



Directorate-General
for Energy



EUROPEAN
COMMISSION

KEY FIGURES

June 2011



**Market
Observatory
for Energy**

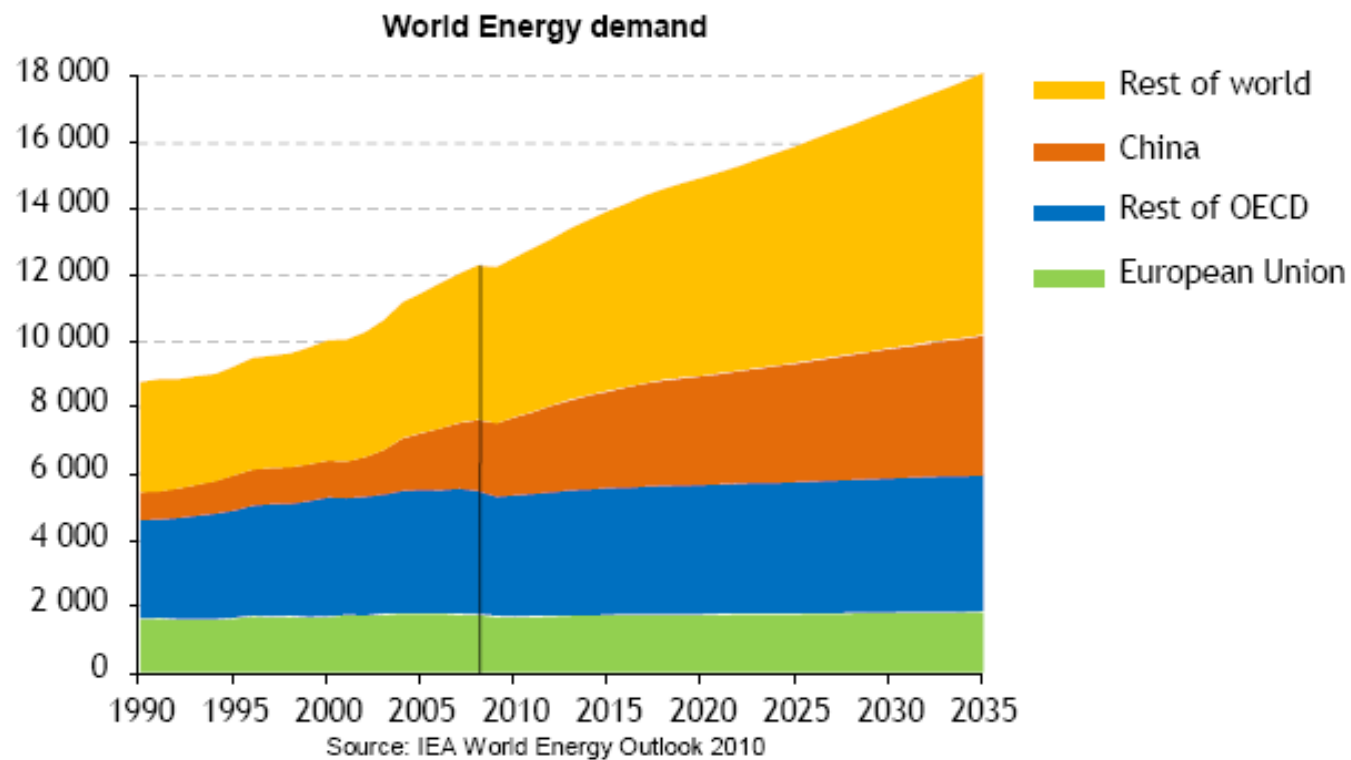
Content



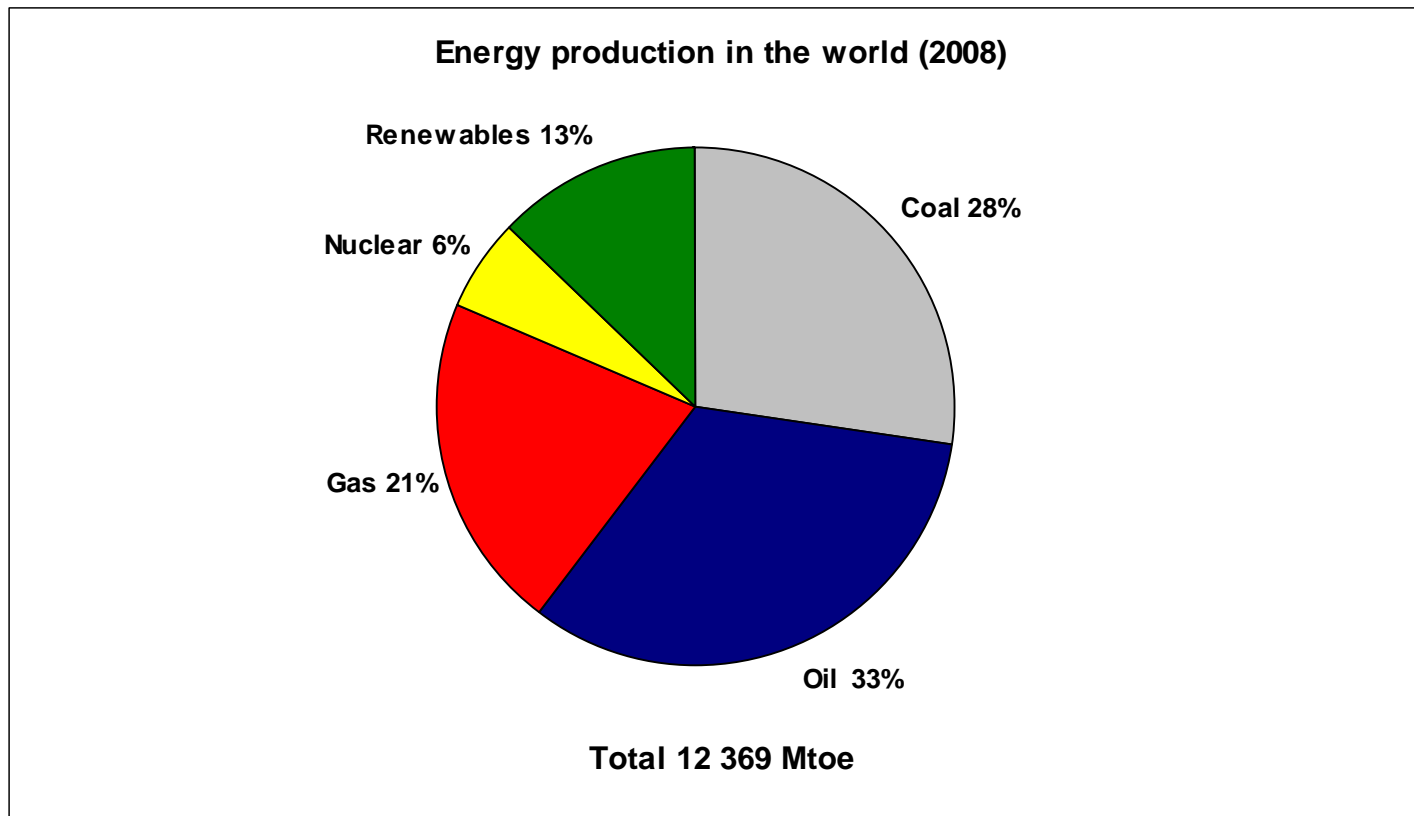
1. ENERGY IN THE WORLD
2. EU ENERGY DEPENDENCY
3. EU ENERGY CONSUMPTION BY FUEL
4. EU FINAL ENERGY CONSUMPTION
5. EU ENERGY PRODUCTION
6. EU ELECTRICITY GENERATION
7. EU ENERGY TARGETS: 20-20-20 BY 2020
8. ENERGY PRICES
9. SOME CONCEPTS AND DEFINITIONS

1. Energy in the world

World energy demand is on the rise...



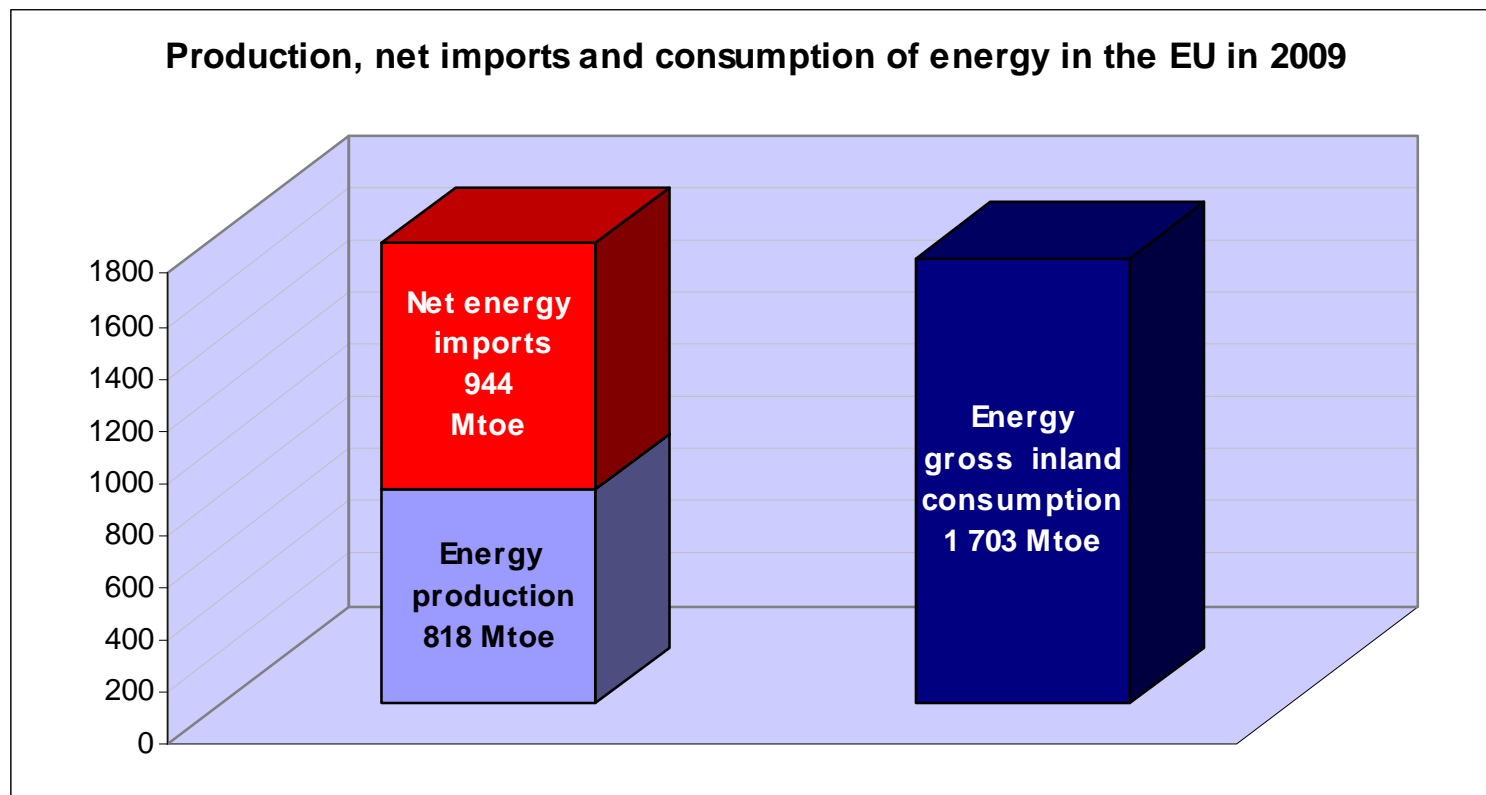
Oil, coal and gas account for more than 80% of the world energy production



