch Consumption	**8**	**19**	**10**	**9**	**8**	**7**	**6**	**6**	**5**	**2.5**	**-2.3**	**-2.1**	**-2.4**
Non-Energy Uses	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**				
Final Energy Demand	**333**	**451**	**412**	**526**	**529**	**571**	**597**	**622**	**639**	**2.2**	**2.5**	**1.2**	**0.7**
by sector													
Industry	0	42	43	46	46	50	51	54	56		0.7	1.0	0.9
- energy intensive industries	0	0	0	0	0	0	0	0	0				
- other industrial sectors	0	42	43	46	46	50	51	54	56		0.7	1.0	0.9
Residential	55	73	76	89	92	101	110	115	121	3.2	2.0	1.7	1.0
Tertiary	56	32	55	63	66	74	81	89	94	-0.2	1.9	2.1	1.4
Transport	222	305	238	329	324	346	354	363	368	0.7	3.1	0.9	0.4
by fuel													
Solids	0	0	0	0	0	0	0	0	0				
Oil	255	343	277	378	371	385	383	381	370	0.9	3.0	0.3	-0.3
Gas	0	0	0	0	0	2	7	27	46			76.6	20.1
Electricity	78	108	135	148	153	160	170	181	188	5.6	1.3	1.0	1.0
Heat (from CHP and District Heating) [A]	0	0	0	0	0	0	0	0	0			2.8	3.0
Renewable energy forms	0	0	0	0	4	23	36	33	35			24.0	-0.3
Other	0	0	0	0	0	0	0	0	0			9.6	-0.4
RES in Gross Final Energy Consumption [B]			**0**	**0**	**5**	**30**	**51**	**60**	**74**			**26.5**	**3.8**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**2.0**		**2.7**	**3.3**	**3.1**	**2.6**	**2.4**	**2.3**	**2.2**	**3.1**	**1.6**	**-2.7**	**-0.6**
of which ETS sectors GHGs emissions				2.1	2.0	1.5	1.4	1.3	1.3			-3.6	-1.0
CO_2 Emissions (energy related)	**1.8**	**2.5**	**2.4**	**3.0**	**2.8**	**2.3**	**2.2**	**2.1**	**2.0**	**3.0**	**1.7**	**-2.7**	**-0.7**
Power generation/District heating	1.0	1.5	1.6	1.9	1.7	1.2	1.0	0.9	0.8	4.4	0.9	-5.4	-2.3
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Residential	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-1.8	2.0	-1.6	-0.1
Tertiary	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1		2.4	0.5	3.5
Transport	0.7	0.9	0.7	1.0	1.0	1.0	1.0	1.1	1.1	0.7	3.2	0.7	0.3
CO_2 Emissions (non energy related)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**				
Non-CO_2 GHGs Emissions	**0.2**		**0.3**	**0.3**	**0.3**	**0.3**	**0.2**	**0.2**	**0.2**	**3.4**	**0.6**	**-2.5**	**0.5**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**135.1**	**168.0**	**158.3**	**131.5**	**120.6**	**117.3**	**113.4**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Malta: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	0.352	0.369	0.380	0.403	0.414	0.421	0.427	0.431	0.432	0.8	0.8	0.3	0.1
GDP (in 000 MEuro'05)	2.9	3.7	4.5	4.8	5.2	5.9	6.8	7.6	8.3	4.6	1.3	2.7	2.0
Gross Inl. Cons./GDP (toe/MEuro'05)	200.3	218.0	170.3	199.7	176.9	139.9	120.3	107.8	98.4	-1.6	0.4	-3.8	-2.0
Carbon intensity (t of CO_2/toe of GIC)	3.06	3.08	3.10	3.12	3.10	2.83	2.64	2.54	2.45	0.1	0.0	-1.6	-0.7
Import Dependency %	100.0	104.5	100.8	100.0	99.5	96.6	94.4	92.9	91.3				
Total Energy-related Costs [C] (in 000 M€05)			0.4	0.6	0.6	0.7	0.9	1.1	1.2		4.6	4.0	2.5
as % of GDP			8.9	12.6	12.2	12.5	13.9	14.7	14.5				
Energy intensity indicators													
Industry (Energy on Value added)	0.0	122.2	100.0	133.5	125.2	118.7	106.6	100.4	95.7		2.3	-1.6	-1.1
Residential (Energy on Private Income)	115.3	114.5	100.0	108.5	106.3	101.1	95.1	89.2	85.0	-1.4	0.6	-1.1	-1.1
Tertiary (Energy on Value added)	158.1	70.7	100.0	103.0	100.8	98.6	94.4	92.2	88.9	-4.5	0.1	-0.6	-0.6
Passenger transport (toe/Mpkm)	47.2	56.2	41.7	57.4	51.3	47.8	44.1	41.3	38.4	-1.2	2.1	-1.5	-1.4
Freight transport (toe/Mtkm)	211.4	232.0	156.0	212.1	192.7	183.1	178.8	175.1	169.7	-3.0	2.1	-0.7	-0.5
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.93	0.91	0.82	0.83	0.80	0.53	0.48	0.41	0.36	-1.3	-0.3	-4.9	-2.7
Final energy demand (t of CO_2/toe)	2.26	2.24	1.99	2.14	2.10	2.02	1.95	1.94	1.90	-1.3	0.5	-0.7	-0.2
Industry		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
Residential	1.66	1.47	1.01	1.10	1.00	0.84	0.72	0.64	0.65	-4.9	0.0	-3.3	-1.0
Tertiary	0.00	0.00	0.64	0.69	0.67	0.55	0.57	0.65	0.70		0.5	-1.5	2.0
Transport	2.97	2.96	2.98	3.00	3.00	2.98	2.94	2.95	2.92	0.0	0.1	-0.2	-0.1
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			0.0	0.0	1.0	6.0	10.0	11.5	14.2				
RES in transport (%)			0.0	0.0	0.1	1.2	3.3	2.4	3.7				
Gross Electricity generation by fuel type (in GWh)			**1917**	**2240**	**2165**	**2223**	**2055**	**2134**	**2149**		**1.2**	**-0.5**	**0.4**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			0	0	0	0	0	0	0				
Petroleum products			1917	2240	2158	1256	984	683	550		1.2	-7.6	-5.6
Gas (including derived gases)			0	0	0	893	893	1136	1136				2.4
Biomass & waste			0	0	0	18	28	33	37				3.0
Hydro			0	0	0	0	0	0	0				
Wind			0	0	0	32	94	188	286				11.7
Solar, tidal etc.			0	0	8	25	57	93	139			22.1	9.4
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**484**	**544**	**550**	**836**	**650**	**742**	**806**		**1.3**	**1.7**	**2.2**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			0	0	5	31	75	133	196			31.1	10.1
Hydro (pumping excluded)			0	0	0	0	0	0	0				
Wind			0	0	0	15	39	73	106				10.5
Solar			0	0	5	16	36	60	90			21.9	9.5
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			484	544	545	805	575	609	609		1.2	0.5	0.6
of which cogeneration units			0	0	0	0	0	0	0				
of which CCS units			0	0	0	0	0	0	0				
Solids fired			0	0	0	0	0	0	0				
Gas fired			0	0	0	124	124	158	158				2.5
Oil fired			484	544	545	678	447	446	446		1.2	-2.0	0.0
Biomass-waste fired			0	0	0	3	4	5	5				2.8
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			42.5	44.9	43.0	29.2	34.8	31.8	29.6				
Efficiency for thermal electricity production (%)			33.3	33.2	34.4	45.6	46.2	48.5	49.1				
CHP indicator (% of electricity from CHP)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			0.0	0.0	0.4	3.4	8.7	14.7	21.5				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			0.0	0.0	0.4	3.4	8.7	14.7	21.5				
Transport sector													
Passenger transport activity (Gpkm)	**3.9**	**4.4**	**4.8**	**4.8**	**5.4**	**6.2**	**6.8**	**7.4**	**8.1**	**1.9**	**1.2**	**2.4**	**1.8**
Public road transport	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	1.2	1.2	0.5	0.2
Private cars and motorcycles	1.5	1.8	1.9	2.1	2.2	2.2	2.2	2.2	2.2	1.9	1.7	0.0	-0.1
Rail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Aviation	2.0	2.2	2.5	2.3	2.7	3.4	4.1	4.7	5.4	2.1	0.8	4.3	2.8
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**0.2**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**4.1**	**0.0**	**1.9**	**1.3**
Trucks	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	4.1	0.0	1.9	1.3
Rail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Energy demand in transport (ktoe)	**222**	**305**	**238**	**329**	**324**	**346**	**354**	**363**	**368**	**0.7**	**3.1**	**0.9**	**0.4**
Public road transport	9	9	7	10	11	11	10	10	10	-1.9	3.7	-0.1	-0.7
Private cars and motorcycles	105	164	105	175	164	160	150	142	135	0.0	4.6	-0.9	-1.0
Trucks	35	58	39	53	48	51	54	56	58	1.0	2.1	1.1	0.8
Rail	0	0	0	0	0	0	0	0	0				
Aviation	72	74	86	90	101	124	140	155	166	1.8	1.6	3.3	1.7
Inland navigation	0	0	0	0	0	0	0	0	0				

Source: PRIMES

Netherlands: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**60563**	**66301**	**57430**	**61899**	**60215**	**58132**	**56544**	**47990**	**41466**	**-0.5**	**0.5**	**-0.6**	**-3.1**
Solids	0	0	0	0	2	2	2	1	1			0.5	-3.4
Oil	4114	3625	2472	2346	1240	530	0	0	0	-5.0	-6.7		
Natural gas	54613	60456	51904	56265	54900	51980	49180	40100	32670	-0.5	0.6	-1.1	-4.0
Nuclear	881	1036	1013	1031	1017	1023	1024	1186	1186	1.4	0.0	0.1	1.5
Renewable energy sources	956	1184	2040	2257	3056	4597	6338	6704	7609	7.9	4.1	7.6	1.8
Hydro	7	8	12	8	8	9	9	9	9	5.3	-3.6	0.0	0.0
Biomass & Waste	942	1144	1945	2050	2352	2917	3360	3261	3758	7.5	1.9	3.6	1.1
Wind	5	27	71	178	616	1448	2488	2699	2869	30.9	24.1	15.0	1.4
Solar and others	2	5	12	22	80	187	378	525	658	18.5	21.3	16.8	5.7
Geothermal	0	0	0	0	0	37	105	210	315			134.4	11.6
Net Imports	**18273**	**17142**	**35442**	**38390**	**34240**	**37486**	**37035**	**44436**	**49766**	**6.8**	**-0.3**	**0.8**	**3.0**
Solids	9574	8921	8222	8313	7280	8989	9208	9417	9579	-1.5	-1.2	2.4	0.4
Oil	31704	33609	42777	48868	46273	47317	46439	45924	44190	3.0	0.8	0.0	-0.5
- Crude oil and Feedstocks	48979	60332	62222	62643	60525	61639	60669	60115	58289	2.4	-0.3	0.0	-0.4
- Oil products	-17275	-26723	-19446	-13775	-14252	-14322	-14230	-14191	-14099				
Natural gas	-23799	-26370	-17191	-20941	-21497	-20224	-19908	-12172	-5429				
Electricity	792	980	1626	1573	1389	325	-89	-176	-196	7.5	-1.6		
Gross Inland Consumption	**67955**	**74528**	**77042**	**82479**	**78365**	**79370**	**77458**	**76073**	**74463**	**1.3**	**0.2**	**-0.1**	**-0.4**
Solids	9206	9098	8035	8190	7281	8991	9210	9418	9581	-1.4	-1.0	2.4	0.4
Oil	25308	28142	29610	33527	31423	31599	30317	29570	27422	1.6	0.6	-0.4	-1.0
Natural gas	30810	34085	34711	35324	33403	31756	29272	27928	27241	1.2	-0.4	-1.3	-0.7
Nuclear	881	1036	1013	1031	1017	1023	1024	1186	1186	1.4	0.0	0.1	1.5
Electricity	792	980	1626	1573	1389	325	-89	-176	-196	7.5	-1.6		
Renewable energy forms	959	1187	2048	2834	3851	5676	7724	8148	9230	7.9	6.5	7.2	1.8
as % in Gross Inland Consumption													
Solids	13.5	12.2	10.4	9.9	9.3	11.3	11.9	12.4	12.9				
Oil	37.2	37.8	38.4	40.6	40.1	39.8	39.1	38.9	36.8				
Natural gas	45.3	45.7	45.1	42.8	42.6	40.0	37.8	36.7	36.6				
Nuclear	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.6	1.6				
Renewable energy forms	1.4	1.6	2.7	3.4	4.9	7.2	10.0	10.7	12.4				
Gross Electricity Generation in GWh_e	**71824**	**81054**	**89599**	**100235**	**104191**	**126189**	**136417**	**140592**	**143553**	**2.2**	**1.5**	**2.7**	**0.5**
Self consumption and grid losses	5556	6855	7754	8521	8795	10570	12357	12871	13133	3.4	1.3	3.5	0.6
Fuel Inputs for Thermal Power Generation	**14646**	**17053**	**18277**	**19614**	**19036**	**21145**	**21164**	**21542**	**22264**	**2.2**	**0.4**	**1.1**	**0.5**
Solids	5698	5900	5114	4958	4760	6541	6797	7004	7171	-1.1	-0.7	3.6	0.5
Oil (including refinery gas)	727	917	671	691	587	590	582	814	759	-0.8	-1.3	-0.1	2.7
Gas	7651	9466	11071	11913	11344	11041	10382	10111	10175	3.8	0.2	-0.9	-0.2
Biomass & Waste	570	770	1421	2052	2345	2936	3298	3403	3844	9.6	5.1	3.5	1.5
Geothermal heat	0	0	0	0	0	37	105	210	315				11.6
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**73390**	**84833**	**86509**	**91301**	**84022**	**84627**	**82215**	**81128**	**78921**	**1.7**	**-0.3**	**-0.2**	**-0.4**
Refineries	69876	81133	83485	87803	80993	81520	78842	77828	75616	1.8	-0.3	-0.3	-0.4
Biofuels and hydrogen production	0	0	0	0	256	498	845	790	857			12.7	0.1
District heating	0	11	153	436	494	494	494	455	388		12.4	0.0	-2.4
Others	3514	3689	2870	3062	2279	2115	2035	2055	2059	-2.0	-2.3	-1.1	0.1
Energy Branch Consumption	**5462**	**6320**	**5600**	**6665**	**5809**	**5783**	**5707**	**5616**	**5445**	**0.2**	**0.4**	**-0.2**	**-0.5**
Non-Energy Uses	**9775**	**9892**	**10307**	**13031**	**12946**	**12826**	**12342**	**12168**	**12156**	**0.5**	**2.3**	**-0.5**	**-0.2**
Final Energy Demand	**42876**	**47727**	**50174**	**51639**	**50682**	**50951**	**49628**	**48338**	**46689**	**1.6**	**0.1**	**-0.2**	**-0.6**
by sector													
Industry	12542	12675	13753	14929	14519	14500	13957	13622	13238	0.9	0.5	-0.4	-0.5
- energy intensive industries	9531	8686	9823	10639	10052	9993	9579	9306	9004	0.3	0.2	-0.5	-0.6
- other industrial sectors	3010	3989	3930	4291	4467	4507	4379	4316	4234	2.7	1.3	-0.2	-0.3
Residential	9938	11152	10333	10101	10171	10301	10045	9617	9282	0.4	-0.2	-0.1	-0.8
Tertiary	10012	11463	12229	11495	11305	11244	10858	10238	9830	2.0	-0.8	-0.4	-1.0
Transport	10385	12436	13858	15114	14687	14906	14768	14861	14339	2.9	0.6	0.1	-0.3
by fuel													
Solids	1651	1415	1295	1515	1151	1212	1230	1198	1171	-2.4	-1.2	0.7	-0.5
Oil	12851	14721	16512	17406	16693	16703	16045	15356	13939	2.5	0.1	-0.4	-1.4
Gas	21244	22515	21008	20335	19363	18536	16771	15755	14536	-0.1	-0.8	-1.4	-1.4
Electricity	6322	7143	8421	8989	9153	9824	10138	10367	10585	2.9	0.8	1.0	0.4
Heat (from CHP and District Heating) [A]	439	1568	2558	2981	3653	3645	3843	4028	4410	19.3	3.6	0.5	1.4
Renewable energy forms	370	364	380	413	668	1029	1598	1631	2045	0.3	5.8	9.1	2.5
Other	0	0	0	0	1	2	3	2	2			11.1	-2.2
RES in Gross Final Energy Consumption [B]			**814**	**1169**	**3235**	**5114**	**7059**	**7412**	**8338**		**14.8**	**8.1**	**1.7**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**214.2**		**219.2**	**217.8**	**197.4**	**201.1**	**188.9**	**184.5**	**177.3**	**0.2**	**-1.0**	**-0.4**	**-0.6**
of which ETS sectors GHGs emissions				107.3	91.4	98.0	92.1	91.6	88.8			0.1	-0.4
CO_2 Emissions (energy related)	**152.1**	**167.6**	**166.2**	**172.1**	**159.6**	**163.4**	**152.1**	**147.5**	**139.9**	**0.9**	**-0.4**	**-0.5**	**-0.8**
Power generation/District heating	43.4	49.2	49.1	51.2	48.4	54.7	50.0	50.2	50.2	1.2	-0.1	0.3	0.0
Energy Branch	13.8	16.0	13.5	15.0	11.3	10.5	9.9	9.6	9.0	-0.3	-1.7	-1.3	-1.0
Industry	26.6	24.8	24.6	25.4	22.1	21.8	20.0	18.4	15.7	-0.8	-1.1	-1.0	-2.4
Residential	19.2	20.6	18.9	17.8	17.9	17.4	16.2	14.9	14.0	-0.2	-0.5	-1.0	-1.5
Tertiary	18.9	20.7	19.5	18.1	17.4	16.4	14.9	12.9	11.3	0.3	-1.2	-1.5	-2.7
Transport	30.2	36.3	40.6	44.5	42.5	42.5	41.0	41.5	39.7	3.0	0.5	-0.4	-0.3
CO_2 Emissions (non energy related)	**9.4**	**9.1**	**8.2**	**8.6**	**7.9**	**8.1**	**8.1**	**8.2**	**8.3**	**-1.4**	**-0.4**	**0.2**	**0.3**
Non-CO_2 GHGs Emissions	**52.6**		**44.8**	**37.0**	**29.9**	**29.6**	**28.7**	**28.7**	**29.1**	**-1.6**	**-4.0**	**-0.4**	**0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**102.3**	**101.7**	**92.2**	**93.9**	**88.2**	**86.1**	**82.8**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Netherlands: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	14.893	15.424	15.864	16.306	16.503	16.717	16.896	17.069	17.208	0.6	0.4	0.2	0.2
GDP (in 000 MEuro'05)	347.5	394.3	480.8	513.4	539.5	589.1	637.9	682.4	726.3	3.3	1.2	1.7	1.3
Gross Inl. Cons./GDP (toe/MEuro'05)	195.6	189.0	160.2	160.7	145.3	134.7	121.4	111.5	102.5	-2.0	-1.0	-1.8	-1.7
Carbon intensity (t of CO_2/toe of GIC)	2.24	2.25	2.16	2.09	2.04	2.06	1.96	1.94	1.88	-0.4	-0.6	-0.4	-0.4
Import Dependency %	23.2	20.0	39.2	38.7	36.3	39.2	39.6	48.1	54.5				
Total Energy-related Costs (C) (in 000 M€05)			45.7	53.0	53.8	62.4	74.5	81.9	83.6		1.7	3.3	1.2
as % of GDP			9.5	10.3	10.0	10.6	11.7	12.0	11.5				
Energy intensity indicators													
Industry (Energy on Value added)	105.2	107.3	100.0	108.1	104.1	97.9	90.1	84.3	78.9	-0.5	0.4	-1.4	-1.3
Residential (Energy on Private Income)	133.0	133.8	100.0	93.4	91.5	83.4	74.3	66.5	60.1	-2.8	-0.9	-2.1	-2.1
Tertiary (Energy on Value added)	117.5	115.7	100.0	86.8	80.6	72.3	63.9	56.0	50.2	-1.6	-2.1	-2.3	-2.4
Passenger transport (toe/Mpkm)	41.4	49.0	49.3	52.8	50.8	47.4	44.6	42.3	37.9	1.8	0.3	-1.3	-1.6
Freight transport (toe/Mtkm)	34.9	37.8	38.1	36.6	35.8	35.6	34.0	32.4	30.7	0.9	-0.6	-0.5	-1.0
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.56	0.48	0.39	0.35	0.30	0.29	0.25	0.24	0.23	-3.4	-2.8	-1.7	-0.7
Final energy demand (t of CO_2/toe)	2.21	2.15	2.07	2.05	1.97	1.93	1.86	1.81	1.73	-0.7	-0.5	-0.6	-0.7
Industry	2.12	1.96	1.79	1.70	1.52	1.51	1.43	1.35	1.19	-1.7	-1.6	-0.6	-1.9
Residential	1.93	1.85	1.83	1.76	1.76	1.69	1.61	1.55	1.50	-0.5	-0.4	-0.9	-0.7
Tertiary	1.89	1.81	1.60	1.58	1.54	1.46	1.37	1.26	1.15	-1.7	-0.4	-1.1	-1.8
Transport	2.91	2.92	2.93	2.95	2.89	2.85	2.78	2.79	2.77	0.1	-0.1	-0.4	0.0
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			1.6	2.2	6.3	9.9	14.0	15.2	17.6				
RES in transport (%)			0.1	0.1	2.6	5.0	8.7	8.3	9.2				
Gross Electricity generation by fuel type (in GWh)			**89599**	**100235**	**104191**	**126189**	**136417**	**140592**	**143553**		**1.5**	**2.7**	**0.5**
Nuclear energy			3925	3996	3942	3967	3971	5096	5096		0.0	0.1	2.5
Coal and lignite			23513	22687	21513	32499	33750	35434	36107		-0.9	4.6	0.7
Petroleum products			2380	2698	2910	2952	2864	2099	1685		2.0	-0.2	-5.2
Gas (including derived gases)			55301	62203	59549	58838	54729	53820	52688		0.7	-0.8	-0.4
Biomass & waste			3500	6463	8931	10840	11745	12084	13618		9.8	2.8	1.5
Hydro			142	88	99	99	99	99	99		-3.6	0.0	0.0
Wind			829	2067	7160	16833	28925	31382	33363		24.1	15.0	1.4
Solar, tidal etc.			8	34	87	117	149	170	240		27.0	5.5	4.9
Geothermal and other renewables			0	0	0	43	186	407	657				13.5
Net Generation Capacity in MW_e			**20559**	**23096**	**26283**	**31527**	**34322**	**34926**	**35623**		**2.5**	**2.7**	**0.4**
Nuclear energy			504	504	504	504	504	589	589		0.0	0.0	1.6
Renewable energy			494	1331	3212	6138	9925	10782	11565		20.6	11.9	1.5
Hydro (pumping excluded)			39	37	37	37	37	37	37		-0.5	0.0	0.0
Wind			442	1243	3078	5975	9716	10524	11192		21.4	12.2	1.4
Solar			13	51	96	126	151	168	241		22.2	4.6	4.8
Other renewables (tidal etc.)			0	0	0	0	21	53	95				16.4
Thermal power			19561	21261	22566	24884	23892	23555	23470		1.4	0.6	-0.2
of which cogeneration units			6017	5905	8227	8305	8336	8570	8470		3.2	0.1	0.2
of which CCS units			0	0	0	0	1005	1005	1005				0.0
Solids fired			4200	4200	4186	8133	8534	8534	8534		0.0	7.4	0.0
Gas fired			13732	14827	15935	13936	12432	11917	11709		1.5	-2.5	-0.6
Oil fired			776	762	995	787	786	777	770		2.5	-2.3	-0.2
Biomass-waste fired			853	1473	1451	2023	2126	2300	2414		5.4	3.9	1.3
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	5	14	28	42				11.6
Load factor for net electric capacities (%)			47.7	47.5	43.4	43.7	43.0	43.5	43.6				
Efficiency for thermal electricity production (%)			39.9	41.2	42.0	42.8	41.9	41.4	40.4				
CHP indicator (% of electricity from CHP)			39.1	30.8	42.8	35.4	32.6	31.1	31.1				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	4.8	5.3	5.8				
Non fossil fuels in electricity generation (%)			9.4	12.6	19.4	25.3	33.0	35.0	37.0				
- nuclear			4.4	4.0	3.8	3.1	2.9	3.6	3.5				
- renewable energy forms and industrial waste			5.0	8.6	15.6	22.1	30.1	31.4	33.4				
Transport sector													
Passenger transport activity (Gpkm)	**172.2**	**172.3**	**184.4**	**194.8**	**197.9**	**213.6**	**225.6**	**239.6**	**254.0**	**0.7**	**0.7**	**1.3**	**1.2**
Public road transport	13.0	12.0	11.3	11.8	12.4	13.2	13.7	14.0	14.2	-1.4	0.9	1.1	0.4
Private cars and motorcycles	138.6	133.0	143.3	151.5	151.7	161.9	168.1	177.0	186.8	0.3	0.6	1.0	1.1
Rail	12.3	17.7	16.1	16.7	18.1	19.7	21.2	22.7	24.0	2.7	1.2	1.6	1.2
Aviation	7.0	8.5	13.0	14.2	15.1	18.0	21.7	25.1	28.0	6.3	1.5	3.7	2.6
Inland navigation	1.2	1.0	0.7	0.7	0.7	0.8	0.8	0.8	0.8	-5.0	0.2	0.6	0.5
Freight transport activity (Gtkm)	**93.2**	**105.7**	**125.4**	**132.3**	**129.2**	**134.2**	**138.3**	**145.7**	**153.4**	**3.0**	**0.3**	**0.7**	**1.0**
Trucks	54.5	67.1	79.6	84.2	80.0	83.5	85.6	90.7	96.3	3.9	0.1	0.7	1.2
Rail	3.1	3.1	4.5	5.9	7.4	7.7	7.9	8.1	8.2	3.9	5.0	0.8	0.3
Inland navigation	35.7	35.5	41.3	42.2	41.8	43.0	44.7	46.8	48.9	1.5	0.1	0.7	0.9
Energy demand in transport (ktoe)	**10385**	**12436**	**13858**	**15114**	**14687**	**14906**	**14768**	**14861**	**14339**	**2.9**	**0.6**	**0.1**	**-0.3**
Public road transport	166	151	140	144	150	155	153	148	143	-1.7	0.7	0.2	-0.7
Private cars and motorcycles	5237	5553	5491	6371	6117	5860	5640	5523	5258	0.5	1.1	-0.8	-0.7
Trucks	2666	3278	4037	4552	4319	4464	4400	4430	4415	4.2	0.7	0.2	0.0
Rail	147	163	176	172	197	203	186	173	167	1.8	1.2	-0.6	-1.1
Aviation	1608	2589	3343	3670	3699	4017	4175	4365	4126	7.6	1.0	1.2	-0.1
Inland navigation	560	702	672	206	204	209	215	223	231	1.8	-11.2	0.5	0.7

