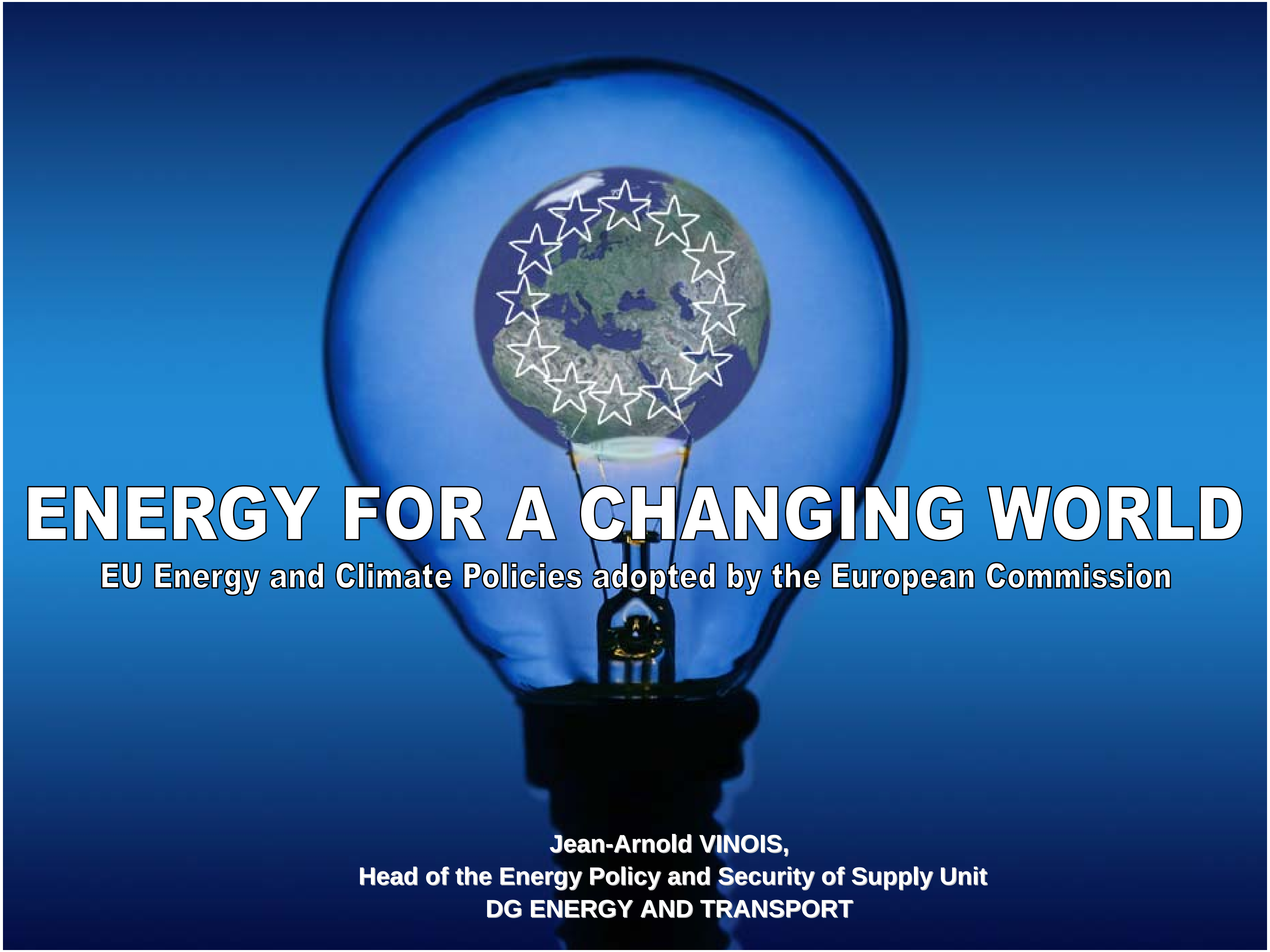


ENERGY FOR A CHANGING WORLD

EU Energy and Climate Policies adopted by the European Commission

Jean-Arnold VINOIS,
Head of the Energy Policy and Security of Supply Unit
DG ENERGY AND TRANSPORT

INTEGRATING ENERGY & ENVIRONMENT

Energy Policy for Europe
(Strategic Energy Review)

Limiting Global Climate Change to 2°C

STRATEGIC OBJECTIVE

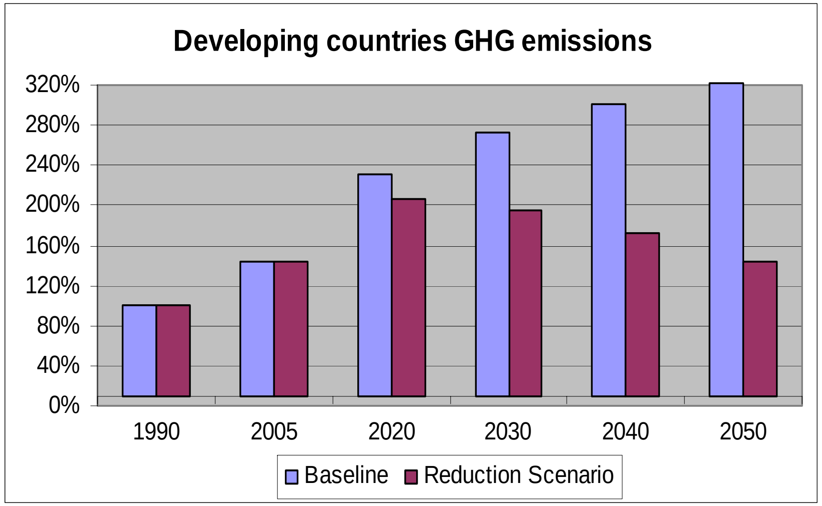
A unilateral EU independent **commitment of**