Source: IEA World Energy Outlook 2010

2. EU Energy dependency

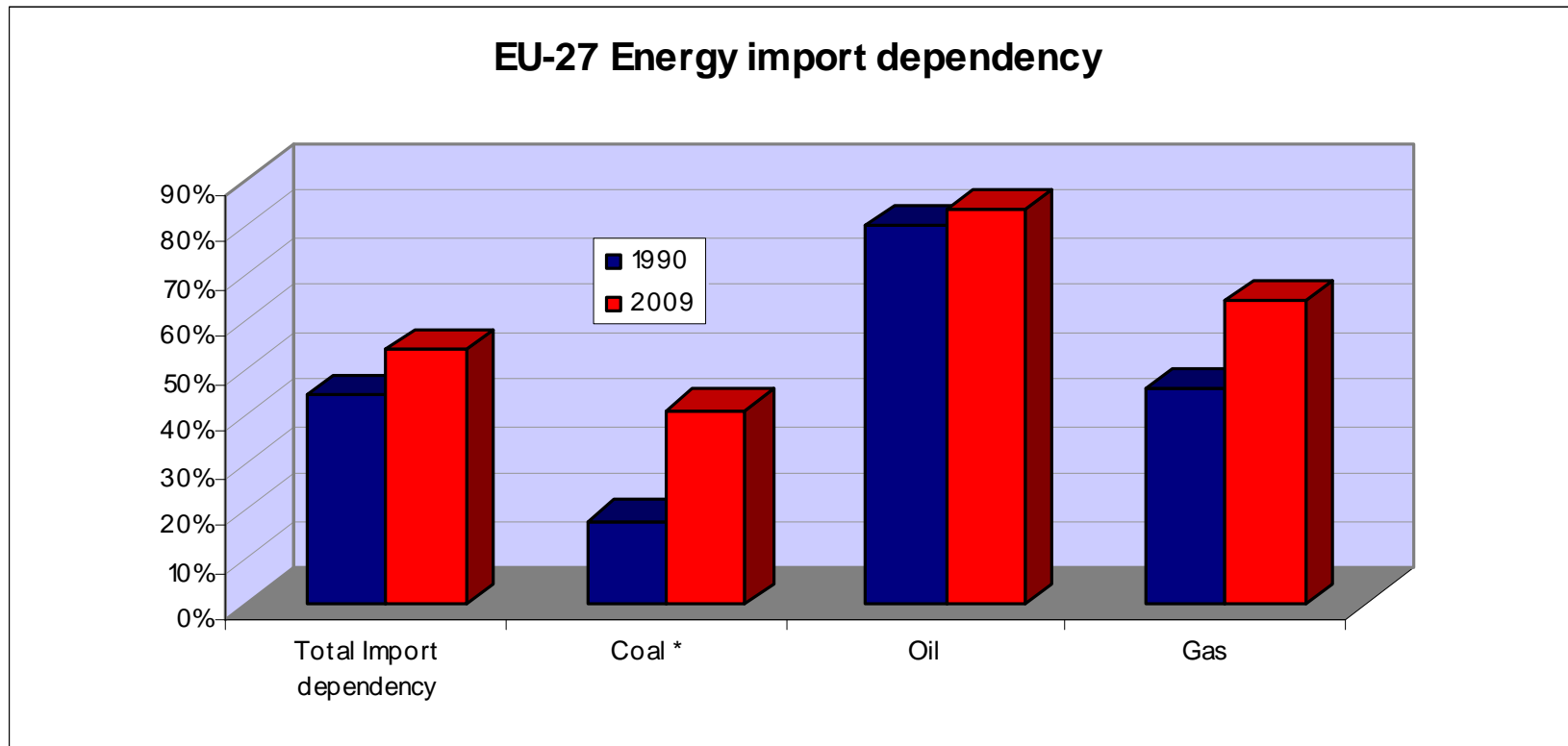
The EU produces 48% of its energy needs...



Source: Eurostat May 2011. Energy production includes primary energy production and recovered products.

2. EU ENERGY DEPENDENCY

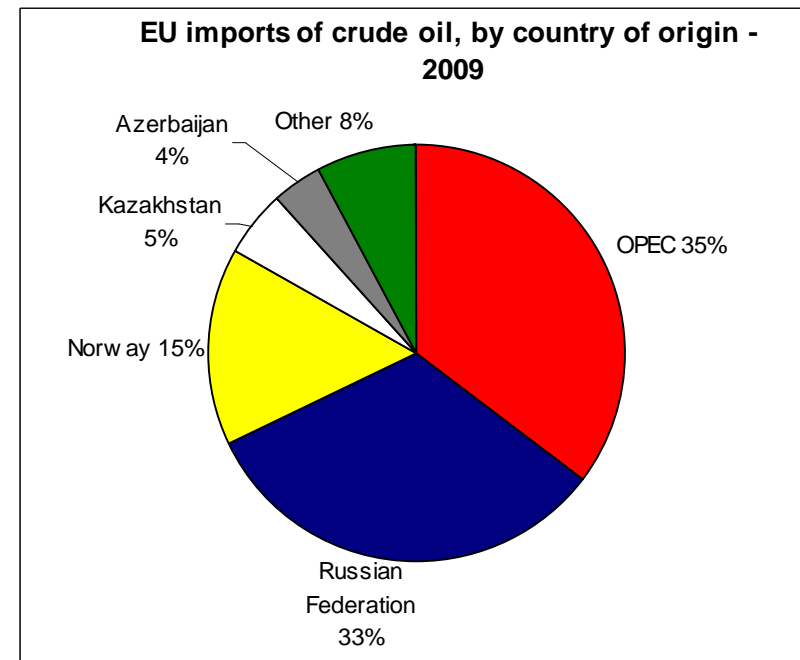
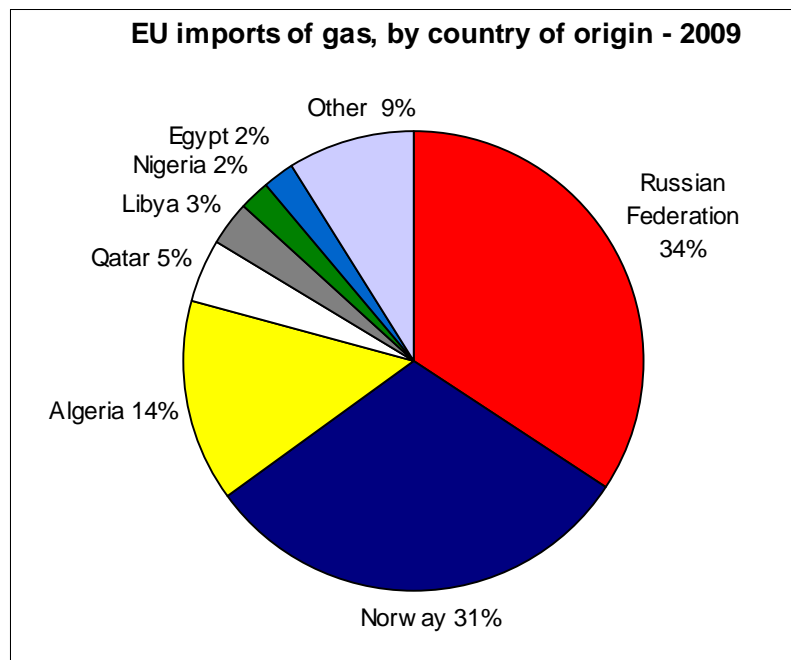
EU dependency on imports is increasing for all fossil fuels....
Dependency on oil imports reached 83.5% in 2009 and 64.2% for gas.



Source: Eurostat May 2011- * Coal and other solid fuels

2. EU ENERGY DEPENDENCY

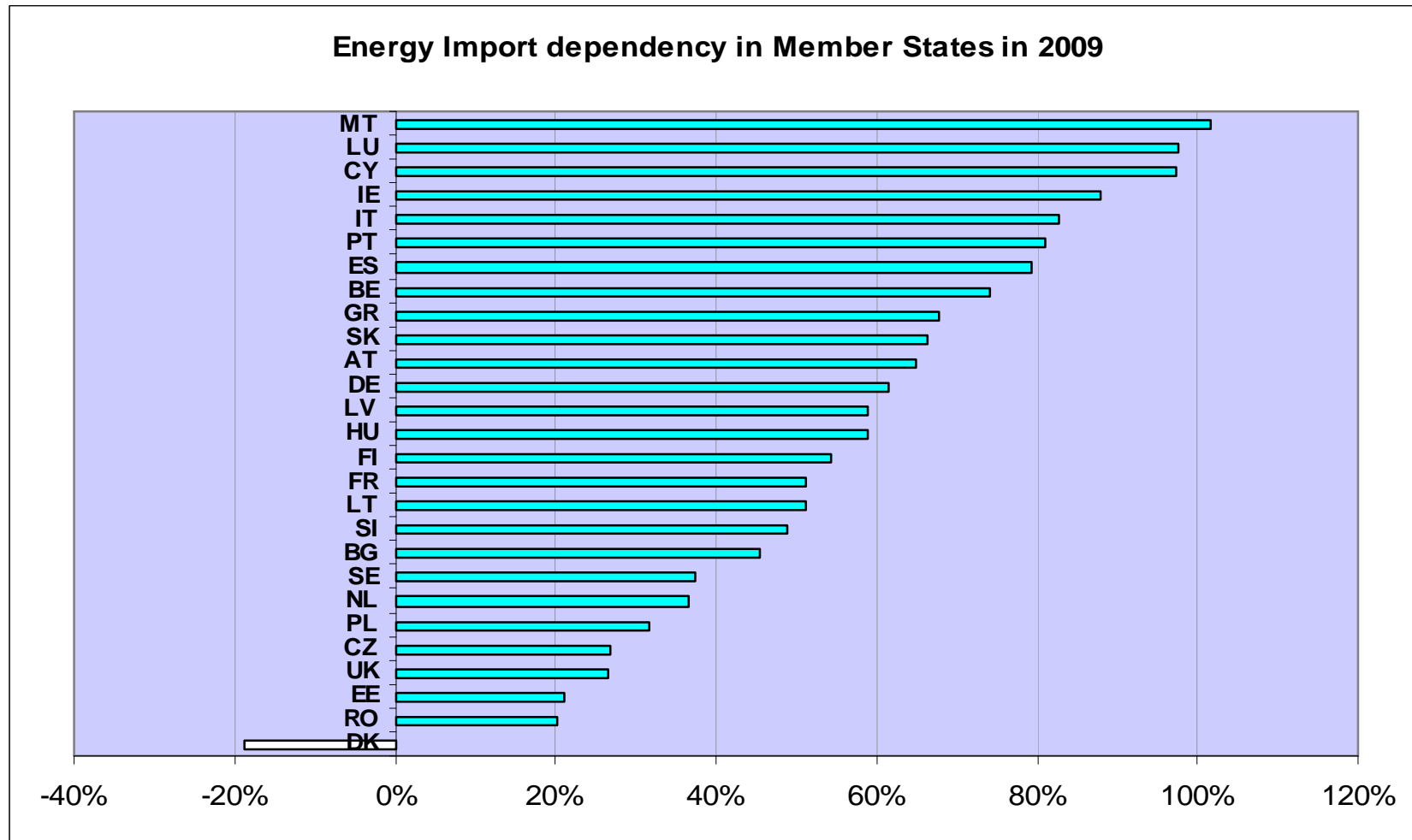
The EU depends on a few suppliers for its oil and gas supplies.
Diversification of routes and sources is a strategic priority for the EU.