Source: PRIMES

Poland: REFERENCE SCENARIO										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**99385**	**99403**	**80300**	**79260**	**69136**	**67673**	**71398**	**68318**	**65446**	**-2.1**	**-1.5**	**0.3**	**-0.9**
Solids	94459	91104	71298	68876	59068	55686	52620	49038	45860	-2.8	-1.9	-1.1	-1.4
Oil	179	367	1433	1498	750	700	692	650	600	23.1	-6.3	-0.8	-1.4
Natural gas	2378	3169	3313	3884	3865	3440	3100	2800	2692	3.4	1.6	-2.2	-1.4
Nuclear	0	0	0	0	0	0	2817	2817	3947				3.4
Renewable energy sources	2369	4763	4256	5002	5453	7847	12170	13013	12347	6.0	2.5	8.4	0.1
Hydro	139	162	181	189	195	205	221	231	246	2.7	0.7	1.3	1.1
Biomass & Waste	2230	4600	4072	4792	5142	7373	11231	11981	11116	6.2	2.4	8.1	-0.1
Wind	0	0	0	12	87	145	248	312	378		70.0	11.1	4.3
Solar and others	0	0	0	0	1	31	93	166	270			51.9	11.3
Geothermal	0	0	3	9	28	93	377	323	338		25.1	29.7	-1.1
Net Imports	**2306**	**-11**	**10262**	**16911**	**32419**	**40185**	**38926**	**43005**	**44486**	**16.1**	**12.2**	**1.8**	**1.3**
Solids	-18913	-21202	-16309	-12755	-5332	-1269	-2283	2306	4902				
Oil	14536	15622	20512	22155	27282	30588	30270	30737	30067	3.5	2.9	1.0	-0.1
- Crude oil and Feedstocks	13196	14112	18949	18362	22649	25237	25004	25342	24983	3.7	1.8	1.0	0.0
- Oil products	1340	1510	1563	3793	4633	5352	5267	5396	5084	1.5	11.5	1.3	-0.4
Natural gas	6773	5810	6607	8531	11156	11523	10969	10921	10498	-0.2	5.4	-0.2	-0.4
Electricity	-90	-241	-548	-962	-576	-442	-449	-498	-528				
Gross Inland Consumption	**100083**	**100165**	**90907**	**93870**	**101136**	**107389**	**109851**	**110848**	**109462**	**-1.0**	**1.1**	**0.8**	**0.0**
Solids	75405	70500	56358	54918	53736	54417	50337	51344	50763	-2.9	-0.5	-0.7	0.1
Oil	13461	16149	20889	22734	27613	30819	30489	30912	30197	4.5	2.8	1.0	-0.1
Natural gas	8938	8995	9960	12235	15021	14963	14069	13721	13189	1.1	4.2	-0.7	-0.6
Nuclear	0	0	0	0	0	0	2817	2817	3947				3.4
Electricity	-90	-241	-548	-962	-576	-442	-449	-498	-528				
Renewable energy forms	2369	4763	4249	4946	5342	7633	12587	12552	11894	6.0	2.3	8.9	-0.6
as % in Gross Inland Consumption													
Solids	75.3	70.4	62.0	58.5	53.1	50.7	45.8	46.3	46.4				
Oil	13.4	16.1	23.0	24.2	27.3	28.7	27.8	27.9	27.6				
Natural gas	8.9	9.0	11.0	13.0	14.9	13.9	12.8	12.4	12.0				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.5	3.6				
Renewable energy forms	2.4	4.8	4.7	5.3	5.3	7.1	11.5	11.3	10.9				
Gross Electricity Generation in GWh_e	**134591**	**137017**	**143148**	**155331**	**162543**	**173429**	**189148**	**203965**	**219681**	**0.6**	**1.3**	**1.5**	**1.5**
Self consumption and grid losses	24377	30428	27978	28523	30121	31462	34744	36795	38524	1.4	0.7	1.4	1.0
Fuel Inputs for Thermal Power Generation	**43419**	**36847**	**35960**	**38149**	**41036**	**42093**	**41417**	**43174**	**42121**	**-1.9**	**1.3**	**0.1**	**0.2**
Solids	41138	35842	34793	35942	37718	38849	35894	37163	36837	-1.7	0.8	-0.5	0.3
Oil (including refinery gas)	1235	405	228	179	200	166	84	90	77	-15.6	-1.3	-8.3	-0.9
Gas	673	488	783	1483	1448	1353	1369	1376	1392	1.5	6.3	-0.6	0.2
Biomass & Waste	372	114	157	546	1670	1726	3952	4421	3683	-8.3	26.7	9.0	-0.7
Geothermal heat	0	0	0	0	0	0	118	125	133				1.2
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**37964**	**33093**	**34029**	**32016**	**34260**	**36447**	**36012**	**36012**	**35745**	**-1.1**	**0.1**	**0.5**	**-0.1**
Refineries	13269	15062	20074	19789	23563	26113	25854	26141	25723	4.2	1.6	0.9	-0.1
Biofuels and hydrogen production	0	0	0	47	363	718	1399	1556	1819			14.4	2.7
District heating	9949	5985	4320	3640	3567	3364	3321	3390	3631	-8.0	-1.9	-0.7	0.9
Others	14746	12045	9635	8541	6766	6252	5438	4926	4572	-4.2	-3.5	-2.2	-1.7
Energy Branch Consumption	**6808**	**7653**	**7263**	**7151**	**8586**	**8937**	**8904**	**8898**	**8650**	**0.6**	**1.7**	**0.4**	**-0.3**
Non-Energy Uses	**4218**	**3720**	**4319**	**4471**	**4707**	**5007**	**5072**	**5218**	**5415**	**0.2**	**0.9**	**0.8**	**0.7**
Final Energy Demand	**59652**	**63525**	**55323**	**57854**	**64840**	**70719**	**72568**	**73271**	**73261**	**-0.8**	**1.6**	**1.1**	**0.1**
by sector													
Industry	25258	22722	18886	16462	17489	18737	18824	18829	18711	-2.9	-0.8	0.7	-0.1
- energy intensive industries	16252	15428	13373	11186	11388	11860	11680	11460	11444	-1.9	-1.6	0.3	-0.2
- other industrial sectors	9006	7294	5513	5276	6101	6877	7144	7370	7267	-4.8	1.0	1.6	0.2
Residential	18126	23284	17519	18377	18765	19418	19783	19383	19373	-0.3	0.7	0.5	-0.2
Tertiary	8906	9244	9714	10932	11847	12938	13452	13670	13668	0.9	2.0	1.3	0.2
Transport	7362	8275	9204	12083	16739	19627	20508	21390	21510	2.3	6.2	2.1	0.5
by fuel													
Solids	17066	23299	13728	11350	10318	10045	9414	9298	9244	-2.2	-2.8	-0.9	-0.2
Oil	9143	11618	14917	17874	22015	24993	24879	25377	24947	5.0	4.0	1.2	0.0
Gas	7987	7735	7447	8400	11465	11633	10647	10173	9106	-0.7	4.4	-0.7	-1.6
Electricity	8262	7703	8454	9028	9908	10855	11933	13008	14217	0.2	1.6	1.9	1.8
Heat (from CHP and District Heating) [A]	15563	8763	6886	7056	7929	7661	7690	8002	8336	-7.8	1.4	-0.3	0.8
Renewable energy forms	1631	4408	3889	4146	3204	5529	7994	7405	7407	9.1	-1.9	9.6	-0.8
Other	0	0	0	0	1	4	10	8	4			22.7	-8.0
RES in Gross Final Energy Consumption [B]			**3766**	**4290**	**4558**	**6842**	**11322**	**11278**	**10791**		**1.9**	**9.5**	**-0.5**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**440.8**		**374.8**	**375.2**	**396.5**	**403.8**	**374.6**	**380.7**	**375.1**	**-1.6**	**0.6**	**-0.6**	**0.0**
of which ETS sectors GHGs emissions				218.9	221.1	224.4	207.2	213.8	214.7			-0.6	0.4
CO_2 Emissions (energy related)	**332.3**	**330.9**	**288.6**	**291.2**	**312.2**	**323.9**	**300.8**	**305.6**	**300.2**	**-1.4**	**0.8**	**-0.4**	**0.0**
Power generation/District heating	209.3	169.9	158.8	162.1	167.9	172.1	155.2	160.5	159.7	-2.7	0.6	-0.8	0.3
Energy Branch	5.8	12.7	11.3	10.6	10.3	9.9	9.0	8.8	8.3	6.9	-1.0	-1.3	-0.9
Industry	44.0	59.9	46.3	33.5	33.9	34.9	33.1	33.9	35.2	0.5	-3.1	-0.2	0.6
Residential	33.1	44.4	27.9	30.2	31.2	30.7	27.8	25.4	22.7	-1.7	1.1	-1.2	-2.0
Tertiary	19.4	20.8	18.4	20.5	21.8	21.9	20.6	19.8	17.8	-0.5	1.7	-0.6	-1.4
Transport	20.6	23.2	25.8	34.4	47.1	54.5	55.0	57.1	56.5	2.3	6.2	1.6	0.3
CO_2 Emissions (non energy related)	**17.7**	**18.0**	**17.6**	**16.8**	**18.7**	**20.9**	**22.6**	**23.8**	**24.9**	**-0.1**	**0.6**	**2.0**	**0.9**
Non-CO_2 GHGs Emissions	**90.8**		**68.6**	**67.2**	**65.6**	**58.9**	**51.2**	**51.4**	**50.0**	**-2.8**	**-0.5**	**-2.4**	**-0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**85.0**	**85.1**	**89.9**	**91.6**	**85.0**	**86.4**	**85.1**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Poland: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	38.038	38.581	38.654	38.174	38.092	38.068	37.960	37.612	36.975	0.2	-0.1	0.0	-0.3
GDP (in 000 MEuro'05)	144.7	161.3	210.0	244.4	298.1	353.9	406.1	464.5	515.8	3.8	3.6	3.1	2.4
Gross Inl. Cons./GDP (toe/MEuro'05)	691.6	620.9	432.9	384.1	339.3	303.4	270.5	238.6	212.2	-4.6	-2.4	-2.2	-2.4
Carbon intensity (t of CO_2/toe of GIC)	3.32	3.30	3.17	3.10	3.09	3.02	2.74	2.76	2.74	-0.4	-0.3	-1.2	0.0
Import Dependency %	2.3	0.0	11.3	18.0	31.9	37.3	35.3	38.6	40.5				
Total Energy-related Costs (C) (in 000 M€05)			31.5	39.8	47.6	59.1	76.5	88.1	94.1		4.2	4.8	2.1
as % of GDP			15.0	16.3	16.0	16.7	18.8	19.0	18.2				
Energy intensity indicators													
Industry (Energy on Value added)	200.8	177.4	100.0	67.2	56.3	49.8	44.8	40.8	38.8	-6.7	-5.6	-2.3	-1.4
Residential (Energy on Private Income)	182.3	177.4	100.0	91.0	79.4	69.6	60.8	51.9	46.1	-5.8	-2.3	-2.6	-2.7
Tertiary (Energy on Value added)	130.3	119.8	100.0	98.0	88.9	79.5	71.0	61.9	54.6	-2.6	-1.2	-2.2	-2.6
Passenger transport (toe/Mpkm)	22.8	27.4	24.9	26.7	27.6	27.1	26.8	26.4	25.9	0.9	1.1	-0.3	-0.3
Freight transport (toe/Mtkm)	25.3	27.2	29.2	32.1	34.1	34.0	33.2	32.7	31.6	1.4	1.6	-0.3	-0.5
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.62	0.67	0.67	0.65	0.58	0.57	0.49	0.48	0.45	0.8	-1.3	-1.8	-0.8
Final energy demand (t of CO_2/toe)	1.96	2.33	2.14	2.05	2.07	2.01	1.88	1.86	1.80	0.9	-0.4	-0.9	-0.4
Industry	1.74	2.64	2.45	2.03	1.94	1.86	1.76	1.80	1.88	3.5	-2.3	-0.9	0.7
Residential	1.83	1.90	1.59	1.64	1.66	1.58	1.40	1.31	1.17	-1.3	0.4	-1.7	-1.8
Tertiary	2.18	2.25	1.89	1.87	1.84	1.69	1.53	1.45	1.31	-1.4	-0.3	-1.8	-1.6
Transport	2.80	2.80	2.81	2.85	2.81	2.78	2.68	2.67	2.63	0.0	0.0	-0.5	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			6.5	7.1	6.8	9.3	15.0	14.8	14.1				
RES in transport (%)			0.1	0.5	2.7	4.6	8.5	9.1	10.5				
Gross Electricity generation by fuel type (in GWh)			**143148**	**155331**	**162543**	**173429**	**189148**	**203965**	**219681**		**1.3**	**1.5**	**1.5**
Nuclear energy			0	0	0	0	11760	11760	16687				3.6
Coal and lignite			137226	145736	148794	158283	152110	164348	174890		0.8	0.2	1.4
Petroleum products			911	759	1046	702	250	171	211		1.4	-13.3	-1.7
Gas (including derived gases)			2450	4990	4883	5141	6213	6265	7079		7.1	2.4	1.3
Biomass & waste			451	1510	4547	5224	13208	14922	13335		26.0	11.3	0.1
Hydro			2106	2201	2263	2379	2568	2682	2856		0.7	1.3	1.1
Wind			5	135	1008	1692	2884	3633	4393		70.0	11.1	4.3
Solar, tidal etc.			0	0	1	8	18	39	76			31.0	15.1
Geothermal and other renewables			0	0	0	0	137	145	154				1.2
Net Generation Capacity in MW_e			**29565**	**30959**	**32481**	**33527**	**35301**	**36857**	**41254**		**0.9**	**0.8**	**1.6**
Nuclear energy			0	0	0	0	1515	1515	2150				3.6
Renewable energy			813	1028	1687	2137	2920	3442	3978		7.6	5.6	3.1
Hydro (pumping excluded)			809	907	1014	1098	1187	1203	1203		2.3	1.6	0.1
Wind			4	121	672	1031	1714	2200	2701		66.9	9.8	4.6
Solar			0	0	1	8	18	39	74			29.8	15.2
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			28752	29931	30794	31390	30866	31900	35126		0.7	0.0	1.3
of which cogeneration units			9348	9606	9781	9330	10320	10876	11145		0.5	0.5	0.8
of which CCS units			0	0	0	0	610	610	610				0.0
Solids fired			27462	28152	28873	28439	26499	27090	29615		0.5	-0.9	1.1
Gas fired			847	1291	1215	1562	1758	1754	1774		3.7	3.8	0.1
Oil fired			429	430	430	440	384	271	210		0.0	-1.1	-5.9
Biomass-waste fired			14	59	276	950	2209	2769	3509		34.6	23.1	4.7
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	16	17	18				1.2
Load factor for net electric capacities (%)			50.3	52.4	52.2	54.2	55.8	57.7	55.7				
Efficiency for thermal electricity production (%)			33.7	34.5	33.4	34.6	35.7	37.0	40.0				
CHP indicator (% of electricity from CHP)			17.6	18.3	17.8	22.6	27.3	30.6	31.6				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	3.5	3.2	2.9				
Non fossil fuels in electricity generation (%)			1.8	2.5	4.8	5.4	16.2	16.3	17.1				
- nuclear			0.0	0.0	0.0	0.0	6.2	5.8	7.6				
- renewable energy forms and industrial waste			1.8	2.5	4.8	5.4	9.9	10.5	9.5				
Transport sector													
Passenger transport activity (Gpkm)	**186.5**	**182.3**	**217.1**	**257.8**	**323.6**	**377.6**	**409.4**	**440.8**	**462.7**	**1.5**	**4.1**	**2.4**	**1.2**
Public road transport	46.3	34.0	31.7	29.3	28.3	29.5	31.4	33.7	35.3	-3.7	-1.1	1.0	1.2
Private cars and motorcycles	83.4	115.2	153.6	201.2	262.6	309.7	335.5	358.9	373.4	6.3	5.5	2.5	1.1
Rail	55.4	31.6	28.8	22.3	24.8	27.4	29.5	31.7	33.3	-6.3	-1.5	1.7	1.2
Aviation	0.9	1.2	2.8	4.8	7.6	10.8	12.8	16.3	20.5	12.4	10.7	5.3	4.8
Inland navigation	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	-6.3	-0.6	1.3	0.7
Freight transport activity (Gtkm)	**122.9**	**120.3**	**130.2**	**162.1**	**228.4**	**276.3**	**287.6**	**298.4**	**302.1**	**0.6**	**5.8**	**2.3**	**0.5**
Trucks	40.3	51.2	75.0	111.8	172.5	210.2	216.3	221.9	221.7	6.4	8.7	2.3	0.2
Rail	81.6	68.2	54.0	50.0	55.5	65.7	70.8	76.0	79.9	-4.0	0.3	2.5	1.2
Inland navigation	1.0	0.9	1.2	0.3	0.4	0.4	0.4	0.5	0.5	1.3	-11.4	2.5	1.4
Energy demand in transport (ktoe)	**7362**	**8275**	**9204**	**12083**	**16739**	**19627**	**20508**	**21390**	**21510**	**2.3**	**6.2**	**2.1**	**0.5**
Public road transport	421	307	276	254	244	248	253	257	261	-4.1	-1.3	0.4	0.3
Private cars and motorcycles	3435	4241	4687	6248	8146	9255	9897	10486	10625	3.2	5.7	2.0	0.7
Trucks	2111	2659	3326	4792	7343	8873	9017	9237	9118	4.6	8.2	2.1	0.1
Rail	1099	669	540	468	507	584	572	559	472	-6.9	-0.6	1.2	-1.9
Aviation	196	371	369	319	497	665	767	848	1031	6.5	3.0	4.4	3.0
Inland navigation	99	29	6	2	2	2	3	3	3	-24.3	-9.9	1.6	0.8

