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Ministry of Economic Affairs and Communications

Energy Efficiency Plan
2007-2013

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1. Introduction

The Energy Efficiency Plan for 2007-2013 is the Development Plan which describes he Estonian's Governments action in a specific energy policy area – fuel and energy efficiency –, as approved by the Government of the Republic. Section 3 of the District Heating Act summarises the aims of the programme and related areas of activity in order to increase energy efficiency, preserve the quality of the environment, and restrict the use of national resources in Estonia over the course of the years 2007-2013. The policy document is supplemented by a three-year implementation plan, which sets out in greater detail the planned actions, enforcers and outputs for the period.

This document delivers an overview of the energy sector's current situation from the perspective of fuel and energy efficiency and sets forth Estonian commitments to the European Union and ratified international agreements; determines which areas need to be prioritised in order to meet fuel and energy savings; the strategic aims and objectives of each area, as well as measures for achieving these objectives. In addition to this, problems requiring further analysis have been identified.

When setting the targets of the "Energy Efficiency Plan 2007-2013", two documents have been taken into account:

- "The Long-term National Development Plan for the Fuel and Energy Sector Until 2015", one strategic aim of which is to keep the volume of primary energy consumption at the 2003 levels until the year 2010;

- Directive 2006/32/EC by the European Parliament and the Council on energy end-use efficiency and energy services. The Directive establishes[1] that during the next nine years all member states shall decrease their energy consumption by 9% in comparison with the average energy consumption of 2000-2005 in sectors which are subject to the scope of application of the Directive, except in those companies belonging to the system of EU emission trading and the national defence sector. Each member state is obliged to submit the appropriate energy-efficiency action plan.

This document takes into account the task of achieving the indicative energy conservation objective forecast in Directive 2006/32/EC.

When identifying problems and determining prioritised areas of activity, the Ministry of Economic Affairs and Communications (MoE) has relied on past experience in effecting previous policies in this field and taken into account experience gained in carrying out much analysis and research.

In order to steer and accelerate the rate of development of the energy sector, the "Energy Efficiency Plan 2007-2013" is an important development sectoral plan allied to other strategies prepared at a national level, such as the "Estonian Environmental Strategy Until 2030", the "Estonian State Budget Strategy 2007-2010", and the strategy of the MoE for the years 2007-2010. The MoE Strategy includes measure 2.1.1, dealing with improving fuel and energy conservation, as well as several other measures indirectly related to the same objective.

Factors which are hindering fuel and energy conservation and which have been identified in conjunction with the European Union, as well as at the international level, are influencing

[1] The objective defined in the Directive 2006/32/EC is a suggested priority for the member states.

policy in the identified areas of activity. These impediments have been described in the relevant notices issued by the European Communities Commission and in reports by the European Energy Charter Secretariat, including the report[2] on Estonia.

2. Implementation of the previous energy efficiency policy

Programmes for improving Estonian energy industry have been continuously implemented since the regaining of independence. The first baseline document for activities in the field of energy efficiency, the "Estonian Energy Efficiency Programme", was approved on 24 July 1992 and the second "Energy Efficiency Plan" was approved by the Government of the Republic on 4 January 2000. The "Energy Efficiency Plan" was used to develop the "Energy Efficiency Plan Implementation Plan 2001-2005" (hereafter referred to as the implementation plan), which was approved by the Government of the Republic on 6 March 2001.

The MoE is responsible for implementing the national energy efficiency policy, and within its Energy Department sits an Energy Efficiency and Renewable Unit. During the period 2001-2006 the average number of employees of the Unit was 3.28. The activities of the Unit are sustained by the Ministry's infrastructure. In 2006 the Housing Division of SA KredEx launched an Energy Efficiency centre of excellence with two employees, whose remit is to raise the energy efficiency awareness of the owners and occupiers of apartment buildings. Implementation of the energy conservation policy has constantly necessitated the hiring of foreign consultants and acquisition services. During the period of 2001-2006, implementation was financed with a total of 5.255 million EEK. Furthermore, investments in local energy efficiency initiatives, (totalling 52.09 million EEK in 2001-2007) have been supported from the national budget, as well as through foreign aid, in order to meet energy efficiency targets.

2.1. Concerning the Realisation of the "Energy Efficiency Plan Implementation Plan 2001-2005"

The implementation plan set forth ten priorities or areas of activity (they were referred to as projects in the implementation plan) for the Government of the Republic to act upon. Those were:

Project 1. International cooperation and participation in energy efficiency projects;

Project 2. Development and execution of the plan "Economically justified implementation of bio fuel, other renewable energy resources and peat in energy production";

Project 3. Ongoing energy development plans and feasibility studies for counties and local authorities;

Project 4. Development of the methodology of the energy-efficient certification of buildings;

Project 5. Development of the methodology of energy audits for industrial premises;

Project 6. Development of a programme for the optimisation of heating supply systems and implementation of the potential for the co-production of electricity and heat;

Project 7. Analysis of the methods for measuring energy expenditure and the relationship between energy consumption and the behaviour of consumers;

[2] In-depth Review of Energy Efficiency Policies and Programmes of Estonia, Energy Charter Secretariat (2002)

Project 8. Energy efficiency training initiatives;

Project 9. Carrying out energy efficiency information campaigns;

Project 10. Development and implementation of a regular control system for boilers with a capacity exceeding 15 kW.

Due to differing working practices in the European Union and Estonia, these Energy Efficiency plan implementation projects did not receive equal attention and the implementation results are therefore not comparable. Most attention was paid to the issues relating to the energy efficiency of buildings, in particular of public buildings and systems under direct municipal control. Furthermore, Project 3 (The continuation of developing energy development plans and feasibility studies for counties and local authorities – the compilation of energy development plans for 25 local authorities was supported), Project 4 (The development of methodology for the energy-certification of buildings – the studies carried out and the auditing of buildings has delivered versatile information for the further planning of measures for improving the energy-efficiency of buildings), and Project 7 (The analysis of the methods for measuring energy expenditure has been organised and their relation to energy consumption has been studied), have all been successfully implemented. Valuable information which was collected during the implementation process has been influential in the designing of national guidelines for improving energy efficiency, particularly in relation to the energy efficiency of buildings, and the creation of new jobs and organisations.

Projects 1 (participation in international cooperation – Estonian institutions are relatively active in taking part in respective international partnerships), 2 (an improvement in the use of renewable energy resources – studies and activities carried out have helped to develop more efficient national guidelines), 6 (investigating the potential for the co-production of heating and electricity, and the development of a national policy for encouraging co-production), and 8 (training activities), have been realised satisfactorily. The full significance of the work which has been carried out in these activities has not yet clearly manifested itself in the national energy balance. Projects 5 (industrial energy audits), 9 (savings campaigns), and 10 (the development and implementation of a regular control system for boilers) can be considered as being partially completed. Each company has the potential to obtain information regarding industrial energy audits from the information material developed at the MoE and to get advice from an expert; the number of savings campaigns remained modest until 2005 due to the financing of the energy efficiency plan, which was less than expected. In 2006 the Energy Efficiency Centre of Excellence – the unit providing education in the field of energy efficiency of apartment buildings - was established at the SA KredEx.

The main priorities of the Energy Efficiency Plan 2000 and its implementation plan were of a more global nature than the projects identified under the plan. These priorities included:

- maintaining the increasing level of energy consumption arising from economic growth which was at least the two times lower than the increment on gross domestic product;
- decreasing special consumption in all economic sectors and households
- encouraging a more widespread use of environmentally-friendly fuels and increasing the efficiency of energy production, transportation and distribution.
- Ensuring the CO_2 emission level remains under the limits allowed for Estonia in the Kyoto protocol (during the years 2008-2012 emission levels must be at least 8% lower than the level for 1990).

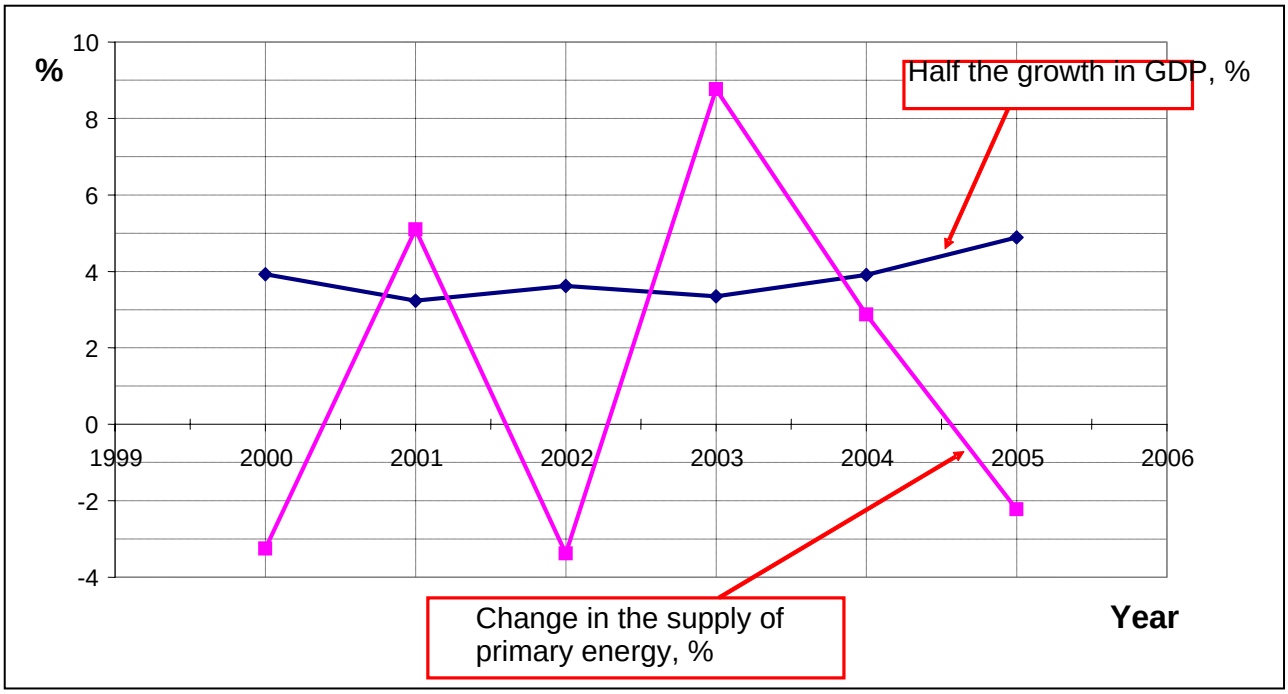

Figure 1. Achievement of the measurable objective of the Energy Efficiency Plan[3].

Achievement of the first aim is represented by Figure 1; achievement of the second aim has not caused any problems either.

A more thorough analysis of the projects mentioned within the framework of the implementation plan is available at the homepage of the MoE: http://www.mkm.ee/doc.php?7622

2.2. State investment support to energy efficiency

Within the framework of the national energy efficiency policy, investments aimed at energy efficiency have been supported by the state budget every year. Support has been given to the local authorities for the modernisation of district heating systems and buildings under their management, as well as for redevelopment of apartment buildings within the framework of the national housing policy, and for the development of housing funds by local authorities. Table 1 gives an overview of the support granted by the framework of energy efficiency policy; activity carried out within the framework of the national housing policy have been outlined in the draft document, "Estonian Housing Sector Development Plan 2007-2013".

Table 1 Support for investment in local authorities aimed at energy efficiency, in millions EEK

Year	**Financial Investment by the state budget**		**Financial Investment by EU structural funds (PHARE ESC)**	
	Number of projects	**Support, mil. EEK**	**Number of projects**	**Support, mil EEK**
2001	5	3.30		

[3] The change in the gross domestic product indicated on the graph is half of the actual change

2002	8	2.70		
2003	9	2.50		
2004	8	2.50		
2005	11	3.60	22	31.29
2006	17	6.20		
Total	58	20.80	22	31.29

Undoubtedly, additional support by the state budget and financing from foreign sources have facilitated more efficient use of fuel and energy in Estonia and supported marketing initiatives and the introduction of new technology. Unfortunately, however, the data necessary for a review has not been assessed or collected, which, had it been present, would have identified any energy or financial savings which had been achieved as a result of activity financed by other sources.

Among the sources of foreign aid the Kingdom of Denmark has provided the most financial support for the Estonian energy efficiency policy. During the 2000-2004 period they financed the respective Estonian and Danish bilateral cooperation programme with 72.35 million EEK. No separate measure was required from within the framework of the EU structural funds implementation (2004-2006) in order to facilitate the efficient use of fuel and energy.

2.3. Support and investment for the improvement of energy efficiency by other sources

The most productive investment in improvement of energy efficiency were made by energy companies during the period of 2001-2005. Introduction of new types of boiler, and launching co-production capabilities improved the energy efficiency of power stations. As a result of the reconstruction of power transmission and distribution networks, network losses have decreased.

Investment in improving efficient energy consumption have probably increased in recent years. Although the active reconstruction of buildings has increased, companies are investing more and more in new production equipment, buses and cars; however, there is no statistical data or analysis which would confirm that improvements in energy efficiency are as a direct result of investment. Data regarding the structure of the budgets of the local municipalities gives only a general overview of the structure of investments[4]. Data regarding financial transactions undertaken by local authorities is also lacking due to the fact that no data is collected in relation to loans.

In addition to direct investment, projects promoting the sustainable use of energy or new technologies were launched by private initiatives. Eesti Energia AS has provided support for the numerous projects promoting sustainable energy and established the “Foundation for Future Energy”, which focuses on of the forthcoming implementation of new energy technologies in Estonia. The Estonian Association of Apartment Owners, the Estonian Power and Heat Association, and other non-governmental organisations have organised several training and information initiatives.

In recent years Estonian organisations have been actively applying for grants from the European Commission’s sustainable energy promotion programme, Intelligent Energy-

[4] According to data from the Ministry of Finance, in 2005 investment by local authorities formed a total of 2.677 billion EEK, of which investment in buildings and facilities formed 18.9%, machinery and equipment 1.12% and information and communication technology 0.26%. The biggest allocation within the same framework was for incomplete construction and prepayments – 59.1%

Europe. More than twenty of these grant applications, with the support of Estonian partners, have been successful.

3. Relationship of the Plan to other strategic documents

The legislative framework and drive towards energy conservation and energy efficiency in Estonia are defined by a variety of legislation and national development strategies. Furthermore, energy conservation and efficiency issues have received particular attention at the European Union level during recent years.
The Energy Efficiency Plan fits in with other strategic documents and proposals included in them as follows (the relationship between the objectives and measures contained in the Energy Efficiency Plan and those contained in other programmes is set out in Annex 4):

"Long-term National Development Plan for the Fuel and Energy Sector Until 2015" (responsibility of the MoE).

The strategic aims of the Estonian fuel and energy sector include making energy use more effective in the individual areas of heat, electricity and heating, and keeping levels of consumption of primary energy at 2003 levels until the year 2010. Improvements in energy consumption and effecting energy efficiency are the priorities for the development of the national energy industry. The aims of energy efficiency must be treated as important factors in achieving national investments as well as public acquisitions. The Energy Efficiency Plan is a development plan of great significance in terms of achieving targets in the areas of energy conservation and efficiency.