Source: Eurostat May 2011- Intra-EU trade excluded

2. EU ENERGY DEPENDENCY

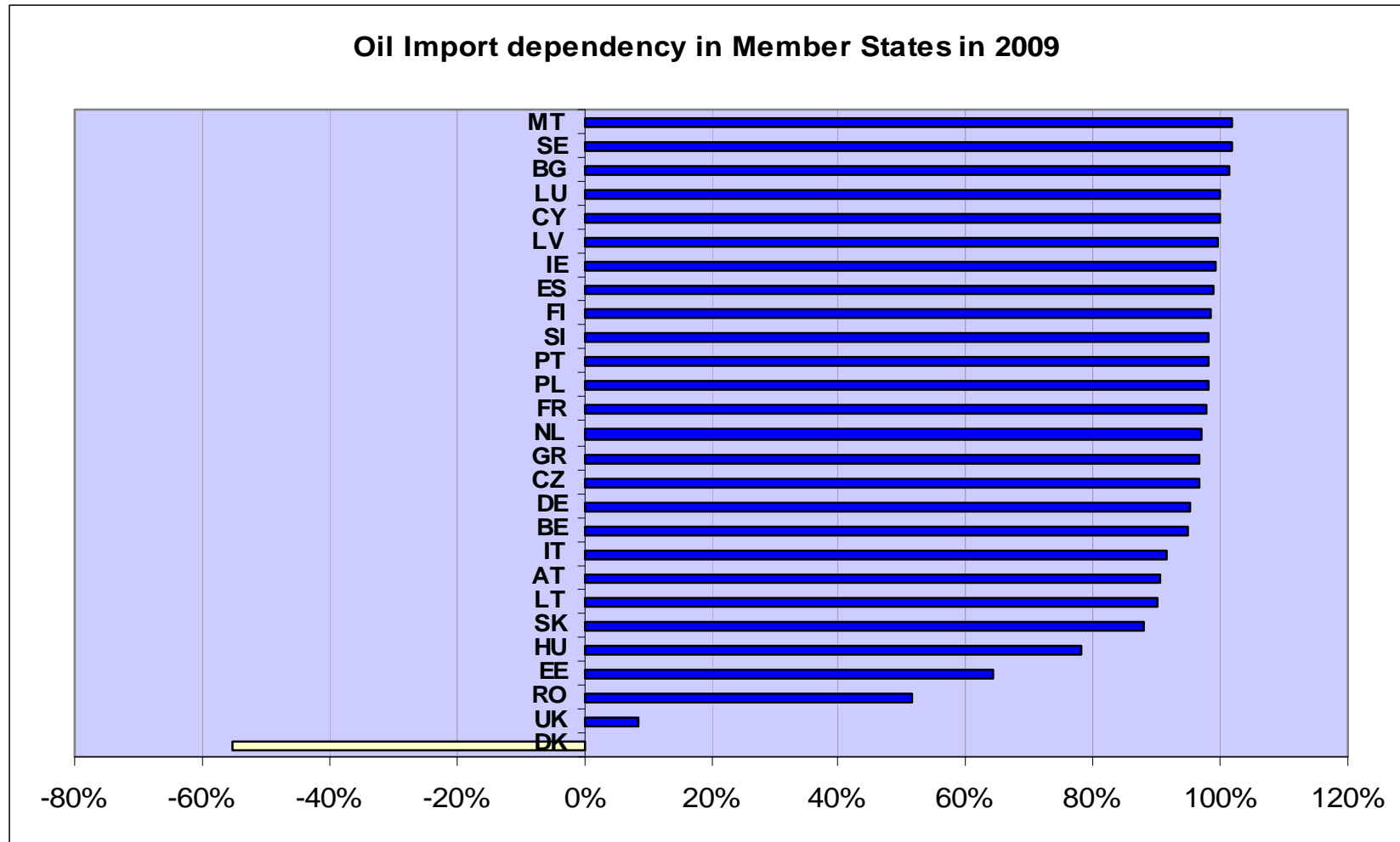
Energy dependency strongly differs among Member States: Denmark is the only net energy exporter while Malta is entirely dependent on energy imports.



Values over 100% are possible due to changes in stocks. Source: Eurostat May 2011

2. EU ENERGY DEPENDENCY

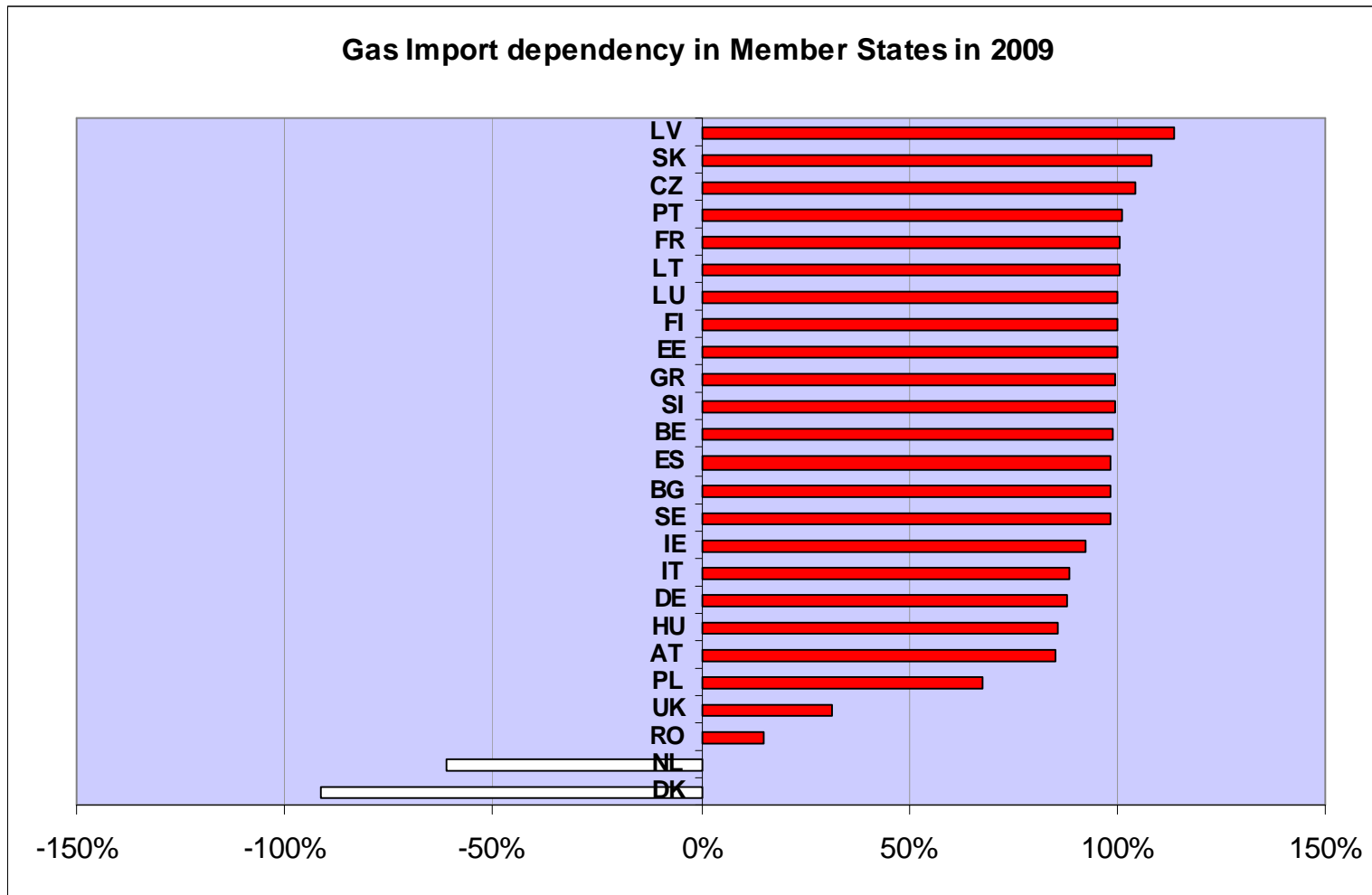
In 2009, Denmark was the sole net exporter of oil among the EU-27 Member States and the United-Kingdom had the lowest oil dependency rate (8.6%).



Values over 100% are possible due to changes in stocks. Source: Eurostat May 2011

2. EU ENERGY DEPENDENCY

In 2009, Denmark and the Netherlands were the only gas exporting countries among the EU-27.

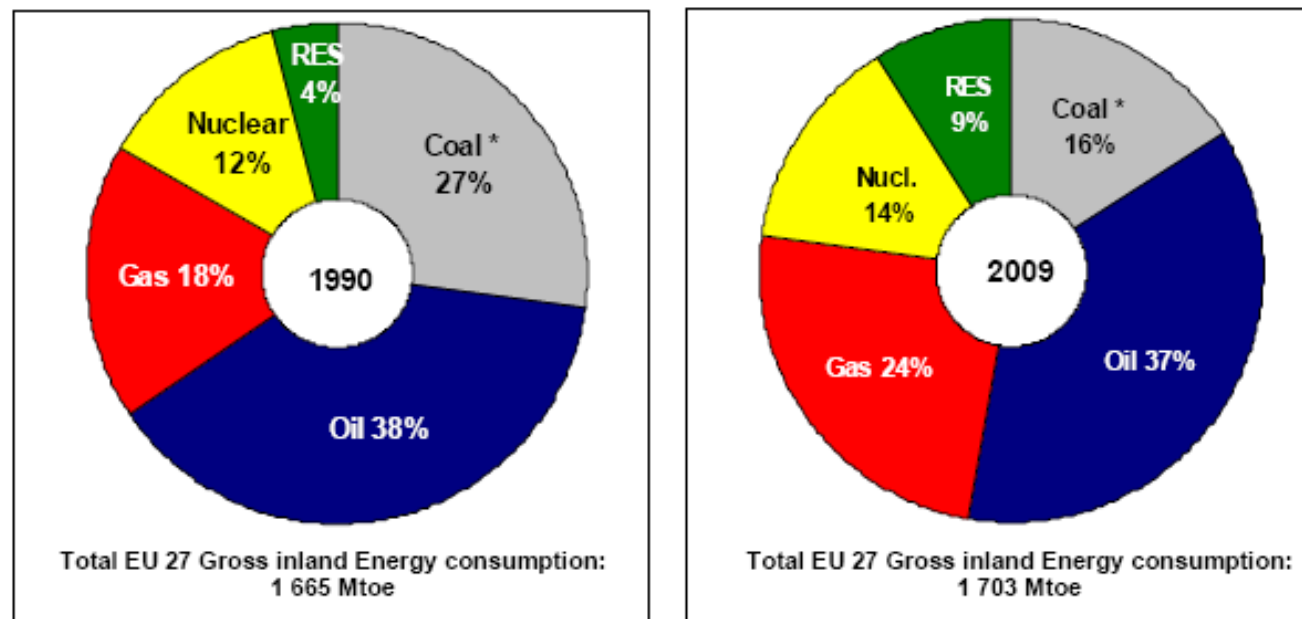


Values over 100% are possible due to changes in stocks. Source: Eurostat May 2011

3. EU energy consumption by fuel

Fossil fuels represent three quarters of our energy mix today. Renewables are on the rise but there is still some way to go before reaching the 20% target by 2020.

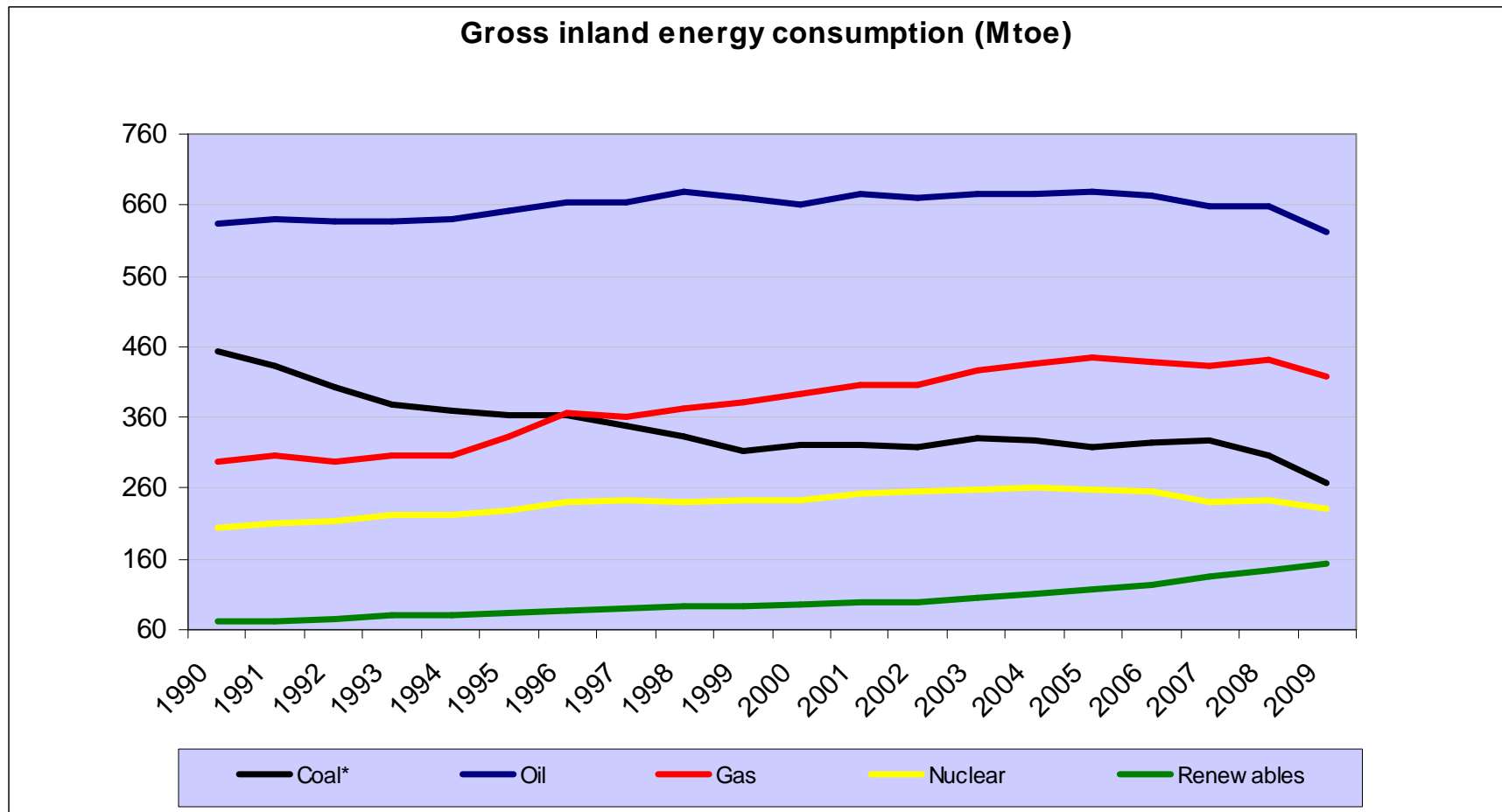
EU gross inland energy consumption by fuel in 1990 and 2009