Source: PRIMES

Portugal: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**3396**	**3321**	**3826**	**3583**	**4594**	**5362**	**6198**	**6567**	**6986**	**1.2**	**1.8**	**3.0**	**1.2**
Solids	115	0	0	0	0	0	0	0	0				
Oil	0	0	0	0	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	0	0	0	0	0	0	0	0	0				
Renewable energy sources	3281	3321	3826	3583	4594	5362	6198	6567	6986	1.5	1.8	3.0	1.2
Hydro	787	717	974	407	892	937	954	971	988	2.1	-0.9	0.7	0.4
Biomass & Waste	2479	2550	2770	2936	2892	3291	3563	3718	3901	1.1	0.4	2.1	0.9
Wind	0	1	14	152	589	753	902	1004	1102	66.9	44.9	4.3	2.0
Solar and others	11	15	18	23	66	225	609	703	824	5.4	13.6	24.9	3.1
Geothermal	3	37	49	66	154	156	170	170	171	31.4	12.1	1.0	0.0
Net Imports	**15122**	**18012**	**21881**	**24414**	**20964**	**20506**	**19013**	**18915**	**18723**	**3.8**	**-0.4**	**-1.0**	**-0.2**
Solids	2789	3797	3913	3223	2320	1981	1736	1674	952	3.4	-5.1	-2.9	-5.8
Oil	12329	14137	15848	16711	13753	13675	13274	13028	12857	2.5	-1.4	-0.4	-0.3
- Crude oil and Feedstocks	11319	13603	12231	13637	12417	12393	12219	12116	12040	0.8	0.2	-0.2	-0.1
- Oil products	1011	534	3618	3073	1336	1282	1055	913	817	13.6	-9.5	-2.3	-2.5
Natural gas	0	0	2039	3893	4206	3861	2821	2873	3550		7.5	-3.9	2.3
Electricity	3	79	80	587	542	564	626	709	692	38.1	21.1	1.4	1.0
Gross Inland Consumption	**17508**	**20469**	**25078**	**27035**	**24975**	**25262**	**24593**	**24850**	**25059**	**3.7**	**0.0**	**-0.2**	**0.2**
Solids	2580	3493	3803	3347	2320	1981	1736	1674	952	4.0	-4.8	-2.9	-5.8
Oil	11644	13576	15335	15768	13171	13069	12656	12396	12206	2.8	-1.5	-0.4	-0.4
Natural gas	0	0	2034	3751	4206	3861	2821	2873	3550		7.5	-3.9	2.3
Nuclear	0	0	0	0	0	0	0	0	0				
Electricity	3	79	80	587	542	564	626	709	692	38.1	21.1	1.4	1.0
Renewable energy forms	3281	3321	3826	3583	4736	5787	6754	7197	7658	1.5	2.2	3.6	1.3
as % in Gross Inland Consumption													
Solids	14.7	17.1	15.2	12.4	9.3	7.8	7.1	6.7	3.8				
Oil	66.5	66.3	61.1	58.3	52.7	51.7	51.5	49.9	48.7				
Natural gas	0.0	0.0	8.1	13.9	16.8	15.3	11.5	11.6	14.2				
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Renewable energy forms	18.7	16.2	15.3	13.3	19.0	22.9	27.5	29.0	30.6				
Gross Electricity Generation in GWh_e	**28350**	**33148**	**43364**	**46180**	**46279**	**49780**	**52391**	**55678**	**59729**	**4.3**	**0.7**	**1.2**	**1.3**
Self consumption and grid losses	4441	4776	5363	5983	5686	6235	6735	7651	7868	1.9	0.6	1.7	1.6
Fuel Inputs for Thermal Power Generation	**4304**	**5493**	**6508**	**8007**	**6131**	**6045**	**5550**	**5730**	**5752**	**4.2**	**-0.6**	**-1.0**	**0.4**
Solids	2027	2919	3198	3319	2314	1975	1732	1670	948	4.7	-3.2	-2.9	-5.8
Oil (including refinery gas)	2105	2371	1671	1885	613	631	506	280	153	-2.3	-9.5	-1.9	-11.3
Gas	19	18	1234	2309	2457	2197	1362	1601	2234	51.6	7.1	-5.7	5.1
Biomass & Waste	149	148	356	430	596	1091	1790	2018	2256	9.1	5.3	11.6	2.3
Geothermal heat	3	37	49	65	151	151	161	161	161	31.4	11.8	0.7	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**11443**	**14111**	**12911**	**13785**	**12854**	**12942**	**12896**	**12870**	**12839**	**1.2**	**0.0**	**0.0**	**0.0**
Refineries	11111	13635	12462	13785	12700	12655	12463	12339	12255	1.2	0.2	-0.2	-0.2
Biofuels and hydrogen production	0	0	0	0	154	287	434	531	584			10.9	3.0
District heating	0	16	0	0	0	0	0	0	0				
Others	332	460	449	0	0	0	0	0	0	3.1			
Energy Branch Consumption	**655**	**960**	**1025**	**1101**	**896**	**873**	**845**	**858**	**808**	**4.6**	**-1.3**	**-0.6**	**-0.4**
Non-Energy Uses	**2113**	**1891**	**2364**	**2429**	**2181**	**2228**	**2265**	**2292**	**2393**	**1.1**	**-0.8**	**0.4**	**0.6**
Final Energy Demand	**11813**	**13789**	**17694**	**18723**	**18119**	**18520**	**18714**	**18906**	**19150**	**4.1**	**0.2**	**0.3**	**0.2**
by sector													
Industry	4728	4974	6244	5689	4997	4840	4801	4917	5185	2.8	-2.2	-0.4	0.8
- energy intensive industries	3073	3350	4092	3767	3001	2857	2777	2770	2858	2.9	-3.1	-0.8	0.3
- other industrial sectors	1656	1625	2151	1922	1995	1982	2025	2148	2328	2.7	-0.7	0.1	1.4
Residential	2290	2569	2804	3206	3192	3363	3469	3423	3400	2.0	1.3	0.8	-0.2
Tertiary	1055	1377	2105	2773	2623	2730	2722	2737	2788	7.1	2.2	0.4	0.2
Transport	3740	4869	6542	7055	7307	7587	7721	7828	7776	5.8	1.1	0.6	0.1
by fuel													
Solids	617	546	465	16	6	5	4	4	4	-2.8	-35.4	-2.8	-1.1
Oil	6700	8215	10509	10561	9592	9544	9265	9158	9028	4.6	-0.9	-0.3	-0.3
Gas	103	97	853	1307	1689	1530	1341	1237	1277	23.6	7.1	-2.3	-0.5
Electricity	2024	2477	3299	3983	3975	4250	4494	4783	5097	5.0	1.9	1.2	1.3
Heat (from CHP and District Heating) [A]	28	36	134	328	366	443	1027	1146	1174	16.8	10.5	10.9	1.3
Renewable energy forms	2341	2417	2433	2529	2490	2746	2580	2576	2569	0.4	0.2	0.4	0.0
Other	0	0	0	0	1	1	2	2	1			12.5	-2.4
RES in Gross Final Energy Consumption [B]			**3559**	**3886**	**4524**	**5386**	**6399**	**6807**	**7288**		**2.4**	**3.5**	**1.3**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**59.3**		**83.4**	**89.3**	**74.2**	**70.5**	**64.8**	**64.2**	**62.3**	**3.5**	**-1.2**	**-1.3**	**-0.4**
of which ETS sectors GHGs emissions				42.1	31.4	29.1	25.8	25.7	24.5			-2.0	-0.5
CO_2 Emissions (energy related)	**39.1**	**48.6**	**58.7**	**61.8**	**51.6**	**49.0**	**44.3**	**43.3**	**41.2**	**4.2**	**-1.3**	**-1.5**	**-0.7**
Power generation/District heating	14.8	19.2	20.9	24.5	16.8	14.9	11.6	11.2	9.4	3.5	-2.1	-3.6	-2.1
Energy Branch	1.5	2.4	2.5	2.6	2.2	2.0	1.9	1.9	1.7	5.3	-1.4	-1.5	-0.8
Industry	8.2	8.4	10.7	7.1	5.5	4.7	4.1	3.9	4.2	2.6	-6.4	-2.9	0.4
Residential	1.6	1.9	2.0	2.3	2.2	2.2	2.0	1.9	1.9	2.0	1.1	-0.8	-0.8
Tertiary	1.9	2.2	3.2	4.3	3.6	3.4	2.9	2.7	2.4	5.4	1.2	-1.9	-1.9
Transport	11.1	14.4	19.4	21.0	21.3	21.8	21.7	21.8	21.4	5.8	0.9	0.2	-0.2
CO_2 Emissions (non energy related)	**4.4**	**5.9**	**6.6**	**7.8**	**6.6**	**6.7**	**6.7**	**6.8**	**7.2**	**4.1**	**0.1**	**0.1**	**0.8**
Non-CO_2 GHGs Emissions	**15.8**		**18.1**	**19.7**	**16.0**	**14.8**	**13.9**	**14.0**	**14.0**	**1.4**	**-1.2**	**-1.4**	**0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**140.7**	**150.5**	**125.2**	**118.9**	**109.4**	**108.2**	**105.1**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Portugal: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	9.996	10.018	10.195	10.529	10.723	10.947	11.108	11.224	11.317	0.2	0.5	0.4	0.2
GDP (in 000 MEuro'05)	102.0	116.9	142.8	149.1	147.9	162.4	179.6	198.7	221.5	3.4	0.4	2.0	2.1
Gross Inl. Cons./GDP (toe/MEuro'05)	171.7	175.1	175.7	181.3	168.9	155.6	136.9	125.1	113.1	0.2	-0.4	-2.1	-1.9
Carbon intensity (t of CO_2/toe of GIC)	2.23	2.37	2.34	2.29	2.07	1.94	1.80	1.74	1.64	0.5	-1.2	-1.4	-0.9
Import Dependency %	83.5	86.0	85.0	88.4	82.0	79.3	75.4	74.2	72.8				
Total Energy-related Costs (C) (in 000 M€05)			17.9	20.9	22.2	26.2	31.7	35.7	37.6		2.2	3.6	1.7
as % of GDP			12.6	14.0	15.0	16.1	17.7	18.0	17.0				
Energy intensity indicators													
Industry (Energy on Value added)	82.1	95.7	100.0	93.4	88.4	81.5	75.1	70.1	67.1	2.0	-1.2	-1.6	-1.1
Residential (Energy on Private Income)	121.8	112.4	100.0	106.5	109.0	104.1	96.1	86.5	78.0	-2.0	0.9	-1.3	-2.1
Tertiary (Energy on Value added)	70.3	77.9	100.0	121.4	111.3	103.6	91.8	82.2	74.0	3.6	1.1	-1.9	-2.1
Passenger transport (toe/Mpkm)	40.1	44.2	40.9	40.3	39.3	36.3	34.3	32.4	29.6	0.2	-0.4	-1.3	-1.5
Freight transport (toe/Mtkm)	45.1	53.4	66.8	61.4	61.3	60.9	58.5	55.5	52.1	4.0	-0.9	-0.5	-1.1
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.52	0.57	0.47	0.49	0.33	0.27	0.18	0.16	0.13	-1.0	-3.3	-5.9	-3.3
Final energy demand (t of CO_2/toe)	1.93	1.95	1.99	1.85	1.80	1.73	1.65	1.60	1.56	0.3	-1.0	-0.9	-0.5
Industry	1.74	1.68	1.71	1.25	1.10	0.96	0.85	0.79	0.82	-0.2	-4.3	-2.5	-0.4
Residential	0.71	0.74	0.71	0.70	0.70	0.65	0.59	0.56	0.56	0.0	-0.2	-1.7	-0.6
Tertiary	1.77	1.62	1.51	1.53	1.36	1.25	1.08	0.98	0.87	-1.6	-1.0	-2.3	-2.1
Transport	2.96	2.96	2.97	2.98	2.92	2.87	2.82	2.78	2.75	0.1	-0.2	-0.4	-0.2
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			19.6	20.2	24.3	28.3	33.3	35.1	37.1				
RES in transport (%)			0.2	0.2	2.7	4.8	7.2	8.7	9.8				
Gross Electricity generation by fuel type (in GWh)			**43364**	**46180**	**46279**	**49780**	**52391**	**55678**	**59729**		**0.7**	**1.2**	**1.3**
Nuclear energy			0	0	0	0	0	0	0				
Coal and lignite			15643	15647	10758	9184	8051	7763	4409		-3.7	-2.9	-5.8
Petroleum products			7769	8912	3209	3288	2618	1354	709		-8.5	-2.0	-12.2
Gas (including derived gases)			7229	13599	12796	11834	7659	9050	13166		5.9	-5.0	5.6
Biomass & waste			1153	1410	1884	4353	8010	8915	10171		5.0	15.6	2.4
Hydro			11321	4730	10371	10892	11092	11292	11491		-0.9	0.7	0.4
Wind			168	1773	6853	8758	10490	11669	12811		44.9	4.3	2.0
Solar, tidal etc.			1	3	194	1239	3733	4480	5498		69.3	34.4	3.9
Geothermal and other renewables			80	105	215	233	737	1155	1474		10.4	13.1	7.2
Net Generation Capacity in MW_e			**10360**	**13096**	**17403**	**20580**	**22670**	**23061**	**23718**		**5.3**	**2.7**	**0.5**
Nuclear energy			0	0	0	0	0	0	0				
Renewable energy			3967	5488	8490	10292	12746	13949	15458		7.9	4.1	1.9
Hydro (pumping excluded)			3883	4422	4499	4622	4731	4731	5077		1.5	0.5	0.7
Wind			83	1064	3832	4803	5601	6177	6687		46.7	3.9	1.8
Solar			1	2	156	854	2147	2557	3044		65.7	30.0	3.6
Other renewables (tidal etc.)			0	0	2	12	267	484	649			61.2	9.3
Thermal power			6393	7607	8913	10288	9924	9112	8260		3.4	1.1	-1.8
of which cogeneration units			1640	1845	2269	2164	2395	2493	2381		3.3	0.5	-0.1
of which CCS units			0	0	0	0	0	0	0				
Solids fired			1889	1903	1855	1807	1807	1421	568		-0.2	-0.3	-10.9
Gas fired			1383	2589	3921	5510	5253	5234	5234		11.0	3.0	0.0
Oil fired			2795	2730	2727	2181	1420	882	774		-0.2	-6.3	-5.9
Biomass-waste fired			312	372	387	766	1419	1550	1658		2.2	13.9	1.6
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			14	14	24	24	25	25	25		5.5	0.6	0.0
Load factor for net electric capacities (%)			46.1	38.9	29.6	26.9	25.6	26.5	27.8				
Efficiency for thermal electricity production (%)			42.1	42.6	40.5	41.1	41.2	41.0	42.9				
CHP indicator (% of electricity from CHP)			10.6	12.2	21.4	24.0	29.5	29.0	26.8				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			29.3	17.4	42.2	51.2	65.0	67.4	69.4				
- nuclear			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
- renewable energy forms and industrial waste			29.3	17.4	42.2	51.2	65.0	67.4	69.4				
Transport sector													
Passenger transport activity (Gpkm)	**56.9**	**67.3**	**91.5**	**105.0**	**110.8**	**121.0**	**130.0**	**140.4**	**151.6**	**4.9**	**1.9**	**1.6**	**1.5**
Public road transport	10.3	11.3	11.8	11.1	10.8	11.2	11.8	12.3	12.8	1.4	-0.9	0.8	0.8
Private cars and motorcycles	33.3	41.9	59.2	72.0	75.4	80.7	85.6	90.5	96.1	5.9	2.4	1.3	1.2
Rail	6.3	5.3	4.6	4.7	5.0	5.5	6.0	6.5	7.1	-3.2	1.0	1.7	1.7
Aviation	6.7	8.5	15.7	17.0	19.2	23.2	26.3	30.7	35.3	8.9	2.1	3.2	3.0
Inland navigation	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	1.0	0.5	0.4
Freight transport activity (Gtkm)	**32.3**	**35.4**	**41.9**	**46.0**	**48.2**	**52.5**	**55.7**	**59.1**	**63.0**	**2.6**	**1.4**	**1.5**	**1.2**
Trucks	28.9	32.0	38.9	42.6	44.7	48.7	51.6	54.7	58.4	3.0	1.4	1.4	1.2
Rail	1.5	2.0	2.2	2.4	2.5	2.8	3.0	3.2	3.4	4.1	1.5	1.7	1.3
Inland navigation	1.9	1.4	0.8	1.0	1.0	1.0	1.1	1.2	1.3	-7.9	1.4	1.5	1.2
Energy demand in transport (ktoe)	**3740**	**4869**	**6542**	**7055**	**7307**	**7587**	**7721**	**7828**	**7776**	**5.8**	**1.1**	**0.6**	**0.1**
Public road transport	82	95	114	113	109	110	110	108	107	3.3	-0.4	0.0	-0.3
Private cars and motorcycles	1573	2209	2788	3200	3219	3107	3069	3054	2944	5.9	1.4	-0.5	-0.4
Trucks	1384	1817	2718	2769	2899	3137	3195	3217	3235	7.0	0.6	1.0	0.1
Rail	83	81	88	66	66	68	67	65	55	0.6	-2.9	0.1	-1.9
Aviation	574	620	790	881	987	1137	1252	1353	1406	3.2	2.3	2.4	1.2
Inland navigation	44	47	44	26	27	28	29	30	31	0.0	-4.9	0.9	0.6