"Estonian electricity sector development plan 2005-2015" (responsibility of the Ministry of the Environment)
The electricity sector development plan is based on the Long-term National Development Plan for the Fuel and Energy Sector Until 2015, and the most important national programme in the electricity sector is the energy efficiency plan. The studies carried out by the Energy Faculty at Tallinn University of Technology estimate that increased efficiency of electricity consumption may represent a potential saving for the consumer of 10-15% over current consumption levels. Stimulating sustainable electricity consumption, which is in accordance with the aims of this energy efficiency plan, has been mentioned in the plan as one of the key priorities.

Estonian national sustainable development strategy "Sustainable Estonia 21" (responsibility of the Strategy Office of the State Chancellery).
Aim 4 of the strategy foresees the preferential development of and support for energy efficient activities. The main quantifier in measuring the effectiveness of the strategy within the energy sector is "greenhouse gas emission per inhabitant" followed by "intensity of energy use". The measures planned in the Energy Efficiency Plan support the priorities of the strategy for the sustainable development of the energy sector.

"Estonian Environmental Strategy Until 2030" (responsibility of the Ministry of the Environment).
Increasing awareness of energy efficiency and the integration of energy efficiency with other sectors of the economy have both been the main objectives in terms of developing energy efficiency and implementing regulations and support. These trends are directly reflected in this Energy Efficiency Plan.

"Estonian Housing Development Plan 2007-2013" (draft, not approved)

According to expert opinion, it is possible to achieve an average 20-30% energy saving as a result of proper reconstruction and renovation work in an apartment building. Financial saving for Estonia as a whole may reach 0.5 billion EEK per year. Therefore, combining reconstruction support initiatives with the energy saving agenda is important for improving accommodation standards, as well as decreasing maintenance costs for the housing budget. The priorities would be to educate residents in the field of energy efficiency, to carry out energy audits and to support the energy-efficient renovation of apartment buildings. These objectives are also of significant importance in this Energy Efficiency Plan.

"Transport Development Plan 2006-2013" (responsibility of the Ministry of the Environment)
In Estonia exhaust gases from vehicles form approximately 75% of the total emissions for that type of contaminants: in other words, the main source of pollution is the motor car. In order to protect the environment, it is vital to start national programmes supporting the development of environmentally sustainable transport technologies. Important advances in this field include the increase in the percentage of environmentally sustainable fuels and the preferential development of electric transport. The state has to improve the competitiveness of public transport as an alternative to individual transport. An environmentally sustainable transport system is without a doubt one of the most important factors in developing energy efficiency.

"National Programme for Decreasing Greenhouse Gas Emissions 2003-2012" (responsibility of the Ministry of the Environment).
The programme establishes the energy sector as the biggest generator of greenhouse gases and road transport as one of the greatest consumers of mobile fuel and sources of pollution. Measures planned in this Energy Efficiency Plan ensure a reduction in air pollution which facilitates climate change.

"National Strategy for the Use of Structural Funds 2007-2013" and its divisional implementation plans (responsibility of various Ministries, each dealing with their own area of competence)
Development of the energy sector has been mentioned separately as one of the priorities (3) in the implementation plan for the development of the human environment., The development of energy efficiency in production, transfer networks and for the end user have been set forth as the main requirements for achieving the aims of the energy sector. It is also considered important to improve energy efficiency and energy conservation in the existing housing market. The proposals directly support the implementation of this programme.

The move towards the improvement of energy efficiency and energy conservation should be reflected not only in the energy policy and this Energy Efficiency Plan, but should also be closely integrated with the policies and development plans of other industries.

"National Development Plan for the Use of Oil Shale 2007-2015" (draft, not approved)
The development plan is aimed at improving the domestic supply of oil shale, increasing the efficiency of oil shale production and use, and decreasing the environmental impacts associated with oil shale mining and use. Pursuant to the development plan, it is planned to determine uses for oil shale as well as criteria for the assessment of oil shale reserves; the creation of long-term plans for oil shale as a resource; the optimisation of mining volumes; the completion of the technological, economic and environmental zoning of the resource in order to maximise its use within the boundaries of the Estonian oil shale deposit (by using it in the existing areas as well as in prospective areas) and the reduction of the negative socio-demographic effects in the oil shale pool and its impact zone. Measures for the rationed use of oil shale in Estonia are outlined in the draft of the development plan.

The potential to increase efficiency in the energy sector is further considered in the **"Baltic energy strategy"** (draft, not approved).

The following studies and documents were also used in the compilation of this Energy Efficiency Plan:

- Assessment of the draft and emergent Estonian position on the Directive concerning energy efficiency for the consumer, and energy services planned both by the European Parliament and the Council, EnPro Inseneribüroo OÜ (2005)
- Green paper on Energy Efficiency, or Doing More With Less,[5] European Commission
- Action Plan for Energy Efficiency: Realising the Potential,[6] European Commission.

4. Fuel and energy consumption and factors limiting the improvement of energy efficiency in Estonia

The changes that have taken place since Estonia regained independence have also affected the relationship between energy and the economy. The energy consumption of the gross domestic product (GDP) has decreased annually; during the period 1993-2004 this indicator decreased by more than 1.8 times (from 0.9 kWh/EEK'2000 to 0.49 kWh/EEK'2000). Estonia is ranked No 40 [7] in the world in terms of GDP adjusted to take into account purchasing power parity. Using the same criteria of GDP with purchasing parity taken into account, Estonia is ranked 94th in terms of energy efficiency. When taking into account the carbon consumption of the economy (the relationship between the GDP corrected on the basis of purchasing power parity and the amount of carbon dioxin emitted into the atmosphere), Estonia is placed at the same level as the countries which are exporting fuel, and is 114th in the list of respective countries. Therefore Estonia continues to be among the countries with a relatively high energy consumption.

4.1. Energy sector

In the energy sector, primary fuel is consumed in order to transform it into other types of energy, ie. electricity, heat and secondary fuel. The effectiveness of the energy supply is influenced by the fuel consumption of the energy sector itself, as well as losses during energy transmission. Whilst the production of secondary fuel in Estonia is limited, with the production of shale oil and wood-based fuel and the production of electricity almost completely based on domestic oil shale, the district heating and electricity distribution networks are much more diverse in their nature.

The structure of the use of fuel for the production of heating is shown in Figure 2. In 2005 the fuels used most in the district heating sector were natural gas, wood and wood-based fuels,[8] and oil shale. In comparison with the year 2001, the use of natural gas (up by 14%) and wood and wood-based fuels (up by 28%) had increased the most in the district heating sector, the use of carbon-rich fuels (oil shale down by 20%, heavy fuel oil down by 88%) decreased significantly.

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[5] COM(2005)265 *Green paper on Energy Efficiency or Doing More With Less.*
[6] COM(2006)545 Action Plan for Energy Efficiency: Realising the Potential.
[7] Data of 2004 regarding 136 countries from the publication Key World Energy Statistics, International Energy Agency 2006.
[8] Firewood, wood waste, wood chips, briquette and granules.

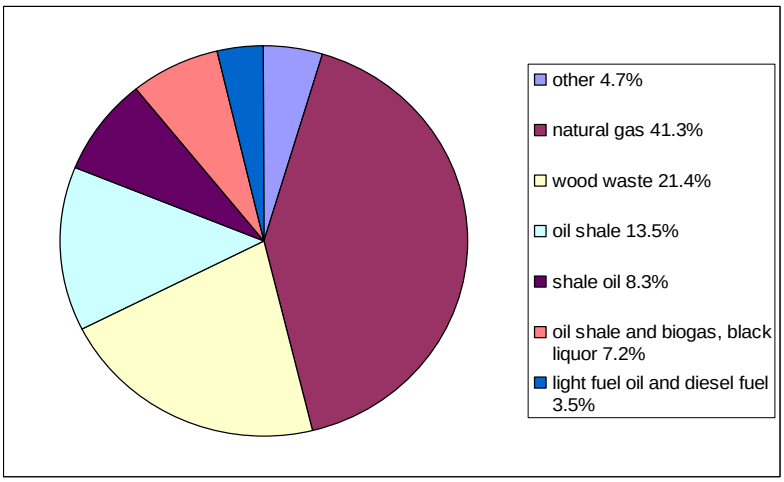


Figure 2. Types of fuel used for heat production in 2005 (Energy balance 2005).

A survey in the district heating sector which was carried out by the Ministry of the Environment in autumn 2006 showed data regarding sale of heating and use of fuel for almost 200 district heating systems in Estonia. The sales volume of these systems made up 56% of the Estonian district heating market[9]. Whilst during the period 2001-2005 the cost of heating for companies increased by just 11.1%,[10] between July 2005 and November 2006 the survey revealed that the price for heating increased by 23.1% . For smaller systems (with annual sales volume of 500-10.000 MWh) the heating price increase was 55.5% during the same period, however, the percentage of their sales volume in the summarised sales volume of the heating market is less than 10%.

Efficiency in heat production had not changed significantly. Despite changes in the structure of fuel use and the extended use of gas, the overall efficiency of boiler houses has not increased. There are still sufficient technical opportunities for increasing the efficiency of boiler houses. The increase in the demand for heating has not yet brought with it a corresponding increase in the performance efficiency of boiler units, but rather has led to an extended use of outdated, inefficient facilities. During the period of 2001-2005 boiler units which were engaged in heating production were able to create an output of 81.1 – 85.1% of the energy contained in fuels.

In comparison with the year 2001, electricity lost during transmission decreased by 19%, and heating lost during transmission by 17%, by the year 2005. At the same time there are a lot of district heating systems where the losses form more than 20% of the heat sales volume. In the 2006 survey by the Ministry of the Environment, the district heating sector sales volume in such systems equated to 38.2%. There is no single segment in the district heating market that can be clearly distinguished by high losses and the data regarding transmission losses in many smaller systems is deficient.

4.2. Final consumption of fuel and energy in Estonia

The final consumption of fuel and energy over the years can be characterised from two points of view: consumption by various markets, and consumption by fuel types. The publication by the Statistical Office of Estonia “Energy balance 2005” reflects data on final consumption for

[9] According to the publication “Energy balance 2005” the Estonian district heating market forms 7638 GWh, pursuant to the questionnaires sent to the MoE, the summarised heating sale of the observed systems formed 4242 FWh.

[10] According to the data of “Energy balance 2005”.

nineteen energy carriers and twenty markets. An overview of the supply of primary energy and final energy consumption in Estonia is given in Figure 3.

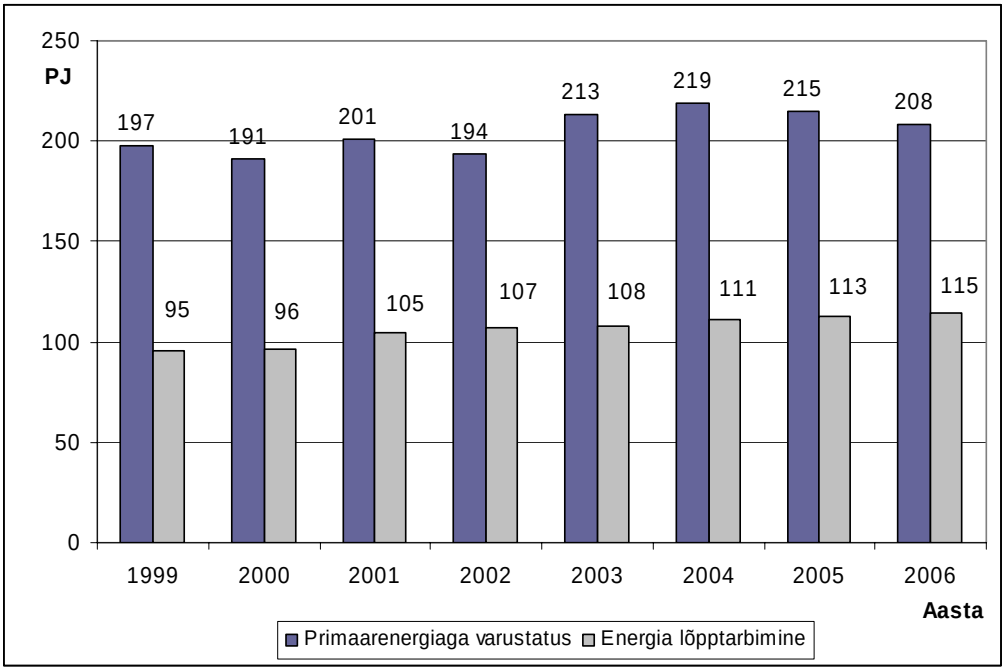


Figure 3. The final consumption of fuel and energy in Estonia (the Statistical Office of Estonia's web site at: www.stat.ee.

The percentage of different markets for the final consumption of fuels and energy in 2005 is shown in Figure 4. The percentage of the final consumption of fuel and energy was 41.0% by households, with industry at 22.7%, transport at 19.6%, the business and public service sector at 13.0%, and agriculture at 3.7%. It appeared from the data inquiry made to the Statistical Office of Estonia by the Ministry of the Environment, that the percentage of the public service sector in the final consumption of fuels and energy in 2005 was 5.9%, including public administration at 1.6% and education, health care and social welfare at 3.2%.

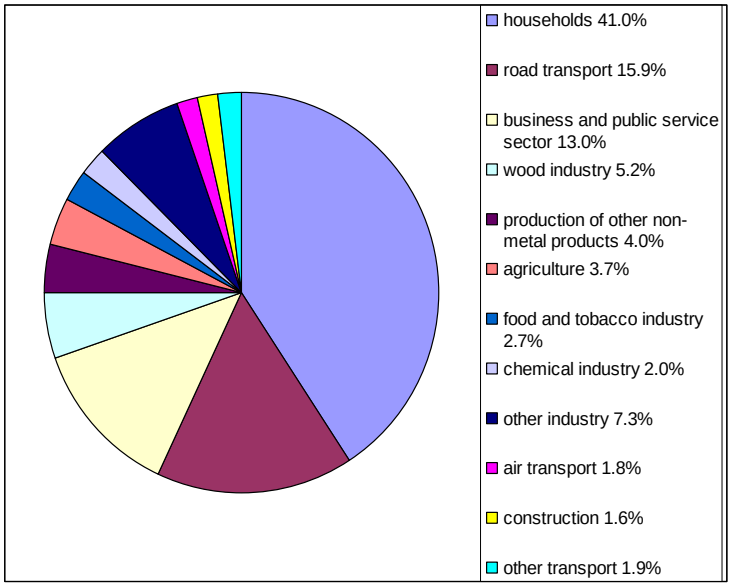


Figure 4. The proportion of the final consumption of fuel and energy by market in 2005 (Energy balance 2005).

The percentage of different fuels in the structure of final consumption of fuels and energy is shown in Figure 5. The percentage of fuels is 52.7% of the final consumption total, heating is at 28.3% and electricity at 19%. The dominating fuels are light heating oil and diesel fuel, wood and wood-based fuels, motor vehicle petrol, and natural gas. The market that consumes the most fuel is the household sector, accounting for 41.7% of the total fuel for final consumption, while road transport is at 29.4%, and other types of transport are at 6.9%. The final consumption of fuel is also important in the production of other non-metal materials (5.9%) and agriculture (4.8%).