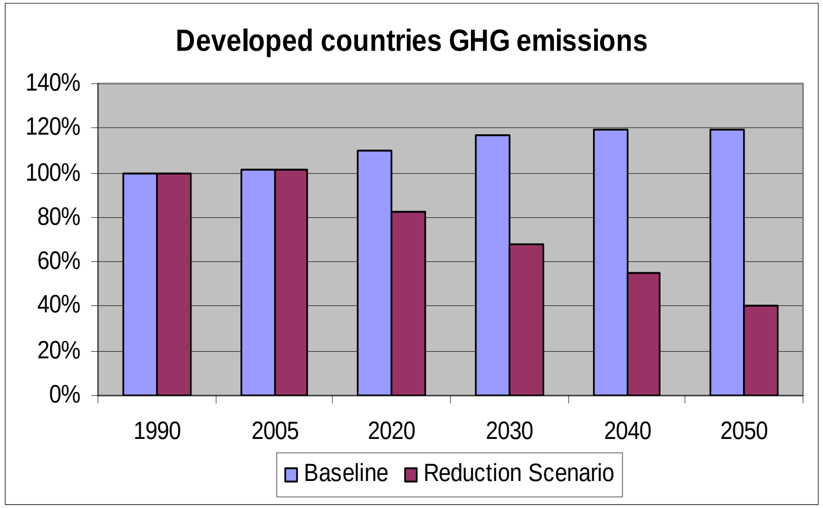
at least 20% GHG emission reduction by 2020, compared to 1990 levels

And a 30% reduction if broader participation

THE STRATEGIC OBJECTIVE

- ➔ At ***EU*** level at least **20%** GHG emission reduction by 2020, compared to 1990 levels
- ➔ ***For negotiations with developed countries:*** **30%** GHG emission reduction target by 2020, compared to 1990 levels
- ➔ ***Developing countries:*** **Decoupling emissions and growth *asap*, absolute reductions after 2020**
- ➔ ***Deforestation:*** **halt within two decades and then reverse**





ENERGY FOR A CHANGING WORLD

GREEN PAPER ENERGY → **LIMITING CLIMATE CHANGE TO 2 °C / ENERGY POLICY FOR EUROPE** → **ACTION PLAN 2007-2009**

SPRING EUROPEAN COUNCIL 2006

ENERGY PACKAGE 2007

SPRING EUROPEAN COUNCIL 2007

SUSTAINABILITY AND LOW-CARBON ECONOMY

- RENEWABLE ENERGY ROAD MAP
- PROGRESS REPORT BIOFUELS
- PROGRESS REPORT RES ELECTRICITY
- ENERGY EFFICIENCY ACTION PLAN (19 OCT 2006)
- SUSTAINABLE FOSSIL FUEL TECHNOLOGIES
- ILLUSTRATIVE NUCLEAR PROGRAMME (PINC)

INTERNAL MARKET

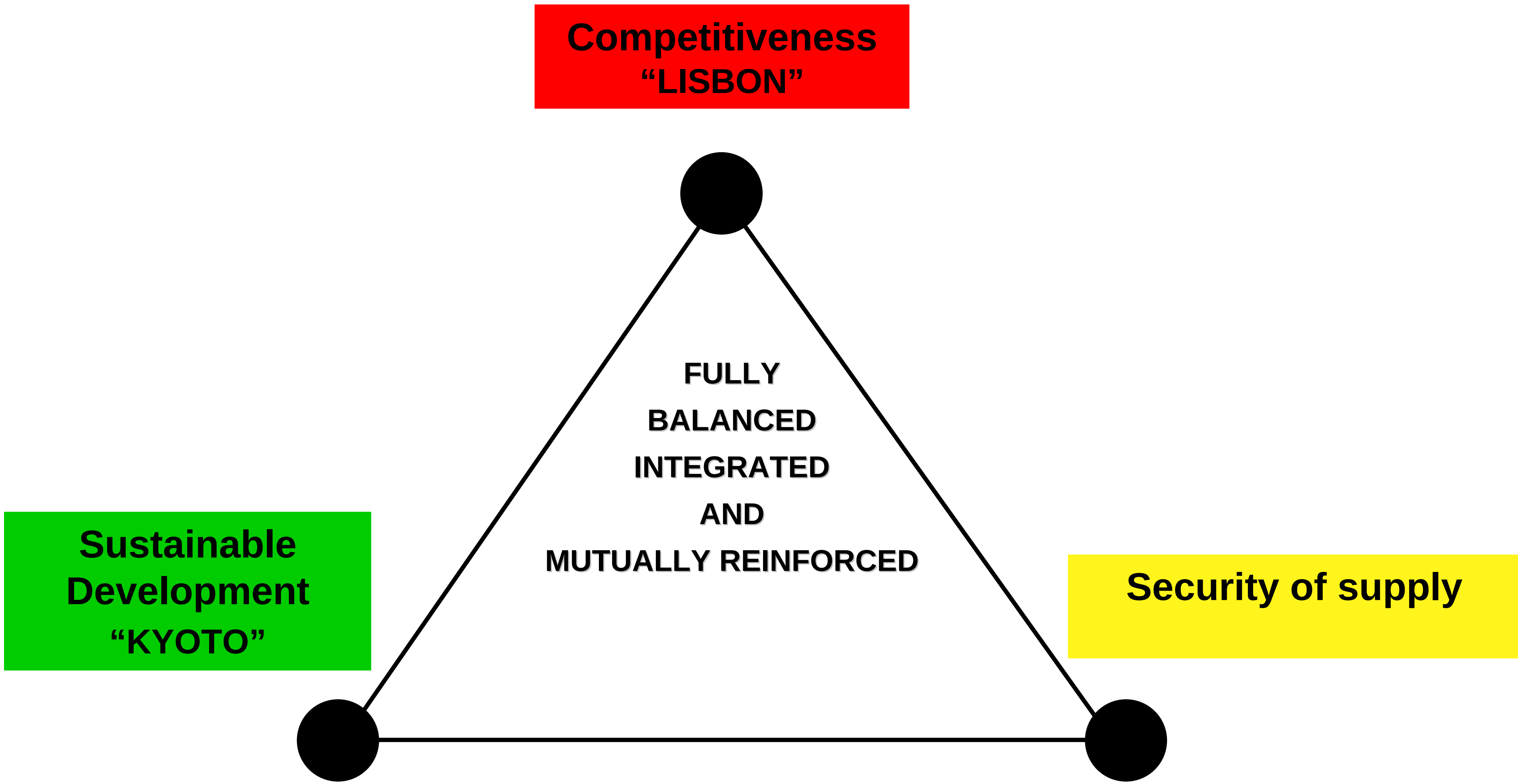
- DG COMP SECTOR INQUIRY
- REPORT ON FUNCTIONING OF INTERNAL MARKET
- PRIORITY INTERCONNECTION PLAN