Source: PRIMES

Romania: REFERENCE SCENARIO										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**41415**	**32618**	**28816**	**28180**	**27517**	**29101**	**30679**	**31581**	**31349**	**-3.6**	**-0.5**	**1.1**	**0.2**
Solids	7935	7886	5875	5793	5741	6593	5589	4871	4223	-3.0	-0.2	-0.3	-2.8
Oil	7963	7124	6434	6183	4790	5100	5000	4922	4721	-2.1	-2.9	0.4	-0.6
Natural gas	22911	14446	10968	9701	8875	8181	8007	7784	7417	-7.1	-2.1	-1.0	-0.8
Nuclear	0	0	1407	1433	2906	2906	4365	5783	5783		7.5	4.2	2.9
Renewable energy sources	2606	3162	4131	5070	5206	6321	7717	8221	9205	4.7	2.3	4.0	1.8
Hydro	1460	1435	1271	1737	1548	1782	2053	2149	2191	-1.4	2.0	2.9	0.7
Biomass & Waste	1146	1726	2854	3314	3587	4222	4862	5035	5866	9.5	2.3	3.1	1.9
Wind	0	0	0	0	34	128	235	292	327			21.4	3.3
Solar and others	0	0	0	0	6	83	383	480	507			51.1	2.9
Geothermal	0	0	7	18	31	105	184	266	314		16.5	19.5	5.5
Net Imports	**22567**	**14552**	**8116**	**10814**	**11621**	**11831**	**11550**	**11268**	**10544**	**-9.7**	**3.7**	**-0.1**	**-0.9**
Solids	4615	2870	1905	2904	1940	1904	1831	1786	1628	-8.5	0.2	-0.6	-1.2
Oil	11209	6862	3560	3970	6197	7007	6975	6861	6545	-10.8	5.7	1.2	-0.6
- Crude oil and Feedstocks	16126	8760	4870	8851	10981	12194	12134	11977	11546	-11.3	8.5	1.0	-0.5
- Oil products	-4917	-1898	-1311	-4882	-4784	-5187	-5159	-5117	-5001				
Natural gas	5928	4794	2712	4190	3879	3576	3500	3403	3242	-7.5	3.6	-1.0	-0.8
Electricity	815	26	-60	-250	-342	-573	-652	-663	-671				
Gross Inland Consumption	**63714**	**47138**	**37131**	**39242**	**39138**	**40932**	**42229**	**42849**	**41893**	**-5.3**	**0.5**	**0.8**	**-0.1**
Solids	12318	10793	7753	8769	7680	8497	7421	6656	5851	-4.5	-0.1	-0.3	-2.3
Oil	19136	13917	10214	10321	10987	12107	11975	11782	11266	-6.1	0.7	0.9	-0.6
Natural gas	28838	19240	13680	13942	12754	11757	11508	11187	10659	-7.2	-0.7	-1.0	-0.8
Nuclear	0	0	1407	1433	2906	2906	4365	5783	5783		7.5	4.2	2.9
Electricity	815	26	-60	-250	-342	-573	-652	-663	-671				
Renewable energy forms	2606	3162	4137	5026	5153	6238	7613	8103	9005	4.7	2.2	4.0	1.7
as % in Gross Inland Consumption													
Solids	19.3	22.9	20.9	22.3	19.6	20.8	17.6	15.5	14.0				
Oil	30.0	29.5	27.5	26.3	28.1	29.6	28.4	27.5	26.9				
Natural gas	45.3	40.8	36.8	35.5	32.6	28.7	27.3	26.1	25.4				
Nuclear	0.0	0.0	3.8	3.7	7.4	7.1	10.3	13.5	13.8				
Renewable energy forms	4.1	6.7	11.1	12.8	13.2	15.2	18.0	18.9	21.5				
Gross Electricity Generation in GWh_e	**63398**	**59255**	**51925**	**59402**	**61460**	**70554**	**76787**	**82781**	**84897**	**-2.0**	**1.7**	**2.3**	**1.0**
Self consumption and grid losses	14858	13101	9963	9773	9832	10597	10680	10918	10483	-3.9	-0.1	0.8	-0.2
Fuel Inputs for Thermal Power Generation	**23517**	**16474**	**10637**	**10103**	**9104**	**9154**	**7877**	**7103**	**7058**	**-7.6**	**-1.5**	**-1.4**	**-1.1**
Solids	8166	7352	5442	5982	5783	6326	5102	4424	3757	-4.0	0.6	-1.2	-3.0
Oil (including refinery gas)	6202	2996	1683	775	464	451	398	298	393	-12.2	-12.1	-1.5	-0.1
Gas	9113	6090	3507	3343	2509	1932	1655	1580	2094	-9.1	-3.3	-4.1	2.4
Biomass & Waste	36	37	4	3	349	423	677	710	678	-19.0	55.0	6.9	0.0
Geothermal heat	0	0	0	0	0	23	45	91	136				11.6
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**25114**	**21082**	**14984**	**18111**	**18328**	**19978**	**19920**	**19708**	**18862**	**-5.0**	**2.0**	**0.8**	**-0.5**
Refineries	23765	15691	11396	15142	15771	17294	17134	16899	16267	-7.1	3.3	0.8	-0.5
Biofuels and hydrogen production	0	0	0	0	59	132	248	364	561			15.4	8.5
District heating	496	1902	1739	825	977	1120	1120	1120	841	13.4	-5.6	1.4	-2.8
Others	853	3489	1850	2144	1521	1432	1418	1326	1193	8.0	-1.9	-0.7	-1.7
Energy Branch Consumption	**3579**	**5328**	**4163**	**4205**	**4115**	**4259**	**4185**	**4094**	**3882**	**1.5**	**-0.1**	**0.2**	**-0.7**
Non-Energy Uses	**922**	**1401**	**2048**	**2469**	**2399**	**2203**	**2047**	**1850**	**1636**	**8.3**	**1.6**	**-1.6**	**-2.2**
Final Energy Demand	**37257**	**26634**	**22460**	**24613**	**24903**	**27119**	**28547**	**29061**	**28891**	**-4.9**	**1.0**	**1.4**	**0.1**
by sector													
Industry	25111	14854	9051	9904	9053	9494	10117	10465	10197	-9.7	0.0	1.1	0.1
- energy intensive industries	15699	10577	6223	7109	6188	6129	6306	6282	5825	-8.8	-0.1	0.2	-0.8
- other industrial sectors	9412	4278	2828	2795	2864	3365	3812	4183	4372	-11.3	0.1	2.9	1.4
Residential	4548	6353	8426	7964	7893	8184	8180	7846	7580	6.4	-0.7	0.4	-0.8
Tertiary	3181	2358	1587	2524	2911	3303	3418	3451	3482	-6.7	6.3	1.6	0.2
Transport	4416	3069	3396	4221	5047	6138	6832	7299	7632	-2.6	4.0	3.1	1.1
by fuel													
Solids	3026	1586	977	1569	1128	1447	1639	1614	1556	-10.7	1.4	3.8	-0.5
Oil	8055	5519	5310	6606	7170	8232	8360	8478	8452	-4.1	3.0	1.5	0.1
Gas	20495	10249	6885	7721	7546	7291	7358	7168	6180	-10.3	0.9	-0.3	-1.7
Electricity	4690	3126	2916	3337	3515	3986	4424	4915	5144	-4.6	1.9	2.3	1.5
Heat (from CHP and District Heating) [A]	377	4679	3570	2135	2323	2287	2176	2047	1911	25.2	-4.2	-0.7	-1.3
Renewable energy forms	612	1476	2802	3244	3221	3875	4587	4838	5645	16.4	1.4	3.6	2.1
Other	0	0	0	0	0	1	2	2	2		7.1	17.1	1.1
RES in Gross Final Energy Consumption [B]			**4118**	**4599**	**4916**	**5872**	**7213**	**7667**	**8568**		**1.8**	**3.9**	**1.7**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**262.9**		**138.2**	**150.5**	**140.9**	**138.2**	**131.9**	**127.4**	**122.8**	**-6.2**	**0.2**	**-0.7**	**-0.7**
of which ETS sectors GHGs emissions				79.5	68.9	68.5	63.9	60.6	55.8			-0.7	-1.3
CO_2 Emissions (energy related)	**168.7**	**115.1**	**84.8**	**90.3**	**85.8**	**90.9**	**86.0**	**82.2**	**76.9**	**-6.6**	**0.1**	**0.0**	**-1.1**
Power generation/District heating	76.4	59.2	40.6	37.2	33.7	34.9	29.0	25.7	23.7	-6.1	-1.8	-1.5	-2.0
Energy Branch	6.2	7.6	7.4	7.9	7.7	7.8	7.4	7.2	6.6	1.7	0.5	-0.4	-1.3
Industry	58.1	31.3	18.8	21.5	17.3	17.9	18.7	18.1	15.2	-10.7	-0.8	0.8	-2.1
Residential	8.8	5.2	6.6	7.2	7.3	7.0	6.7	6.5	6.5	-2.9	1.0	-0.8	-0.2
Tertiary	6.8	3.1	1.9	4.4	5.4	5.8	5.0	4.6	4.5	-12.2	11.3	-0.8	-1.1
Transport	12.3	8.6	9.7	12.2	14.5	17.5	19.1	20.1	20.4	-2.4	4.1	2.8	0.7
CO_2 Emissions (non energy related)	**23.2**	**18.5**	**13.1**	**16.3**	**14.2**	**14.2**	**15.5**	**16.5**	**16.0**	**-5.5**	**0.8**	**0.9**	**0.3**
Non-CO_2 GHGs Emissions	**71.0**		**40.3**	**43.9**	**40.9**	**33.1**	**30.3**	**28.8**	**29.9**	**-5.5**	**0.2**	**-3.0**	**-0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**52.5**	**57.2**	**53.6**	**52.5**	**50.2**	**48.5**	**46.7**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Romania: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	23.211	22.712	22.455	21.659	21.334	21.103	20.834	20.484	20.049	-0.3	-0.5	-0.2	-0.4
GDP (in 000 MEuro'05)	71.6	64.5	60.4	79.8	93.8	115.4	135.0	151.7	166.1	-1.7	4.5	3.7	2.1
Gross Inl. Cons./GDP (toe/MEuro'05)	889.4	731.4	614.4	491.7	417.1	354.6	312.7	282.5	252.2	-3.6	-3.8	-2.8	-2.1
Carbon intensity (t of CO_2/toe of GIC)	2.65	2.44	2.28	2.30	2.19	2.22	2.04	1.92	1.84	-1.5	-0.4	-0.7	-1.0
Import Dependency %	35.4	30.9	21.9	27.6	29.7	28.9	27.4	26.3	25.2				
Total Energy-related Costs (C) (in 000 M€05)			11.1	15.8	17.4	22.8	30.0	34.6	37.2		4.6	5.6	2.2
as % of GDP			18.3	19.8	18.5	19.8	22.2	22.8	22.4				
Energy intensity indicators													
Industry (Energy on Value added)	200.0	171.9	100.0	81.4	71.1	61.1	54.0	48.1	42.8	-6.7	-3.4	-2.7	-2.3
Residential (Energy on Private Income)	50.5	69.0	100.0	58.9	48.8	41.4	36.3	31.5	28.5	7.1	-6.9	-2.9	-2.4
Tertiary (Energy on Value added)	186.9	138.7	100.0	121.7	110.4	99.6	85.5	74.2	65.4	-6.1	1.0	-2.5	-2.6
Passenger transport (toe/Mpkm)	16.3	20.1	28.4	21.4	22.0	22.3	22.4	22.1	21.3	5.7	-2.5	0.2	-0.5
Freight transport (toe/Mtkm)	37.3	36.8	34.8	30.6	31.5	31.9	31.4	30.5	30.2	-0.7	-1.0	-0.1	-0.4
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	1.12	0.43	0.39	0.39	0.33	0.31	0.25	0.22	0.20	-10.1	-1.4	-2.8	-2.3
Final energy demand (t of CO_2/toe)	2.31	1.81	1.64	1.84	1.78	1.78	1.74	1.70	1.61	-3.4	0.8	-0.3	-0.7
Industry	2.32	2.11	2.07	2.17	1.91	1.89	1.85	1.73	1.49	-1.1	-0.8	-0.3	-2.2
Residential	1.94	0.83	0.78	0.90	0.92	0.85	0.82	0.83	0.86	-8.7	1.7	-1.1	0.5
Tertiary	2.13	1.33	1.17	1.73	1.86	1.77	1.47	1.34	1.28	-5.8	4.7	-2.3	-1.3
Transport	2.79	2.81	2.85	2.89	2.87	2.85	2.80	2.75	2.68	0.2	0.1	-0.3	-0.4
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			17.0	17.6	18.6	20.5	24.0	25.2	28.4				
RES in transport (%)			1.5	1.0	2.2	3.2	5.0	6.5	9.1				
Gross Electricity generation by fuel type (in GWh)			**51925**	**59402**	**61460**	**70554**	**76787**	**82781**	**84897**		**1.7**	**2.3**	**1.0**
Nuclear energy			5455	5554	11592	11592	17684	23775	23775		7.8	4.3	3.0
Coal and lignite			18913	21922	21470	24050	19886	17356	15201		1.3	-0.8	-2.7
Petroleum products			3398	1894	1139	1101	1219	930	1097		-10.4	0.7	-1.1
Gas (including derived gases)			9373	9822	7826	10256	9244	9766	12710		-1.8	1.7	3.2
Biomass & waste			10	7	1031	1254	1940	2227	2375		59.0	6.5	2.0
Hydro			14775	20203	18003	20724	23869	24992	25477		2.0	2.9	0.7
Wind			0	0	394	1492	2738	3394	3799			21.4	3.3
Solar, tidal etc.			0	0	5	58	155	237	306			41.5	7.0
Geothermal and other renewables			0	0	0	26	53	105	158				11.6
Net Generation Capacity in MW_e			**21880**	**18732**	**20396**	**22358**	**24626**	**21671**	**20362**		**-0.7**	**1.9**	**-1.9**
Nuclear energy			667	663	1357	1368	2109	2844	2844		7.4	4.5	3.0
Renewable energy			6154	6161	6563	7764	9362	9910	10232		0.6	3.6	0.9
Hydro (pumping excluded)			6154	6160	6312	6778	7585	7677	7677		0.3	1.9	0.1
Wind			0	1	246	926	1616	1990	2240			20.7	3.3
Solar			0	0	5	60	161	243	315			41.5	7.0
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			15058	11908	12476	13226	13156	8917	7286		-1.9	0.5	-5.7
of which cogeneration units			3742	3305	3216	3809	2817	2582	3049		-1.5	-1.3	0.8
of which CCS units			0	0	0	0	0	0	0				
Solids fired			8144	6483	6640	7871	8163	5264	3702		-2.0	2.1	-7.6
Gas fired			4299	3584	4029	4066	3569	2787	2732		-0.6	-1.2	-2.6
Oil fired			2384	1583	1550	1016	975	365	365		-4.2	-4.5	-9.4
Biomass-waste fired			231	257	258	270	443	490	470		1.1	5.6	0.6
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	3	6	12	18				11.6
Load factor for net electric capacities (%)			25.4	33.8	32.3	34.0	33.8	41.4	45.4				
Efficiency for thermal electricity production (%)			25.6	28.6	29.7	34.5	35.3	36.8	38.4				
CHP indicator (% of electricity from CHP)			35.2	28.6	24.6	27.0	24.2	21.7	24.2				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			39.0	43.4	50.5	49.8	60.5	66.1	65.8				
- nuclear			10.5	9.3	18.9	16.4	23.0	28.7	28.0				
- renewable energy forms and industrial waste			28.5	34.0	31.6	33.4	37.4	37.4	37.8				
Transport sector													
Passenger transport activity (Gpkm)	**87.7**	**78.1**	**78.9**	**87.7**	**100.6**	**119.5**	**135.8**	**149.4**	**160.9**	**-1.1**	**2.5**	**3.0**	**1.7**
Public road transport	24.0	12.3	12.0	11.8	12.6	13.7	15.0	16.1	16.8	-6.7	0.5	1.8	1.1
Private cars and motorcycles	24.3	39.0	47.6	58.4	67.3	83.1	96.0	106.7	116.0	7.0	3.5	3.6	1.9
Rail	36.6	24.9	17.6	14.6	14.8	15.5	16.5	17.5	18.2	-7.0	-1.7	1.1	1.0
Aviation	2.8	1.8	1.7	3.0	5.9	7.2	8.3	9.2	9.8	-5.1	13.4	3.4	1.7
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-6.7	-2.2	0.8	0.1
Freight transport activity (Gtkm)	**80.0**	**40.7**	**33.3**	**76.5**	**89.8**	**108.8**	**120.7**	**130.6**	**139.1**	**-8.4**	**10.4**	**3.0**	**1.4**
Trucks	29.0	19.7	14.3	51.5	63.3	78.8	87.0	93.8	99.9	-6.8	16.1	3.2	1.4
Rail	48.9	17.9	16.4	16.6	17.0	19.1	21.5	23.6	25.2	-10.4	0.4	2.3	1.6
Inland navigation	2.1	3.1	2.6	8.4	9.4	10.9	12.2	13.2	14.1	2.3	13.6	2.7	1.4
Energy demand in transport (ktoe)	**4416**	**3069**	**3396**	**4221**	**5047**	**6138**	**6832**	**7299**	**7632**	**-2.6**	**4.0**	**3.1**	**1.1**
Public road transport	241	130	120	97	103	110	115	117	115	-6.7	-1.5	1.1	0.0
Private cars and motorcycles	843	1133	1893	1610	1832	2233	2586	2840	2964	8.4	-0.3	3.5	1.4
Trucks	2463	1039	688	2140	2624	3241	3532	3716	3918	-12.0	14.3	3.0	1.0
Rail	282	472	451	209	207	218	230	247	253	4.8	-7.5	1.1	1.0
Aviation	275	192	128	113	224	271	296	301	300	-7.3	5.7	2.8	0.1
Inland navigation	312	103	115	51	57	65	72	78	82	-9.5	-6.8	2.5	1.3