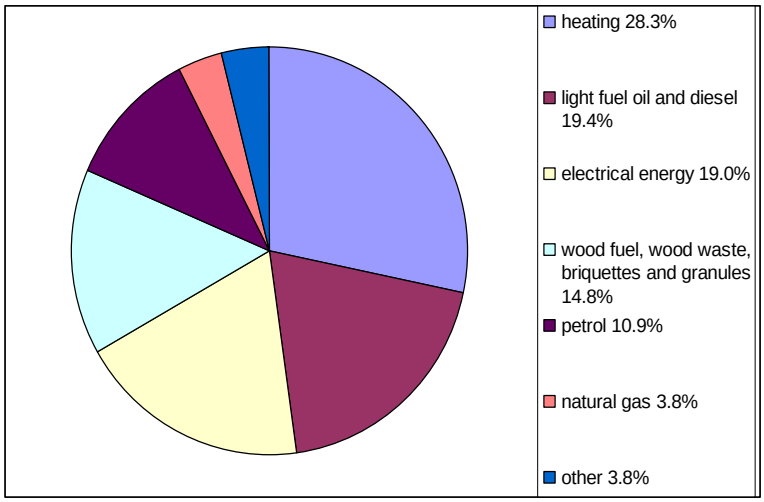


Figure 5. The structure of the final consumption of fuel and energy in 2005 (Energy Balance 2005).

The structure of the final consumption of heating is reflected in Figure 6. The most heating is consumed in households, industry (in total 29.6% of the summarised final consumption of heating), business and the public service sector (in total 19.3%, including public administration at 2.2%; education, health care and social welfare at 8.9%).

The structure of the final consumption of electricity (see Figure 7) indicates that the most important consumer is the industry sector (35.9% of the final consumption of electricity), followed by the business and public service sectors (in total 31.9%, including public administration at 2.3%, health care and social welfare at 3.8%), and private households.

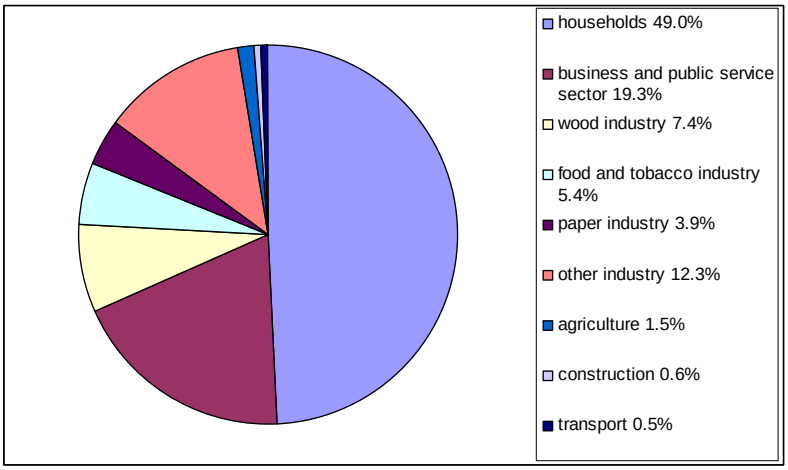


Figure 6. The structure of the final consumption of heating in 2005 (Energy Balance 2005).

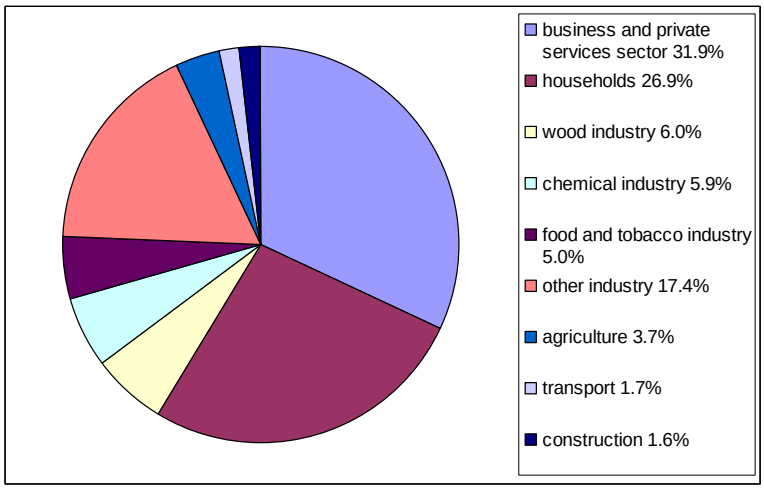


Figure 7. The structure of the final consumption of electricity in 2005 (Energy Balance 2005).

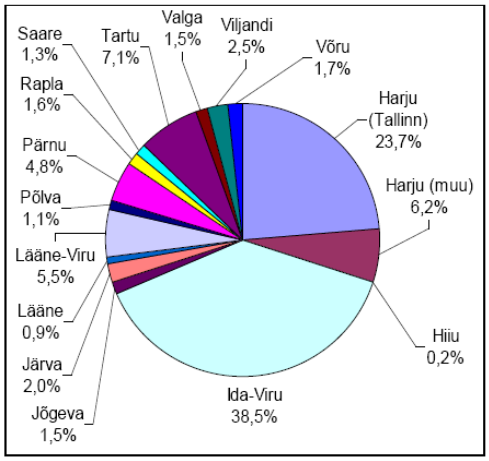
During the period 2001-2005, the final consumption of fuel and energy in Estonia increased by 8.7%. The growth was first and foremost due to the increase in consumption of fuels and energy in transport (up by 36%), and the business and public service sectors (up by 32%); in industry consumption increased by 17% and in private households consumption decreased by 8%. When observing the important branches of industry in more detail, it becomes apparent that fuel and energy consumption increased significantly in the wood industry (up by 92%) and the chemical industry (up by 30%), whereas in the production of other non-metal products energy consumption decreased by 25%; in the food and tobacco industry it decreased by 6%. The increase in the fuel and energy consumption in transport was first and foremost due to road transport (up by 33%) and air transport (up by 193%).

In the public service sector the final consumption of fuel and energy increased by 12.6%. Generally this growth is due to a 48% increase in consumption in the education, health care and social welfare sectors (most of the changes took place in 2001-2002; since then consumption has remained stable); in public administration consumption decreased by 21.7%.

In terms of important fuels the consumption of light heating oil and diesel fuel increased by 29.2%, while the consumption of wood and wood-based fuels increased by 3.3%, the consumption of motor vehicle petrol decreased by 13.5%, and the consumption of natural gas increased by 31.5%. Just as heating production in boiler houses decreased, so too did the consumption of carbon-rich fossil solids and liquid fuels. Electricity consumption increased by 17.3% and heating consumption by 3.4%. Demand for electricity increased the most in the business and public service sectors (up by 32%) and industry (up by 19.1%, including an increase in the wood industry of 62.2%, the chemical industry at 15.7%, and the food industry at 6.0%, in the production of other non-metal products by 22.2%, and the engineering industry up by 55.6%).

Unfortunately the Estonian energy sector statistics do not provide the data to allow for further analysis into the effects relating to the use of equipment and technologies in more detail, or to observe the changes in energy consumption, for example in buildings. It is also difficult to ascertain the structure of internal energy consumption and characteristic changes in sectors that require large-sample data (for example households, road transport). More detailed analysis on energy usage (2004) has been carried out by the Ministry of the Environment; furthermore, research was carried out into energy usage on farms that need an integrated environmental permit for their activities (2003).

Fuel consumption in different counties is shown in Figure 8. Fuels are used the most in Ida-Viru County, despite the fact that the data reflected in Figure 8 does not show oil shale consumption in oil shale power stations. The dominating counties in fuel consumption are the counties of Harju (in total 29.9% of fuel consumption) and Ida-Viru. The general picture may be somewhat influenced by the fact that big companies which are engaged in heating production are, according to the registers, located in Tallinn and therefore the consumption levels for their departments which are located in other counties is recorded against their head offices, and is not reflected in the consumption of the counties in which any subsidiary buildings are located.



[Harju (muu) = Harju (other)]

Figure 8. Fuel consumption by counties in 2005 (the Statistical Office of Estonia's web site: www.stat.ee, without oil shale consumed in oil shale power stations).

4.3. Factors limiting the improvement of energy efficiency in Estonia

The main problems that have prevented the development of more efficient and sustainable use of fuel and energy in Estonia are as follows:

Relatively cheap fuel and energy. The availability of local fuel resources long facilitated the retaining of heating and electricity prices at a low level. Considering the changes that have taken place in the world fuel market, including the opening of markets and stricter environmental limitations in the energy sector arising from the international agreements, the opportunities for controlling energy prices are becoming fewer; however, in order to create a clear savings stimulus, systematic signals are required for consumers through increasing fuel and energy prices. At the beginning of 2006 the Environmental Fees Act came into force laying out the structure of the acts establishing environmental fees, and is a good platform for continuing ecological tax reform[11].

Fragmented energy conservation potential. The use of fuel and energy in Estonia has become more rational, first and foremost thanks to the modernisation of technology in the energy sector. The existing statistics concerning energy consumption in Estonia confirms a strong increase in energy consumption, rather than consumption becoming more efficient. The influence of small consumers (primarily household consumers) of fuels and energy at the end-user level is increasing, and without broad support from the government it is difficult to achieve any success in the energy conservation policy. From the point of view of implementing the energy conservation policy, problems are also caused by the wide range of possible saving measures: however, at the same time there are some measures that could

[11] Baseline document, "Bases for ecological tax reform," introduced by the Minister of Finance at the Government of the Republic cabinet meeting on 07.07.2005.

deliver results in all sectors. In order to generate small projects across a wide range, solutions have to be found for how operators (those engaged in the sale of fuel and energy, energy specialists, construction specialists, etc), could facilitate the achievement of state energy conservation policy targets.

The energy efficiency aspect is not considered when granting financial support and in public acquisitions. Environmental possibilities, including the energy efficiency aspect, have only been introduced into public procurement legislation relatively recently and there is little experience of handling such procurements. The Estonian Government has also approved the "Estonian Priorities for Environmental and Sustainable Public Procurements for 2007-09"[12].

The energy efficiency aspect is not one on which, for example, providing state support to investments or granting subsistence benefits are based. There is no overview of the energy use of authorities and social organisations, and there are also no comparable standard operating procedures that would deal with energy use criteria for authorities (eg. on the subject of managing rooms, equipment, buildings etc).

Lack of experts. Significant changes in economy have increased the need for specialists who understand modern energy technologies and solutions for more sustainable use of energy and who are able to modernise, design and handle new and existing production units, equipment or facilities. The lack of competent employees is increased by improved opportunities for free movement of labour and low interest among young people in vocational education and engineering sciences. The opportunities for training specialists is more and more hindered by the lack of teachers, which is exacerbated by under-financing of some areas of important research and development activities.

Increased demands of the consumers. Improved living standards in society have brought along higher demands for quality of life of the population. People are using more and more energy-consuming technology to make their work and life more comfortable, and year on year the amount of living space per person is increasing, as well as the needs of building occupants for climate control. Products imported from other countries have found their place in consumption habits and the need for travel has increased. The share of high-quality energy carriers (electricity, engine fuels) is increasing within the framework of fuel and energy consumption. The opportunities for saving fuels and energy are, however, decreasing due to the aforementioned trends.

Limited awareness of the consumer. The awareness levels of the consumer play an important role in the success of realising the energy efficiency policy. There are barriers on several levels: people are unaware of the potential for saving fuels and energy in everyday life and they do not make the connection between their everyday decisions that incur energy expenditure, and the detrimental effect of energy use on the environment; they do not know how to plan and accomplish energy efficiency measures, and they lack the impetus to make appropriate investments. For those companies and municipalities that are in complicated financial positions, as well as for households which have problems with coping with financial difficulties, procuring more sustainable equipment or modernising facilities are a serious problem. Very often the introduction of more sustainable solutions is hindered by contradictory claims regarding their functioning and use – providing small consumers with a lack of independent information in the field of energy efficiency A further problem which is worthy of mention is a fact which restricts the effective realisation of energy efficiency policy **- it is difficult to establish a positive influence on national energy consumption decisions**

[12] Approved at the Government meeting of 22 January 2007.

on the basis of existing national statistics and other databases. Considering only the activities carried out at the Ministry of the Environment (grants to local municipality investments, bringing forth the Energy Efficiency Plan Implementation Plan) it must be acknowledged that the success of the activities is below the statistical error of the state's energy balance. Directive 2006/32/EC provides that a country must ensure reporting that allows assessing the success of the implementation of this Plan.

5. Responsibilities on an international level

5.1. Estonian Responsibilities arising from the European Union membership

Due to membership of the European Union, Estonia is required to adopt EU legislation dealing with energy efficiency. The most important Directives regarding energy efficiency, which are being adopted:

- **Directive 2002/91/EC by the European Parliament and the Council, dated 16 December 2002, on the energy performance of buildings** the central aim of which is to facilitate the efficient use of fuels and energy in the European Union. Pursuant to the Directive a Member State is obliged to:
    - establish the methodology of the calculation for the integrated energy performance of buildings
    - establish minimum requirements on the energy performance of buildings;
    - establish minimum requirements on the energy performance for building new buildings and renovating existing buildings exceeding 1000 m^2;
    - facilitate an increase of the energy performance of boilers, air conditioners and heating devices which are older than fifteen years and which exceed the capacity of 20 kW used in buildings.

In order to ratify the directive, the Building Act, the Building Association Act, the Apartment Ownership Act, the Apartment Associations Act, and the Energy Efficiency of Equipment Act have all been amended. Several sub-clauses and implementation instructions arising from the amendments of the acts have not yet been developed, which is partially due to the lack of the necessary baseline studies and people who would carry them out. The lack of experts and know-how in developing the framework for implementing the directive is acute.

- **Directive 2005/32/EC by the European Parliament and the Council establishing a framework for the setting of ecodesign requirements for energy-using products**. The aim of the Directive is to ensure environmental considerations are taken into account in designing and constructing energy-consuming products. Ratification of the Directive must be carried out no later than 11 August 2007. Estonia has no companies whose activities will be directly influenced by this Directive. The ratification has stated that the most rational course of action would be to harmonise the directive with the amendment of the Energy Efficiency of Equipment Act.
- **Directive 2006/32/EC by the European Parliament and the Council on energy end-use efficiency and energy services.** The Directive entered into force on 17 May 2006 and must be ratified by member states by 17 May 2008. The aims of this Directive are to remove market barriers in order to increase the efficiency of the end-use of fuels and energy. The Directive sets the indicative aim of the improvement of the efficiency of the final consumption and deals with measures for achieving this aim. In addition to the preparation of this Plan, Estonia has to perform the following tasks during the course of adopting the Directive:

- establish how to facilitate provision of energy services;[13]
- establish measures for ensuring the exemplary role of the public sector in improving energy efficiency by applying the principles of green public acquisitions in purchasing buildings, equipment and services;
- determine tasks for companies involved in sales of energy, in activities facilitating the improvement of energy efficiency;
- analyse the financing of energy conservation projects and the provision of energy audits in Estonia;
- improve the availability of data regarding energy use for energy consumers;
- create a reporting system for measuring the success of the realisation of this Plan.

In addition to this legislation, the European Commission has compiled the **Action Plan for Energy Efficiency**[14]**.** While preparing the Action Plan for Energy Efficiency the opinions expressed during the debate following the publication of the European Commission **Green Paper on Energy Efficiency,**[15] were taken into account. Ten prioritised measures have been set forth in the Action Plan, which should facilitate a more rational use of fuels and energy within the European Union and ensure the potential for saving fuels and energy set by the European Commission, ie. **how the EU could achieve a reduction in energy consumption by 20%, as compared to the prognoses of 2020, by placing the emphasis on cost-effectiveness**.