EXTERNAL RELATIONS

- JOINT COMMISSION/ HR / COUNCIL JUNE 2006 PAPER AND COM PAPER OCT 2006
- NEGOTIATION MANDATE FOR NEW AGREEMENT WITH RUSSIA
- DIALOGUE WITH PRODUCERS: NORWAY-OPEC-GCC-ALGERIA-CASPIAN BASIN (BAKU PROCESS) EU-AFRICA PARTNERSHIP
- DIALOGUE WITH CONSUMERS: US, JAPAN,CHINA, INDIA, BRAZIL

THE R&D 7TH FRAMEWORK PROGRAMME → **STRATEGIC ENERGY TECHNOLOGY PLAN (2007)**

I. THE THREE CHALLENGES

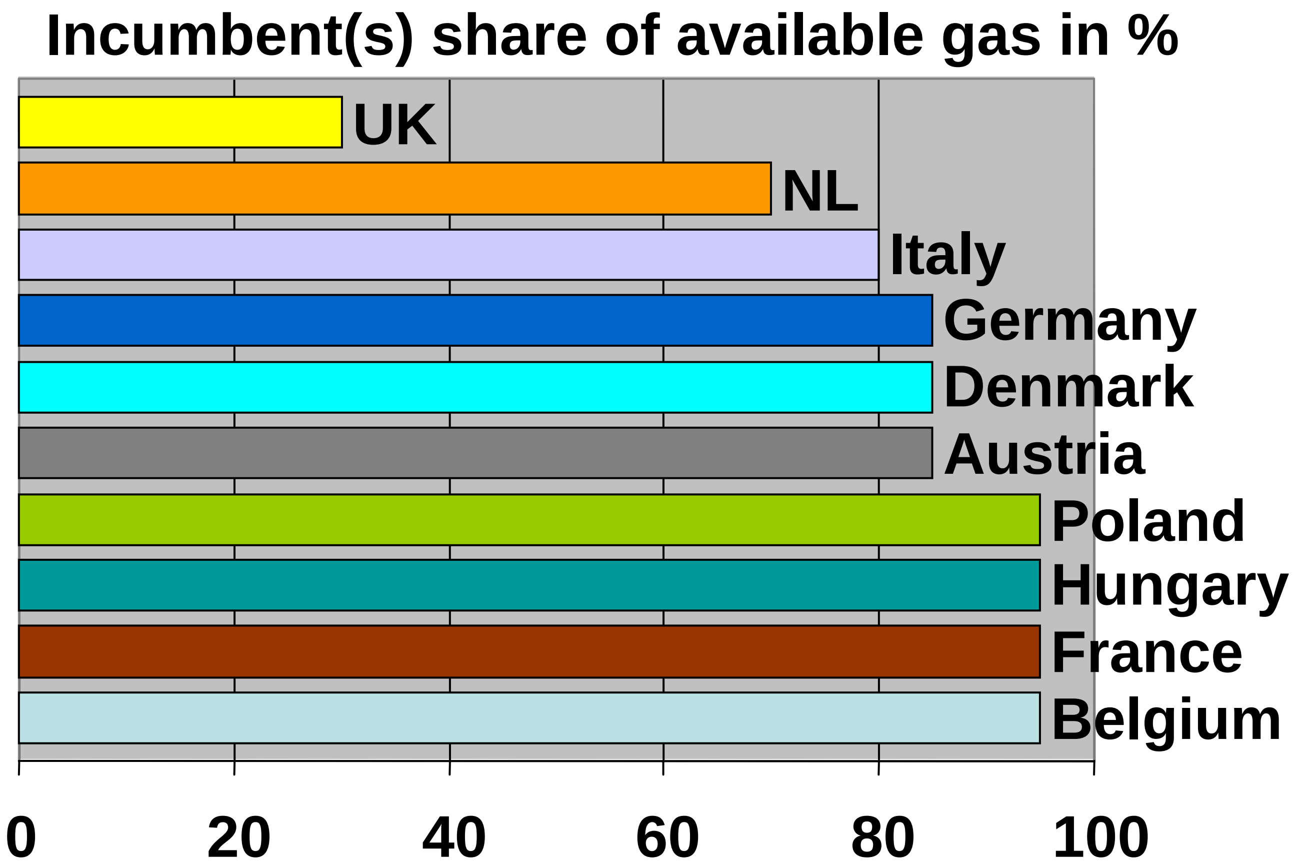


1. COMPETITIVENESS

Problems with the Internal Energy Market :

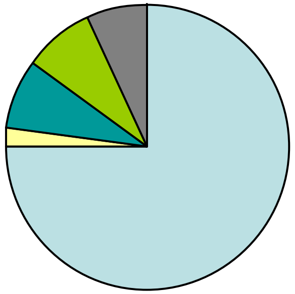
- Incomplete and incorrect transposition of EU directives: 26 infringement cases against 16 MS
- Different powers and competences of national regulators
- Markets are not integrated sufficiently – national markets concentrated;
- Lack of cross border capacity and need for more interconnections;
- Incompatible market design in some cases – e.g. balancing, transmission tariff regimes
- Limited wholesale trading