Eurostat May 2011 - * Coal and other solid fuels - RES: Renewable Energy Sources

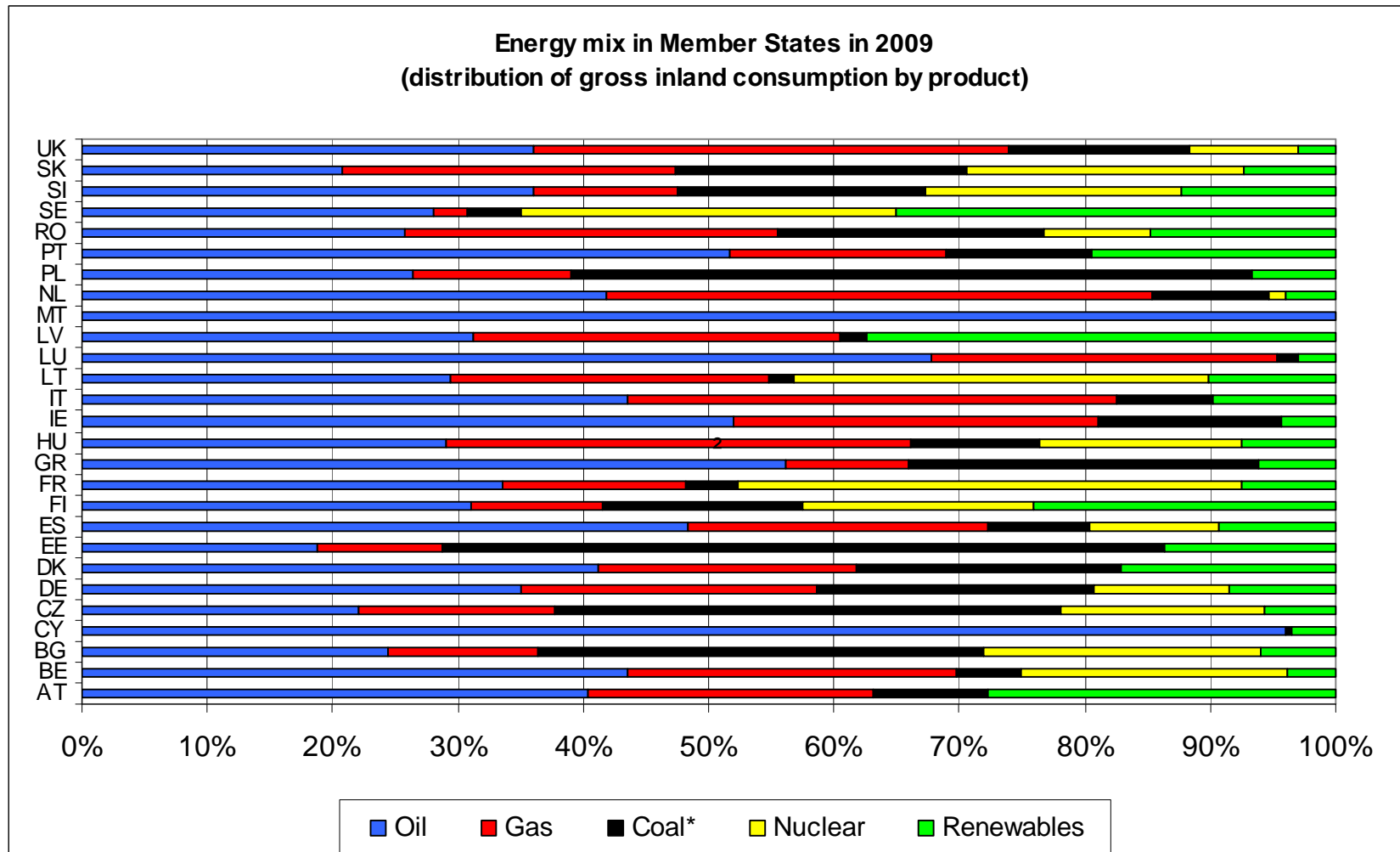
3. EU ENERGY CONSUMPTION BY FUEL

The quasi-stability of energy consumption in the EU (it increased by only 2% between 1990 and 2009) hides a strong decline in coal consumption (-41%) while the consumption of renewables and gas grew by 116% and 41% respectively .



3. EU ENERGY CONSUMPTION BY FUEL

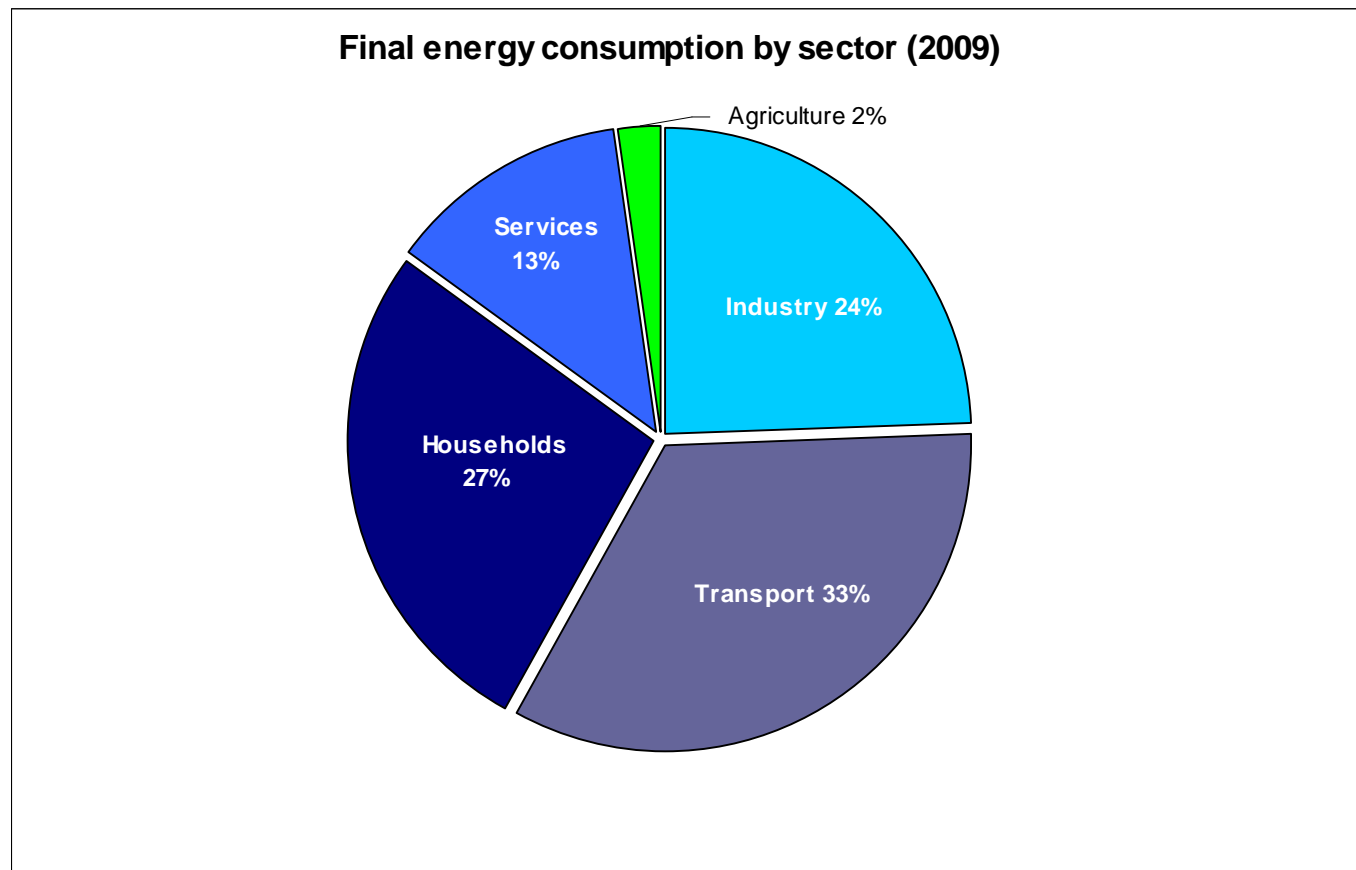
The picture of the energy mix strongly varies among Member States. For instance Malta energy consumption is 100% dependant on oil, while oil accounts for less than 20% of the energy consumption in Estonia.



Source: Eurostat May 2011; * Coal and other solid fuels

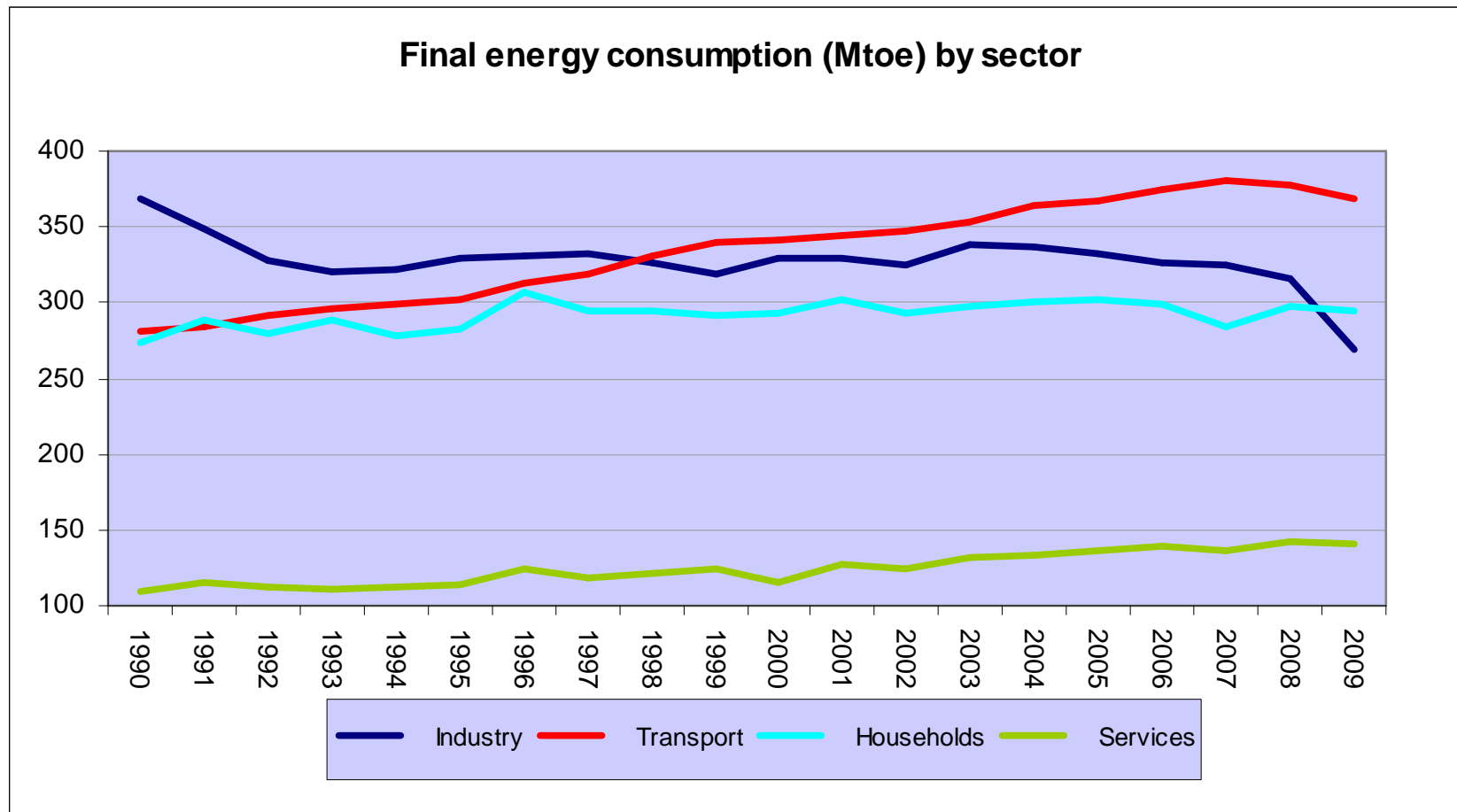
4. EU final energy consumption

Transport and industry consume more than half of the total final energy in the EU, while a quarter of final energy is consumed by households.