In the final conclusions of the Council of Europe regarding the Action Plan for Energy Efficiency, the highest priority activities were established which conform fully with the measures set forth in the Action Plan for Energy Efficiency and have been separately set forth and listed. According to the opinion of the Council, the key activities for the next six years are the following:

1. Utilisation of the immense energy efficiency potential of the transport sector and application of voluntary agreements or, if necessary, legislation for that purpose;
2. Implementation of energy efficiency minimum requirements on energy-consuming apparatus and equipment, and minimising the energy consumption of the on-hold regimes of equipment;
3. Increasing awareness among energy consumers in order to promote energy efficiency;
4. Supporting energy efficient technological research from different programmes;
5. Continue with the implementation of the requirements arising from the Directive on the energy efficiency of buildings and realise the potential of the energy efficiency of buildings on the basis thereof.

Although it is an Action Plan by the European Commission, Estonia should take the activities arising from the Plan into consideration and be ready to contribute to cross-European cooperation in the field of energy efficiency. The aims and activities of the Action Plan for Energy Efficiency are also highlighted in a broader perspective, ie. in the recently published European Commission **energy and climate change package**[16]**.**

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[13] The physical benefits, utilities or goods which are derived from a combination of energy with energy efficient technology and/or with action, which may include the operations, maintenance and control necessary to deliver the service, which is delivered on the basis of a contract and in normal circumstances has proven to lead to verifiable and measurable or estimable energy efficiency improvement and/or primary energy savings.

[14] COM(2006)545 *Action Plan for Energy Efficiency: Realising the Potential.*

[15] COM(2005)265 *Green Paper on Energy Efficiency or Doing More With Less.*

[16] COM(2007)1 *An Energy Policy for Europe*, COM(2007)2 *Limiting Global Climate Change to 2 degrees Celsius: The way ahead for 2020 and beyond.*

5.2. Estonian responsibilities arising from membership of the Energy Charter

Estonia ratified the Energy Charter Treaty Protocol on Energy Efficiency and Related Environmental Aspects on 11 February 1998. Due to the Protocol, Estonia must participate in developing the policy for making energy use more efficient, and relevant legal and regulative framework. As a party to the Protocol, Estonia must have a programme for energy efficiency which is regularly updated. Estonia must also support the efforts of other countries in making energy use more efficient.

6. Vision for energy efficiency

When setting national energy efficiency targets, account must be taken of Estonia's international obligations and national energy policy aims. On the basis of these, the Estonian vision in the field of fuel and energy saving for the year 2013 is as follows:

The know-how necessary for realising projects for fuel and energy saving is widespread in Estonia. Energy operators and consumers operate in a sustainable way and are motivated to discover new opportunities for saving fuel and energy.

From this vision it can be concluded that if the Plan is successfully realised by 2013 the following will be true:

1. the consumer will have access to versatile and independent information on the opportunities for saving fuel and energy; they will be able to access more information regarding sustainable lifestyles and consumption solutions, and this information is provided proactively;
2. Estonia will have a sufficient number of experts with the necessary skill and knowledge in order to organise and bring to fruition energy efficiency projects, and access will be ensured to relevant training and advisory services in order to seek out opportunities for the fuel and energy efficiency offered by the market;
3. consumers and energy companies will be interested in carrying out energy saving projects and there is a sufficient choice of funding sources, including those for carrying out small projects.
4. Estonia has successfully adopted the European Union directives concerning fuel and energy saving, and the national statistics and other databases allow for an assessment of the impact of measures which have been applied by the state in the area of fuel and energy consumption.

7. Aims and measures of the Plan

7.1. National indicative aim on the basis of Directive 2006/32/EC

Pursuant to Article 4 of the Directive 2006/32/EC, all member states must decrease their energy consumption during the next nine years by 9% in comparison with the average for energy consumption during the period 2000-2005 in the sectors that belong to the scope of the Directive, except for companies which are engaged in trading with emissions in the EU, and for the national defence sector. According to the data supplied by the Statistical Office of Estonia on the final consumption of fuels and energy, the average final consumption of fuels

and energy, excluding the transport sector, formed 85 PJ of which 9% is 7.65 PJ. The Directive anticipates that the member states have to achieve the primary aim during the period 2008-2016. In order to fulfil two-thirds of the task set forth in the Directive during the period 2008-2013, the saving of fuel and energy at the point of end use should be at 5.1 PJ during the period 2008-2013. Due to the fact that the primary aims arising from the Directive are not legally binding for the member states and information regarding the possible success of the measures proposed within the framework of the Plan is not sufficient, determining a numerically expressed aim for improving the efficiency of the use of fuel and energy or the conservation of fuel and energy for the Plan as a whole is premature. The possible impact of the measures and their implementation is being analysed in the light of the minimum national indicative aim given by Directive 2006/32/EC.

7.2. Aims and measures of the Plan and their structure

Bearing in mind national energy policy objectives for the fuel and energy sector, Estonia's EU and international obligations, and the aforementioned factors restricting the improvement of energy efficiency in Estonia and of the energy efficiency policy vision, the general aim of the Plan is to improve the efficiency of the use of fuels and energy and to achieve the saving of fuels and energy. The sub-clauses and measures arising from the general aim and vision on the Plan are as follows:

7.3. The availability of energy-efficiency information

Aim 1: Make the information concerning the saving of fuels and energy more accessible and more usable for energy consumers, the organisers of the energy sector, and energy companies, and ensure that energy efficient equipment is the preferred choice among consumers.

Indicator 1: The percentage of A class equipment on the market of established electrical installations and lamps [the estimated level of 2006 is 50%, the target level in 2013 is at least 75%]

Measures:

1. Advising local authorities in planning the development of the energy sector and related areas
2. Mapping the need for advising companies in the field of energy efficiency as well as advising companies in general
3. Developing new methods for disseminating energy efficiency information
4. Promoting energy efficient consumption solutions and installations
5. Increasing awareness for improving the housing fund (Measure 2.2 of the draft "Estonian Housing Fund Development Plan 2007-2013")
6. Mapping the situation of the housing fund (Measure 2.3 of the draft "Estonian Housing Fund Development Plan 2007-2013")

7.4. Availability of skills and experts

Aim 2: Ensure the provision of lifelong learning in the field of energy efficiency to specialists involved in issues related to energy, the management of construction projects and structures; and increase the number of non-governmental organisations which are providing training in the field of energy efficiency.

Indicator 1: The number of non-governmental organisations which are providing training in the field of energy efficiency [the estimated level for 2006 is three, while the target level for 2013 is at least six]

Measures:

1. The provision of in-service training courses for energy efficiency specialists
2. An analysis of the technical solutions facilitating the rational use of fuels and energy
3. The developing of a provision for energy services

7.5. Increasing efficiency in the consumption, production and transfer of fuels and energy

Aim 3: Improve the opportunities for financing investments which are aimed at saving fuels and energy, and support projects which are aimed at saving fuels and energy.

Indicator 3: Investments made to projects which are aimed at saving fuels and energy as a result of measures implemented by the government during the period 2007-2013 [in total: 1.5 billion EEK]

Measures:

1. Enforcement of the energy saving responsibility of energy companies
2. Stimulating the collection of initial capital necessary for investments, and developing loan products which are aimed at them
3. Improving efficiency in energy production and transfer (priority development aim No 3: development of the energy sector of the "National Strategy for the Use of Structural Funds 2007-2013", "Human Environment Implementation Plan")
4. Supporting small-scale projects by local authorities which are aimed at energy efficiency
5. Increasing the quality and energy efficiency of the housing fund (Measure 2.1 of the draft "Estonian Housing Fund Development Plan 2007-2013")

7.6 Performing tasks arising from the European Union fuels and energy efficiency policy

Aim 4: Ensure the adoption of the Directives of the European Union dealing with fuel and energy efficiency and an assessment of the results of implementation.

Indicator 4: The number of infringement proceedings in force by the European Commission in relation to Estonia in terms of legislation concerning energy efficiency [in 2007 – one, target level in 2010 – zero]

Measures:

1. The adoption of Directives 2002/91/EC, 2005/32/EC and 2006/32/EC
2. Supporting the implementation of the Action Plan for Energy Efficiency COM(2006)545 of the Commission of the European Communities
3. International cooperation in order to make energy use more efficient

Availability of energy-efficiency information

The habits of people in using fuels and energy depend on their awareness, social attitudes and access to alternatives. Several attitudes and processes in Estonian society facilitate increased energy use rather than favouring the spreading of more sustainable consumption habits. Considering the significant proportion of public energy consumption in the general energy consumption of Estonia, measures that concern the majority of the population should be applied in order to achieve the success of the energy efficiency policy. To effect such a major change in attitude for the population, it is necessary to provide versatile information regarding the means to save fuels and energy in the home, and, through new installations, encourage and motivate people to get rid of outdated installations and choose sustainable solutions instead.

The experience of the Ministry of the Environment in cooperation with the county governments and local government has shown that local authorities are eager to apply environmental thinking as a part of the local ethos. In order to expand the remit of the energy efficiency policy, it is necessary to have more active local authorities who consider it important to facilitate sustainability in developing the energy sector (including in buildings, transport, and the use of installations) and are ready to contribute to more energy efficient solutions in their acquisitions. Support from the government, and competent advice and recognition is necessary by county authorities and local authorities who wish to be proactive.

The adoption of energy efficient technical solution could be facilitated by organising public procurements which take into account the relevant criteria. The importance of improving administrative capacity for the organisation of environmental and sustainable public procurement is stressed in “Estonian Priorities for Environmentally-Friendly and Sustainable Public Procurements for 2007-09”.

During the past five years energy consumption has significantly increased in the business and public service sectors due to developments in the private sector. The reasons for the increase in consumption have not been comprehensively analysed, the conventions in handling issues related to energy use are not known. The experiences of foreign countries have shown that an easy way to ensure the promoting of sustainable consumption habits is to promote the monitoring of fuel and energy consumption and improve the availability of the respective comparative data.

Many Estonian manufacturing companies have reached a stage in their development where they have to think of decreasing the labour output ratio and introducing new manufacturing technologies. Supporting new installations and reorganisation of the production processes provides opportunities for making choices for acquiring more sustainable installations. The best possible technologies, the requirements for which may set limitations as to the use of fuels and energy, should be introduced in companies subject to the integrated environmental permit.

The most appropriate ways for providing energy efficiency information to consumers are not fully exploited. The easiest way to draw the attention of the consumer to the need for achieving, and the ways to achieve, the saving of energy is to provide the respective information on energy bills which are sent out regularly. The potential to use information and communications technologies in energy monitoring should be applied more actively (eg. by using them to give regular overviews of consumption).

Measure 1.1	**Advising local authorities in planning for development in the energy sector and related areas**

BACKGROUND TO THE MEASURE	For the purposes of energy efficiency it is necessary to have long-term plans for investment into the energy sector; furthermore, local authorities have an important role in establishing projects that give real savings in fuels and energy. The compiling of energy development plans is necessary for establishing long-term development priorities in the energy sector and planning activities promoting energy efficiency at county and local authority level. It is appropriate to provide assistance for smaller communities through the supporting of energy audits of the property under their control (ie. buildings, district heating networks, street lights systems) or other relevant support (e.g. in compiling documents to facilitate acquisitions etc).
EXPLANATION OF THE MEASURE	**Directions and important actions:** - Supporting the preparation of the energy development plans of local authorities and counties, the assessment of the impact of plans compiled so far - Developing models and requirements for energy audits on public facilities, supporting the performance of energy audits on property belonging to local authorities - The provision of independent energy advice to local authorities and in development projects initiated by the local authorities, plus the preparation, implementation and development of the necessary advisory schemes - Organising information days, seminars, etc, for local authorities and county governments - Supporting the development and distribution of information materials

	Results and indicators	**Target value 2013 or deadline**
OUTPUT-INDICATORS	o Number of authorities whose energy development plan is newer than ten years old [80 in 2007]	a further 40 local authorities
	o The principles of advising local authorities in the field of energy have been determined	31.12.2008

Measure 1.2	**Mapping the need for advising companies in the field of energy efficiency and advising of companies**
BACKGROUND TO THE MEASURE	During recent years energy consumption in industry, and the business and public service sectors, has increased significantly. National statistics do not include data that would allow a change to energy efficiency during the same period to be analysed. An increase in the cost of energy is the most common argument in justifying the increase of prices for services and products. Information regarding the actions and mindset of companies in improving energy efficiency is poor and must be increased. The experiences of foreign countries have shown that companies are not able to pay independent attention to increasing their competitiveness through fuel and energy saving. Often, introducing energy monitoring on a very simple level is sufficient to start observing expenses made on

	energy and to find opportunities for savings.	
EXPLANATION OF THE MEASURE	**Directions and important actions:** - A study is carried out in companies that belong to the sectors that influence energy consumption to a significant extent (industry, business and public service sector) - Positions are developed for stimulating more efficient energy use in industry through education - Dissemination of energy efficiency information aimed at companies, preparation and development of information materials, development and initiation of cooperation schemes for companies	
OUTPUT-INDICATORS	**Results and indicators**	**Target value 2013 or deadline**
	o Number of companies participating in the mapping of needs for advising	50 companies
	o Formed positions	31.12.2008
RESPONSIBLE BODY	Ministry of Economic Affairs and Communications	

Measure 1.3	**Developing new methods for disseminating energy efficiency information**	
BACKGROUND TO THE MEASURE	Where an abundance of information exists, methods for disseminating information regarding energy efficiency to energy consumers must be chosen more effectively. So far, the potential to disseminate information concerning consumption, and information offering comparison with the invoices sent by energy companies has not been exploited by energy companies. A better overview of energy use would help the consumer control energy consumption. To some extent, the media has been used for promoting sustainable consumption habits and saving of fuels and energy. Topical information can be disseminated through TV games, consumer games and other methods.	
EXPLANATION OF THE MEASURE	**Directions and important actions:** - Development of statistical comparative data for different consumer groups for the most significant fuel and energy carriers in order to provide it on energy invoices - Establishing principles for introducing invoices that contain additional data - Analysis of conditions and opportunities for organising related TV and consumer games - Supporting the organisation of TV and consumer games	
OUTPUT-	**Results and indicators**	**Target value 2013 or deadline**

INDICATORS	o Number of companies characterising energy consumption on fuel and energy bills [2007 - 0] o The conditions and opportunities for organising TV and consumer games have been analysed	15 31.12.2009
RESPONSIBLE BODY	Ministry of Economic Affairs and Communications	

Measure 1.4	**Promoting energy efficient consumption solutions and systems**	
BACKGROUND TO THE MEASURE	It is very likely that a lot of outdated and low-efficiency systems are still used in Estonia. In addition to legal, institutional, cultural, social, financial barriers the introduction of new systems and consumption solutions is hindered by the mistrust of consumers. The consumer lacks reliable and independent information regarding available products, as well as the skill and opportunity to compare different products. The spreading of energy-efficient systems and consumption solutions is facilitated by the provision of relevant, trustworthy and independent information regarding consumption solutions available on the market. This information should help to compare systems currently available on the market with those previously offered. Internet portals that have already been developed can be used for disseminating information.	
EXPLANATION OF THE MEASURE	**Directions and important actions:** - Determining the categories of systems of interest (electrical systems, heating systems, cooling and freezing systems, those being used as well as those that could potentially be used) - Appointing a body for organising this measure, if necessary, seeking an external provider - Collection and analysis of technical information regarding systems and consumption solutions (including carrying out tests for comparing systems), establishing protocols for the exchange of information, improving methods for forwarding information - Mediation of information regarding comparative tests of systems carried out in other countries, exchange of information with other countries	
OUTPUT-INDICATORS	**Results and indicators**	**Target value 2013 or deadline**
	o Authority organising the implementation of the established measure, protocols established for information-sharing o Visits of the home page of the information materials 2011 [2007 - 0]	31.12.2010 100 000 contacts
RESPONSIBLE BODY	Ministry of Economic Affairs and Communications	

The measures Increasing Awareness for Improving the Housing Fund (Measure 2.2) and Mapping the Situation of the Housing Fund (Measure 2.3) of the draft "Estonian Housing Sector Development Plan 2007-2013" also give an important contribution to improving awareness among energy consumers, information concerning their contents is available in the draft of the respective plan.