Concentration of national gas markets

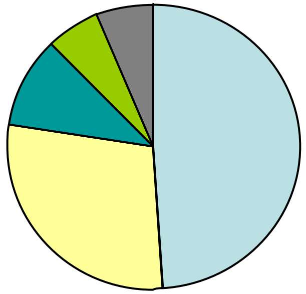


Concentration in electricity markets

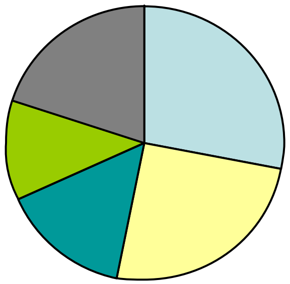
FRANCE - single dominance



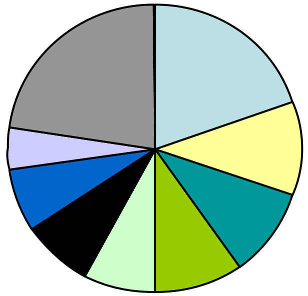
SPAIN - duopoly



GERMANY - oligopoly

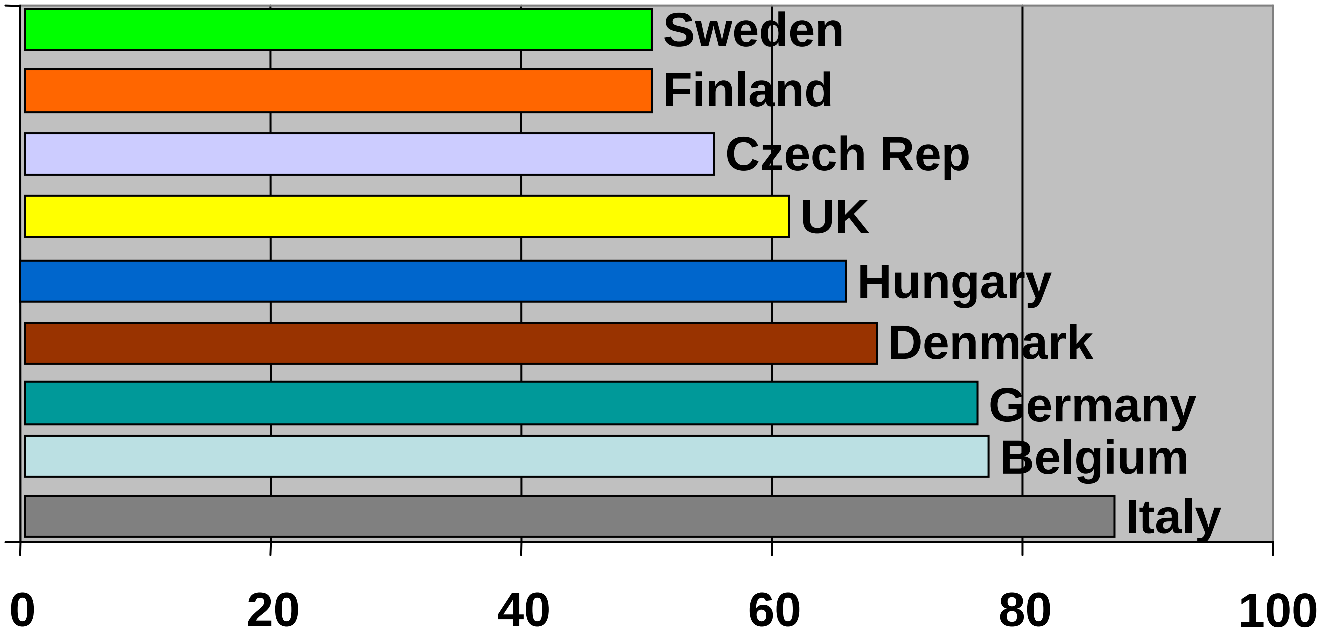


UK – fairly competitive market