4. EU FINAL ENERGY CONSUMPTION

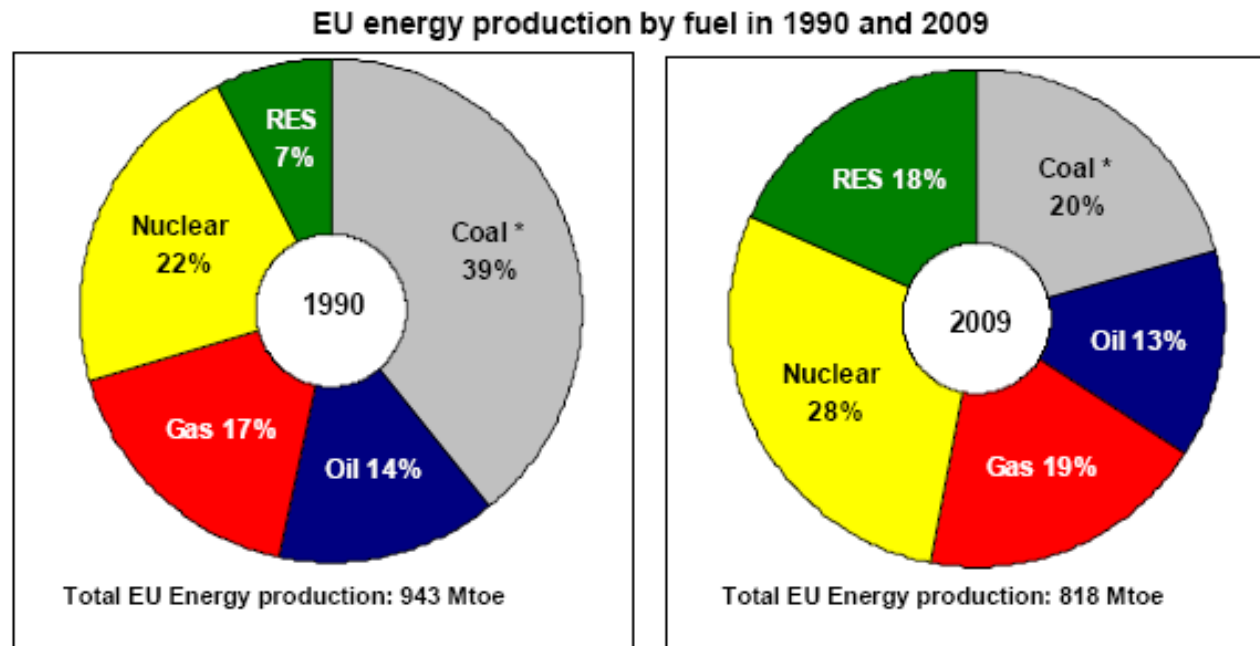
Final energy consumed by transport has strongly increased in the last 2 decades (+31%) even though the economic crisis has slightly reversed the curb in 2009.



Source: Eurostat May 2011

5. EU energy production

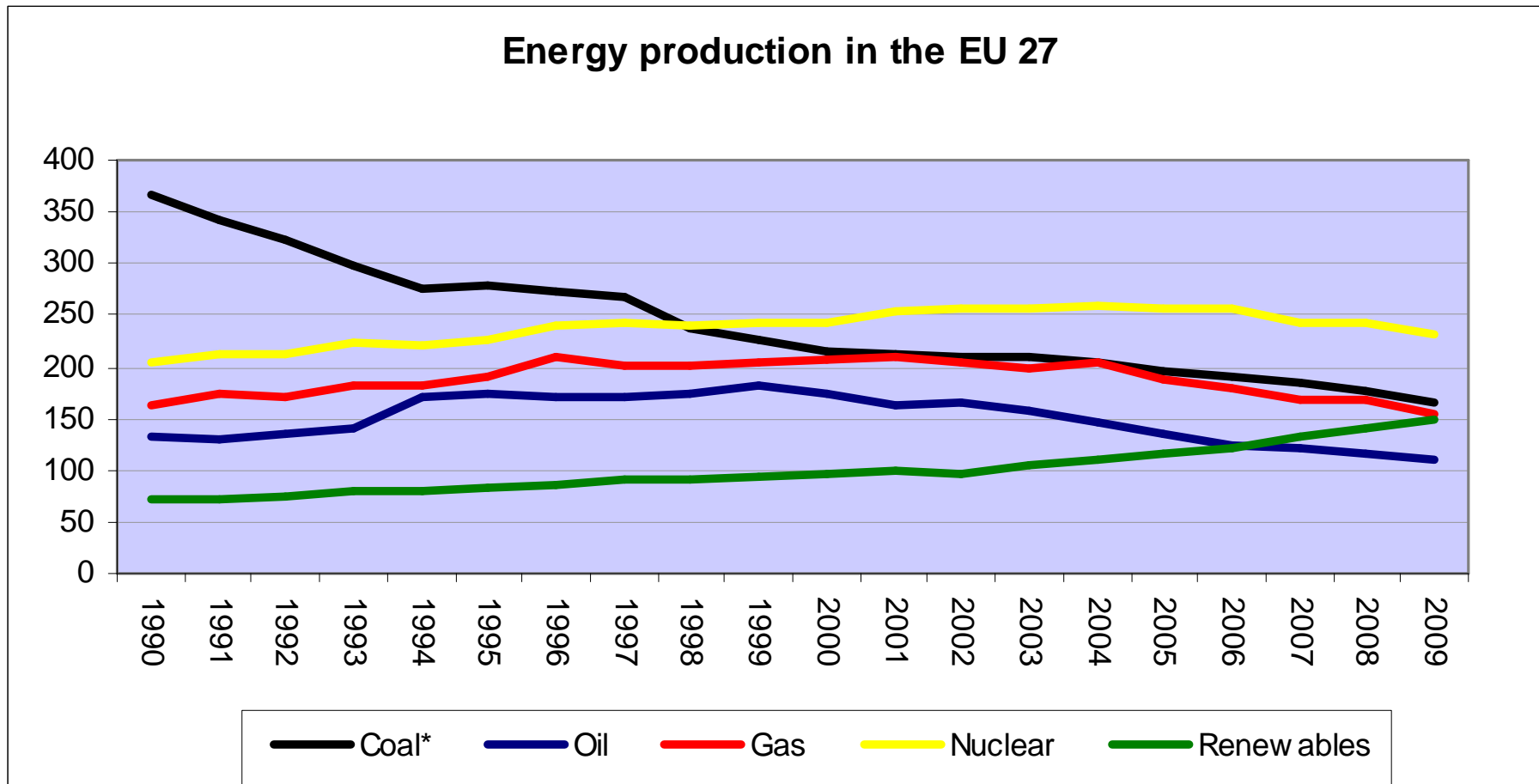
The EU energy production decreased by 13% over the last 20 years, mainly due to the large reduction in coal and other solid fuels production (-55%)



Eurostat May 2011 - * Coal and other solid fuels - RES: Renewable Energy Sources

5. EU ENERGY PRODUCTION

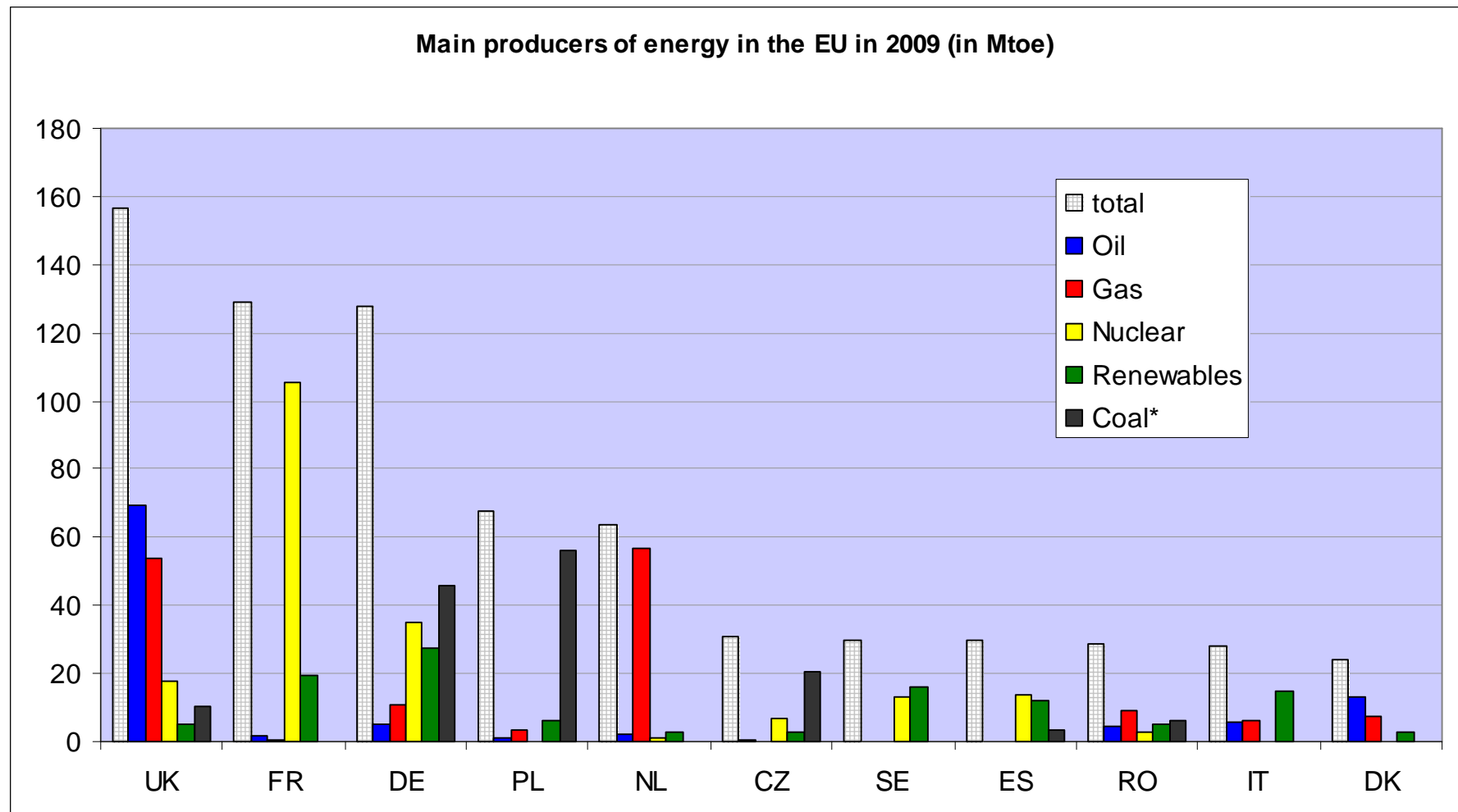
By contrast production of energy from renewable sources rose by 111% between 1990 and 2009.



Source: Eurostat May 2011; * Coal and other solid fuels

5. EU ENERGY PRODUCTION

2/3 of the total primary energy production in the EU comes from 5 Member States...