Availability of skills and experts

The rapid development of technology is a further influence upon the industries related to fuel and energy consumption. Spreading awareness and skilled implementation of new knowledge provides the opportunity to facilitate more sustainable use of fuel and energy and ensuring success in international cooperation.

Education that is closely related to the areas determining fuel and energy consumption is provided by several educational institutions. Opportunities for in-service training are limited; courses for improving the knowledge of practicing specialists are organised at the educational institutions in small numbers. There are no companies in Estonia engaged in training engineers and employees in the field of energy; generally, specialists obtain new information through exhibitions, information days and self-study. The interest of associations bringing experts and companies together for organising trainings exists; however, organising courses concerning fuel and energy efficiency requires further stimulation.

The analysis and introduction of consumption solutions aimed at fuel and energy saving has several market barriers. Small consumers of energy (home consumers, small companies) lack the skills, motivation and opportunity to carry out the preparatory analysis prior to introducing new technical solutions; at the same time the widespread implementation of these solutions could facilitate increasing efficiency of fuel and energy consumption in Estonia, or improve the quality of decisions made in planning the energy sector. Carrying out applied studies helps to maintain competence in educational institutions and to grow the next generation of academic staff.

New sources for the sales of fuels and energy to the consumer offer solutions for stimulating the introduction of sustainable solutions that cannot be guaranteed with the classic principles of the sale of fuel and energy alone. Where low prices for energy exist, neither the consumer nor the supplier have the desire to invest in sustainable systems when offering energy services; however, the energy supplier has a clear stimulus to offer modern solutions with the purpose of optimising energy consumption. Estonia has yet to consider business models that would safeguard the interests of energy companies whilst increasing energy efficiency at consumer level.

Measure 2.1	**Provision of energy efficiency in-service training courses for specialists**
BACKGROUND TO THE MEASURE	The development of technology nowadays is fast and sets the specialists the challenge to study constantly in order to keep pace, including in areas related to energy efficiency. The measures that the government has taken so far cannot ensure sufficient preparation of specialists: the specialists lack motivation, there is a lack of individuals offering training as well as courses. Organisations matching experts to companies are not able (due to very little or no assistance to their activities) to make sufficient contribution to propagating new knowledge and skills, ie. it is imperative to have government help in developing training and coordinating activities of different organisations.

EXPLANATION OF THE MEASURE	**Directions and important actions:** - Determining target groups and specialities of interest, cooperation with target groups for mapping training needs, developing training principles - Developing the scheme for supporting training, and if necessary solving problems related to the granting of state aid - Supporting the publication of suitable training and information material, identifying individuals actively involved in training	
OUTPUT-INDICATORS	**Results and indicators**	**Target value 2013 or deadline**
	o Identified training needs for specialists and developed training principles in cooperation with the most important associations of specialists and companies in the field of energy	30.06.2008
RESPONSIBLE BODY	Ministry of Economic Affairs and Communications	

Measure 2.2	**Analysis of technical solutions facilitating the rational use of fuels and energy**
BACKGROUND TO THE MEASURE	Successful implementation of the energy policy requires high quality information regarding the current situation of the energy sector and possible development trends that established sources of information and data collection do not deal with, however, these can be established through research. From the point of view of high-quality implementation of the energy efficiency policy, it is necessary to carry out several studies into favourable consumption solutions under Estonian conditions (techno-economical opportunities for their implementation and achievement of results), the structure of energy consumption and which facilities and circumstances exist for managing energy consumption, the impact of national measures on the use of consumption solutions etc. Furthermore, the quality of information sources pertaining to the use of systems consuming fuel and energy needs to be improved. Constant monitoring of the analysis of technical solutions, which are considered promising under Estonian conditions, is also necessary for maintaining and developing competence at research institutions and providers of technical education.
EXPLANATION OF THE MEASURE	**Directions and important actions:** - Organising analysis of the potential for consumption management and a sample project - Developing the concept of low-energy consumption buildings - Developing renovation models for buildings built on the basis of a standard design, mapping the conditions of apartment buildings - Analysis of the use of electrical systems, electric lighting and lamps - Impact of national measures on the use of consumption solutions - The state register of construction works is supplemented with the data concerning the use of boiler systems, heat pumps and air

	conditioners - Procurements of research, introduction of other consumption solutions facilitating perspective energy saving, and if necessary carrying out further research	
OUTPUT-INDICATORS	**Results and indicators**	**Target value 2013 or deadline**
	o Development of renovation models for apartment buildings built on the basis of standard design o Analysis carried out on the use of electrical systems, electric lighting and lamps o Analysis carried out on the potential for consumption management together with a sample project o Augmentation of a housing development concept with low-energy consumption o Impact of state measures on the use of consumption solutions	31.12.2010 31.12.2011 31.12.2012 31.12.2012 31.12.2013
RESPONSIBLE BODY	Ministry of Economic Affairs and Communications	

Measure 2.3	**Developing of provision of energy services**
BACKGROUND TO THE MEASURE	A serious obstacle for the improvement of energy efficiency is the fact that consumers buy energy in order to run systems they have purchased. Unfortunately, consumers are rather passive in procuring new systems and they continue to use old and inefficient equipment. In providing a complete energy service the energy supplier, in addition to the energy, should also provide the required system and is obliged to ensure the functioning of the system to an agreed standard (for example a lighting system has to provide consumers with lighting to a certain level, a heating system must be able to maintain a certain temperature in the rooms etc.). Due to the fact that the manufacturer is responsible for purchasing the system, it should be in the best interests of the producer to invest into sustainable systems for the purpose of maximising profit. So far there is no information in Estonia regarding the foundations for providing energy services. There is no common understanding of the nature of energy services and the principles of their provision, no relevant contracts have been developed between the energy suppliers and consumers, functioning of energy services has not been tested in practice , nor has any assessment been carried out into the saving of fuels or energy as a result of implementation of available energy services.

EXPLANATION OF THE MEASURE	**Directions and important actions:** - Determining the possible areas for the provision of energy services in Estonia, developing conditions and principles for their provision - Determining legal foundations for the provision of energy services, developing sample contracts between energy suppliers and consumers - Test provision of energy services - Promotion of the concept of energy services	
OUTPUT-INDICATORS	**Results and indicators**	**Target value 2013 or deadline**
	o Areas for the provision of energy services and conditions and principles for their provision have been established	31.12.2011
RESPONSIBLE BODY	Ministry of Economic Affairs and Communications	

Increasing efficiency in consumption, production and transfer of fuels and energy

Although people may be ready to act when it comes to saving fuels and energy, and use more sustainable equipment or technical solutions, they often lack the financial capability to introduce sustainable solutions. In order to achieve saving of fuels and energy in Estonia, a number of small projects should be initiated. In order to achieve success it is necessary to expand the scope of the current energy saving policy and stimulate investment into energy efficiency. In addition to projects aimed at saving fuels and energy by local and state authorities, it is important to reach small and medium-sized enterprises and households.
Taking into account the fact that the institutions issuing state grants have so far been involved with a significantly narrower target group, and that there is a wish to decrease governmental expenses, energy companies should be proactively included in the implementation of the fuel and energy saving potential at the level of the end-user.
The measures of the draft "Estonian Housing Sector Development Plan 2007-2013" are generally focused on improving energy efficiency in apartment buildings; information regarding the potential for saving fuel and energy in small houses is only available to a lesser extent. The state has the potential to facilitate investment into fuel and energy saving by encouraging, for example, the collection of initial capital necessary for energy-saving investment. The support mechanisms involving business have not been analysed either. Estonia is planning to support projects aimed at improving energy efficiency in apartment buildings and modernize infrastructure of the energy sector during the new budget period of the EU. It is expected that the interest of local authorities in carrying out small energy saving projects, the supporting of which from the EU Structural Finds is not justified due to the small scale, will remain.

Measure 3.1	**Enforcement of the energy saving responsibility of energy companies**
BACKGROUND OF THE MEASURE	The activities of Estonian energy companies in improving the energy efficient use of fuels and energy at the end-user level is minimal. The energy saving responsibility of companies is defined as the duty of operators to facilitate the energy-efficient activities of the consumer (e.g. to ensure that consumer projects aimed at saving fuel and energy, are supported and thus are committed to achieving an annual saving to a

	certain level,). The potential for companies to communicate with the energy consumer is better than those of state authorities involved in energy issues. The idea of the energy-saving responsibilities of companies has not been analysed; it is necessary to establish an appropriate set of companies, to specify the potential for their clients to save fuel and energy, to support energy saving-consumer projects , to monitor the fulfilment of the commitment and the framework for supervision. As well as analysing implementation opportunities and the energy saving responsibility of energy companies, new options for replacing the pollution charge imposed upon companies should be considered. The obligation to pay the pollution charge could be replaced with the obligation to finance consumer energy saving measures.
EXPLANATION OF THE MEASURE	**Directions and important activities:** - Developing the foundations for the implementation of the energy-saving commitments of companies, analysis of the alternative support schemes and their implementation through legislation, if necessary solving the set of problems related to granting state aid - Developing recommended criteria for the selection of projects supported within the framework of the energy-saving responsibility of companies on the basis of the typical, economically justified alternatives for end-user energy saving and the communication of such opportunities, readiness of the consumers and scope of obligation - Organising supervision of the performance of the energy-saving responsibility of companies and assessment of results
OUTPUT-INDICATORS	**Results and indicators** / **Target value 2013 or deadline** o The foundations for the implementation of the energy-saving responsibility of companies and draft legislation has been developed / 30.06.2009
RESPONSIBLE BODY	Ministry of Economic Affairs and Communications

Measure 3.2	**Stimulating the collection of initial capital necessary for investment and developing loan products aimed at them**
BACKGROUND TO THE MEASURE	The income tax incentive of re-invested capital of companies has had a very positive effect on the development of companies in Estonia. The stimulus for an individual to behave in a sustainable manner is minimal. The projects aimed at saving of fuel and energy often require large-scale construction activity, the financing of which could be problematic without an alternative source of initial capital. Household consumers see no point in saving (ie. collecting capital for making investment into energy saving); very often the contributions made to the repairs fund in housing associations are minimal. In order to generate enthusiasm in energy consumers (first and foremost in individuals and housing associations) to carry out projects aimed at saving fuel and energy, collection of capital necessary for investment must be stimulated. When encouraging collection of capital, cooperation of the state with credit institutions for the purposes of developing loan products could be

	promising for the future. The development of new loan instruments in the short-term economic situation could prove impractical. The "Estonian Government Action Plan for 2007-11"[17] does not provide for any new tax incentives to be established. The Ministry of Finance should be consulted when developing instruments to facilitate the collection of capital necessary for environment investment.
EXPLANATION OF THE MEASURE	**Directions and important actions:** - Determining incentives for collection of initial capital necessary for making suitable energy-saving investment, developing principles, legislation and guidelines necessary for implementation, and if necessary solving problems related to granting state aid - Informing target groups of the measure - Monitoring the impact of the measure
OUTPUT-INDICATORS	**Results and indicators** / **Target value 2013 or deadline** o Analysis of incentives for collection of initial capital necessary for making energy-saving investment, related proposals for amending legislation / 30.06.2010
RESPONSIBLE BODY	Ministry of Economic Affairs and Communications

Measure 3.3	**Improving efficiency in energy production and transfer**
BACKGROUND TO THE MEASURE	Modernising the energy infrastructure and reducing losses in energy production and transfer networks, in the electricity sector as well as district heating, continues to be an issue in Estonia. It is proposed that projects aimed at improving efficiency of the energy sector will be supported from the EU Structural Funds during the period 2007-2013. The energy market regulator should also continue to stimulate energy companies' taking action towards greater fuel and energy efficiency by means of price regulation. The methodology and regulations used to set and coordinate energy company service prices should take account of the latest technological possibilities to increase energy production and transmission efficiency. Regulatory measures to improve efficiency in energy production and transmission are implemented as part of the transposition of Directive 2006/32/EU.
EXPLANATION OF THE MEASURE	**Directions and important actions:** - Complying with the conditions necessary for the support of the EU Structural Funds (developing legislation necessary for the implementation of the measure, solving the problems related to granting state aid, developing guidelines, organising application rounds etc) - Supporting the reconstruction and development of district heating systems (fuel supply, boiler houses, networks) - Supporting the building of combined heating and electricity

[17] Approved at the Government meeting of 31 May 2007.

	production stations	
OUTPUT-INDICATORS	**Results and indicators**	**Target value 2013 or deadline**
	o The EU Structural Funds are open to projects aimed at developing the energy sector (dependent upon application)	30.04.2008
	o The EU Structural Funds have been efficiently implemented for supporting projects aimed at developing the energy sector	31.12.2013
RESPONSIBLE BODY	Ministry of Economic Affairs and Communications, Ministry of the Environment	

Measure 3.4	**Supporting small-scale projects by local authorities aimed at energy efficiency**
BACKGROUND TO THE MEASURE	A considerable part of the energy consumption of the public sector is due to the requirements of local authorities and their institutions. The opportunity for local authorities to carry out energy-saving investment continues to be limited. Without the state's attention to improving energy efficiency in the public sector, including at the level of local authorities, an important part of the foundation necessary for realising the energy-saving policy will be lacking. Investment grants to local authorities have been approved since regaining independence. Proactive application for grants by local authorities has continued to be high, due in part to the attractive assistance available for smaller authorities. Continued provision of investment grants are necessary in order to ensure the interest of local authorities for dealing with energy sector issues and realising small projects.
EXPLANATION OF THE MEASURE	**Directions and important actions:** - Supplementing the criteria for supporting small-scale projects of local authorities aimed at saving fuel and energy with the publication of guideline materials and dissemination of information - Organising application processes in cooperation with local government - Granting investment for small-scale projects by local authorities aimed at saving fuel and energy, and if necessary solving problems related to granting state aid, supervision over the carrying out of projects - Dissemination of information and reporting regarding supported projects
OUTPUT-	**Results and indicators** / **Target value 2013 or deadline**

INDICATORS	o The criteria for supporting small-scale projects by local authorities aimed at saving fuel and energy and the necessary guidelines have been published o Support for small-scale projects by local authorities aimed at saving fuel and energy is efficiently organised	31.12.2007 31.12.2013
RESPONSIBLE BODY	Ministry of Economic Affairs and Communications	

The measure "Increasing the quality and energy efficiency of the housing fund" (Measure 2.1) of the draft "Estonian Housing Sector Development Plan 2007-2013" ensures improvement of energy efficiency in the housing sector; information regarding its contents is available in the Plan document.