Prices for commercial electricity users

Average industrial electricity prices 2002-2006

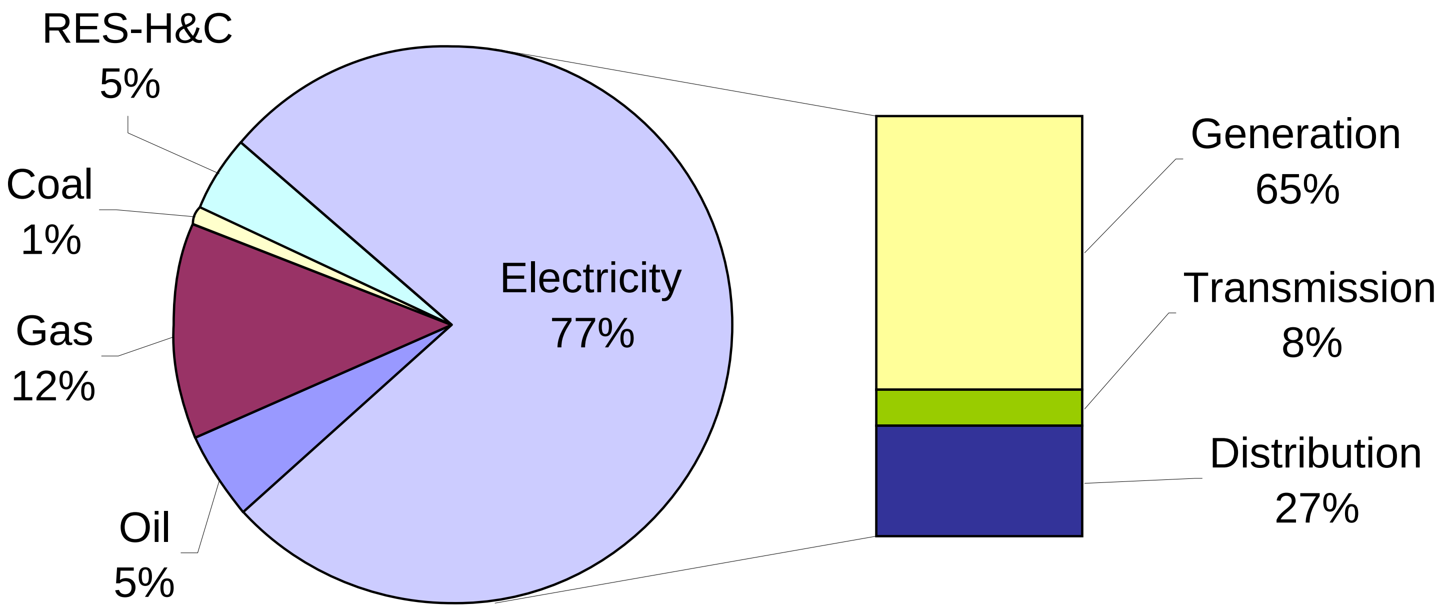


Member States with regulated tariffs such as France and Spain are not representatives

Euro/MWh net of tax

1. COMPETITIVENESS

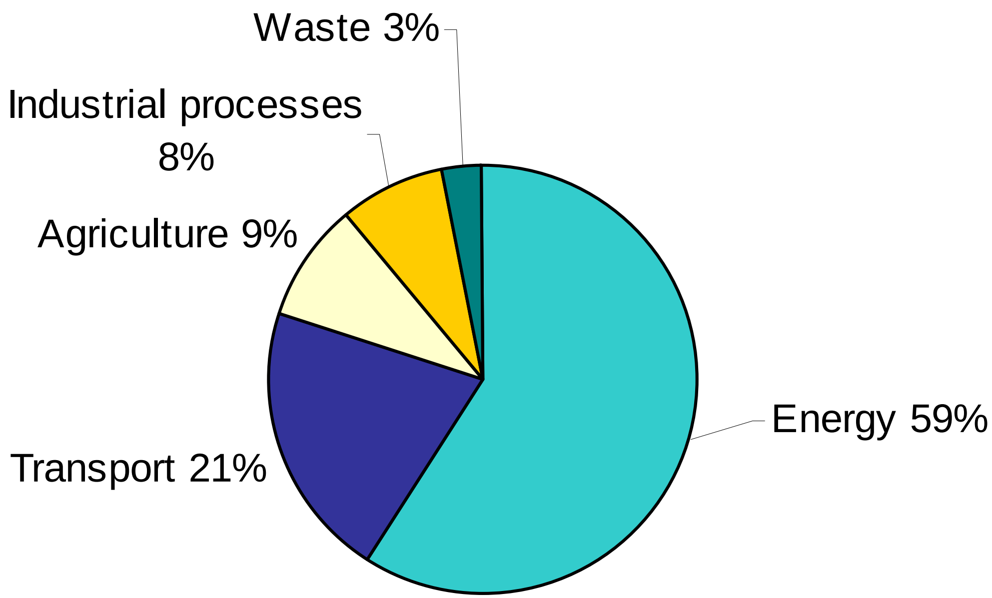
EU-27 INVESTMENT NEEDS up to 2030: €1.79 trillion