Source: PRIMES

Slovak Republic: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**5249**	**4862**	**6074**	**6634**	**5975**	**8244**	**8913**	**10262**	**10442**	**1.5**	**-0.2**	**4.1**	**1.6**
Solids	1397	1017	1018	637	932	874	850	951	941	-3.1	-0.9	-0.9	1.0
Oil	81	128	162	384	38	39	39	40	38	7.2	-13.5	0.2	-0.3
Natural gas	338	264	133	126	123	130	129	124	124	-8.9	-0.8	0.5	-0.4
Nuclear	3105	2950	4255	4573	3610	5139	5327	6261	6361	3.2	-1.6	4.0	1.8
Renewable energy sources	328	503	506	914	1272	2062	2568	2886	2978	4.4	9.7	7.3	1.5
Hydro	162	427	406	399	403	434	440	443	446	9.7	-0.1	0.9	0.1
Biomass & Waste	166	76	100	507	857	1548	1935	2221	2223	-5.0	24.0	8.5	1.4
Wind	0	0	0	1	7	31	55	76	97			23.3	5.8
Solar and others	0	0	0	0	4	36	64	87	111			33.3	5.6
Geothermal	0	0	0	8	2	13	75	59	101			45.9	3.1
Net Imports	**16102**	**12344**	**11586**	**12488**	**12738**	**12847**	**12751**	**11984**	**11660**	**-3.2**	**1.0**	**0.0**	**-0.9**
Solids	6055	4131	3437	3737	3275	3231	2889	2853	2800	-5.5	-0.5	-1.2	-0.3
Oil	4246	3565	2674	3320	4164	4249	4206	4248	4038	-4.5	4.5	0.1	-0.4
- Crude oil and Feedstocks	5916	5293	5310	5433	6490	6630	6586	6647	6370	-1.1	2.0	0.1	-0.3
- Oil products	-1670	-1728	-2636	-2114	-2326	-2381	-2379	-2399	-2332				
Natural gas	5353	4528	5707	5754	5650	5967	5921	5705	5691	0.6	-0.1	0.5	-0.4
Electricity	447	119	-232	-281	-166	-174	-215	-340	-424				
Gross Inland Consumption	**20994**	**17748**	**17550**	**19061**	**18713**	**21091**	**21664**	**22245**	**22101**	**-1.8**	**0.6**	**1.5**	**0.2**
Solids	7771	5414	4261	4231	4206	4105	3739	3804	3741	-5.8	-0.1	-1.2	0.0
Oil	4255	3543	2992	3758	4203	4289	4245	4288	4075	-3.5	3.5	0.1	-0.4
Natural gas	5088	5217	5776	5921	5773	6097	6050	5830	5815	1.3	0.0	0.5	-0.4
Nuclear	3105	2950	4255	4573	3610	5139	5327	6261	6361	3.2	-1.6	4.0	1.8
Electricity	447	119	-232	-281	-166	-174	-215	-340	-424				
Renewable energy forms	328	504	498	858	1087	1637	2517	2402	2533	4.3	8.1	8.8	0.1
as % in Gross Inland Consumption													
Solids	37.0	30.5	24.3	22.2	22.5	19.5	17.3	17.1	16.9				
Oil	20.3	20.0	17.0	19.7	22.5	20.3	19.6	19.3	18.4				
Natural gas	24.2	29.4	32.9	31.1	30.8	28.9	27.9	26.2	26.3				
Nuclear	14.8	16.6	24.2	24.0	19.3	24.4	24.6	28.1	28.8				
Renewable energy forms	1.6	2.8	2.8	4.5	5.8	7.8	11.6	10.8	11.5				
Gross Electricity Generation in GWh_e	**23428**	**26036**	**30431**	**31346**	**31942**	**36941**	**41336**	**47099**	**49724**	**2.6**	**0.5**	**2.6**	**1.9**
Self consumption and grid losses	5213	5190	5246	3910	3843	4175	4406	5219	5668	0.1	-3.1	1.4	2.6
Fuel Inputs for Thermal Power Generation	**3178**	**3113**	**2551**	**2478**	**3499**	**3008**	**3522**	**3697**	**3993**	**-2.2**	**3.2**	**0.1**	**1.3**
Solids	2054	1835	1617	1638	2061	1874	1581	1721	1753	-2.4	2.5	-2.6	1.0
Oil (including refinery gas)	243	119	30	99	166	30	142	6	7	-19.0	18.8	-1.6	-26.5
Gas	882	1158	905	701	957	746	970	1015	1217	0.3	0.6	0.1	2.3
Biomass & Waste	0	0	0	40	315	351	776	903	922			9.5	1.7
Geothermal heat	0	0	0	0	0	8	52	52	94				6.2
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**9061**	**8065**	**8153**	**9349**	**9435**	**9905**	**9991**	**9965**	**9579**	**-1.1**	**1.5**	**0.6**	**-0.4**
Refineries	6339	5263	5541	6388	6973	7156	7148	7213	6909	-1.3	2.3	0.2	-0.3
Biofuels and hydrogen production	0	0	0	11	47	100	216	196	222			16.5	0.3
District heating	265	743	586	717	530	778	819	838	820	8.3	-1.0	4.4	0.0
Others	2458	2060	2026	2233	1884	1871	1807	1718	1628	-1.9	-0.7	-0.4	-1.0
Energy Branch Consumption	**1153**	**994**	**915**	**2194**	**2279**	**2340**	**2301**	**2237**	**2125**	**-2.3**	**9.6**	**0.1**	**-0.8**
Non-Energy Uses	**1375**	**886**	**1263**	**1244**	**1219**	**1452**	**1641**	**1700**	**1740**	**-0.8**	**-0.4**	**3.0**	**0.6**
Final Energy Demand	**14791**	**10460**	**10285**	**10613**	**10918**	**12222**	**12564**	**12522**	**12333**	**-3.6**	**0.6**	**1.4**	**-0.2**
by sector													
Industry	6728	4088	3816	4470	4123	4572	4578	4477	4341	-5.5	0.8	1.1	-0.5
- energy intensive industries	3162	2966	3026	3645	3106	3353	3304	3207	3097	-0.4	0.3	0.6	-0.6
- other industrial sectors	3566	1122	790	825	1017	1219	1274	1270	1244	-14.0	2.6	2.3	-0.2
Residential	2233	1976	2586	2533	2542	2686	2740	2704	2709	1.5	-0.2	0.8	-0.1
Tertiary	4384	2980	2424	1815	2011	2377	2558	2639	2649	-5.8	-1.9	2.4	0.4
Transport	1446	1415	1459	1796	2242	2586	2689	2701	2634	0.1	4.4	1.8	-0.2
by fuel													
Solids	4319	2322	1511	1511	1254	1350	1301	1259	1136	-10.0	-1.9	0.4	-1.3
Oil	3324	1636	1725	2191	2477	2768	2708	2711	2588	-6.4	3.7	0.9	-0.5
Gas	4319	3907	4537	3651	3525	3706	3531	3257	3134	0.5	-2.5	0.0	-1.2
Electricity	2013	1868	1893	1965	2127	2508	2824	3127	3238	-0.6	1.2	2.9	1.4
Heat (from CHP and District Heating) [A]	648	722	619	951	1173	1294	1598	1650	1729	-0.5	6.6	3.1	0.8
Renewable energy forms	166	4	1	344	362	595	602	517	507	-42.8	89.0	5.2	-1.7
Other	0	0	0	0	0	0	1	1	1			11.5	-0.4
RES in Gross Final Energy Consumption [B]			**291**	**722**	**927**	**1351**	**1845**	**1922**	**1965**		**12.3**	**7.1**	**0.6**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**68.0**		**45.8**	**49.3**	**50.5**	**49.4**	**47.8**	**47.9**	**46.4**	**-3.9**	**1.0**	**-0.5**	**-0.3**
of which ETS sectors GHGs emissions				29.1	29.0	27.1	26.1	26.8	26.1			-1.0	0.0
CO_2 Emissions (energy related)	**53.1**	**38.5**	**34.3**	**36.9**	**38.5**	**38.5**	**36.4**	**36.1**	**34.5**	**-4.3**	**1.2**	**-0.6**	**-0.5**
Power generation/District heating	12.0	12.8	10.3	10.2	12.5	11.2	10.8	11.1	11.0	-1.5	1.9	-1.5	0.2
Energy Branch	2.4	1.7	1.6	4.9	4.9	4.5	3.6	4.0	3.5	-4.3	12.1	-3.0	-0.3
Industry	17.7	11.1	9.7	10.6	8.8	9.1	8.5	8.0	7.4	-5.8	-1.0	-0.3	-1.5
Residential	4.4	2.9	4.1	3.5	3.3	3.4	3.4	3.2	3.2	-0.6	-2.1	0.1	-0.6
Tertiary	12.5	6.1	4.5	2.5	2.6	2.9	2.8	2.6	2.4	-9.8	-5.5	1.0	-1.7
Transport	4.0	3.9	4.1	5.2	6.4	7.3	7.2	7.3	7.0	0.1	4.6	1.2	-0.3
CO_2 Emissions (non energy related)	**3.5**	**2.8**	**3.3**	**3.7**	**3.9**	**4.9**	**5.9**	**6.1**	**6.2**	**-0.7**	**1.8**	**4.2**	**0.6**
Non-CO_2 GHGs Emissions	**11.4**		**8.2**	**8.6**	**8.0**	**6.0**	**5.6**	**5.7**	**5.7**	**-3.2**	**-0.2**	**-3.6**	**0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**67.3**	**72.4**	**74.2**	**72.6**	**70.3**	**70.5**	**68.2**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)									Slovak Republic: REFERENCE SCENARIO				
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	5.288	5.356	5.399	5.385	5.407	5.427	5.432	5.402	5.332	0.2	0.0	0.0	-0.2
GDP (in 000 MEuro'05)	26.2	25.6	30.3	38.5	48.2	61.0	73.3	82.8	91.9	1.5	4.8	4.3	2.3
Gross Inl. Cons./GDP (toe/MEuro'05)	801.4	692.4	579.5	495.2	388.4	345.6	295.6	268.7	240.6	-3.2	-3.9	-2.7	-2.0
Carbon intensity (t of CO_2/toe of GIC)	2.53	2.17	1.95	1.94	2.06	1.82	1.68	1.62	1.56	-2.6	0.5	-2.0	-0.7
Import Dependency %	76.7	69.6	66.0	65.5	68.1	60.9	58.9	53.9	52.8				
Total Energy-related Costs (C) (in 000 M€05)			6.4	7.5	8.0	10.6	14.0	16.0	17.0		2.3	5.7	1.9
as % of GDP			21.2	19.4	16.7	17.4	19.2	19.4	18.5				
Energy intensity indicators													
Industry (Energy on Value added)	201.8	135.7	100.0	69.1	50.4	41.8	34.8	31.2	29.1	-6.8	-6.6	-3.6	-1.8
Residential (Energy on Private Income)	87.6	95.0	100.0	77.6	70.3	58.8	51.3	45.0	40.5	1.3	-3.5	-3.1	-2.3
Tertiary (Energy on Value added)	206.5	152.1	100.0	61.4	56.9	50.4	44.5	39.6	34.7	-7.0	-5.5	-2.4	-2.5
Passenger transport (toe/Mpkm)	16.3	19.2	22.0	21.9	22.2	22.3	22.3	21.9	20.5	3.1	0.1	0.1	-0.8
Freight transport (toe/Mtkm)	19.9	22.2	23.8	28.7	31.1	31.9	30.7	29.1	27.5	1.8	2.7	-0.1	-1.1
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.37	0.34	0.25	0.22	0.25	0.20	0.16	0.15	0.15	-3.6	-0.2	-4.0	-1.1
Final energy demand (t of CO_2/toe)	2.61	2.29	2.18	2.05	1.93	1.86	1.75	1.69	1.62	-1.8	-1.2	-1.0	-0.8
Industry	2.63	2.72	2.54	2.37	2.13	2.00	1.86	1.79	1.70	-0.3	-1.8	-1.3	-0.9
Residential	1.96	1.47	1.59	1.39	1.31	1.28	1.23	1.18	1.17	-2.1	-1.9	-0.7	-0.5
Tertiary	2.86	2.04	1.85	1.36	1.27	1.22	1.11	0.99	0.90	-4.3	-3.7	-1.4	-2.0
Transport	2.80	2.74	2.81	2.89	2.86	2.82	2.69	2.71	2.67	0.0	0.2	-0.6	-0.1
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			2.7	6.5	8.1	10.6	14.0	14.6	15.1				
RES in transport (%)			0.7	1.0	2.6	4.4	8.8	8.1	9.4				
Gross Electricity generation by fuel type (in GWh)			**30431**	**31346**	**31942**	**36941**	**41336**	**47099**	**49724**		**0.5**	**2.6**	**1.9**
Nuclear energy			16491	17724	13996	20330	21115	25852	26285		-1.6	4.2	2.2
Coal and lignite			5591	5514	6400	6444	5140	5795	6483		1.4	-2.2	2.3
Petroleum products			126	441	846	152	747	24	27		20.9	-1.2	-28.4
Gas (including derived gases)			3498	2929	4948	3285	5497	5770	6730		3.5	1.1	2.0
Biomass & waste			0	95	984	1301	2995	3505	3687			11.8	2.1
Hydro			4725	4637	4685	5042	5115	5151	5189		-0.1	0.9	0.1
Wind			0	7	78	365	637	888	1123			23.3	5.8
Solar, tidal etc.			0	0	4	13	30	54	90			22.8	11.6
Geothermal and other renewables			0	0	0	9	60	60	110				6.2
Net Generation Capacity in MW_e			**6775**	**7153**	**6628**	**8247**	**8337**	**9055**	**9780**		**-0.2**	**2.3**	**1.6**
Nuclear energy			2484	2605	1859	2721	2808	3351	3406		-2.9	4.2	1.9
Renewable energy			1620	1583	1759	2135	2469	2732	2992		0.8	3.4	1.9
Hydro (pumping excluded)			1620	1578	1686	1797	1863	1863	1863		0.4	1.0	0.0
Wind			0	5	69	325	575	812	1036			23.6	6.1
Solar			0	0	4	14	31	56	93			22.8	11.6
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			2671	2965	3010	3391	3061	2972	3382		1.2	0.2	1.0
of which cogeneration units			491	1043	1296	1392	1809	1631	1989		10.2	3.4	1.0
of which CCS units			0	0	0	0	0	0	87				
Solids fired			1453	1541	1492	1699	1291	1094	1128		0.3	-1.4	-1.3
Gas fired			1138	1191	1284	1294	1136	1177	1523		1.2	-1.2	3.0
Oil fired			81	182	184	169	123	115	115		8.6	-3.9	-0.7
Biomass-waste fired			0	50	50	228	502	579	603			25.9	1.8
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	1	7	7	13				6.2
Load factor for net electric capacities (%)			45.6	46.6	51.7	48.5	54.1	56.5	55.0				
Efficiency for thermal electricity production (%)			31.1	31.2	32.4	32.0	35.3	35.3	36.7				
CHP indicator (% of electricity from CHP)			21.6	17.0	24.0	21.4	26.0	23.2	25.9				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	1.8				
Non fossil fuels in electricity generation (%)			69.7	71.7	61.8	73.3	72.5	75.4	73.4				
- nuclear			54.2	56.5	43.8	55.0	51.1	54.9	52.9				
- renewable energy forms and industrial waste			15.5	15.1	18.0	18.2	21.4	20.5	20.5				
Transport sector													
Passenger transport activity (Gpkm)	**42.7**	**37.6**	**37.2**	**39.0**	**42.9**	**47.5**	**51.0**	**54.2**	**57.0**	**-1.4**	**1.5**	**1.7**	**1.1**
Public road transport	19.8	14.4	9.3	8.5	8.8	9.0	9.2	9.3	9.4	-7.3	-0.6	0.5	0.3
Private cars and motorcycles	16.0	18.4	24.4	26.4	29.9	33.6	36.1	38.2	40.1	4.3	2.1	1.9	1.1
Rail	6.8	4.6	3.2	2.6	2.6	2.6	2.8	2.9	3.0	-7.3	-2.2	0.7	0.9
Aviation	0.0	0.1	0.2	1.5	1.7	2.3	2.9	3.7	4.5		22.1	5.8	4.2
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**37.7**	**31.2**	**27.0**	**32.8**	**41.4**	**47.8**	**50.5**	**52.1**	**53.1**	**-3.3**	**4.4**	**2.0**	**0.5**
Trucks	15.6	15.9	14.3	22.6	30.7	36.1	37.5	38.1	38.2	-0.8	7.9	2.0	0.2
Rail	21.4	13.8	11.2	9.5	9.9	10.9	12.1	13.1	13.9	-6.2	-1.2	2.0	1.4
Inland navigation	0.7	1.5	1.4	0.7	0.8	0.8	0.9	0.9	1.0	6.6	-5.8	1.6	0.9
Energy demand in transport (ktoe)	**1446**	**1415**	**1459**	**1796**	**2242**	**2586**	**2689**	**2701**	**2634**	**0.1**	**4.4**	**1.8**	**-0.2**
Public road transport	123	88	57	51	52	52	51	50	50	-7.4	-0.9	-0.2	-0.2
Private cars and motorcycles	558	579	724	759	852	945	1012	1050	1026	2.6	1.6	1.7	0.1
Trucks	652	566	552	888	1235	1470	1489	1450	1394	-1.7	8.4	1.9	-0.7
Rail	100	119	83	49	51	53	57	61	63	-1.9	-4.8	1.2	1.0
Aviation	0	40	27	39	43	56	69	80	89		4.8	4.9	2.6
Inland navigation	12	24	16	9	9	10	11	11	11	3.1	-5.8	1.4	0.8

Source: PRIMES

Slovenia: REFERENCE SCENARIO										SUMMARY ENERGY BALANCE AND INDICATORS (A)			
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**2902**	**3020**	**3085**	**3492**	**3657**	**4194**	**4544**	**5062**	**5143**	**0.6**	**1.7**	**2.2**	**1.2**
Solids	1432	1216	1062	1184	1252	1493	1290	481	481	-2.9	1.7	0.3	-9.4
Oil	3	2	1	0	0	0	0	0	0	-10.4			
Natural gas	20	16	6	3	4	0	0	0	0	-11.4	-4.9		
Nuclear	1192	1245	1228	1518	1557	1557	1557	2863	2904	0.3	2.4	0.0	6.4
Renewable energy sources	254	542	788	787	845	1144	1697	1717	1758	12.0	0.7	7.2	0.4
Hydro	254	279	330	298	338	353	373	373	376	2.7	0.2	1.0	0.1
Biomass & Waste	0	263	458	489	501	701	1147	1127	1140		0.9	8.6	-0.1
Wind	0	0	0	0	0	6	19	25	29				4.1
Solar and others	0	0	0	0	6	79	130	163	184			37.0	3.5
Geothermal	0	0	0	0	0	4	29	30	30			79.9	0.3
Net Imports	**2572**	**3063**	**3381**	**3825**	**4279**	**4655**	**4810**	**4379**	**4130**	**2.8**	**2.4**	**1.2**	**-1.5**
Solids	130	186	245	323	270	244	251	181	174	6.5	1.0	-0.7	-3.6
Oil	1804	2239	2430	2604	3074	3503	3507	3425	3216	3.0	2.4	1.3	-0.9
- Crude oil and Feedstocks	598	589	151	0	1	1	1	1	1	-12.8	-38.2	1.3	-0.4
- Oil products	1206	1650	2278	2604	3072	3501	3506	3423	3214	6.6	3.0	1.3	-0.9
Natural gas	723	750	820	925	984	991	1073	921	903	1.3	1.8	0.9	-1.7
Electricity	-85	-142	-114	-28	-58	-115	-135	-246	-270				
Gross Inland Consumption	**5523**	**6111**	**6427**	**7299**	**7907**	**8815**	**9317**	**9402**	**9233**	**1.5**	**2.1**	**1.7**	**-0.1**
Solids	1645	1402	1306	1539	1522	1738	1540	662	655	-2.3	1.5	0.1	-8.2
Oil	1754	2290	2393	2554	3044	3468	3469	3385	3175	3.2	2.4	1.3	-0.9
Natural gas	763	746	826	929	987	991	1073	921	903	0.8	1.8	0.8	-1.7
Nuclear	1192	1245	1228	1518	1557	1557	1557	2863	2904	0.3	2.4	0.0	6.4
Electricity	-85	-142	-114	-28	-58	-115	-135	-246	-270				
Renewable energy forms	254	571	788	787	855	1176	1812	1817	1866	12.0	0.8	7.8	0.3
as % in Gross Inland Consumption													
Solids	29.8	22.9	20.3	21.1	19.2	19.7	16.5	7.0	7.1				
Oil	31.8	37.5	37.2	35.0	38.5	39.3	37.2	36.0	34.4				
Natural gas	13.8	12.2	12.8	12.7	12.5	11.2	11.5	9.8	9.8				
Nuclear	21.6	20.4	19.1	20.8	19.7	17.7	16.7	30.5	31.5				
Renewable energy forms	4.6	9.3	12.3	10.8	10.8	13.3	19.5	19.3	20.2				
Gross Electricity Generation in GWh_e	**12440**	**12652**	**13622**	**15114**	**16191**	**18063**	**19643**	**21963**	**22522**	**0.9**	**1.7**	**2.0**	**1.4**
Self consumption and grid losses	1584	1497	1662	1943	1964	2145	2300	2331	2392	0.5	1.7	1.6	0.4
Fuel Inputs for Thermal Power Generation	**1543**	**1523**	**1342**	**1507**	**1621**	**1934**	**2136**	**1271**	**1325**	**-1.4**	**1.9**	**2.8**	**-4.7**
Solids	1296	1315	1253	1411	1431	1641	1444	590	590	-0.3	1.3	0.1	-8.6
Oil (including refinery gas)	155	119	12	9	2	2	2	0	0	-22.8	-15.5	-0.9	-20.7
Gas	92	90	62	58	147	135	152	123	176	-3.8	9.0	0.4	1.5
Biomass & Waste	0	0	15	30	41	153	510	532	532		10.2	28.8	0.4
Geothermal heat	0	0	0	0	0	3	27	27	27				0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**596**	**582**	**253**	**90**	**97**	**170**	**324**	**371**	**420**	**-8.2**	**-9.2**	**12.9**	**2.6**
Refineries	542	505	170	1	1	1	1	1	1	-11.0	-38.9	1.3	-0.4
Biofuels and hydrogen production	0	0	0	0	39	119	264	287	335			21.0	2.4
District heating	53	76	83	89	56	49	59	82	84	4.7	-3.9	0.4	3.6
Others	1	1	0	0	0	0	0	0	0				
Energy Branch Consumption	**122**	**121**	**112**	**104**	**112**	**127**	**134**	**132**	**131**	**-0.9**	**-0.1**	**1.9**	**-0.2**
Non-Energy Uses	**6**	**122**	**238**	**310**	**351**	**407**	**446**	**465**	**468**	**43.8**	**4.0**	**2.4**	**0.5**
Final Energy Demand	**3373**	**3948**	**4440**	**4892**	**5448**	**6176**	**6537**	**6440**	**6231**	**2.8**	**2.1**	**1.8**	**-0.5**
by sector													
Industry	1469	1180	1424	1657	1694	1841	1932	1849	1759	-0.3	1.8	1.3	-0.9
- energy intensive industries	729	587	840	1038	1047	1155	1229	1177	1116	1.4	2.2	1.6	-1.0
- other industrial sectors	740	593	585	619	647	685	703	672	642	-2.3	1.0	0.8	-0.9
Residential	853	1180	1124	1186	1204	1330	1402	1362	1358	2.8	0.7	1.5	-0.3
Tertiary	122	259	580	575	569	588	584	564	540	16.9	-0.2	0.3	-0.8
Transport	930	1329	1312	1475	1981	2416	2618	2665	2573	3.5	4.2	2.8	-0.2
by fuel													
Solids	243	115	97	80	61	63	61	41	37	-8.8	-4.6	0.1	-4.9
Oil	1513	2106	2239	2404	2856	3244	3222	3123	2892	4.0	2.5	1.2	-1.1
Gas	603	468	569	665	655	662	702	556	495	-0.6	1.4	0.7	-3.4
Electricity	837	807	905	1096	1153	1242	1344	1428	1448	0.8	2.5	1.5	0.7
Heat (from CHP and District Heating) [A]	177	192	195	196	257	314	338	453	479	1.0	2.8	2.8	3.6
Renewable energy forms	0	260	435	452	467	650	869	837	880		0.7	6.4	0.1
Other	0	0	0	0	0	1	1	1	1			20.6	-6.2
RES in Gross Final Energy Consumption [B]			**768**	**810**	**833**	**1128**	**1696**	**1700**	**1747**		**0.8**	**7.4**	**0.3**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**18.1**		**18.6**	**20.1**	**21.3**	**23.5**	**22.5**	**18.1**	**17.4**	**0.3**	**1.4**	**0.5**	**-2.5**
of which ETS sectors GHGs emissions				9.0	8.8	9.8	9.2	5.3	5.3			0.5	-5.4
CO_2 Emissions (energy related)	**13.2**	**14.1**	**14.0**	**15.3**	**16.7**	**18.8**	**18.0**	**13.8**	**13.0**	**0.6**	**1.8**	**0.8**	**-3.2**
Power generation/District heating	6.2	6.2	5.5	6.2	6.4	7.2	6.4	2.9	3.0	-1.1	1.4	0.1	-7.3
Energy Branch	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.9			
Industry	2.5	1.8	2.3	2.3	2.2	2.2	2.2	1.6	1.4	-0.7	-0.8	0.2	-4.7
Residential	1.7	2.1	1.3	1.4	1.5	1.5	1.5	1.4	1.3	-2.5	1.2	0.0	-1.1
Tertiary	0.0	0.0	1.0	1.0	0.9	1.0	0.9	0.8	0.7	47.0	-0.2	-0.7	-2.5
Transport	2.7	3.9	3.8	4.3	5.8	6.8	7.0	7.1	6.6	3.5	4.3	2.0	-0.5
CO_2 Emissions (non energy related)	**1.1**	**0.9**	**0.9**	**1.1**	**1.1**	**1.3**	**1.4**	**1.4**	**1.4**	**-1.9**	**1.8**	**2.1**	**0.3**
Non-CO_2 GHGs Emissions	**3.8**		**3.7**	**3.7**	**3.5**	**3.5**	**3.1**	**2.9**	**2.9**	**-0.4**	**-0.6**	**-1.3**	**-0.5**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**102.8**	**110.8**	**117.7**	**129.7**	**124.0**	**99.8**	**95.8**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Slovenia: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	1.996	1.989	1.988	1.998	2.034	2.053	2.058	2.047	2.023	0.0	0.2	0.1	-0.2
GDP (in 000 MEuro'05)	20.0	19.4	24.0	28.7	32.7	38.4	44.0	48.2	50.7	1.9	3.1	3.0	1.4
Gross Inl. Cons./GDP (toe/MEuro'05)	276.7	315.3	267.9	254.2	241.7	229.6	211.7	195.2	182.1	-0.3	-1.0	-1.3	-1.5
Carbon intensity (t of CO_2/toe of GIC)	2.39	2.30	2.18	2.09	2.12	2.13	1.94	1.46	1.41	-0.9	-0.3	-0.9	-3.1
Import Dependency %	46.6	50.1	52.6	52.3	53.9	52.6	51.4	46.4	44.5				
Total Energy-related Costs [C] (in 000 M€05)			3.6	3.9	4.8	6.2	8.1	8.9	9.2		3.0	5.3	1.2
as % of GDP			15.0	13.6	14.8	16.2	18.5	18.6	18.1				
Energy intensity indicators													
Industry (Energy on Value added)	109.1	109.6	100.0	92.4	82.8	77.0	71.5	65.0	61.2	-0.9	-1.9	-1.4	-1.5
Residential (Energy on Private Income)	99.0	123.5	100.0	92.2	85.2	80.8	74.0	64.9	60.4	0.1	-1.6	-1.4	-2.0
Tertiary (Energy on Value added)	27.6	54.1	100.0	82.4	72.6	63.4	54.7	47.7	42.9	13.7	-3.2	-2.8	-2.4
Passenger transport (toe/Mpkm)	33.4	45.5	38.5	32.6	32.1	31.2	30.4	27.6	24.6	1.4	-1.8	-0.5	-2.1
Freight transport (toe/Mtkm)	22.8	56.0	42.7	41.9	46.1	47.0	45.1	43.1	40.5	6.5	0.8	-0.2	-1.1
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.42	0.41	0.34	0.34	0.32	0.32	0.26	0.10	0.10	-2.0	-0.7	-1.8	-8.9
Final energy demand (t of CO_2/toe)	2.05	1.99	1.89	1.86	1.90	1.87	1.77	1.69	1.61	-0.8	0.0	-0.7	-1.0
Industry	1.72	1.55	1.65	1.39	1.28	1.20	1.15	0.87	0.78	-0.4	-2.5	-1.1	-3.8
Residential	1.98	1.81	1.17	1.21	1.24	1.16	1.06	1.02	0.98	-5.2	0.5	-1.5	-0.8
Tertiary	0.17	0.13	1.65	1.76	1.66	1.65	1.50	1.41	1.25	25.7	0.0	-1.0	-1.8
Transport	2.88	2.91	2.89	2.94	2.91	2.83	2.67	2.66	2.58	0.0	0.1	-0.8	-0.3
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			16.7	15.9	14.7	17.6	25.0	25.4	26.9				
RES in transport (%)			0.5	0.3	2.3	5.3	10.6	11.3	13.7				
Gross Electricity generation by fuel type (in GWh)			**13622**	**15114**	**16191**	**18063**	**19643**	**21963**	**22522**		**1.7**	**2.0**	**1.4**
Nuclear energy			4760	5883	6035	6035	6035	12305	12480		2.4	0.0	7.5
Coal and lignite			4630	5314	5183	6335	5960	2034	2043		1.1	1.4	-10.2
Petroleum products			40	34	9	7	7	0	1		-14.0	-2.1	-17.1
Gas (including derived gases)			313	324	870	778	901	696	950		10.8	0.4	0.5
Biomass & waste			45	100	165	710	2107	2183	2183		13.9	29.0	0.4
Hydro			3833	3460	3927	4109	4332	4338	4367		0.2	1.0	0.1
Wind			0	0	0	66	223	289	333				4.1
Solar, tidal etc.			0	0	3	20	48	86	135			32.5	10.9
Geothermal and other renewables			0	0	0	4	31	31	31				0.0
Net Generation Capacity in MW_e			**2748**	**3084**	**3284**	**3823**	**4078**	**4584**	**4720**		**1.8**	**2.2**	**1.5**
Nuclear energy			696	696	706	706	706	1515	1515		0.1	0.0	7.9
Renewable energy			846	963	1041	1178	1486	1604	1721		2.1	3.6	1.5
Hydro (pumping excluded)			846	963	1038	1082	1182	1184	1201		2.1	1.3	0.2
Wind			0	0	0	75	254	330	380				4.1
Solar			0	0	3	21	50	90	140			32.5	10.9
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			1206	1424	1538	1938	1885	1465	1483		2.5	2.1	-2.4
of which cogeneration units			453	389	447	556	504	600	636		-0.1	1.2	2.4
of which CCS units			0	0	0	0	0	0	0				
Solids fired			948	947	894	1199	1087	682	665		-0.6	2.0	-4.8
Gas fired			223	446	615	617	486	472	507		10.7	-2.3	0.4
Oil fired			17	10	10	10	2	0	0		-5.2	-15.9	-22.3
Biomass-waste fired			17	21	19	111	307	308	308		1.4	32.0	0.0
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	4	4	4				0.0
Load factor for net electric capacities (%)			53.1	52.3	52.9	50.6	51.7	51.8	51.6				
Efficiency for thermal electricity production (%)			32.2	32.9	33.0	34.8	36.3	33.5	33.8				
CHP indicator (% of electricity from CHP)			7.2	8.2	12.5	17.3	17.8	17.2	17.7				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			63.4	62.5	62.6	60.6	65.0	87.6	86.7				
- nuclear			34.9	38.9	37.3	33.4	30.7	56.0	55.4				
- renewable energy forms and industrial waste			28.5	23.6	25.3	27.2	34.3	31.5	31.3				
Transport sector													
Passenger transport activity (Gpkm)	**21.6**	**21.4**	**25.0**	**26.9**	**29.5**	**32.7**	**35.2**	**36.9**	**37.8**	**1.5**	**1.7**	**1.8**	**0.7**
Public road transport	6.5	4.1	3.5	3.1	3.3	3.5	3.7	3.8	3.8	-6.0	-0.6	1.1	0.4
Private cars and motorcycles	13.5	16.5	20.5	22.7	24.9	27.7	29.8	31.2	31.8	4.3	2.0	1.8	0.7
Rail	1.4	0.6	0.7	0.8	0.8	0.9	1.0	1.1	1.1	-6.8	1.7	1.9	1.1
Aviation	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.9	1.0	3.7	4.9	4.7	3.3
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Freight transport activity (Gtkm)	**9.1**	**6.4**	**8.2**	**14.3**	**22.4**	**29.7**	**34.3**	**38.2**	**40.5**	**-1.1**	**10.6**	**4.3**	**1.7**
Trucks	4.9	3.3	5.3	11.0	18.4	25.1	28.8	32.2	34.2	0.8	13.3	4.6	1.8
Rail	4.2	3.1	2.9	3.2	4.0	4.6	5.5	6.0	6.3	-3.8	3.4	3.3	1.3
Inland navigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Energy demand in transport (ktoe)	**930**	**1329**	**1312**	**1475**	**1981**	**2416**	**2618**	**2665**	**2573**	**3.5**	**4.2**	**2.8**	**-0.2**
Public road transport	51	33	27	23	25	26	26	26	25	-6.2	-0.9	0.3	-0.2
Private cars and motorcycles	642	918	909	829	892	959	1004	948	855	3.5	-0.2	1.2	-1.6
Trucks	181	329	316	570	1000	1357	1506	1606	1614	5.8	12.2	4.2	0.7
Rail	29	29	34	29	35	40	43	42	31	1.4	0.3	2.0	-3.2
Aviation	27	20	25	23	29	35	40	45	49	-0.8	1.6	3.3	1.9
Inland navigation	0	0	0	0	0	0	0	0	0				