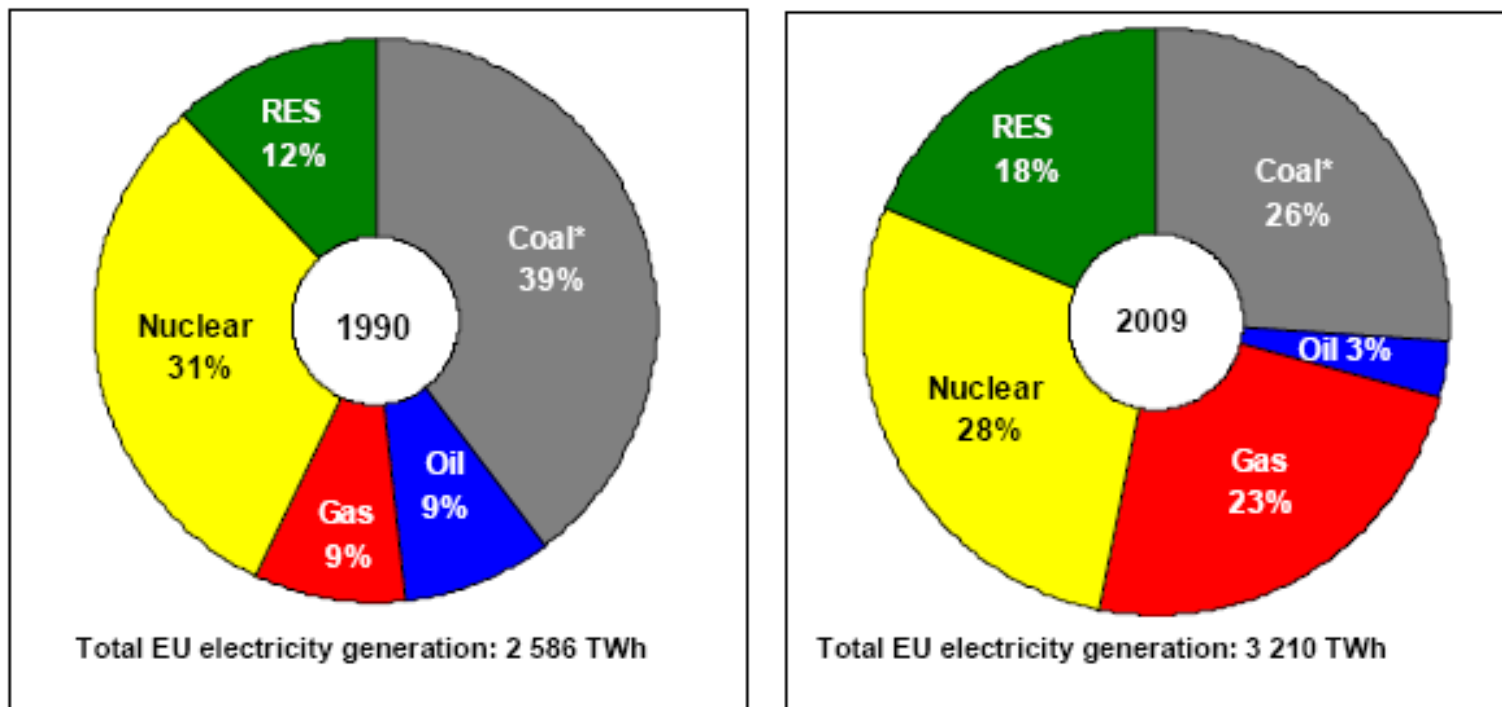


Source: Eurostat May 2011; * Coal and other solid fuels

6. EU electricity generation

Gas and renewables are more and more contributing to the electricity generation in the EU, just after nuclear and coal...

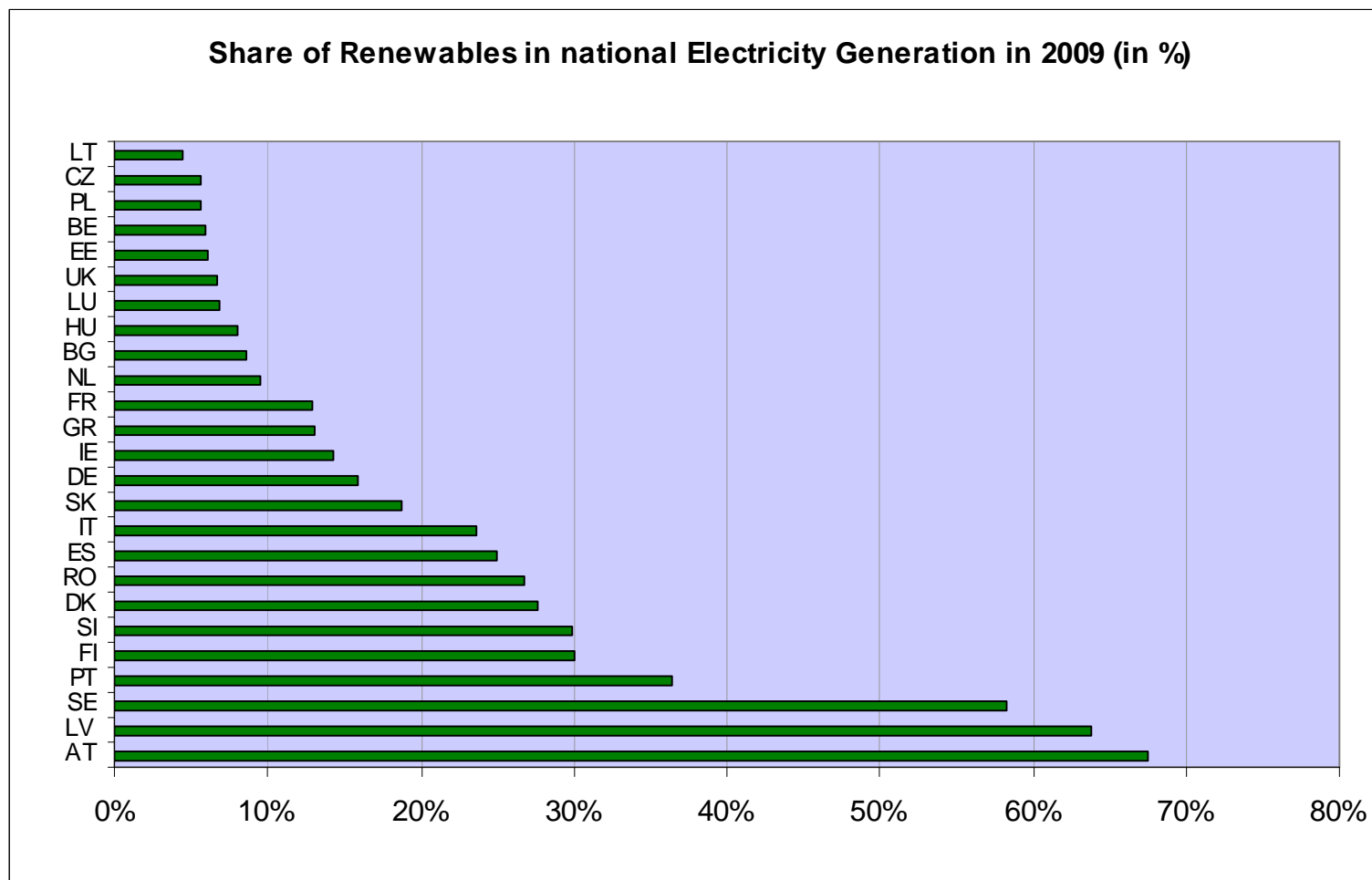
Electricity Generation in the EU by type of fuel in 1990 and 2009



Eurostat May 2011 - * Coal and other solid fuels - RES: Renewable Energy Sources

6. EU ELECTRICITY GENERATION

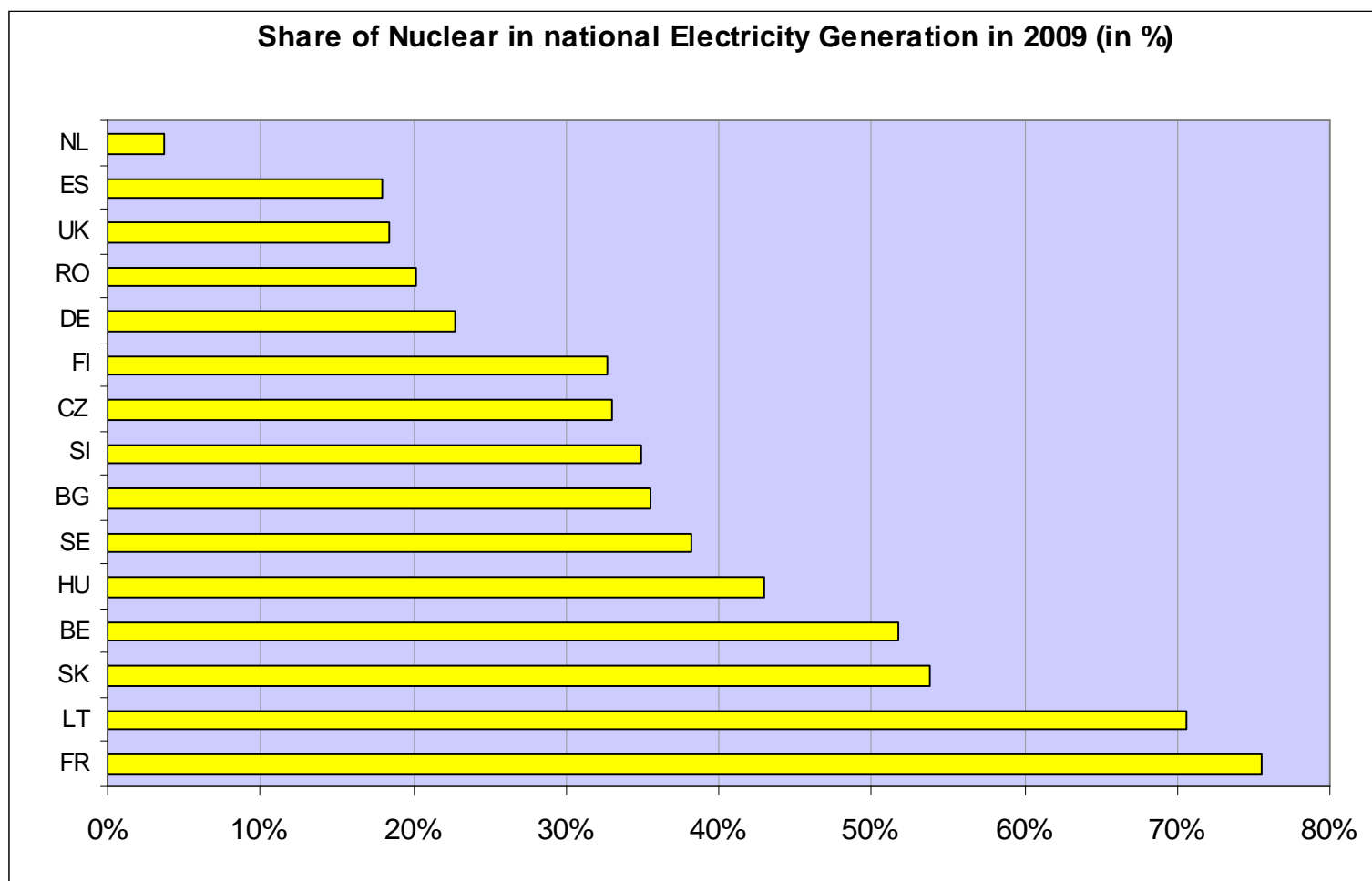
In Austria, 68% of electricity generation was provided by renewable energy sources in 2009 while the EU average was of 18%...



Source: Eurostat May 2011

6. EU ELECTRICITY GENERATION

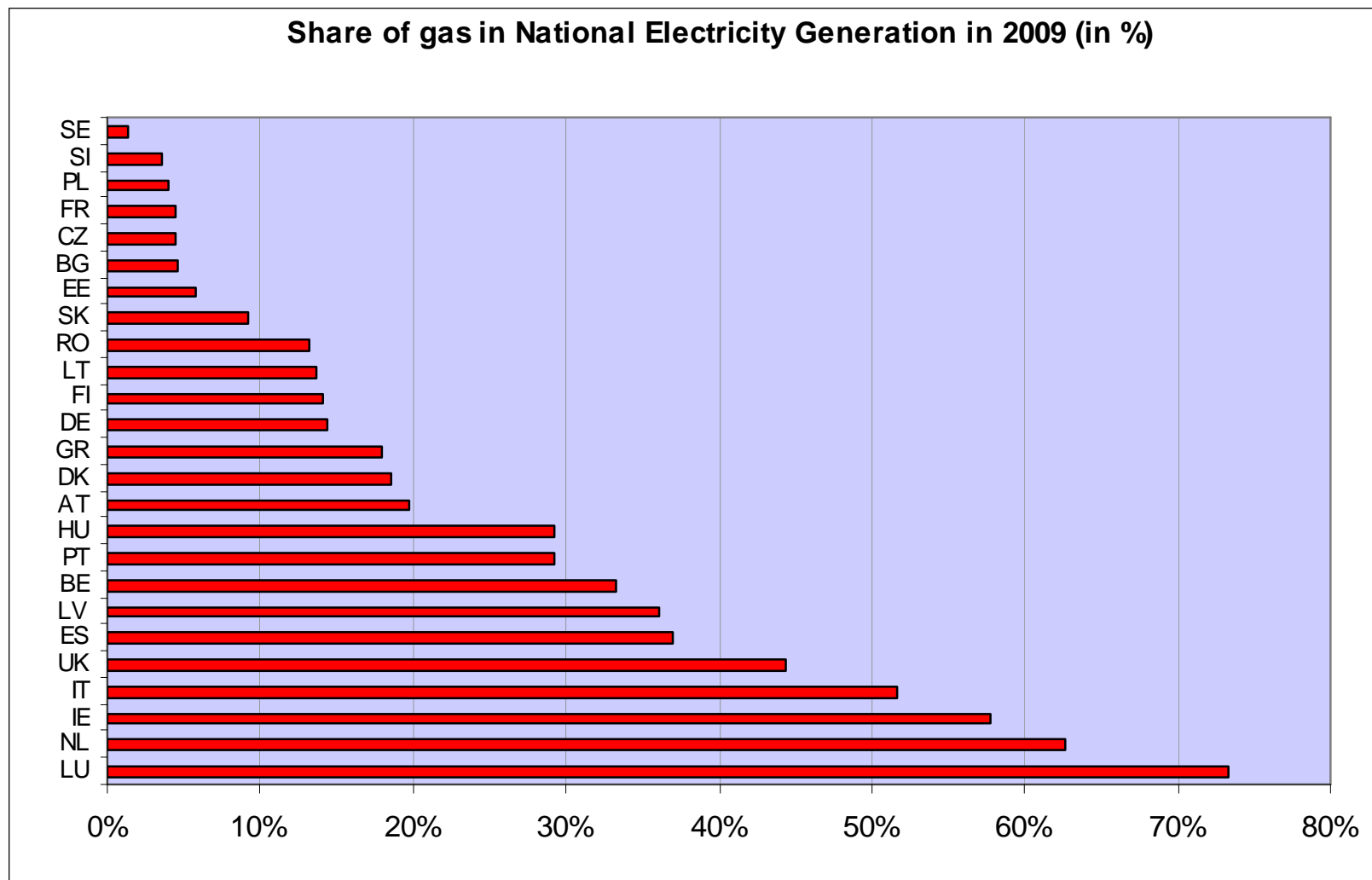
In 2009, 15 Member States produced electricity from nuclear energy, with the highest share in France (76%).