Source: EUROSTAT

2. SUSTAINABLE DEVELOPMENT

Energy => 80% of EU-GHG

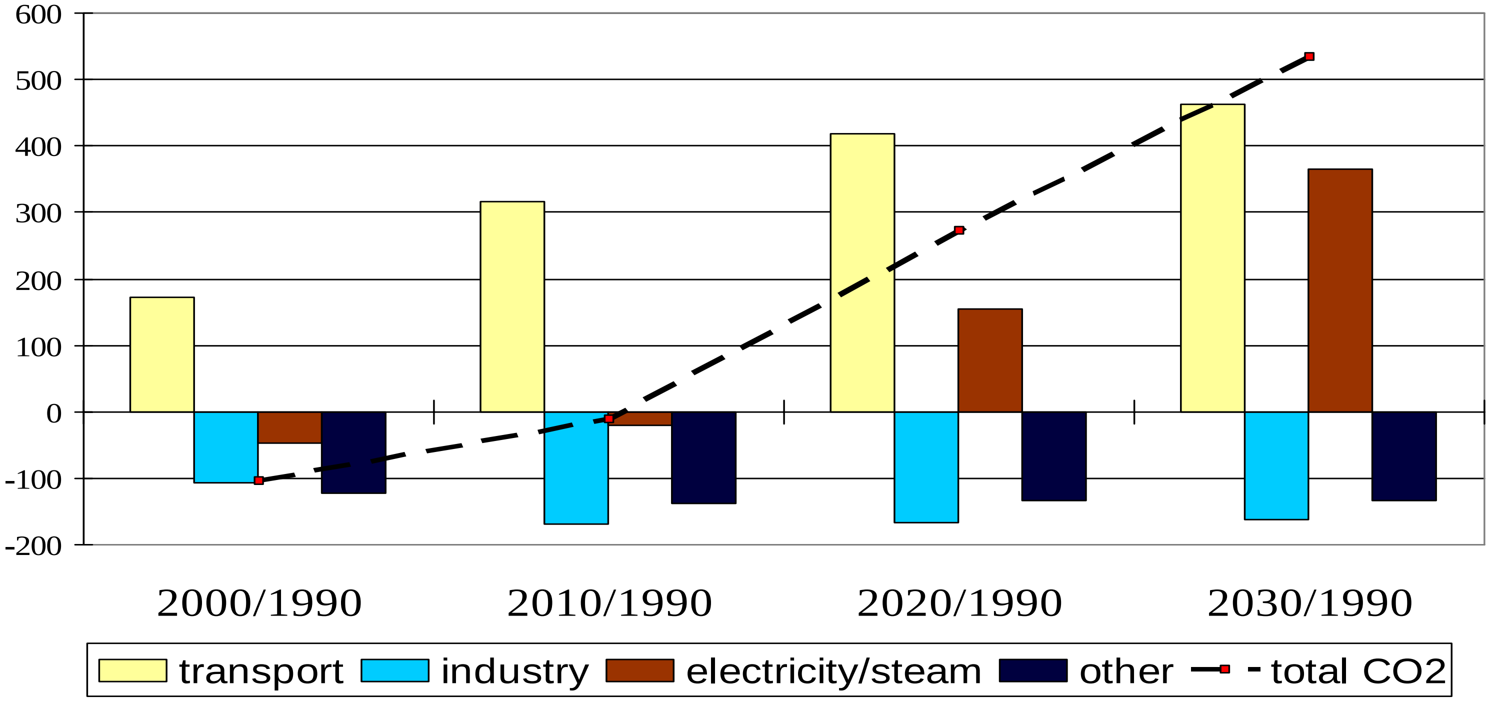


Source: European Environemental Agency Report 2006

2. SUSTAINABLE DEVELOPMENT

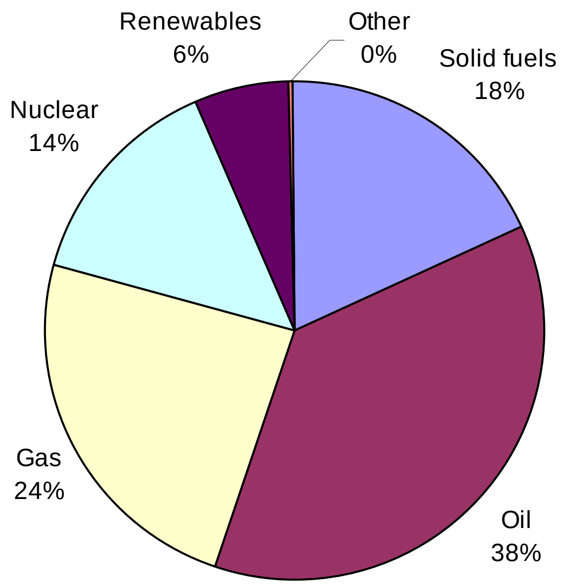
TRENDS IN CO2 EMISSIONS up to 2030

Mt CO2 – relative to 1990 (Baseline)

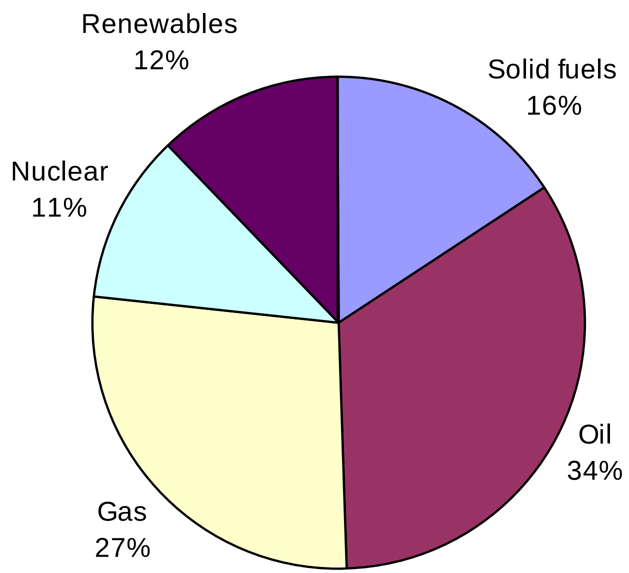


2. SUSTAINABLE DEVELOPMENT

EU-27 ENERGY MIX: High dependence on fossil fuels
=> Is Business as usual sustainable?