Source: PRIMES

Spain: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**33731**	**31366**	**31335**	**30127**	**32856**	**38099**	**45375**	**40919**	**45484**	**-0.7**	**0.5**	**3.3**	**0.0**
Solids	11679	10170	7740	6265	4745	4504	4210	3061	2580	-4.0	-4.8	-1.2	-4.8
Oil	801	790	229	168	135	107	85	0	0	-11.8	-5.1	-4.5	
Natural gas	1273	379	148	144	70	45	0	0	0	-19.4	-7.2		
Nuclear	13701	14305	16046	14842	15121	15267	15267	8981	8981	1.6	-0.6	0.1	-5.2
Renewable energy sources	6276	5722	7172	8709	12785	18176	25813	28876	33923	1.3	6.0	7.3	2.8
Hydro	2184	1987	2534	1681	2537	2603	2663	2783	2884	1.5	0.0	0.5	0.8
Biomass & Waste	4067	3684	4191	5131	6132	9279	12025	12857	13622	0.3	3.9	7.0	1.3
Wind	1	23	406	1825	3379	4785	6040	7121	9430	79.0	23.6	6.0	4.6
Solar and others	21	25	33	65	724	1482	3177	3283	3626	4.5	36.3	15.9	1.3
Geothermal	2	3	8	8	12	28	1909	2831	4361	12.3	4.9	65.5	8.6
Net Imports	**60168**	**76165**	**99334**	**123972**	**117252**	**122548**	**123995**	**133938**	**131850**	**5.1**	**1.7**	**0.6**	**0.6**
Solids	7038	9146	12636	14418	9502	11936	10862	15010	14806	6.0	-2.8	1.3	3.1
Oil	49476	59112	70849	79421	75096	78556	79286	79946	78068	3.7	0.6	0.5	-0.2
- Crude oil and Feedstocks	53717	56145	59233	60834	59812	62382	62909	63412	62639	1.0	0.1	0.5	0.0
- Oil products	-4240	2968	11616	18587	15284	16173	16377	16534	15429		2.8	0.7	-0.6
Natural gas	3690	7521	15467	30248	32841	31880	33093	38489	38338	15.4	7.8	0.1	1.5
Electricity	-36	386	382	-115	-377	-312	-361	-400	-387				
Gross Inland Consumption	**89717**	**102950**	**123652**	**144589**	**141874**	**151756**	**160071**	**165265**	**167569**	**3.3**	**1.4**	**1.2**	**0.5**
Solids	18942	19515	20643	20698	14247	16440	15072	18071	17386	0.9	-3.6	0.6	1.4
Oil	45863	55298	64191	70610	66998	69771	70071	70354	68303	3.4	0.4	0.4	-0.3
Natural gas	4970	7722	15219	29844	32911	31925	33093	38489	38338	11.8	8.0	0.1	1.5
Nuclear	13701	14305	16046	14842	15121	15267	15267	8981	8981	1.6	-0.6	0.1	-5.2
Electricity	-36	386	382	-115	-377	-312	-361	-400	-387				
Renewable energy forms	6276	5723	7172	8710	12974	18664	26928	29770	34948	1.3	6.1	7.6	2.6
as % in Gross Inland Consumption													
Solids	21.1	19.0	16.7	14.3	10.0	10.8	9.4	10.9	10.4				
Oil	51.1	53.7	51.9	48.8	47.2	46.0	43.8	42.6	40.8				
Natural gas	5.5	7.5	12.3	20.6	23.2	21.0	20.7	23.3	22.9				
Nuclear	15.3	13.9	13.0	10.3	10.7	10.1	9.5	5.4	5.4				
Renewable energy forms	7.0	5.6	5.8	6.0	9.1	12.3	16.8	18.0	20.9				
Gross Electricity Generation in GWh_e	**150944**	**165585**	**222776**	**290518**	**295436**	**328781**	**354623**	**390183**	**410386**	**4.0**	**2.9**	**1.8**	**1.5**
Self consumption and grid losses	21386	24594	32562	40810	39088	43585	46622	53736	55210	4.3	1.8	1.8	1.7
Fuel Inputs for Thermal Power Generation	**16683**	**18604**	**26463**	**35421**	**31012**	**33474**	**35123**	**42897**	**42360**	**4.7**	**1.6**	**1.3**	**1.9**
Solids	13881	13585	18249	17641	12180	14422	12960	15507	14595	2.8	-4.0	0.6	1.2
Oil (including refinery gas)	2171	3654	4445	5249	4332	4155	3025	2661	2483	7.4	-0.3	-3.5	-2.0
Gas	486	987	3075	11140	12962	11287	12283	16630	15237	20.3	15.5	-0.5	2.2
Biomass & Waste	145	377	694	1391	1538	3610	5032	5372	5812	16.9	8.3	12.6	1.5
Geothermal heat	0	0	0	0	0	0	1823	2727	4234				8.8
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**58344**	**59752**	**63964**	**64825**	**63011**	**66855**	**68704**	**69969**	**69675**	**0.9**	**-0.2**	**0.9**	**0.1**
Refineries	54213	56829	60882	61490	59602	62349	62974	63457	62719	1.2	-0.2	0.6	0.0
Biofuels and hydrogen production	0	0	51	259	1558	2817	3918	4468	4793		40.7	9.7	2.0
District heating	0	0	0	0	0	0	0	0	0				
Others	4131	2924	3031	3077	1852	1689	1812	2043	2163	-3.0	-4.8	-0.2	1.8
Energy Branch Consumption	**4745**	**5505**	**6119**	**6708**	**5993**	**6241**	**6374**	**6657**	**6385**	**2.6**	**-0.2**	**0.6**	**0.0**
Non-Energy Uses	**6027**	**8358**	**9467**	**8349**	**7850**	**8684**	**9439**	**10146**	**10616**	**4.6**	**-1.9**	**1.9**	**1.2**
Final Energy Demand	**56801**	**63691**	**79631**	**97456**	**99875**	**108652**	**114871**	**119537**	**121618**	**3.4**	**2.3**	**1.4**	**0.6**
by sector													
Industry	20070	20508	25528	31098	30687	33196	36324	39694	42307	2.4	1.9	1.7	1.5
- energy intensive industries	13093	13648	17306	20472	19168	20399	21956	23512	24696	2.8	1.0	1.4	1.2
- other industrial sectors	6977	6860	8221	10626	11519	12796	14369	16182	17611	1.7	3.4	2.2	2.1
Residential	9275	9998	11886	15168	16085	17540	17817	17382	17137	2.5	3.1	1.0	-0.4
Tertiary	5054	7024	9241	11580	11860	12726	13027	13517	13957	6.2	2.5	0.9	0.7
Transport	22401	26162	32977	39609	41242	45190	47703	48944	48216	3.9	2.3	1.5	0.1
by fuel													
Solids	3524	2235	1671	1782	1182	1242	1283	1621	1775	-7.2	-3.4	0.8	3.3
Oil	33612	39125	46007	53066	51361	54334	54858	54982	53501	3.2	1.1	0.7	-0.3
Gas	4903	6841	12141	17978	18884	18835	19147	20146	20809	9.5	4.5	0.1	0.8
Electricity	10817	12116	16205	20824	21150	23669	25570	27976	29614	4.1	2.7	1.9	1.5
Heat (from CHP and District Heating) [A]	0	39	74	0	2266	3674	4277	4856	5418		40.8	6.6	2.4
Renewable energy forms	3945	3335	3533	3805	5029	6886	9711	9930	10487	-1.1	3.6	6.8	0.8
Other	0	0	0	1	3	12	25	26	14		61.8	23.7	-5.7
RES in Gross Final Energy Consumption [B]			**6612**	**8524**	**12414**	**17838**	**24325**	**26320**	**30043**		**6.5**	**7.0**	**2.1**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**285.1**		**386.1**	**440.6**	**407.0**	**420.0**	**415.9**	**440.9**	**432.4**	**3.1**	**0.5**	**0.2**	**0.4**
of which ETS sectors GHGs emissions				207.1	171.3	176.5	171.6	194.9	189.8			0.0	1.0
CO_2 Emissions (energy related)	**202.4**	**224.6**	**281.1**	**336.8**	**308.5**	**320.7**	**314.9**	**337.6**	**326.5**	**3.3**	**0.9**	**0.2**	**0.4**
Power generation/District heating	63.6	68.2	94.1	113.0	92.5	96.6	88.0	106.9	99.1	4.0	-0.2	-0.5	1.2
Energy Branch	11.5	13.1	13.4	14.4	12.3	11.4	11.6	11.4	10.6	1.5	-0.8	-0.6	-0.9
Industry	40.7	41.9	46.4	55.4	47.2	47.2	48.9	53.7	56.7	1.3	0.2	0.4	1.5
Residential	12.9	13.6	16.5	20.4	21.5	22.1	19.5	17.0	15.3	2.5	2.7	-1.0	-2.4
Tertiary	7.7	10.6	13.0	16.3	16.4	16.6	16.0	16.0	16.1	5.3	2.4	-0.3	0.1
Transport	65.9	77.2	97.7	117.3	118.6	126.8	130.8	132.6	128.7	4.0	2.0	1.0	-0.2
CO_2 Emissions (non energy related)	**23.1**	**22.3**	**27.0**	**30.4**	**27.1**	**28.8**	**30.3**	**32.3**	**33.9**	**1.6**	**0.0**	**1.1**	**1.1**
Non-CO_2 GHGs Emissions	**59.6**		**78.0**	**73.4**	**71.4**	**70.5**	**70.7**	**71.0**	**72.0**	**2.7**	**-0.9**	**-0.1**	**0.2**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**135.4**	**154.6**	**142.8**	**147.3**	**145.9**	**154.7**	**151.7**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Spain: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	38.826	39.343	40.050	43.038	46.673	49.381	51.109	52.101	52.661	0.3	1.5	0.9	0.3
GDP (in 000 MEuro'05)	574.9	632.9	773.9	908.8	949.4	1099.4	1285.2	1474.1	1635.8	3.0	2.1	3.1	2.4
Gross Inl. Cons./GDP (toe/MEuro'05)	156.1	162.7	159.8	159.1	149.4	138.0	124.5	112.1	102.4	0.2	-0.7	-1.8	-1.9
Carbon intensity (t of CO_2/toe of GIC)	2.26	2.18	2.27	2.33	2.17	2.11	1.97	2.04	1.95	0.1	-0.4	-1.0	-0.1
Import Dependency %	64.3	71.8	76.7	81.3	78.1	76.3	73.2	76.6	74.4				
Total Energy-related Costs (C) (in 000 M€05)			74.6	92.6	102.0	124.8	159.2	183.4	190.9		3.2	4.6	1.8
as % of GDP			9.6	10.2	10.7	11.3	12.4	12.4	11.7				
Energy intensity indicators													
Industry (Energy on Value added)	98.8	100.1	100.0	115.5	111.3	102.8	94.2	87.6	83.0	0.1	1.1	-1.7	-1.3
Residential (Energy on Private Income)	103.7	102.8	100.0	107.4	111.0	105.2	94.4	83.2	75.7	-0.4	1.1	-1.6	-2.2
Tertiary (Energy on Value added)	70.9	90.3	100.0	107.4	104.8	95.9	84.4	76.7	71.4	3.5	0.5	-2.1	-1.7
Passenger transport (toe/Mpkm)	37.4	38.0	40.9	40.1	38.6	35.7	33.6	31.3	28.8	0.9	-0.6	-1.4	-1.5
Freight transport (toe/Mtkm)	89.2	76.3	70.6	65.5	65.4	65.2	62.8	59.7	55.7	-2.3	-0.8	-0.4	-1.2
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.42	0.41	0.42	0.39	0.29	0.26	0.22	0.24	0.21	0.0	-3.7	-2.8	-0.4
Final energy demand (t of CO_2/toe)	2.24	2.25	2.18	2.15	2.04	1.96	1.87	1.83	1.78	-0.3	-0.7	-0.8	-0.5
Industry	2.03	2.04	1.82	1.78	1.54	1.42	1.35	1.35	1.34	-1.1	-1.7	-1.3	-0.1
Residential	1.39	1.36	1.39	1.35	1.34	1.26	1.10	0.98	0.89	0.0	-0.4	-2.0	-2.0
Tertiary	1.53	1.51	1.41	1.41	1.39	1.31	1.23	1.18	1.16	-0.9	-0.1	-1.2	-0.6
Transport	2.94	2.95	2.96	2.96	2.87	2.81	2.74	2.71	2.67	0.1	-0.3	-0.5	-0.3
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			8.0	8.5	12.0	15.9	20.5	21.2	23.8				
RES in transport (%)			0.4	1.0	4.7	7.7	10.1	11.3	12.7				
Gross Electricity generation by fuel type (in GWh)			**222776**	**290518**	**295436**	**328781**	**354623**	**390183**	**410386**		**2.9**	**1.8**	**1.5**
Nuclear energy			62195	57529	58619	59185	59185	34817	34817		-0.6	0.1	-5.2
Coal and lignite			86960	93772	58688	69908	62971	75180	70412		-3.9	0.7	1.1
Petroleum products			22636	26417	19094	18814	13285	11872	11847		-1.7	-3.6	-1.1
Gas (including derived gases)			14956	67692	80333	73077	79524	107758	98516		18.3	-0.1	2.2
Biomass & waste			1824	4303	4250	12968	17335	21162	22404		8.8	15.1	2.6
Hydro			29465	19549	29499	30267	30967	32359	33530		0.0	0.5	0.8
Wind			4723	21215	39295	55636	70230	82805	109652		23.6	6.0	4.6
Solar, tidal etc.			18	41	5658	8925	19006	21058	24285		77.7	12.9	2.5
Geothermal and other renewables			0	0	1	1	2121	3172	4924			118.2	8.8
Net Generation Capacity in MW_e			**48421**	**69109**	**97751**	**105157**	**115743**	**119647**	**132584**		**7.3**	**1.7**	**1.4**
Nuclear energy			7579	7579	7434	6986	6986	4107	4107		-0.2	-0.6	-5.2
Renewable energy			14819	22686	39490	45931	57276	63696	74497		10.3	3.8	2.7
Hydro (pumping excluded)			12533	12731	13819	13923	14291	14464	15012		1.0	0.3	0.5
Wind			2274	9918	21674	25779	31399	36292	45408		25.3	3.8	3.8
Solar			12	37	3996	6228	11585	12940	14077		78.7	11.2	2.0
Other renewables (tidal etc.)			0	0	0	0	1	1	1			4.0	0.0
Thermal power			26024	38845	50827	52240	51482	51844	53979		6.9	0.1	0.5
of which cogeneration units			3800	4796	5477	8112	8621	11534	12469		3.7	4.6	3.8
of which CCS units			0	0	0	0	340	340	340				0.0
Solids fired			11549	11674	11466	10531	10530	9886	9180		-0.1	-0.8	-1.4
Gas fired			7466	20921	31823	33218	31731	32882	34422		15.6	0.0	0.8
Oil fired			6536	5386	5609	5112	4855	3979	4472		-1.5	-1.4	-0.8
Biomass-waste fired			472	864	1929	3378	4123	4735	5343		15.1	7.9	2.6
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	242	362	562				8.8
Load factor for net electric capacities (%)			50.2	46.0	33.4	34.6	33.9	35.8	34.2				
Efficiency for thermal electricity production (%)			41.1	46.7	45.0	44.9	42.9	43.9	42.2				
CHP indicator (% of electricity from CHP)			9.7	8.2	8.2	14.1	13.8	17.5	17.4				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.6	0.6	0.7				
Non fossil fuels in electricity generation (%)			44.1	35.3	46.5	50.8	56.1	50.1	56.0				
- nuclear			27.9	19.8	19.8	18.0	16.7	8.9	8.5				
- renewable energy forms and industrial waste			16.2	15.5	26.6	32.8	39.4	41.1	47.5				
Transport sector													
Passenger transport activity (Gpkm)	**301.3**	**386.4**	**476.1**	**535.4**	**558.5**	**640.5**	**718.6**	**794.3**	**854.4**	**4.7**	**1.6**	**2.6**	**1.7**
Public road transport	33.4	39.6	50.3	53.2	59.7	64.9	69.9	73.8	76.4	4.2	1.7	1.6	0.9
Private cars and motorcycles	186.8	257.3	310.2	346.4	353.7	402.7	454.4	498.0	527.4	5.2	1.3	2.5	1.5
Rail	19.9	20.8	25.4	27.6	28.3	31.0	35.2	39.8	43.9	2.5	1.1	2.2	2.2
Aviation	59.6	67.0	88.6	106.5	115.1	139.9	157.1	180.6	204.5	4.0	2.6	3.2	2.7
Inland navigation	1.6	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.2	-0.2	0.9	1.3	0.9
Freight transport activity (Gtkm)	**124.7**	**150.5**	**191.3**	**276.9**	**300.9**	**342.5**	**375.0**	**404.1**	**423.4**	**4.4**	**4.6**	**2.2**	**1.2**
Trucks	80.5	101.6	148.7	233.2	258.1	297.5	325.7	350.1	366.2	6.3	5.7	2.4	1.2
Rail	11.2	11.0	11.6	11.6	10.9	11.7	13.1	14.6	15.9	0.4	-0.7	1.9	1.9
Inland navigation	33.0	38.0	31.0	32.0	32.0	33.3	36.3	39.4	41.3	-0.6	0.3	1.3	1.3
Energy demand in transport (ktoe)	**22401**	**26162**	**32977**	**39609**	**41242**	**45190**	**47703**	**48944**	**48216**	**3.9**	**2.3**	**1.5**	**0.1**
Public road transport	356	417	522	541	602	638	655	654	641	3.9	1.4	0.8	-0.2
Private cars and motorcycles	8092	10704	14024	15106	14798	15197	15882	16203	15716	5.7	0.5	0.7	-0.1
Trucks	9305	9427	11708	15923	17572	20097	21193	21689	21410	2.3	4.1	1.9	0.1
Rail	529	629	850	1171	1072	1142	1154	1145	862	4.9	2.3	0.7	-2.9
Aviation	2456	3105	4486	5323	5650	6507	7089	7397	7656	6.2	2.3	2.3	0.8
Inland navigation	1664	1881	1386	1544	1548	1610	1731	1857	1932	-1.8	1.1	1.1	1.1