Source: Eurostat May 2011

6. EU ELECTRICITY GENERATION

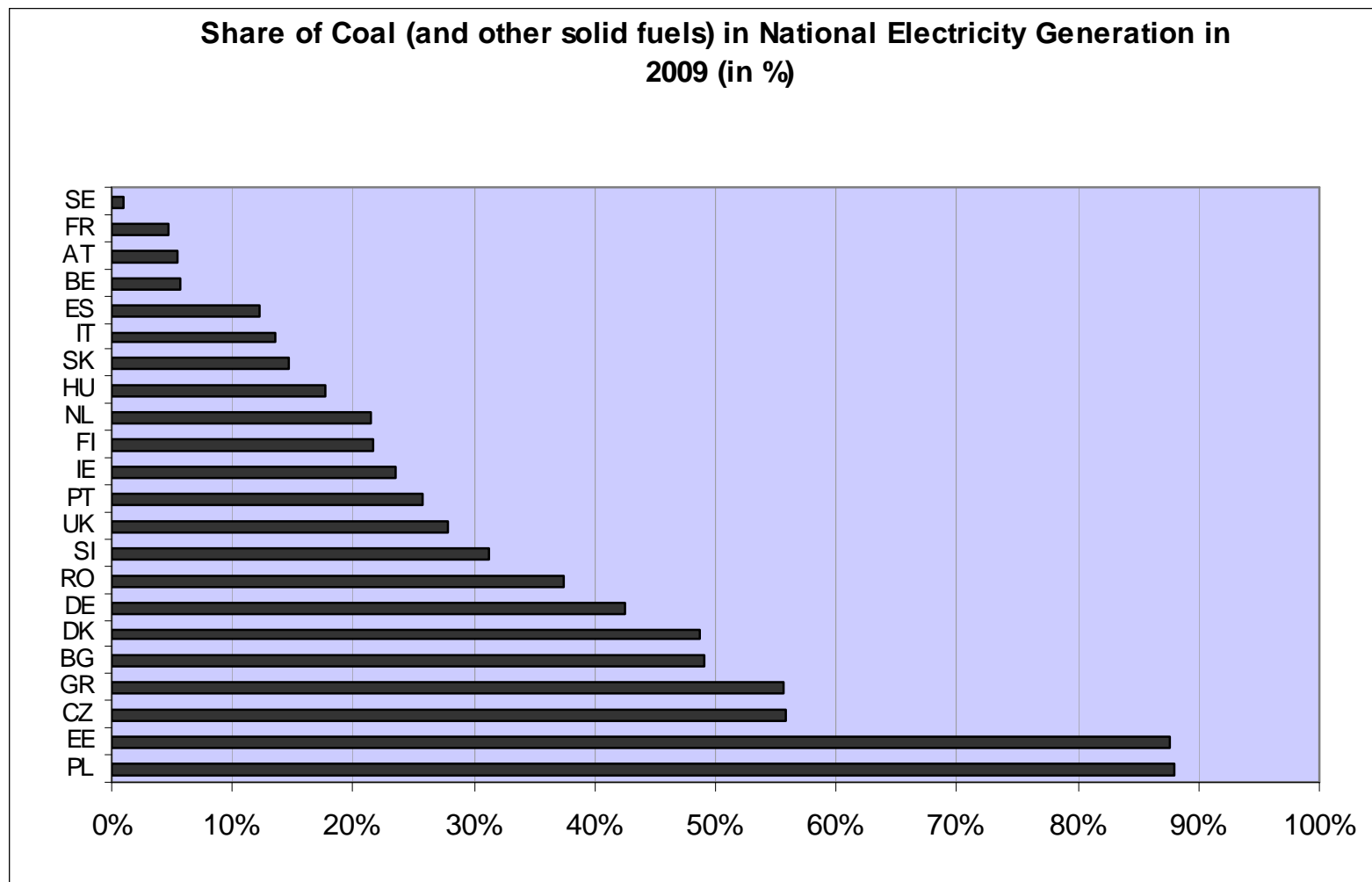
Luxembourg, the Netherlands, Ireland and Italy produced more than 50% of their electricity from gas.



Source: Eurostat May 2011

6. EU ELECTRICITY GENERATION

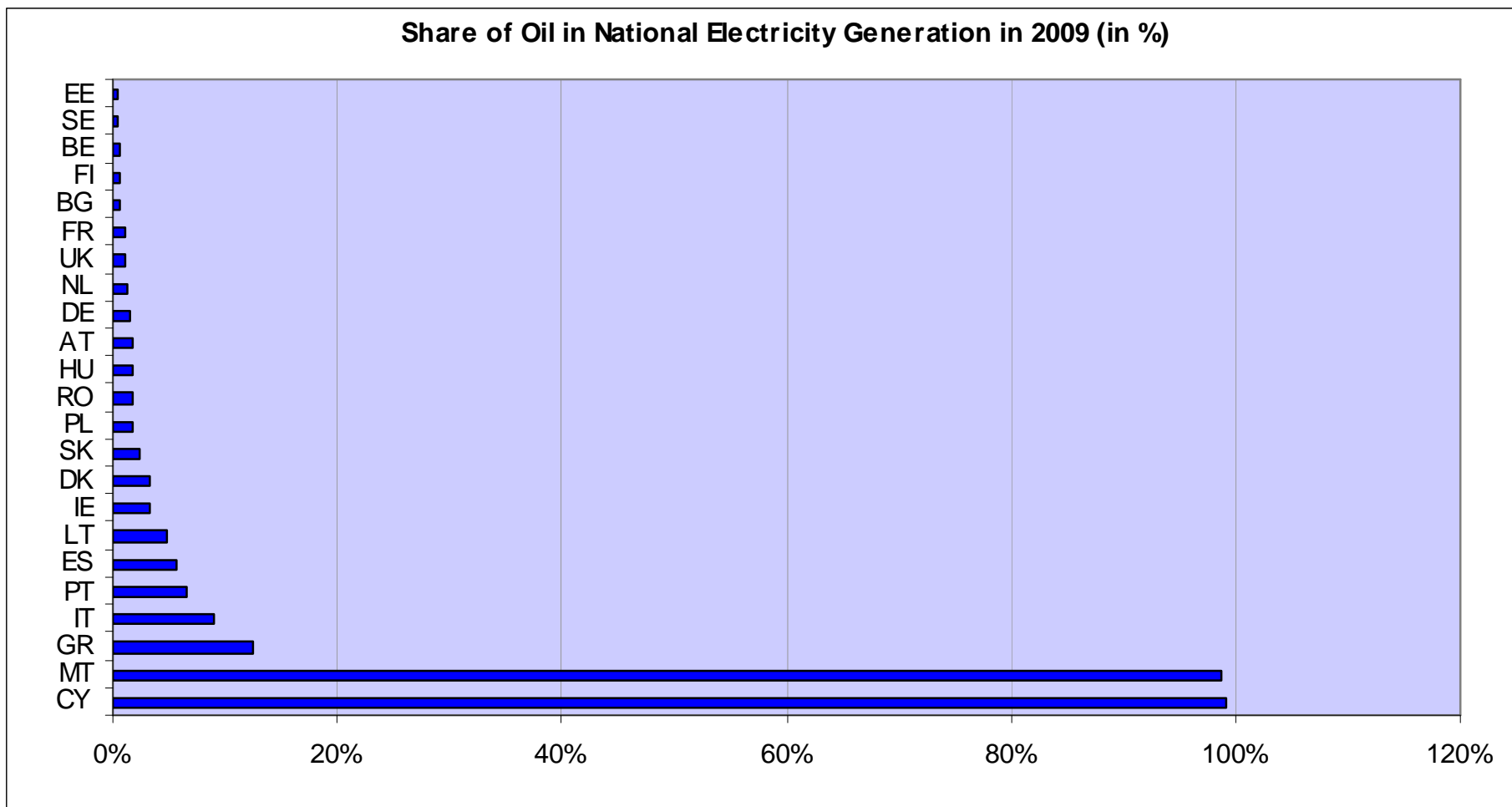
Electricity generation from coal remains particularly high in Poland and Estonia.



Source: Eurostat May 2011

6. EU ELECTRICITY GENERATION

Electricity generation in Malta and Cyprus is quasi exclusively dependent on oil.