2004

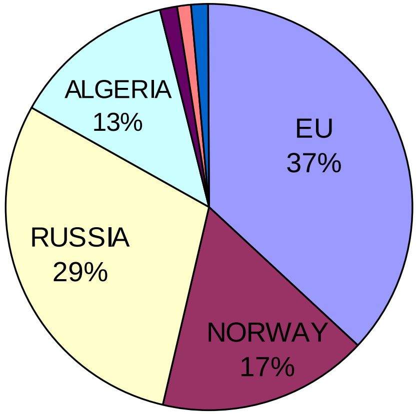


2030 (BaU)

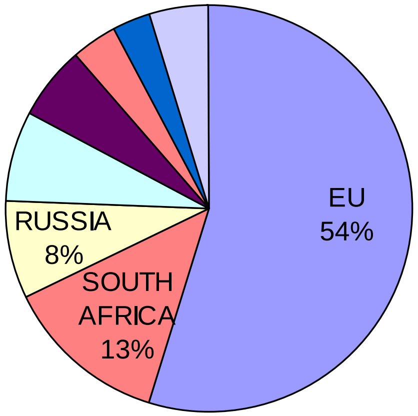
Source: EUROSTAT

3. SECURITY OF SUPPLY

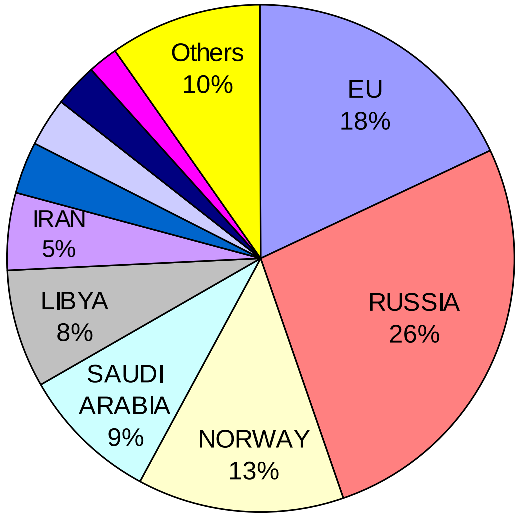
EU-27 ORIGIN OF GAS



EU-27 ORIGIN OF COAL

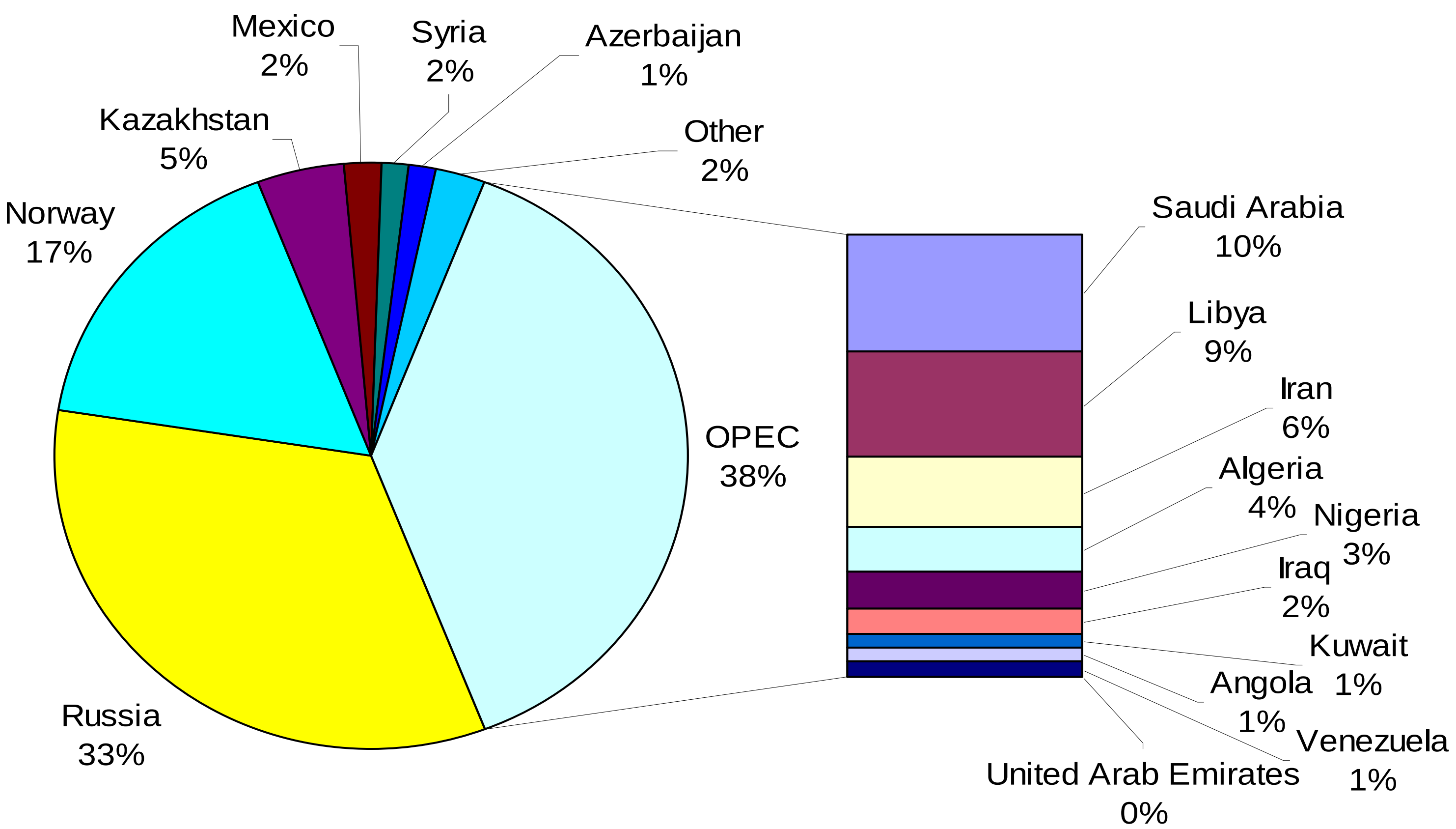


EU-27 ORIGIN OF OIL

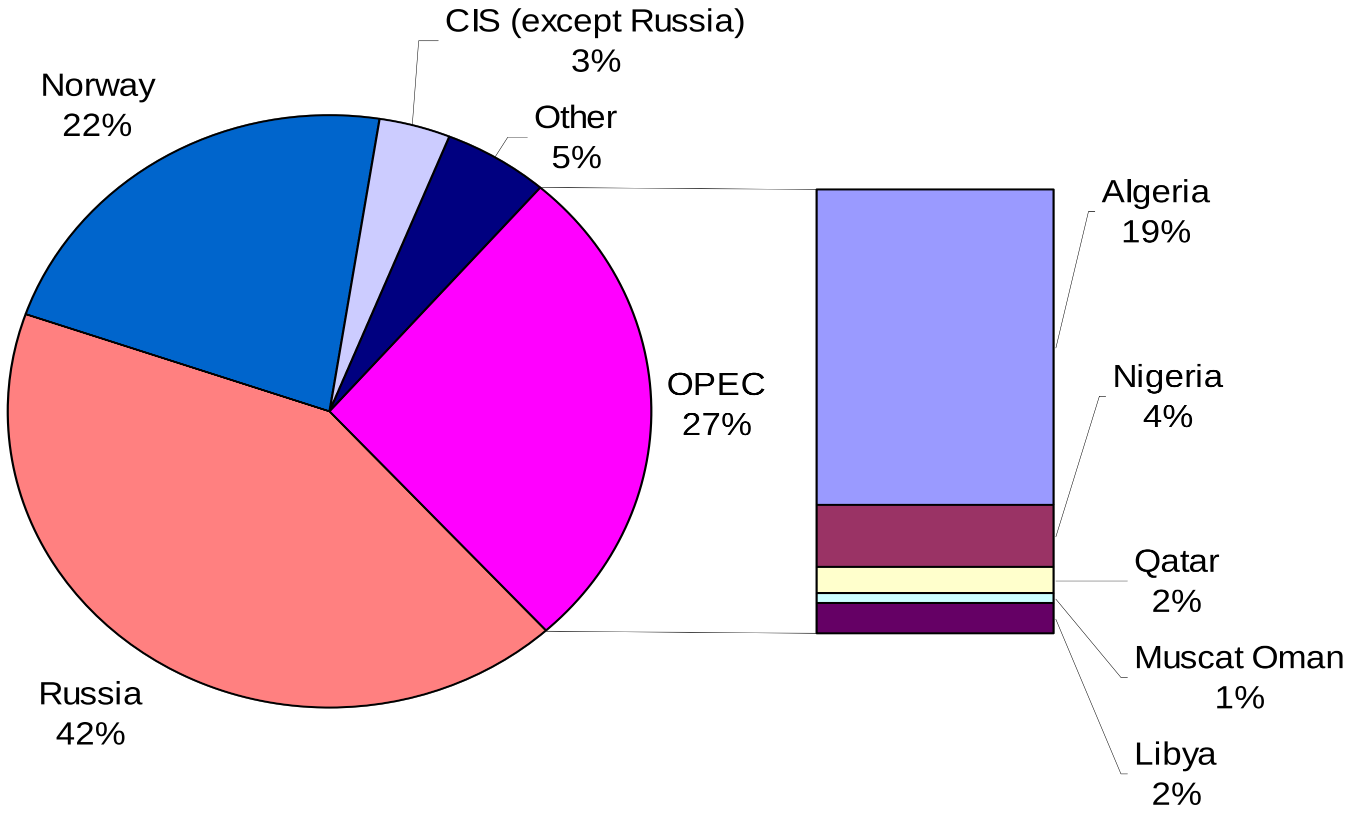


Sources : European Commission Eurostat 2004

Role of OPEC in EU oil import 2005



Role of OPEC in EU gas import 2005



THE KEY DRIVERS 3x20% by 2020

By 2020 20% EU GHG

20% by 2020 EFFICIENCY

By 2020 binding 20% RENEWABLES
EU level

BIO-FUELS	E-ELECTRICITY	HEATING & COOLING
Min 10% binding	MS binding choice	MS binding choice

NATIONAL TARGETS and ACTION PLANS