Source: PRIMES

Sweden: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**29665**	**31344**	**30008**	**34207**	**32785**	**34123**	**34919**	**34785**	**33940**	**0.1**	**0.9**	**0.6**	**-0.3**
Solids	152	225	162	211	267	179	114	96	89	0.6	5.2	-8.2	-2.4
Oil	3	4	0	0	0	0	0	0	0				
Natural gas	0	0	0	0	0	0	0	0	0				
Nuclear	17764	18040	14781	18670	17074	16828	15536	16378	15953	-1.8	1.5	-0.9	0.3
Renewable energy sources	11745	13075	15065	15325	15443	17117	19269	18311	17897	2.5	0.2	2.2	-0.7
Hydro	6234	5856	6757	6260	5814	5835	5857	5864	5871	0.8	-1.5	0.1	0.0
Biomass & Waste	5507	7206	8264	8978	9325	10553	12012	10900	10360	4.1	1.2	2.6	-1.5
Wind	1	9	39	80	286	676	1253	1370	1458	54.2	22.0	15.9	1.5
Solar and others	3	5	5	6	18	53	148	177	208	5.3	12.7	23.7	3.5
Geothermal	0	0	0	0	0	0	0	0	0			25.0	0.3
Net Imports	**18035**	**19405**	**19291**	**20179**	**18642**	**18004**	**16400**	**16270**	**15623**	**0.7**	**-0.3**	**-1.3**	**-0.5**
Solids	2399	2750	2409	2556	2061	1647	1411	1601	1613	0.0	-1.6	-3.7	1.3
Oil	15211	16044	15703	17416	15850	15585	14802	14289	13701	0.3	0.1	-0.7	-0.8
- Crude oil and Feedstocks	17071	17892	20449	20071	18460	18195	17412	16897	16304	1.8	-1.0	-0.6	-0.7
- Oil products	-1861	-1848	-4745	-2655	-2610	-2610	-2610	-2608	-2602				
Natural gas	577	755	776	843	1224	1181	759	993	1134	3.0	4.7	-4.7	4.1
Electricity	-152	-145	402	-636	-535	-548	-811	-858	-898				
Gross Inland Consumption	**47213**	**50401**	**47896**	**51689**	**49506**	**50091**	**49230**	**48914**	**47368**	**0.1**	**0.3**	**-0.1**	**-0.4**
Solids	2683	2890	2442	2629	2328	1826	1525	1697	1703	-0.9	-0.5	-4.1	1.1
Oil	14596	15786	14429	14858	13929	13548	12713	12148	11506	-0.1	-0.4	-0.9	-1.0
Natural gas	577	755	776	843	1224	1181	759	993	1134	3.0	4.7	-4.7	4.1
Nuclear	17764	18040	14781	18670	17074	16828	15536	16378	15953	-1.8	1.5	-0.9	0.3
Electricity	-152	-145	402	-636	-535	-548	-811	-858	-898				
Renewable energy forms	11745	13075	15065	15325	15485	17256	19508	18557	17970	2.5	0.3	2.3	-0.8
as % in Gross Inland Consumption													
Solids	5.7	5.7	5.1	5.1	4.7	3.6	3.1	3.5	3.6				
Oil	30.9	31.3	30.1	28.7	28.1	27.0	25.8	24.8	24.3				
Natural gas	1.2	1.5	1.6	1.6	2.5	2.4	1.5	2.0	2.4				
Nuclear	37.6	35.8	30.9	36.1	34.5	33.6	31.6	33.5	33.7				
Renewable energy forms	24.9	25.9	31.5	29.6	31.3	34.4	39.6	37.9	37.9				
Gross Electricity Generation in GWh_e	**145958**	**148264**	**145524**	**158340**	**155560**	**162044**	**168068**	**174435**	**174193**	**0.0**	**0.7**	**0.8**	**0.4**
Self consumption and grid losses	15140	15969	16250	17365	15509	16399	16978	18171	17977	0.7	-0.5	0.9	0.6
Fuel Inputs for Thermal Power Generation	**1491**	**3246**	**3239**	**4458**	**4955**	**5301**	**6021**	**5920**	**6338**	**8.1**	**4.3**	**2.0**	**0.5**
Solids	558	705	467	494	596	323	114	197	90	-1.8	2.5	-15.2	-2.4
Oil (including refinery gas)	253	737	276	317	401	288	227	234	25	0.9	3.8	-5.5	-19.9
Gas	253	406	414	490	946	928	448	764	966	5.0	8.6	-7.2	8.0
Biomass & Waste	427	1398	2083	3158	3012	3762	5231	4726	5257	17.2	3.8	5.7	0.0
Geothermal heat	0	0	0	0	0	0	0	0	0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**20664**	**23542**	**25372**	**24500**	**22356**	**22143**	**21322**	**20818**	**19725**	**2.1**	**-1.3**	**-0.5**	**-0.8**
Refineries	18125	19553	21694	20789	18456	18193	17411	16896	16303	1.8	-1.6	-0.6	-0.7
Biofuels and hydrogen production	0	0	0	152	292	473	648	725	818			8.3	2.4
District heating	1123	2373	1973	1728	2342	2082	2082	1884	1127	5.8	1.7	-1.2	-6.0
Others	1416	1616	1705	1832	1267	1395	1182	1313	1477	1.9	-2.9	-0.7	2.3
Energy Branch Consumption	**1758**	**1629**	**1532**	**1371**	**1303**	**1334**	**1314**	**1335**	**1281**	**-1.4**	**-1.6**	**0.1**	**-0.3**
Non-Energy Uses	**1826**	**2051**	**1808**	**2425**	**2444**	**2538**	**2566**	**2524**	**2544**	**-0.1**	**3.1**	**0.5**	**-0.1**
Final Energy Demand	**30518**	**32305**	**33350**	**33173**	**31651**	**32165**	**31708**	**30903**	**29976**	**0.9**	**-0.5**	**0.0**	**-0.6**
by sector													
Industry	11827	11195	12056	12097	10873	10758	10535	10418	10205	0.2	-1.0	-0.3	-0.3
- energy intensive industries	8542	7497	8396	8887	7822	7685	7448	7314	7097	-0.2	-0.7	-0.5	-0.5
- other industrial sectors	3285	3699	3660	3209	3051	3073	3087	3104	3108	1.1	-1.8	0.1	0.1
Residential	6542	7735	7554	7302	7336	7403	7235	6848	6530	1.4	-0.3	-0.1	-1.0
Tertiary	4873	5694	5593	5166	4808	4983	4877	4813	4716	1.4	-1.5	0.1	-0.3
Transport	7276	7680	8147	8608	8633	9021	9060	8824	8526	1.1	0.6	0.5	-0.6
by fuel													
Solids	1231	1192	1141	1345	1082	843	886	907	928	-0.8	-0.5	-2.0	0.5
Oil	12007	12343	12389	11175	10006	9945	9504	8918	8397	0.3	-2.1	-0.5	-1.2
Gas	587	611	673	764	603	678	622	594	611	1.4	-1.1	0.3	-0.2
Electricity	10348	10711	11068	11382	11264	11733	11950	12344	12308	0.7	0.2	0.6	0.3
Heat (from CHP and District Heating) [A]	1706	3540	3550	4174	4762	4459	4266	3832	3670	7.6	3.0	-1.1	-1.5
Renewable energy forms	4639	3908	4529	4332	3933	4505	4478	4307	4061	-0.2	-1.4	1.3	-1.0
Other	0	0	0	0	1	1	2	2	2			9.0	-0.6
RES in Gross Final Energy Consumption [B]			**12960**	**13507**	**14566**	**16265**	**18123**	**17509**	**17079**		**1.2**	**2.2**	**-0.6**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**71.7**		**70.8**	**68.6**	**62.7**	**58.9**	**54.6**	**54.9**	**54.0**	**-0.1**	**-1.2**	**-1.4**	**-0.1**
of which ETS sectors GHGs emissions				24.1	20.7	17.8	15.5	17.6	18.1			-2.9	1.6
CO_2 Emissions (energy related)	**50.5**	**53.3**	**50.7**	**48.6**	**43.8**	**40.6**	**36.3**	**36.3**	**35.0**	**0.0**	**-1.5**	**-1.9**	**-0.4**
Power generation/District heating	6.3	7.9	5.1	5.5	7.0	4.8	2.4	3.6	3.2	-1.9	3.2	-10.2	2.9
Energy Branch	1.5	1.8	1.9	2.1	0.9	0.9	0.2	0.7	1.2	2.3	-7.1	-13.1	18.4
Industry	11.5	11.7	11.0	12.4	8.5	7.2	7.1	6.9	6.9	-0.4	-2.6	-1.8	-0.2
Residential	4.9	4.6	3.7	1.4	1.5	1.4	1.1	0.8	0.7	-2.6	-8.8	-2.6	-4.4
Tertiary	5.6	5.4	5.6	3.1	2.2	2.0	1.6	1.3	1.2	0.0	-8.8	-3.3	-3.1
Transport	20.7	21.9	23.2	24.1	23.7	24.3	23.9	23.0	21.8	1.1	0.2	0.1	-0.9
CO_2 Emissions (non energy related)	**5.6**	**5.9**	**5.4**	**5.6**	**5.1**	**5.4**	**5.5**	**5.8**	**6.0**	**-0.3**	**-0.6**	**0.8**	**0.8**
Non-CO_2 GHGs Emissions	**15.6**		**14.7**	**14.4**	**13.8**	**12.9**	**12.8**	**12.8**	**13.0**	**-0.6**	**-0.6**	**-0.8**	**0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**98.8**	**95.7**	**87.5**	**82.2**	**76.2**	**76.6**	**75.3**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)										Sweden: REFERENCE SCENARIO			
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	8.527	8.816	8.861	9.011	9.306	9.588	9.853	10.094	10.270	0.4	0.5	0.6	0.4
GDP (in 000 MEuro'05)	210.0	220.4	259.7	294.7	304.3	342.8	380.3	417.7	456.7	2.2	1.6	2.3	1.8
Gross Inl. Cons./GDP (toe/MEuro'05)	224.9	228.7	184.4	175.4	162.7	146.1	129.4	117.1	103.7	-2.0	-1.2	-2.3	-2.2
Carbon intensity (t of CO_2/toe of GIC)	1.07	1.06	1.06	0.94	0.88	0.81	0.74	0.74	0.74	-0.1	-1.8	-1.8	0.0
Import Dependency %	37.7	37.7	39.2	37.6	36.2	34.5	32.0	31.9	31.5				
Total Energy-related Costs (C) (in 000 M€05)			25.7	32.0	32.7	37.4	43.7	46.5	47.6		2.5	2.9	0.9
as % of GDP			9.9	10.9	10.7	10.9	11.5	11.1	10.4				
Energy intensity indicators													
Industry (Energy on Value added)	175.0	133.3	100.0	80.6	70.8	60.6	53.6	48.4	43.4	-5.4	-3.4	-2.8	-2.1
Residential (Energy on Private Income)	102.6	120.4	100.0	87.3	91.9	80.5	71.2	62.2	54.7	-0.3	-0.8	-2.5	-2.6
Tertiary (Energy on Value added)	103.9	118.2	100.0	82.9	75.5	68.9	60.6	54.2	48.5	-0.4	-2.8	-2.2	-2.2
Passenger transport (toe/Mpkm)	40.6	41.3	39.9	40.2	38.5	35.2	33.0	29.7	26.7	-0.2	-0.4	-1.5	-2.1
Freight transport (toe/Mtkm)	41.7	43.0	45.6	45.2	44.8	44.5	42.7	40.7	38.6	0.9	-0.2	-0.5	-1.0
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.04	0.04	0.03	0.03	0.03	0.02	0.01	0.02	0.01	-3.1	2.0	-10.5	3.0
Final energy demand (t of CO_2/toe)	1.40	1.35	1.31	1.24	1.13	1.09	1.06	1.04	1.02	-0.7	-1.4	-0.6	-0.4
Industry	0.97	1.04	0.92	1.02	0.78	0.67	0.67	0.66	0.68	-0.6	-1.6	-1.4	0.1
Residential	0.74	0.59	0.49	0.20	0.20	0.20	0.16	0.12	0.11	-4.0	-8.6	-2.5	-3.4
Tertiary	1.15	0.95	1.00	0.61	0.46	0.40	0.33	0.27	0.24	-1.4	-7.5	-3.4	-2.8
Transport	2.85	2.85	2.85	2.79	2.74	2.69	2.64	2.60	2.56	0.0	-0.4	-0.4	-0.3
Indicators for renewables (excluding industrial waste) (%) (B)													
RES in gross final energy demand (%)			36.8	38.8	44.0	48.2	54.4	53.7	54.0				
RES in transport (%)			1.9	4.2	6.2	8.6	11.4	12.8	14.9				
Gross Electricity generation by fuel type (in GWh)			**145524**	**158340**	**155560**	**162044**	**168068**	**174435**	**174193**		**0.7**	**0.8**	**0.4**
Nuclear energy			57306	72364	66208	65252	60243	63507	61861		1.5	-0.9	0.3
Coal and lignite			1623	1720	2264	1271	587	936	343		3.4	-12.6	-5.2
Petroleum products			1210	1277	2097	1274	1179	1146	111		5.7	-5.6	-21.1
Gas (including derived gases)			1599	1844	4242	4762	2606	4525	5597		10.2	-4.8	7.9
Biomass & waste			4759	7405	9816	13731	20704	20088	20903		7.5	7.7	0.1
Hydro			78570	72795	67600	67850	68100	68183	68267		-1.5	0.1	0.0
Wind			457	936	3328	7860	14567	15933	16958		22.0	15.9	1.5
Solar, tidal etc.			0	0	4	45	82	116	153			35.7	6.5
Geothermal and other renewables			0	0	0	0	0	0	0				
Net Generation Capacity in MW_e			**33642**	**33916**	**35778**	**38153**	**41134**	**40587**	**41650**		**0.6**	**1.4**	**0.1**
Nuclear energy			9584	9646	9685	10545	10547	10547	10547		0.1	0.9	0.0
Renewable energy			16559	16896	17939	19693	22418	23074	23525		0.8	2.3	0.5
Hydro (pumping excluded)			16347	16374	16460	16679	17012	17086	17086		0.1	0.3	0.0
Wind			209	516	1465	2966	5321	5868	6280		21.5	13.8	1.7
Solar			3	5	15	49	85	121	159		17.1	19.2	6.5
Other renewables (tidal etc.)			0	0	0	0	0	0	0				
Thermal power			7499	7374	8154	7915	8170	6966	7579		0.8	0.0	-0.7
of which cogeneration units			3662	3662	4319	4321	3263	3262	4038		1.7	-2.8	2.2
of which CCS units			0	0	0	0	0	0	0				
Solids fired			764	686	686	582	582	419	184		-1.1	-1.6	-10.9
Gas fired			549	405	1093	1093	1093	1110	2239		7.1	0.0	7.4
Oil fired			4606	3340	3200	2703	2050	1165	416		-3.6	-4.4	-14.7
Biomass-waste fired			1581	2943	3176	3537	4445	4271	4740		7.2	3.4	0.6
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	0	0	0	0				
Load factor for net electric capacities (%)			47.6	51.4	48.4	47.3	45.5	47.7	46.5				
Efficiency for thermal electricity production (%)			24.4	23.6	32.0	34.1	35.8	38.8	36.6				
CHP indicator (% of electricity from CHP)			6.2	7.1	11.8	13.0	12.3	12.2	14.6				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Non fossil fuels in electricity generation (%)			97.0	96.9	94.5	95.5	97.4	96.2	96.5				
- nuclear			39.4	45.7	42.6	40.3	35.8	36.4	35.5				
- renewable energy forms and industrial waste			57.6	51.2	51.9	55.2	61.6	59.8	61.0				
Transport sector													
Passenger transport activity (Gpkm)	**123.7**	**124.8**	**133.4**	**138.7**	**143.5**	**158.6**	**168.0**	**177.7**	**186.4**	**0.8**	**0.7**	**1.6**	**1.0**
Public road transport	9.7	9.7	9.5	8.8	8.6	8.8	9.1	9.4	9.6	-0.2	-1.0	0.6	0.6
Private cars and motorcycles	86.9	88.1	93.5	99.6	102.0	111.8	116.8	121.4	124.9	0.7	0.9	1.4	0.7
Rail	8.6	8.8	10.2	11.0	12.6	14.3	15.4	16.3	17.1	1.7	2.1	2.0	1.1
Aviation	11.8	12.1	14.2	13.5	14.4	17.6	20.4	24.1	28.1	1.8	0.2	3.6	3.3
Inland navigation	6.7	6.2	6.1	5.8	6.0	6.2	6.4	6.5	6.6	-0.9	-0.2	0.6	0.4
Freight transport activity (Gtkm)	**53.9**	**58.9**	**62.0**	**67.3**	**69.5**	**77.3**	**82.3**	**87.3**	**92.0**	**1.4**	**1.1**	**1.7**	**1.1**
Trucks	26.5	31.6	35.6	38.6	39.6	44.4	47.1	50.0	52.9	3.0	1.1	1.8	1.2
Rail	19.1	19.4	19.5	21.7	22.9	25.5	27.2	28.8	30.3	0.2	1.7	1.7	1.1
Inland navigation	8.3	7.9	6.9	7.0	6.9	7.4	7.9	8.4	8.9	-1.8	0.1	1.4	1.1
Energy demand in transport (ktoe)	**7276**	**7680**	**8147**	**8608**	**8633**	**9021**	**9060**	**8824**	**8526**	**1.1**	**0.6**	**0.5**	**-0.6**
Public road transport	129	122	130	114	110	109	107	105	103	0.1	-1.7	-0.2	-0.4
Private cars and motorcycles	4016	4078	4108	4468	4373	4287	4125	3766	3384	0.2	0.6	-0.6	-2.0
Trucks	1974	2253	2526	2706	2768	3073	3139	3175	3172	2.5	0.9	1.3	0.1
Rail	252	273	299	332	350	372	374	377	380	1.7	1.6	0.7	0.2
Aviation	760	849	928	846	888	1028	1158	1242	1324	2.0	-0.4	2.7	1.3
Inland navigation	144	103	155	142	144	150	156	160	164	0.8	-0.7	0.8	0.5