Actions arising from the European Union fuels and energy efficiency policy

In the past the EU has significantly intensified work in the field of improving energy efficiency and has implemented legislation with far-reaching consequences. Their ratification requires significant change in the relevant legislation and intensive supporting activity (e.g. dissemination of information, ensuring availability of new services, developing measures, standards and methodology etc.). In addition to fulfilling national commitments, the Estonian authorities are required to participate in developing new measures aimed at improving energy efficiency, and furthermore to report on the adoption of the EU legislation and their impact in Estonia.
Although the importance of Estonia in terms of global energy is modest and the potential to influence trends in the energy market through improving energy efficiency are non-existent, Estonia is sensitive to the increase in energy prices and environmental impact. The increasing ability for suppliers to control prices within the energy market needs balancing and countries importing fuel and energy need to support international efforts in conserving them. International efforts in the sector are beneficial to Estonia.

Measure 4.1	**Ratification of Directives 2002/91/EC, 2005/32/EC and 2006/32/EC**
BACKGROUND TO THE MEASURE	Estonia must ensure fulfilment of the obligations arising from membership of the European Union and adopt EU Directives that are aimed at making fuel and energy use more efficient. Estonian legislation does not reflect many of the requirements of these Directives, hence it is necessary to produce supporting material and carry out supportive projects in order to facilitate implementation of the new legislation. A more detailed overview of the activities for adopting the Directive 2006/32/EC is set forth in Annex 2 to this document; implementation of the plan for adoption of the Directive 2002/91/EC is being executed, and the development of the amendment for the Energy Efficiency of Equipment Act ratifying the Directive 2005/32/EC is in its final stage.
EXPLANATION	**Directions and important actions:**

OF THE MEASURE	- Effecting the implementation plans for the Directives - Reporting regarding the adoption and impact of the Directives	
OUTPUT-INDICATORS	**Results and indicators**	**Target value 2013 or deadline**
	o The requirements arising from the Directive 2002/91/EC have been appended to Estonian legislation and function in reality	01.01.2009
	o The requirements arising from the Directive 2005/32/EC have been appended to Estonian legislation and function in reality	31.12.2007
	o The requirements arising from the Directive 2006/32/EC have been appended to Estonian legislation and function in reality	17.05.2008
RESPONSIBLE BODY	Ministry of Economic Affairs and Communications	

Measure 4.2	**Supporting the implementation of the Action Plan for Energy Efficiency COM(2006)545 of the Commission of the European Communities**	
BACKGROUND OF THE MEASURE	The Action Plan for Energy of the Commission of the European Communities includes several actions that directly concern the member states. Estonia must be ready for the additional efforts required by the EU in the field of energy efficiency and participate actively in the debate on measures for increasing the efficiency of energy use at EU level. A more detailed overview of the actions for Estonia in realising the Action Plan is set forth in Annex 3 to this Document.	
EXPLANATION OF THE MEASURE	**Directions and important actions:** - Analysis of the measures arising from the Action Plan - Assessment of how far the additional measures for improving efficiency of the EU energy use can be applied; participation in developing measures arising from the Action Plan and in related decision-making process at the EU level, and the implementation in Estonia - Participation in EU working groups dealing with the energy efficiency topic - Dissemination of information regarding EU initiatives and programmes in the field of energy efficiency; determining the principles for supporting the participation of Estonian partners in EU programmes and, if possible, co-financing participation in the projects	
OUTPUT-	**Results and indicators**	**Target value 2013 or deadline**

INDICATORS	o Impact of the EU Action Plan for Energy Efficiency forms part of the analysis of the success of implementation of the Energy Plan	31.12.2010
RESPONSIBLE BODY	Ministry of Economic Affairs and Communications	

Measure 4.3	**International cooperation in making energy use more efficient**
BACKGROUND TO THE MEASURE	According to the "Estonian Development Cooperation and Humanitarian Aid Development Plan 2006–2010"[18] Estonia provides international humanitarian and development aid in several sectors, including in supporting the development of economic sustainability . Conserving fuel and energy is one of the ways in which both economic and environmentally-friendly development can be supported. So far Estonia has provided significant amounts of development aid to countries like Georgia, Ukraine and Armenia who face the same problems as Estonia in the energy sector – a high percentage of household consumption and low efficiency of the infrastructure servicing it (district heating, electricity networks), low efficiency in the consumption of fuel and energy, and a monopoly in terms of some fuels. Considering the importance of protecting supply (energy security), and the possible contribution of energy efficiency in improving that protection, Estonia should observe the development of policies aimed at saving energy and fuel in nearby regions (neighbouring countries belonging to the same energy system, including in North-West Russia).
EXPLANATION OF THE MEASURE	**Directions and important actions:** - Establishing cooperation partners and cooperation principles - Introduction of Estonian experience in modernising buildings and infrastructure - Supporting projects aimed at saving fuel and energy within the framework of development cooperation

OUTPUT-INDICATORS	**Results and indicators**	**Target value 2013 or deadline**
	o Priorities in providing development aid in the field of energy efficiency	31.12.2010
	o Number of projects supported under the development aid programme (each year from 2010) in the field of energy efficiency [0 up to 2007]	3
	o Functioning exchange of information with neighbouring regions with authorities responsible for the development of the energy sector	31.12.2013

[18] approved by Order No 281 by the Government of the Republic, dated 11.05.2006

RESPONSIBLE BODY	Ministry of Foreign Affairs, Ministry of Economic Affairs and Communications

8. Monitoring and management of the implementation of the Plan

The "Energy Efficiency Plan 2007-2013" is implemented through the activities of the Ministry of Economic Affairs and Communications (Ministry of the Environment) in conjunction with the Ministry of the Environment and Ministry of Finance. National organisations, energy companies, academic institutions and other interest groups will be included in the implementation of the programme. Further acquisition may be necessary, ,or framework agreements constructed, in order for the programme to be realised. Pursuant to the Directive 2006/32/EC the Plan will be updated at least once every three years.

Fuel and energy efficiency policy is juts one part of Estonia's energy policy. The "Energy Efficiency Plan 2007-2013" sets out how the "Long-term National Development Plan for the Fuel and Energy Sector Until 2015" is to be implemented in the energy efficiency sector. The implementation plan drawn up pursuant to Regulation No 302 of the Government of the Republic, dated 13 December 2005 "Types of strategic development plans, the procedure for their preparation, amendment, implementation and evaluation and the reporting procedure", sets out in greater detail the actions to be carried out, enforcers and outputs for the period 2007-09. The actions arising from the Plan are reflected in the working plan of the Ministry of the Environment. Supervision of the implementation is based on regular assessment of the results of the measures and sub-actions included in the Plan. Data required for assessment is collected through research, and data collected through administration is applied. Observations, research and analysis related to the sector are carried out in order to review and assess the results of the Plan.

The Ministry of the Environment is responsible for the direct performance of the Plan. In September of each year the Ministry of the Environment assesses the results of actions on the basis of national statistics and departmental data, reports to the Government of the Republic on the performance of the Plan, achievement of the aims set forth in the Plan and results of the measures, and if necessary makes proposals for updating or ending the Plan. No later than 15 June 2011, the Ministry of the Environment submits to the Government of the Republic the supplement to the "Energy Efficiency Plan 2007-2013" to be submitted to the European commission, which allows for the approval of additional measures to conserve fuel and energy as set forth in the Directive 2006/32/EC, depending on the successful implementation of the plan up to that point..

9. Annexes

Annex 1: Estimation of the cost of realisation of the Plan by measures and areas
Annex 2: Overview of actions necessary for the adoption of Directive 2006/32/EC
Annex 3: Overview of recommended actions in Estonia in support of the Commission Action Plan for Energy Efficiency COM(2006)545
Annex 4: Relationship between the objectives and measures contained in the "Energy Efficiency Plan 2007-13" and action planned in other national strategy documents

Annex 1: Estimation of the cost of realisation of the Plan by measures and areas

Annex 1.1.1. Estimation of the cost of realisation of the "Energy Efficiency Plan 2007-2013" by measures (actions arising directly from the program)

Measure	Name	Costs, th. EEK (1)	Total	2007	2008	2009	2010	2011	2012	2013	sources for covering, th. EEK (2)	Total	2007	2008	2009	2010	2011	2012	2013
1. Availability of energy-efficiency information																			
1.1. Advising local municipalities in planning the development in the energy sector and related areas																			
1.1.		Total	5,067	480	647	596	799	823	848	874	Total	5,068	480	647	596	800	823	848	874
1.1.		MoE	3,951	480	528	554	571	588	606	624	State budget	4,08	360	515	457	657	676	697	718
1.1.		MoEa	161	0	119	42	0	0	0	0	Local municip.	988	120	132	139	143	147	151	156
1.1.		KredEx	955	0	0	0	228	235	242	250									
1.2.Mapping the need for advising companies in the field of energy efficiency and advising of companies																			
1.2.		Total	144	144	0	0	0	0	0		Total	144	144	0	0	0	0	0	0
1.2.		MoEa	144	144	0	0	0	0	0	0	State budget	144	144	0	0	0	0	0	0
1.3. Developing new methods for disseminating energy efficiency information																			
1.3.		Total	3,874	0	0	111	1,006	2,757	0		Total	3,874	0	0	111	1,006	2,757	0	0
1.3.		MoEa	3,874	0	0	111	1,006	2,757	0		State budget	3,874	0	0	111	1,006	2,757	0	0
1.4. Promoting energy efficient consumption solutions and installations																			
1.4.		Total	235	0	0	0	114	39	40	42	Total	235	0	0	0	114	39	40	42
1.4.		MoEa	235	0	0	0	114	39	40	42	State budget	235	0	0	0	114	39	40	42
1.5. Developing green public procurements																			
1.5.		Total	426	0	0	139	228	59	0		Total	426	0	0	139	228	59	0	0
1.5.		MoF	287	0	0	0	228	59	0		State budget	426	0	0	139	228	59	0	0
1.5.		MoEa	139	0	0	139	0	0	0										
2. Availability of skills and experts																			
2.1. Provision of energy efficiency in-service training courses for specialists																			
2.1.		Total	618	0	0	0	114	163	168	173	Total	618	0	0	0	114	163	168	173
2.1.		MoE	504	0	0	0	0	163	168	173	State budget	618	0	0	0	114	163	168	173
2.1.		MoEa	114	0	0	0	114	0	0	0									
2.2. Analysis of technical solutions facilitating rational use of fuels and energy																			
2.2.		Total	7,562	0	0	732	2,000	2,673	1,575	582	Total	7,562	0	0	732	2,000	2,673	1,575	582
2.2.		MoEa	7,562	0	0	732	2,000	2,673	1,575	582	State budget	7,562	0	0	732	2,000	2,673	1,575	582
2.3. Developing of provision of energy services																			

2.3.		Total	450	0	0	0	0	221	159	70	Total	450	0	0	0	0	221	159	70
2.3.		MoEa	450	0	0	0	0	221	159	70	State budget	450	0	0	0	0	221	159	70
3. Increasing efficiency in consumption, production and transfer of fuels and energy																			
3.1. Implementation of the energy saving obligation of the energy companies																			
3.1.		Total	778	48	370	360	0	0	0	0	Total	778	48	370	360	0	0	0	0
3.1.		MoE	418	48	370	0	0	0	0	0	State budget	778	48	370	360	0	0	0	0
3.1.		MoEa	360	0	0	360	0	0	0	0									
3.2. Stimulating the collection of initial capital necessary for investments and developing loan products aimed at them																			
3.2.		Total	462	0	185	277	0	0	0	0	Total	462	0	185	277	0	0	0	0
3.2.		MoE	351	0	185	166	0	0	0	0	State budget	462	0	185	277	0	0	0	0
3.2.		MoEa	111	0	0	111	0	0	0	0									
3.4. Supporting small-scale projects of local municipalities aimed at energy efficiency																			
3.4.		Total	33,247	4,359	4,378	4,388	4,395	5,235	5,242	5,250	Total	33,248	4,359	4,378	4,388	4,395	5,235	5,242	5,250
3.4.		MoE	33,247	4,359	4,378	4,388	4,395	5,235	5,242	5,250	State budget	20,580	2,692	2,711	2,722	2,728	3,235	3,242	3,250
3.4.											Local municip.	12,668	1,667	1,667	1,667	1,667	2,000	2,000	2,000
4. Performing tasks arising from the European Union fuels and energy efficiency policy																			
4.1. Transposition of Directives 2002/91/EC, 2005/32/EC and 2006/32/EC																			
4.1.		Total	23,596	4,131	3,222	5,023	4,392	3,200	1,788	1,840	Total	23,598	4,131	3,222	5,024	4,393	3,200	1,788	1,840
4.1.		MoE	12,441	1,205	1,353	2,538	3,250	2,435	818	842	State budget	17,743	2,566	2,667	4,094	2,713	2,075	1,788	1,840
4.1.		MoEa	11,115	2,926	1,869	2,485	1,142	765	970	998	EU-TF	1,565	1,565	0	0	0	0	0	0
4.1.		KredEx	0	0	0	0	0	0	0	0	EU-IEE	540	0	180	180	180	0	0	0
4.1.											Switzerland	3,750	0	375	750	1,500	1,125	0	0
4.2. Supporting the implementation of the Action Plan for Energy Efficiency COM(2006)545 of the Commission of the European Communities																			
4.2.		Total	7,646	737	1,721	2,971	1,387	514	222	94	Total	7,646	737	1,721	2,971	1,387	514	222	94
4.2.		MoE	1,972	624	412	435	248	176	61	16	State budget	7,646	737	1,721	2,971	1,387	514	222	94
4.2.		MoEa	5,080	101	1,045	2,218	1,139	338	161	78									
4.2.		EMI	107	12	26	69	0	0	0	0									
4.2.		MoE-TI	487	0	238	249	0	0	0	0									
4.3. Development cooperation in making the energy use more efficient																			
4.3.		Total	5,429	0	0	0	171	1,745	1,752	1,760	Total	5,429	0	0	0	171	1,745	1,752	1,760
4.3.		MoE	171	0	0	0	171	0	0	0	State budget	5,429	0	0	0	171	1,745	1,752	1,760
4.3.		MoEa	757	0	0	0	0	245	252	260									
4.3.		MoFa	4,500	0	0	0	0	1,500	1,500	1,500									

Comments:

(1) The name of the body realizing the measure and the planned expenses related to the realization of the measure are set forth on the row of costs. Abbreviations used are the following:
MoE- Ministry of Economic Affairs and Communications
MoEa- services purchased by the Ministry of Economic Affairs and Communications
MoF – Ministry of Finance
MoFa – Ministry of Foreign Affairs
Private sector-MoEn – activities carried out by the private sector, which are supported from the Structural Funds through the “Human Environment Development Implementation Plan” coordinated by the Ministry of the Environment
EMI – Energy Market Inspectorate
MoE-TI – Ministry of Economic Affairs and Communications (Technical Inspectorate)
KredEx – foundation KredEx