Source: PRIMES

United Kingdom: REFERENCE SCENARIO									SUMMARY ENERGY BALANCE AND INDICATORS (A)				
ktoe	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**'90-'00**	**'00-'10**	**'10-'20**	**'20-'30**
										Annual % Change			
Production	**205941**	**250517**	**269601**	**203293**	**166170**	**117081**	**86718**	**82256**	**81302**	**2.7**	**-4.7**	**-6.3**	**-0.6**
Solids	54125	30516	18577	12172	10500	9000	7232	7000	6000	-10.1	-5.5	-3.7	-1.9
Oil	93246	133042	128893	86714	70000	45000	25000	20000	18000	3.3	-5.9	-9.8	-3.2
Natural gas	40925	63715	97554	79397	63000	35000	24000	18000	13000	9.1	-4.3	-9.2	-5.9
Nuclear	16574	21249	21942	21054	16098	16255	12152	17454	23960	2.8	-3.0	-2.8	7.0
Renewable energy sources	1070	1996	2635	3956	6572	11827	18334	19802	20342	9.4	9.6	10.8	1.0
Hydro	436	416	437	423	403	416	426	427	439	0.0	-0.8	0.6	0.3
Biomass & Waste	627	1539	2104	3252	4767	6097	7622	8091	7961	12.9	8.5	4.8	0.4
Wind	1	34	81	250	1315	4705	8982	9931	10350	59.3	32.1	21.2	1.4
Solar and others	5	6	11	30	86	595	1267	1297	1515	8.1	22.6	30.9	1.8
Geothermal	1	1	1	1	2	12	36	55	77	0.0	7.3	36.6	7.9
Net Imports	**5720**	**-36234**	**-39249**	**32152**	**52358**	**97586**	**116877**	**118777**	**118254**			**8.4**	**0.1**
Solids	9122	10493	14577	27459	25386	25082	18941	18740	16131	4.8	5.7	-2.9	-1.6
Oil	-10607	-48766	-45734	-2409	8108	34135	52077	55526	55889			20.4	0.7
- Crude oil and Feedstocks	-4602	-36569	-39312	4857	14113	40182	58257	61810	62288			15.2	0.7
- Oil products	-6005	-12197	-6422	-7266	-6005	-6047	-6180	-6283	-6399				
Natural gas	6178	637	-9311	5973	17511	35652	40392	40105	41357			8.7	0.2
Electricity	1027	1403	1219	715	512	768	784	598	591	1.7	-8.3	4.4	-2.8
Gross Inland Consumption	**211304**	**218439**	**231868**	**232972**	**216530**	**212647**	**201595**	**199004**	**197475**	**0.9**	**-0.7**	**-0.7**	**-0.2**
Solids	64305	45866	36816	38387	35886	34082	26173	25740	22131	-5.4	-0.3	-3.1	-1.7
Oil	81124	82806	81857	82974	76109	77114	75076	73497	71808	0.1	-0.7	-0.1	-0.4
Natural gas	47203	65119	87399	85473	80511	70652	64392	58105	54357	6.4	-0.8	-2.2	-1.7
Nuclear	16574	21249	21942	21054	16098	16255	12152	17454	23960	2.8	-3.0	-2.8	7.0
Electricity	1027	1403	1219	715	512	768	784	598	591	1.7	-8.3	4.4	-2.8
Renewable energy forms	1070	1996	2635	4370	7413	13777	23017	23609	24628	9.4	10.9	12.0	0.7
as % in Gross Inland Consumption													
Solids	30.4	21.0	15.9	16.5	16.6	16.0	13.0	12.9	11.2				
Oil	38.4	37.9	35.3	35.6	35.1	36.3	37.2	36.9	36.4				
Natural gas	22.3	29.8	37.7	36.7	37.2	33.2	31.9	29.2	27.5				
Nuclear	7.8	9.7	9.5	9.0	7.4	7.6	6.0	8.8	12.1				
Renewable energy forms	0.5	0.9	1.1	1.9	3.4	6.5	11.4	11.9	12.5				
Gross Electricity Generation in GWh_e	**316937**	**332435**	**374308**	**395367**	**390653**	**406119**	**420344**	**438608**	**445376**	**1.7**	**0.4**	**0.7**	**0.6**
Self consumption and grid losses	44606	46775	48358	48835	48690	51220	56049	57577	57513	0.8	0.1	1.4	0.3
Fuel Inputs for Thermal Power Generation	**56324**	**49960**	**55408**	**61068**	**60354**	**56628**	**50033**	**46943**	**40674**	**-0.2**	**0.9**	**-1.9**	**-2.0**
Solids	47267	33844	27232	30920	30066	28514	20877	20601	16904	-5.4	1.0	-3.6	-2.1
Oil (including refinery gas)	7177	3443	767	677	331	500	427	351	281	-20.0	-8.1	2.6	-4.1
Gas	1668	12054	25999	26428	26127	22328	21070	18236	15668	31.6	0.0	-2.1	-2.9
Biomass & Waste	212	620	1410	3043	3830	5276	7638	7712	7757	20.9	10.5	7.1	0.2
Geothermal heat	0	0	0	0	0	9	21	43	64				11.6
Hydrogen - Methanol	0	0	0	0	0	0	0	0	0				
Fuel Input in other transformation proc.	**99522**	**102761**	**100927**	**95428**	**90112**	**91456**	**91268**	**89543**	**88817**	**0.1**	**-1.1**	**0.1**	**-0.3**
Refineries	90259	94682	89873	87812	82729	84525	83044	81854	80474	0.0	-0.8	0.0	-0.3
Biofuels and hydrogen production	0	0	0	68	1052	2037	3861	3544	3939			13.9	0.2
District heating	0	0	3373	2111	1867	632	242	131	213		-5.7	-18.5	-1.2
Others	9264	8079	7682	5436	4465	4263	4121	4013	4191	-1.9	-5.3	-0.8	0.2
Energy Branch Consumption	**12823**	**14392**	**15027**	**15548**	**14408**	**13376**	**12880**	**12056**	**11344**	**1.6**	**-0.4**	**-1.1**	**-1.3**
Non-Energy Uses	**11365**	**12762**	**11323**	**11241**	**9836**	**11000**	**11884**	**12604**	**13337**	**0.0**	**-1.4**	**1.9**	**1.2**
Final Energy Demand	**137080**	**142633**	**152177**	**152272**	**144403**	**145257**	**142596**	**138472**	**136670**	**1.1**	**-0.5**	**-0.1**	**-0.4**
by sector													
Industry	34977	35146	36424	34371	32533	32931	33162	33565	33759	0.4	-1.1	0.2	0.2
- energy intensive industries	19485	19968	19231	16421	14745	14815	14976	15228	15550	-0.1	-2.6	0.2	0.4
- other industrial sectors	15492	15178	17193	17950	17788	18116	18186	18337	18208	1.0	0.3	0.2	0.0
Residential	37941	39568	43074	43519	39651	39797	38505	36461	35993	1.3	-0.8	-0.3	-0.7
Tertiary	18621	20887	20373	19176	17791	17186	16113	15174	14720	0.9	-1.3	-1.0	-0.9
Transport	45541	47032	52307	55206	54429	55343	54815	53273	52199	1.4	0.4	0.1	-0.5
by fuel													
Solids	12266	8891	5683	4418	3609	3548	3410	3300	3271	-7.4	-4.4	-0.6	-0.4
Oil	58903	60401	62950	65915	61631	61276	58723	57269	55408	0.7	-0.2	-0.5	-0.6
Gas	41893	47140	52180	50227	45772	42577	38514	35126	34121	2.2	-1.3	-1.7	-1.2
Electricity	23597	25274	28325	29792	29232	30594	31428	32697	33291	1.8	0.3	0.7	0.6
Heat (from CHP and District Heating) [A]	0	0	2439	1268	2443	4073	5123	5151	5305		0.0	7.7	0.4
Renewable energy forms	421	926	600	653	1713	3179	5371	4914	5267	3.6	11.1	12.1	-0.2
Other	0	0	0	0	3	9	28	15	7			23.2	-13.1
RES in Gross Final Energy Consumption [B]			**1432**	**2139**	**4631**	**11871**	**21210**	**21536**	**22817**		**12.5**	**16.4**	**0.7**
TOTAL GHGs Emissions (Mt of CO_2 eq.)	**772.6**		**693.3**	**678.6**	**631.4**	**594.2**	**515.1**	**492.9**	**462.9**	**-1.1**	**-0.9**	**-2.0**	**-1.1**
of which ETS sectors GHGs emissions				311.8	287.7	267.5	216.8	209.4	187.9			-2.8	-1.4
CO_2 Emissions (energy related)	**566.4**	**532.7**	**546.6**	**559.7**	**522.9**	**492.8**	**422.7**	**399.8**	**369.6**	**-0.4**	**-0.4**	**-2.1**	**-1.3**
Power generation/District heating	214.1	173.0	181.0	192.8	185.9	168.5	118.3	110.4	88.8	-1.7	0.3	-4.4	-2.8
Energy Branch	27.1	31.3	32.2	34.2	30.3	26.5	24.4	22.0	20.5	1.7	-0.6	-2.1	-1.7
Industry	81.8	78.8	72.1	66.4	58.3	54.3	51.7	51.2	52.0	-1.3	-2.1	-1.2	0.1
Residential	77.8	77.3	81.9	80.1	70.6	68.8	63.7	57.7	55.8	0.5	-1.5	-1.0	-1.3
Tertiary	33.0	35.3	26.7	24.5	21.5	18.5	15.7	13.2	11.9	-2.1	-2.2	-3.1	-2.7
Transport	132.6	137.0	152.6	161.6	156.3	156.1	149.0	145.2	140.6	1.4	0.2	-0.5	-0.6
CO_2 Emissions (non energy related)	**22.8**	**23.4**	**20.1**	**19.8**	**18.6**	**19.6**	**20.6**	**21.3**	**22.2**	**-1.2**	**-0.8**	**1.0**	**0.8**
Non-CO_2 GHGs Emissions	**183.4**		**126.7**	**99.1**	**89.9**	**81.8**	**71.8**	**71.8**	**71.1**	**-3.6**	**-3.4**	**-2.2**	**-0.1**
TOTAL GHGs Emissions Index (1990=100)	**100.0**		**89.7**	**87.8**	**81.7**	**76.9**	**66.7**	**63.8**	**59.9**				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)									United Kingdom: REFERENCE SCENARIO				
	1990	1995	2000	2005	2010	2015	2020	2025	2030	'90-'00	'00-'10	'10-'20	'20-'30
										Annual % Change			
Main Energy System Indicators													
Population (Million)	57.157	57.943	58.785	60.060	61.984	63.792	65.683	67.543	69.224	0.3	0.5	0.6	0.5
GDP (in 000 MEuro'05)	1263.3	1371.5	1623.9	1831.7	1882.4	2132.4	2373.0	2625.4	2903.1	2.5	1.5	2.3	2.0
Gross Inl. Cons./GDP (toe/MEuro'05)	167.3	159.3	142.8	127.2	115.0	99.7	85.0	75.8	68.0	-1.6	-2.1	-3.0	-2.2
Carbon intensity (t of CO_2/toe of GIC)	2.68	2.44	2.36	2.40	2.41	2.32	2.10	2.01	1.87	-1.3	0.2	-1.4	-1.1
Import Dependency %	2.7	-16.4	-16.8	13.7	24.0	45.5	57.4	59.1	59.3				
Total Energy-related Costs [C] (in 000 M€05)			141.8	153.5	154.5	177.8	213.0	229.4	235.0		0.9	3.3	1.0
as % of GDP			8.7	8.4	8.2	8.3	9.0	8.7	8.1				
Energy intensity indicators													
Industry (Energy on Value added)	104.4	102.7	100.0	104.8	103.1	96.5	90.7	84.7	78.8	-0.4	0.3	-1.3	-1.4
Residential (Energy on Private Income)	116.5	113.7	100.0	87.6	82.0	71.2	61.1	52.7	47.4	-1.5	-2.0	-2.9	-2.5
Tertiary (Energy on Value added)	123.1	124.4	100.0	78.1	69.4	58.1	48.5	41.0	35.8	-2.1	-3.6	-3.5	-3.0
Passenger transport (toe/Mpkm)	45.4	45.3	47.6	47.2	44.9	41.5	39.1	35.6	33.0	0.5	-0.6	-1.4	-1.7
Freight transport (toe/Mtkm)	56.2	53.2	53.7	53.7	53.3	53.0	50.6	47.8	44.9	-0.5	-0.1	-0.5	-1.2
Carbon Intensity indicators													
Electricity and Steam production (t of CO_2/MWh)	0.68	0.52	0.45	0.47	0.44	0.36	0.24	0.22	0.17	-4.0	-0.2	-5.8	-3.3
Final energy demand (t of CO_2/toe)	2.37	2.30	2.19	2.18	2.12	2.05	1.96	1.93	1.91	-0.8	-0.3	-0.8	-0.3
Industry	2.34	2.24	1.98	1.93	1.79	1.65	1.56	1.53	1.54	-1.7	-1.0	-1.4	-0.1
Residential	2.05	1.95	1.90	1.84	1.78	1.73	1.65	1.58	1.55	-0.7	-0.7	-0.7	-0.6
Tertiary	1.77	1.69	1.31	1.28	1.21	1.08	0.97	0.87	0.81	-3.0	-0.8	-2.2	-1.8
Transport	2.91	2.91	2.92	2.93	2.87	2.82	2.72	2.73	2.69	0.0	-0.2	-0.5	-0.1
Indicators for renewables (excluding industrial waste) (%) [B]													
RES in gross final energy demand (%)			0.9	1.4	3.2	8.2	15.0	15.7	16.9				
RES in transport (%)			0.0	0.2	2.7	5.3	10.5	10.3	11.8				
Gross Electricity generation by fuel type (in GWh)			**374308**	**395367**	**390653**	**406119**	**420344**	**438608**	**445376**		**0.4**	**0.7**	**0.6**
Nuclear energy			85048	81603	62408	63013	48031	71330	102279		-3.0	-2.6	7.9
Coal and lignite			125076	139027	130670	123821	97722	97535	80767		0.4	-2.9	-1.9
Petroleum products			3447	3053	1511	2145	1854	1454	1108		-7.9	2.1	-5.0
Gas (including derived gases)			150451	152255	160359	136904	129300	111194	96785		0.6	-2.1	-2.9
Biomass & waste			4253	11595	15680	19950	28996	30014	30258		13.9	6.3	0.4
Hydro			5085	4921	4682	4840	4958	4964	5099		-0.8	0.6	0.3
Wind			947	2903	15295	54715	104447	115476	120354		32.1	21.2	1.4
Solar, tidal etc.			1	8	38	97	199	316	563		43.8	18.0	11.0
Geothermal and other renewables			0	0	12	633	4837	6326	8162			82.9	5.4
Net Generation Capacity in MW_e			**77225**	**79496**	**86809**	**101581**	**110024**	**115588**	**120614**		**1.2**	**2.4**	**0.9**
Nuclear energy			13038	10962	10723	9265	6012	8887	12679		-1.9	-5.6	7.7
Renewable energy			1873	3016	8089	20945	40573	43170	46241		15.8	17.5	1.3
Hydro (pumping excluded)			1462	1439	1499	1534	1617	1628	1712		0.2	0.8	0.6
Wind			408	1565	6542	18987	36256	37960	39762		32.0	18.7	0.9
Solar			2	11	41	101	204	326	570		35.3	17.4	10.8
Other renewables (tidal etc.)			0	1	6	323	2497	3257	4197			82.8	5.3
Thermal power			62315	65518	67997	71372	63438	63530	61693		0.9	-0.7	-0.3
of which cogeneration units			4015	3141	5879	8192	8711	9041	9488		3.9	4.0	0.9
of which CCS units			0	0	0	0	2334	2334	2334				0.0
Solids fired			28647	27019	26336	21374	11178	11338	9799		-0.8	-8.2	-1.3
Gas fired			26520	32734	35224	42352	43991	43582	43108		2.9	2.2	-0.2
Oil fired			5826	4093	4330	2800	1485	1463	1299		-2.9	-10.1	-1.3
Biomass-waste fired			1321	1672	2107	4844	6781	7141	7479		4.8	12.4	1.0
Fuel Cells			0	0	0	0	0	0	0				
Geothermal heat			0	0	0	1	3	6	9				11.6
Load factor for net electric capacities (%)			52.9	54.2	49.0	43.5	41.3	41.1	40.1				
Efficiency for thermal electricity production (%)			44.0	43.1	43.9	43.0	44.3	44.0	44.2				
CHP indicator (% of electricity from CHP)			6.4	6.6	9.1	12.8	13.9	13.7	13.5				
CCS indicator (% of electricity from CCS)			0.0	0.0	0.0	0.0	6.0	5.6	5.4				
Non fossil fuels in electricity generation (%)			25.5	25.6	25.1	35.3	45.6	52.1	59.9				
- nuclear			22.7	20.6	16.0	15.5	11.4	16.3	23.0				
- renewable energy forms and industrial waste			2.7	4.9	9.1	19.8	34.1	35.8	36.9				
Transport sector													
Passenger transport activity (Gpkm)	**740.2**	**770.7**	**823.2**	**884.5**	**909.1**	**992.2**	**1047.4**	**1112.0**	**1175.3**	**1.1**	**1.0**	**1.4**	**1.2**
Public road transport	47.7	45.8	48.5	49.5	51.6	54.9	57.4	59.4	61.2	0.2	0.6	1.1	0.6
Private cars and motorcycles	593.9	622.3	645.0	680.0	693.4	747.7	772.8	814.8	856.6	0.8	0.7	1.1	1.0
Rail	39.9	37.1	46.7	53.1	60.5	66.4	71.8	76.6	81.4	1.6	2.6	1.7	1.3
Aviation	52.2	58.8	77.4	96.7	98.2	117.7	139.8	155.3	170.0	4.0	2.4	3.6	2.0
Inland navigation	6.5	6.7	5.5	5.3	5.4	5.5	5.7	5.8	6.0	-1.6	-0.3	0.5	0.5
Freight transport activity (Gtkm)	**211.8**	**227.9**	**243.7**	**251.0**	**255.1**	**267.0**	**273.4**	**285.3**	**298.9**	**1.4**	**0.5**	**0.7**	**0.9**
Trucks	140.0	161.5	165.6	167.5	168.6	176.2	179.4	188.3	199.6	1.7	0.2	0.6	1.1
Rail	16.0	13.3	18.1	22.3	25.1	27.1	28.1	28.8	29.4	1.2	3.3	1.1	0.5
Inland navigation	55.8	53.1	60.0	61.2	61.4	63.6	65.9	68.2	69.9	0.7	0.2	0.7	0.6
Energy demand in transport (ktoe)	**45541**	**47032**	**52307**	**55206**	**54429**	**55343**	**54815**	**53273**	**52199**	**1.4**	**0.4**	**0.1**	**-0.5**
Public road transport	429	435	484	505	522	541	538	527	510	1.2	0.8	0.3	-0.5
Private cars and motorcycles	25845	25978	27091	27804	27161	26204	24968	23075	22397	0.5	0.0	-0.8	-1.1
Trucks	10141	10378	11364	11406	11453	11851	11617	11603	11595	1.1	0.1	0.1	0.0
Rail	1068	1238	1326	1405	1499	1582	1472	1290	1051	2.2	1.2	-0.2	-3.3
Aviation	6781	7879	11115	12810	12508	13843	14866	15389	15230	5.1	1.2	1.7	0.2
Inland navigation	1277	1123	926	1275	1286	1321	1354	1389	1416	-3.2	3.3	0.5	0.4

Source: PRIMES

(A) Regarding heat from CHP, there is a break in the series between 2005 and 2010. This is related to the practice of Eurostat to report the fuel consumption of on site CHP under the final demand categories of the individual fuels, even if the fuel is in reality used in industrial CHP. In order to keep comparability with Eurostat statistics, the fuel consumption data for the statistical years are presented in a Eurostat compatible format. For the projection period from 2010 onwards the modeling allocates the fuel consumption for new CHP plants to the CHP part of the power generation sector while the corresponding heat and steam is shown under industrial energy demand. Comparisons concerning steam in industry should therefore start only from 2010 onwards. Except for the knock-on effect on total steam, this break in the heat series does not affect other comparisons in PRIMES that can start from 2005 or earlier years.

(B) PRIMES does not report separately on industrial waste. In order to ensure a consistent breakdown of supply and demand quanties, industrial waste is shown as part of total waste and of renewables. Given that only biodegradable waste counts towards the renewables targets, the indicators on the share of RES in gross final energy demand have been adjusted to exclude industrial waste. RES indicators have been calculated on the basis of the methodology developed by EUROSTAT, i.e. taking into account normalised hydro and wind production, increased weight for renewable electricity in road transport and aviation cap for gross final energy demand.

(C) excluding payments for auctioned emission allowances (if applicable)energy demand increased by distribution losses and self consumption of electricity and steam.

Disclaimer: Energy and transport statistics reported in this publication and used for the modelling are taken mainly from EUROSTAT and from the publication "EU Energy and Transport in Figures" of the Directorate General for Energy and Transport. Energy and transport statistical concepts have developed differently in the past according to their individual purposes. Energy demand in transport reflects usually sales of fuels at the point of refuelling, which can differ from the region of consumption. This is particularly relevant for airplanes and trucks. Transport statistics deal with the transport activity within a country but may not always fully include transit shipments. These differences should be borne in mind when comparing energy and transport figures. This applies in particular to transport activity ratios, such as energy efficiency in freight transport, which is measured in tonnes of oil equivalent per million tonne-km.

Abbreviations
GIC: Gross Inland Consumption
CHP: combined heat and power

Units
toe: tonne of oil equivalent, or 10^7 kilocalories, or 41.86 GJ (Gigajoule)
ktoe: 1000 toe
MW: Megawatt or 10^6 watt
MWh: megawatt-hour or 10^6 watt-hours
GWh: gigawatt-hour or 10^9 watt-hours
t: metric tonnes, or 1000 kilogrammes
Mt: Million metric tonnes
km: kilometre
pkm: passenger-kilometre (one passenger transported a distance of one kilometre)
tkm: tonne-kilometre (one tonne transported a distance of one kilometre)
Gpkm: Giga passenger-kilometre, or 10^9 passenger-kilometre
Gtkm: Giga tonne-kilometre, or 10^9 tonne-kilometre

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