(2) Sources from which the financing of the measure is planned are listed in the sources for cover row. Abbreviations used in the table are the following:
NorwayEEC – financial mechanism of Norway and the European Economic Area
Local municp. – local municipalities
EU-IEE – European Union Energy Programme “Intelligent Energy Europe”
EU-ERDF – European Union Regional Development Fund
EU-TF – European Union Transition Fund

Annex 1.1.2. Estimation of the cost of realisation of the "Energy Efficiency Plan 2007-2013" by areas
(actions arising directly from the program)

Measure	Name	Costs, th. EEK (1)	Total	2007	2008	2009	2010	2011	2012	2013	sources for covering, th. EEK (2)	Total	2007	2008	2009	2010	2011	2012	2013
1. Availability of energy-efficiency information																			
		Total	9,746	624	647	846	2,147	3,678	888	916	Total	9,746	624	647	846	2,148	3,678	888	916
		MoE	3,951	480	528	554	571	588	606	624	State budget	8,759	504	515	707	2,005	3,531	737	760
		MoEa	4,553	144	119	292	1,120	2,796	40	42	Local municip.	988	120	132	139	143	147	151	156
		KredEx	955	0	0	0	228	235	242	250									
		MoF	287	0	0	0	228	59	0	0									
2. Availability of skills and experts																			
		Total	8,630	0	0	732	2, 114	3,057	1,902	825	Total	8,630	0	0	732	2, 114	3,057	1,902	825
		MoE	504	0	0	0	0	163	168	173	State budget	8,630	0	0	732	2, 114	3,057	1,902	825
		MoEa	8,126	0	0	732	2, 114	2,894	1,734	652									
3. Increasing efficiency in consumption, production and transfer of fuels and energy																			
		Total	34,487	4,407	4,933	5,025	4,395	5,235	5,242	5,250	Total	34,488	4,407	4,933	5,025	4,395	5,235	5,242	5,250
		MoE	34,016	4,407	4,933	4,554	4,395	5,235	5,242	5,250	State budget	21,820	2,740	3,266	3,359	2,728	3,235	3,242	3,250
		MoEa	471	0	0	471	0	0	0	0	Local municip.	12,668	1,667	1,667	1,667	1,667	2,000	2,000	2,000
4. Performing tasks arising from the European Union fuels and energy efficiency policy																			
		Total	36,671	4,868	4,943	7,994	5,950	5,459	3,762	3,694	Total	36,6731	4,868	4,943	7,995	5,951	5,459	3,762	3,694
		MoE	14,584	1,829	1,765	2,973	3,669	2,611	879	858	State budget	30,818	3,303	4,388	7,065	4,271	4,334	3,762	3,694
		MoEa	16,992	3,027	2,914	4,703	2,281	1,348	1,383	1,336	EU-TF	1,565	1,565	0	0	0	0	0	0
		KredEx	0	0	0	0	0	0	0	0	EU-IEE	540	0	180	180	180	0	0	0
		EMI	107	12	26	69	0	0	0	0	Switzerland	3,750	0	375	750	1,500	1,125	0	0
		MoE-TI	487	0	238	249	0	0	0	0									
		MoFa	4,500	0	0	0	0	1,500	1,500	1,500									
1.1 ALL AREAS																			
		Total	89,534	9,899	10,523	14,597	14,606	17,429	11,794	10,685	Total	89,538	9,899	10,523	14,599	14,608	17,429	11,794	10,685
		MoE	53,055	6,716	7,226	8,081	8,635	8,597	6,895	6,905	State budget	70,027	6,547	8,169	11,863	11,118	14,157	9,643	8,529

		MoEa	30,142	3,171	3,033	6,198	5,515	7,038	3,157	2,030	EU-TF	1,565	1,565	0	0	0	0	0	0
		EMI	107	12	26	69	0	0	0	0	EU-IEE	540	0	180	180	180	0	0	0
		MoF	287	0	0	0	228	59	0	0	Switzerland	3,750	0	375	750	1,500	1,125	0	0
		MoFa	4,500	0	0	0	0	1,500	1,500	1,500	Local municip.	13,656	1,787	1,799	1,806	1,810	2,147	2,151	2,156
		MoE-TI	487	0	238	249	0	0	0	0									
		KredEx	955	0	0	0	228	235	242	250									

Annex 1.2.1. Estimation of the cost of realisation of the "Energy Efficiency Plan 2007-2013" by measures
(in combination with the actions aimed at fuel and energy saving, which are planned to be brought into effect within the framework of implementation of other development plans)

Measure	Name	Costs, th. EEK (1)	Total	2007	2008	2009	2010	2011	2012	2013	sources for covering, th. EEK (2)	Total	2007	2008	2009	2010	2011	2012	2013
1. Availability of energy-efficiency information																			
1.1. Advising local municipalities in planning the development in the energy sector and related areas																			
1.1.		Total	5,067	480	647	596	799	823	848	874	Total	5,068	480	647	596	800	823	848	874
1.1.		MoE	3,951	480	528	554	571	588	606	624	State budget	4,080	360	515	457	657	676	697	718
1.1.		MoEa	161	0	119	42	0	0	0	0	NorwayEEA	0	0	0	0	0	0	0	0
1.1.		KredEx	955	0	0	0	228	235	242	250	Local municip.	988	120	132	139	143	147	151	156
1.2.Mapping the need for advising companies in the field of energy efficiency and advising of companies																			
1.2.		Total	144	144	0	0	0	0	0		Total	144	144	0	0	0	0	0	0
1.2.		MoEa	144	144	0	0	0	0	0	0	State budget	144	144	0	0	0	0	0	0
1.3. Developing new methods for disseminating energy efficiency information																			
1.3.		Total	3,874	0	0	111	1,006	2,757	0		Total	3,874	0	0	111	1,006	2,757	0	0
1.3.		MoEa	3,874	0	0	111	1,006	2,757	0		State budget	3,874	0	0	111	1,006	2,757	0	0
1.4. Promoting energy efficient consumption solutions and installations																			
1.4.		Total	235	0	0	0	114	39	40	42	Total	235	0	0	0	114	39	40	42
1.4.		MoEa	235	0	0	0	114	39	40	42	State budget	235	0	0	0	114	39	40	42
1.5. Developing green public procurements																			
1.5.		Total	426	0	0	139	228	59	0		Total	426	0	0	139	228	59	0	0
1.5.		MoF	287	0	0	0	228	59	0		State budget	426	0	0	139	228	59	0	0
1.5.		MoEa	139	0	0	139	0	0	0										
1.6. Increasing awareness for improving the housing fund (3)																			
1.6.		Total	105,363	6,483	6,500	6,500	6,500	26,460	26,460	26,460	Total	105,363	6,483	6,500	6,500	6,500	26,460	26,460	26,460
1.6.		MoE	105,363	6,483	6,500	6,500	6,500	26,460	26,460	26,460	State budget	91,643	5,503	4,540	4,050	4,050	24,500	24,500	24,500
1.6.											EU-ERDF	13,720	980	1,960	2,450	2,450	1,960	1,960	1,960
1.6.																			
1.7. Mapping the situation of the housing fund																			
1.7.		Total	72,789	6,082	8,923	9,896	8,114	13,267	13,267	13,267	Total	72,789	6,082	8,923	9,896	8,114	13,267	13,267	13,267
1.7.		MoE	72,789	6,082	8,923	9,896	8,114	13,267	13,267	13,267	State budget	43,388	4,122	3,043	3,989	2,234	10,000	10,000	10,000
1.7.											EU-ERDF	29,401	1,960	5,880	5,880	5,880	3,267	3,267	3,267

1.7.																			
2. Availability of skills and experts																			
2.1. Provision of energy efficiency in-service training courses for specialists																			
2.1.		Total	618	0	0	0	114	163	168	173	Total	618	0	0	0	114	163	168	173
2.1.		MoE	504	0	0	0	0	163	168	173	State budget	618	0	0	0	114	163	168	173
2.1.		MoEa	114	0	0	0	114	0	0	0									
2.2. Analysis of technical solutions facilitating rational use of fuels and energy																			
2.2.		Total	7,562	0	0	732	2,000	2,673	1,575	582	Total	7,562	0	0	732	2,000	2,673	1,575	582
2.2.		MoEa	7,562	0	0	732	2,000	2,673	1,575	582	State budget	7,562	0	0	732	2,000	2,673	1,575	582
2.3. Developing of provision of energy services																			
2.3.		Total	450	0	0	0	0	221	159	70	Total	450	0	0	0	0	221	159	70
2.3.		MoEa	450	0	0	0	0	221	159	70	State budget	450	0	0	0	0	221	159	70
3. Increasing efficiency in consumption, production and transfer of fuels and energy																			
3.1. Implementation of the energy saving obligation of the energy companies																			
3.1.		Total	778	48	370	360	0	0	0	0	Total	778	48	370	360	0	0	0	0
3.1.		MoE	418	48	370	0	0	0	0	0	State budget	778	48	370	360	0	0	0	0
3.1.		MoEa	360	0	0	360	0	0	0	0									
3.2. Stimulating the collection of initial capital necessary for investments and developing loan products aimed at them																			
3.2.		Total	462	0	185	277	0	0	0	0	Total	462	0	185	277	0	0	0	0
3.2.		MoE	351	0	185	166	0	0	0	0	State budget	462	0	185	277	0	0	0	0
3.2.		MoEa	111	0	0	111	0	0	0	0									
3.3. Improving efficiency in energy production and transfer (5)																			
3.3.		Total	785,600	7,126	122,551	244,780	211,584	111,912	81,796	5,852	Total	785,600	7,126	122,551	244,780	211,584	111,912	81,796	5,852
3.3.		Private sector	785,600	7,126	122,551	244,780	211,584	111,912	81,796	5,852	EU-ERDF	426,600	0	60,000	140,000	120,000	60,181	45,109	309
3.3.											Private sector	360,000	7,126	62,551	104,780	91,584	51,730	36,686	5,543
3.4. Supporting small-scale projects of local municipalities aimed at energy efficiency																			
3.4.		Total	33,247	4,359	4,378	4,388	4,395	5,235	5,242	5,250	Total	33,248	4,359	4,378	4,388	4,395	5,235	5,242	5,250
3.4.		MoE	33,247	4,359	4,378	4,388	4,395	5,235	5,242	5,250	State budget	20,580	2,692	2,711	2,722	2,728	3,235	3,242	3,250
3.4.											Local municip.	12,668	1,667	1,667	1,667	1,667	2,000	2,000	2,000
3.5. Increasing the quality and energy efficiency of the housing fund (6)																			
3.5.		Total	656,379	37,060	153,179	112,448	112,134	95,438	76,121	70,000	Total	656,379	37,060	153,179	112,448	112,134	95,438	76,121	70,000
3.5.		MoE	569	0	106	111	114	118	121	0	State budget	399,499	13,000	74,019	73,778	73,464	55,118	55,121	55,000
3.5.		Private sector	655,810	37,060	153,073	112,337	112,020	95,320	76,000	70,000	EU-ERDF	256,880	24,060	79,160	38,670	38,670	40,320	21,000	15,000

4. Performing tasks arising from the European Union fuels and energy efficiency policy																			
4.1. Transposition of Directives 2002/91/EC, 2005/32/EC and 2006/32/EC																			
4.1.		Total	23,596	4,131	3,222	5,023	4,392	3,200	1,788	1,840	Total	23,598	4,131	3,222	5,024	4,393	3,200	1,788	1,840
4.1.		MoE	12,441	1,205	1,353	2,538	3,250	2,435	818	842	State budget	17,743	2,566	2,667	4,094	2,713	2,075	1,788	1,840
4.1.		MoEa	11,115	2,926	1,869	2,485	1,142	765	970	998	EU-TF	1,565	1,565	0	0	0	0	0	0
4.1.		KredEx	0	0	0	0	0	0	0	0	EU-IEE	540	0	180	180	180	0	0	0
4.1.											Switzerland	3,750	0	375	750	1,500	1,125	0	0
4.2. Supporting the implementation of the Action Plan for Energy Efficiency COM(2006)545 of the Commission of the European Communities																			
4.2.		Total	7,646	737	1,721	2,971	1,387	514	222	94	Total	7,646	737	1,721	2,971	1,387	514	222	94
4.2.		MoE	1,972	624	412	435	248	176	61	16	State budget	7,646	737	1,721	2,971	1,387	514	222	94
4.2.		MoEa	5,080	101	1,045	2,218	1,139	338	161	78									
4.2.		EMI	107	12	26	69	0	0	0	0									
4.2.		MoE-TI	487	0	238	249	0	0	0	0									
4.3. Development cooperation in making the energy use more efficient																			
4.3.		Total	5,429	0	0	0	171	1,745	1,752	1,760	Total	5,429	0	0	0	171	1,745	1,752	1,760
4.3.		MoE	171	0	0	0	171	0	0	0	State budget	5,429	0	0	0	171	1,745	1,752	1,760
4.3.		MoEa	757	0	0	0	0	245	252	260									
4.3.		MoFa	4,500	0	0	0	0	1,500	1,500	1,500									

Comments:

(1) The name of the body realizing the measure and the planned expenses related to the realization of the measure are set forth on the row of costs. Abbreviations used are the following:
MoE- Ministry of Economic Affairs and Communications
MoEa- services purchased by the Ministry of Economic Affairs and Communications
MoF – Ministry of Finance
MoFa – Ministry of Foreign Affairs
Private sector-MoEn – activities carried out by the private sector, which are supported from the Structural Funds through the "Human Environment Development Implementation Plan" coordinated by the Ministry of the Environment
EMI – Energy Market Inspectorate
MoE-TI – Ministry of Economic Affairs and Communications (Technical Inspectorate)
KredEx – foundation KredEx

(2) Sources from which the financing of the measure is planned are listed in the sources for cover row. Abbreviations used in the table are the following:
NorwayEEC – financial mechanism of Norway and the European Economic Area
Local municp. – local municipalities
EU-IEE – European Union Energy Programme "Intelligent Energy Europe"
EU-ERDF – European Union Regional Development Fund
EU-TF – European Union Transition Fund

(3) Financing of Measure 2.2 "Increasing awareness for improving the housing fund" of the "Estonian Housing Fund Development Plan 2007-2013" has been set forth as the budget of the measure

(4) Financing of Measure 2.3 “Mapping the situation of the housing fund” of the “Estonian Housing Fund Development Plan 2007-2013” has been set forth as the budget of the measure
(5) assessment of the budget takes in to account the fact that ca 40% of the summarised budget of the priority development aim 3: development of the energy sector of the “National Strategy for the Use of Structural Funds 2007-2013” “Human Environment Implementation Plan” is directed to the projects developing saving of fuels and energy. More precise volume of financing will be established during carrying out of the measure.
(6)) Financing of Measure 2.2. “Increasing the quality and energy efficiency of the housing fund” of the “Estonian Housing Fund Development Plan 2007-2013” ” has been set forth as the budget of the measure

Annex 1.2.2. Estimation of the cost of realisation of the "Energy Efficiency Plan 2007-2013" by areas
(in combination with the actions aimed at fuel and energy saving, which are planned to be brought into effect within the framework of implementation of other development plans)

Measure	Name	Costs, th. EEK (1)	Total	2007	2008	2009	2010	2011	2012	2013	sources for covering, th. EEK (2)	Total	2007	2008	2009	2010	2011	2012	2013
1. Availability of energy-efficiency information																			
		Total	187,898	13,189	16,070	17,215	16,761	43,405	40,615	40,643	Total	187,898	13,189	16,070	17,215	16,761	43,405	40,615	40,643
		MoE	182,103	13,045	15,951	16,923	15,185	40,315	40,333	40,351	State budget	143,790	10,129	8,096	8,746	8,289	38,031	35,237	35,260
		MoEa	4,553	144	119	292	1,120	2,796	40	42	Local municip.	988	120	132	139	143	147	151	156
		KredEx	955	0	0	0	228	235	242	250	EU-ERDF	43,121	2,940	7,840	8,330	8,330	5,227	5,227	5,227
		MoF	287	0	0	0	228	59	0	0									
2. Availability of skills and experts																			
		Total	8,630	0	0	732	2, 114	3,057	1,902	825	Total	8,630	0	0	732	2, 114	3,057	1,902	825
		MoE	504	0	0	0	0	163	168	173	State budget	8,630	0	0	732	2, 114	3,057	1,902	825
		MoEa	8,126	0	0	732	2, 114	2,894	1,734	652									
3. Increasing efficiency in consumption, production and transfer of fuels and energy																			
		Total	1,476,446	48,583	280,663	362,253	328,113	212,584	163,159	81,102	Total	1,476,446	48,583	280,663	362,253	328,113	212,584	163,159	81,102
		MoE	34,585	4,407	5,030	4,665	4,509	5,353	5,363	5,250	State budget	421,319	15,740	77,285	77,137	76,192	58,353	58,3832	58,250
		MoEa	471	0	0	471	0	0	0	0	EU-ERDF	682,480	24,060	139,160	178,670	158,670	100,501	66,109	15,309
		Private sector	1,441,410	44,186	257,624	357,117	323,604	207,232	157,796	75,852	Private sector	360,000	7,126	62,551	104,780	91,584	51,730	36,686	5,543
											Local municip.	12,668	1,667	1,667	1,667	1,667	2,000	2,000	2,000
4. Performing tasks arising from the European Union fuels and energy efficiency policy																			
		Total	36,671	4,868	4,943	7,994	5,950	5,459	3,762	3,694	Total	36,6731	4,868	4,943	7,995	5,951	5,459	3,762	3,694
		MoE	14,584	1,829	1,765	2,973	3,669	2,611	879	858	State budget	30,818	3,303	4,388	7,065	4,271	4,334	3,762	3,694
		MoEa	16,992	3,027	2,914	4,703	2,281	1,348	1,383	1,336	EU-TF	1,565	1,565	0	0	0	0	0	0
		KredEx	0	0	0	0	0	0	0	0	EU-IEE	540	0	180	180	180	0	0	0
		EMI	107	12	26	69	0	0	0	0	Switzerland	3,750	0	375	750	1,500	1,125	0	0
		MoE-TI	487	0	238	249	0	0	0	0									
		MoFa	4,500	0	0	0	0	1,500	1,500	1,500									

1.2 ALL AREAS

		Total	1,709,665	66,650	301,676	388,194	352,938	264,505	209,438	126,264	Total	1,709,665	66,650	301,676	388,194	352,938	264,505	209,438	126,264
		MoE	231,777	19,281	22,755	24,561	23,364	48,442	46,743	46,632	State budget	604,557	29,172	89,771	93,680	90,867	103,774	99,265	98,029
		MoEa	30,142	3,171	3,033	6,198	5,515	7,038	3,157	2,030	EU-ERDF	725,601	27,000	147,000	187,000	167,000	105,728	71,336	20,536
		EMI	107	12	26	69	0	0	0	0	EU-TF	1,565	1,565	0	0	0	0	0	0
		MoF	287	0	0	0	228	59	0	0	EU-IEE	540	0	180	180	180	0	0	0
		MoFa	4,500	0	0	0	0	1,500	1,500	1,500	Switzerland	3,750	0	375	750	1,500	1,125	0	0
		MoE-TI	487	0	238	249	0	0	0	0	Local municip.	13,656	1,787	1,799	1,806	1,810	2,147	2,151	2,156
		KredEx	955	0	0	0	228	235	242	250	Private sector	360,000	7,126	62,551	104,780	91,584	51,730	36,686	5,543
		Private sector	1,441,410	44,186	275,624	375,117	323,604	207,232	157,796	75,852									

Annex 2: List of actions required for adopting Directive 2006/32/EC by the European Parliament and the Council on energy end-use efficiency and energy services

1. The general sections of the acts regulating the energy market should reflect the efforts aimed at environmental protection (in addition to those required of energy companies by the provisions of the legislation regulating environmental issues).
2. Ascertain whether the obligations of the energy companies should be enforced.
3. Clarify the relationship between the definitions used in existing legislation with the definitions used in the Directive.
4. Quantify the indicative energy saving priority of Estonia.
5. In cooperation with the Statistical Office of Estonia (ETI) establish new requirements for statistical reporting by companies.
6. Establish in the Plan the aim for the energy efficiency activities of the following years, also activities for achieving it.
7. Establish by order of the Government of the Republic, which authority will be responsible for monitoring performance of the Energy Efficiency Plan, guarantee resources for that authority to enable it to perform tasks, or create an appropriate authority by Government act.
8. Ensure fulfilment of those requirements set forth in the Building Act and related legislation.
9. Consider the need to elucidate the Public Procurement Act (the requirement to take energy efficiency into account in public acquisitions). The Ministry of the Environment should consult with the Ministry of Finance in terms of for the most appropriate ways for Estonia to fulfil the requirements arising from Article 5(1) and Annex VI of the Directive.
10. Dissemination of information regarding the need to energy efficiency into account when organising public acquisitions.
11. Organising monitoring of energy efficiency criteria in acquisitions.
12. Establishing the need for collection of additional statistics. Supplement legislation dealing with the collection of statistics.
13. Monitoring of the energy market with the aim of establishing boundaries for the provision of energy services and introducing other measures allowing for more rational use of energy.
14. Establishing the responsibilities of energy companies in supporting energy-saving activities of consumers.
15. Putting forward actions for major companies to provide support for consumer energy–saving measures.
16. Analysis of the opportunities arising from voluntary contracts to provide support for consumer energy–saving measures17. Clarify the situation in the energy services and energy consultation market; consider measures to eliminate market restrictions.
18. Within the legislation regulating the energy market, consider establishing the requirement for operators to list separately within their accounts any expenses incurred in support of energy-saving initiatives.
19. Ensure consumers are informed regarding financial incentives to energy-saving activities.
20. Ensure that the appropriate supervisory authority provides advice for companies as necessary regarding their responsibilities to provide incentives for energy-saving activities.
21. Provide an overview of the potential for providing and acquiring professional qualifications for energy efficiency specialists as set out in the Directive.
22. Ensure analysis of existing legislation in order to prevent unnecessary delays or restrictions to the application for financial investment into energy-saving or purchasing of energy services.
23. Include development of standard contracts for energy services in the Energy Efficiency Plan
24. Establish if the methodology for calculating expenses within the energy transfer and distribution tariffs includes aspects that facilitate excessive transport of energy.

25. Identify during the development phase of the Energy Efficiency Plan areas where national intervention would significantly facilitate improvement of energy efficiency.
26. Provide tools that the fund may use in energy-saving activities, as part of the national support measures.
27. Describe what should be taken into account as part of the procedures for using national measures for supporting energy efficiency activities or other related legislation. 28. Facilitate improved access to energy audits.
29. Analyse provision of energy audits in different areas, identify areas where audits are not provided.
30. Establish requirements for installing individual meters, if justified, in the Energy Efficiency Regulation.
31. Specify through legislation, if possible, requirements for the contents of energy invoices, if necessary providing for relevant provision by delegating to other authorities.
32. Develop a methodology for calculating the productivity of the Energy Efficiency Plan (taking into account the relevant EU methodology that is being developed at the EU Demand Side Management Committee).
33. Consider if regular updating of the Energy Efficiency Plan is required by the legislation.
34. Decide if it is necessary in the District Heating Act to outline more specifically the responsibilities for the contents of the Efficiency Plan.
35. Through legislation, elaborate on the possible reasons for, and frequency of calculating productivity of the energy saving policy.
36. Ensure timely ratification of the Directive (17.05.2008).
37. Establish the procedure for reporting on the ratification of the Directive.

Annex 3: Actions arising for Estonia from the measures proposed in the European Commission Action Plan for Energy Efficiency COM(2006)545

Dynamic energy performance requirements for products, buildings and services.

1. Adopt into Estonian legislation the Directive 2005/32/EC by the European Parliament and the Council, establishing a framework for the setting of ecodesign requirements for energy-using products.
2. Observe the EU initiatives in the field of ecodesign and energy-performance labelling of systems.
3. Participate in the meetings of the Directive 2005/32/EC committee.
4. Monitor the responsibilities of companies undertaken voluntarily for making products more energy efficient.
5. Participate in the process amendment of the Directive on energy-performance labelling of systems (proceedings in the Commission expert group, in the Council), ensure ratification of the amended Directive.
6. Develop regulations put forward by the minister responsible for adopting the Commission Directive on energy-performance labelling of gas water heaters and electrical water heaters.
7. Ensure full support for the implementation of measures relating to the amended energy-performance labelling Directive in Estonia, including efficiency by ensuring supervision of the market.
8. If necessary, provide information to the European Commission regarding the implementation and effect of the energy-performance labelling Directive 92/75/EC in Estonia.
9. If necessary, analyse and disseminate information regarding the Energy Star agreement.
10. Participate in the process of amending the Community Regulation for energy-performance labelling of the office appliances (including in its proceedings in the Council).
11. Observe the process of developing energy efficiency requirements for office appliances, at the European Commission.
12. Participate in the committee for the energy services Directive 2006/32/EC and in the process of supplementing and amending the Directive at Council level
13. Observe the development of the memorandum of understanding for energy efficiency by the regulators of the European energy markets.
14. Obtain and disseminate information regarding studies on the white energy efficiency certificates by the Commission.
15. Abide by information applicable to Europe regarding acquisitions, taking into consideration the aspect of energy efficiency..
16. Collect information regarding the initiatives of the European Commission, which are aimed at assigning responsibility for voluntary agreements.
17. Observe the development process of the European Union energy audit standard, and provide information on the currently accepted methods for organising Estonian energy audits.
18. Observe the development process for requirements for energy invoices, at the European Commission.19. Develop the Estonian position relating to the establishment of new centres of excellence for technology designed to increase energy efficiency.
20. Collect and disseminate information regarding implementation of the Directive on the energy efficiency of buildings in Estonia, develop the Estonian position for amending the Directive and participate in the proceedings of the Directive at Council level.
21. Prepare to establish a position regarding the Commission proposal (expanding the role of the public sector in introducing new technologies in buildings), and collect relevant information regarding the current position in Estonia.
22. Develop the Estonian position regarding expansion of the scope of the minimum requirements for energy efficiency in reconstructed buildings.

23. Develop the Estonian position regarding the policy on the new minimum requirements for energy efficiency in buildings.
24. Collect information regarding the use of, and potential for, passive heating/cooling in Estonia.
25. Complete financial analysis into current energy efficiency measures for buildings in Estonia. Consider introducing the appropriate recommendations of the European Commission in Estonia.
26. Ensure relevant processing of standards issued concerning construction products Directive (89/106/EEC), in Estonia.

2 Improving energy transformation

27. Update existing databases regarding district heating systems and boiler houses. Develop a summary on the basis of the indicators characterising the efficiency of Estonian boiler houses, which could be used for developing the Estonian position. Consider alternative regulatory possibilities for improving energy efficiency in boiler houses.
28. Establish which professional requirements for the engineers of power stations and boiler houses are applicable in Estonia today.
29. Follow the development of the good practice in calculating the transfer and distribution costs for the regulators of the European energy markets.
30. Collect information regarding access of small production equipment to the power network, and if necessary prepare the Estonian position for supplementing the regulations relating to the amalgamation of decentralised producers within the power network.
31. Upon the adoption of Directive 2004/8/EC:
- base the methodology for determining Estonian high performance co-production on the respective methodologies of other EU member states;
- find out which professional requirements should be met by engineers managing the co-production stations in Estonia.
- consider participation in cooperation with the bodies concerned with issuing certificates of origin for electricity (AIB[1]), and confirm the Estonian position during the development of the electronic certificate of origin;
- establish the possible role of the ETI in giving incentives to co-production, if necessary; confirm the Estonian position in these issues;
- identify heating networks/consumers which provide suitable opportunities for co-production of heating and electricity (and supplement the existing studies);
- develop a position regarding the need to study the potential for utilising residue heating in Estonia;
- study efficiency of district heating networks in Estonia with the aim of being ready to provide opinions in case a proposal is made for establishing minimum requirements for the district heating networks;
- monitor development of the requirements for the efficiency of the micro co-production equipment.

3 Financing energy efficiency, economic incentives and energy pricing

32. Establish legal restrictions for the activities of ESCOs[2] in Estonia, develop proposals for their removal.
33. Analyse possible additional incomes from joint financing of the energy efficiency realisation projects and Estonian current practice in this field. If successful, establish activities necessary to execute summarised financing for the realisation projects.
34. Organise implementation of the measures aimed at improving energy efficiency of buildings under the “Human Environment Improvement Implementation Plan” of the

[1] Association of Issuing Bodies, www.aib-net.org
[2] Energy Service Company

“National Strategy for the Use of Structural Funds 2007-2013” (develop implementation regulations, carry out auditing of implementing authorities, invite applications, etc). Analysis of the energy efficiency factor in making financing decisions in other projects financed from the Structural Funds, consider adding the aspect of improving energy efficiency in the assessment criteria for projects in other fields.
35. If necessary and where possible, participate in the EU network for sharing experiences in financing energy efficiency projects.
36. Determine the status of eco-innovation initiatives of companies in Estonia, identify the contents of the supporting measures offered by the EU and their possible areas of application in Estonia.

4 Changing Energy Behaviour

37. Follow guidelines for organising public acquisitions, taking into account the energy efficiency aspect developed by the Commission; if necessary translate and adapt them to Estonian conditions.
38. Collate information regarding Commission recommendations in the energy management sector, also for promoting energy-efficient installations and providing the relevant training for industry. If suitable, apply these recommendations to the situation in Estonia.
39. Reflect climate change issues in the curriculum, using materials that are prepared within the framework of the Community programmes.
40. Keep up to date with information regarding the plans of the Commission to pay more attention in vocational education in topics related to energy saving.
41. Initiate an Estonian network of local authorities interested in developing and promoting energy efficiency. Forge links with the respective organisations in Europe.
42. Disseminate information regarding the competition of energy efficient schools in Estonia to the European Commission.
43. If possible and where necessary, participate in the network joining the partner organisations for the implementation of the European Commission Action Plan for Energy Efficiency COM(2006)545.

5 International partnerships

44.Collate information regarding the international framework agreement on energy efficiency, disseminate it within Estonia and develop an Estonian position.
45. Ensure energy efficiency aspects are considered when developing relations between countries and in cooperation agreements. Fulfil responsibilities undertaken with the agreements.
46. Collate information regarding international cooperation in developing methodologies for calculating energy efficiency. Participate, if suitable.
47. Collate information regarding the international network for promoting energy efficient technologies. Participate, if suitable.