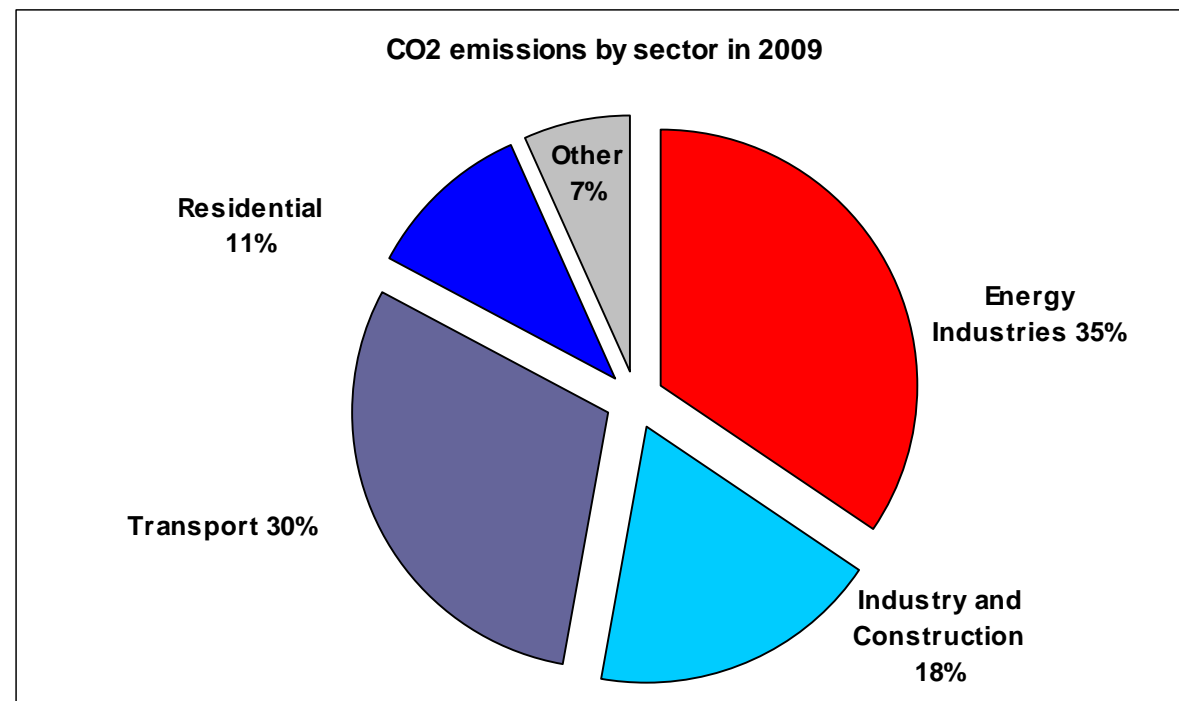


Source: Eurostat May 2011

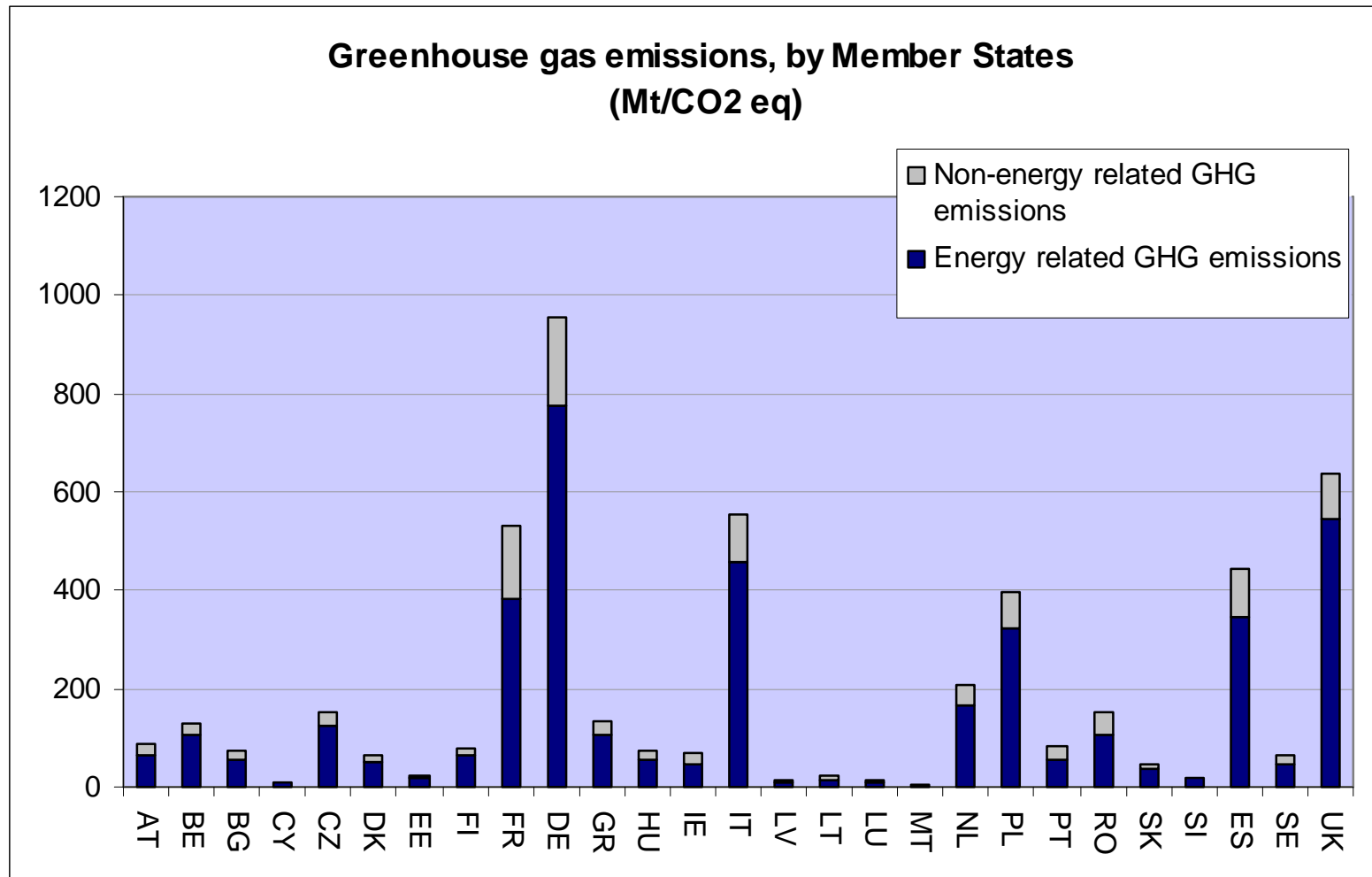
7. EU ENERGY TARGETS: 20-20-20 BY 2020

ü Reduction of the greenhouse gas emissions by 20% compared to 1990

Energy industries are responsible for 35% of CO₂ emissions.
Transport comes just after with 30% of CO₂ emissions.



7. EU Energy targets 20-20-20 by 2020

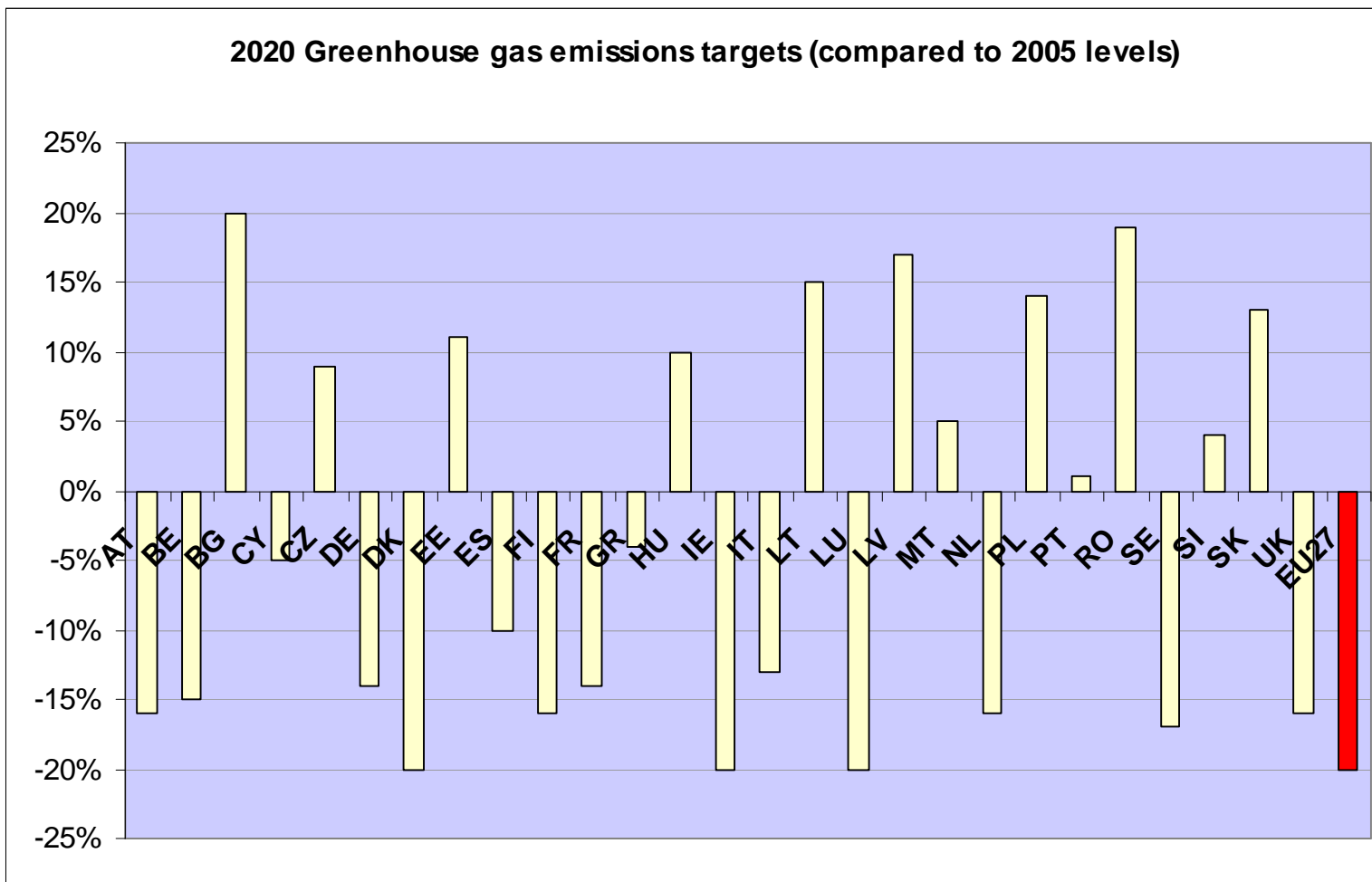


Source: EEA 2010

7. EU Energy targets 20-20-20 by 2020

The EU is committed to reducing its greenhouse gas emissions by at least 20% from 1990 levels by 2020.

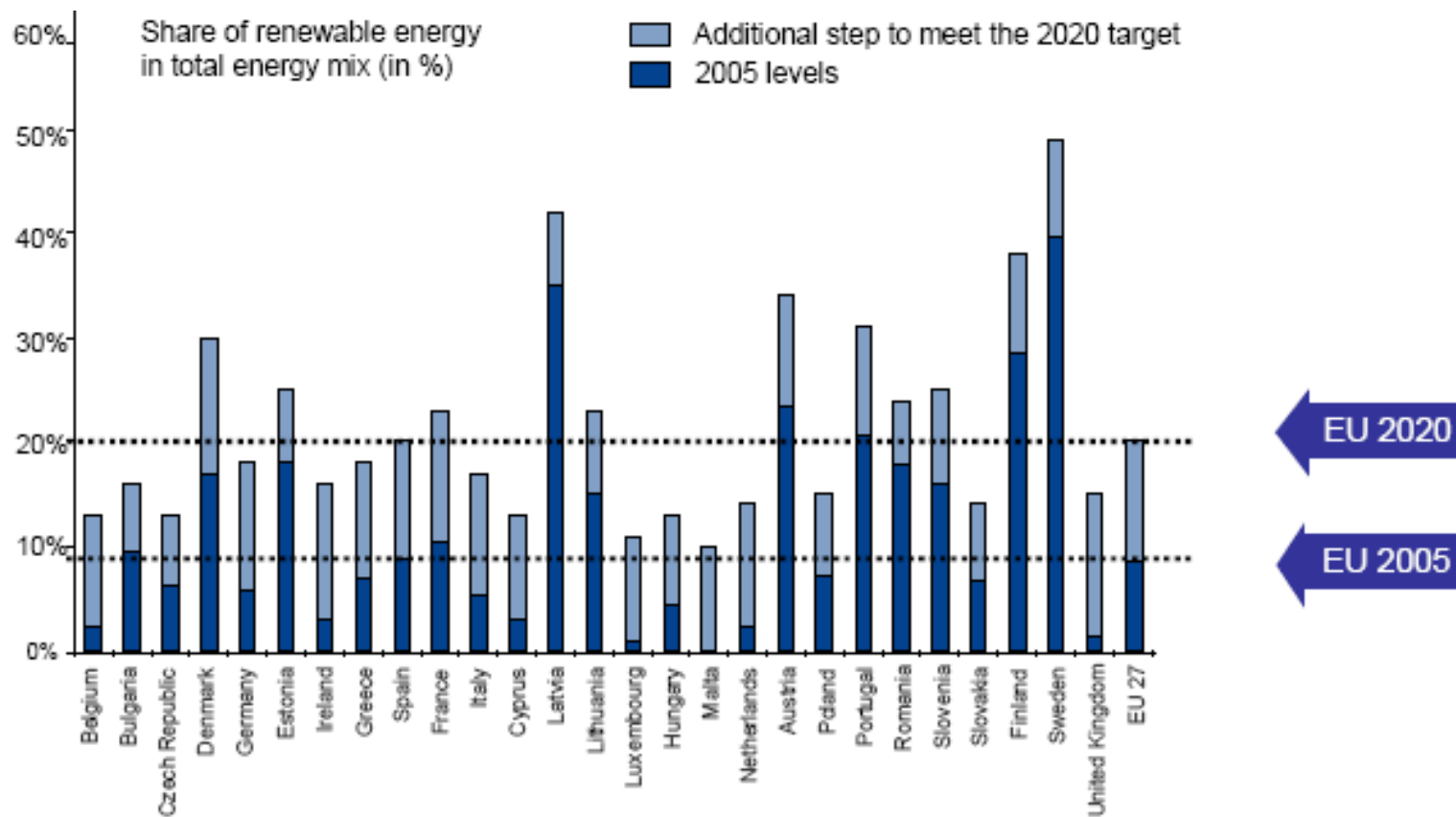
Member States have set themselves specific targets.



Source: European Commission Europe 2020 targets.
The 20% reduction target for the EU is compared to 1990 level.

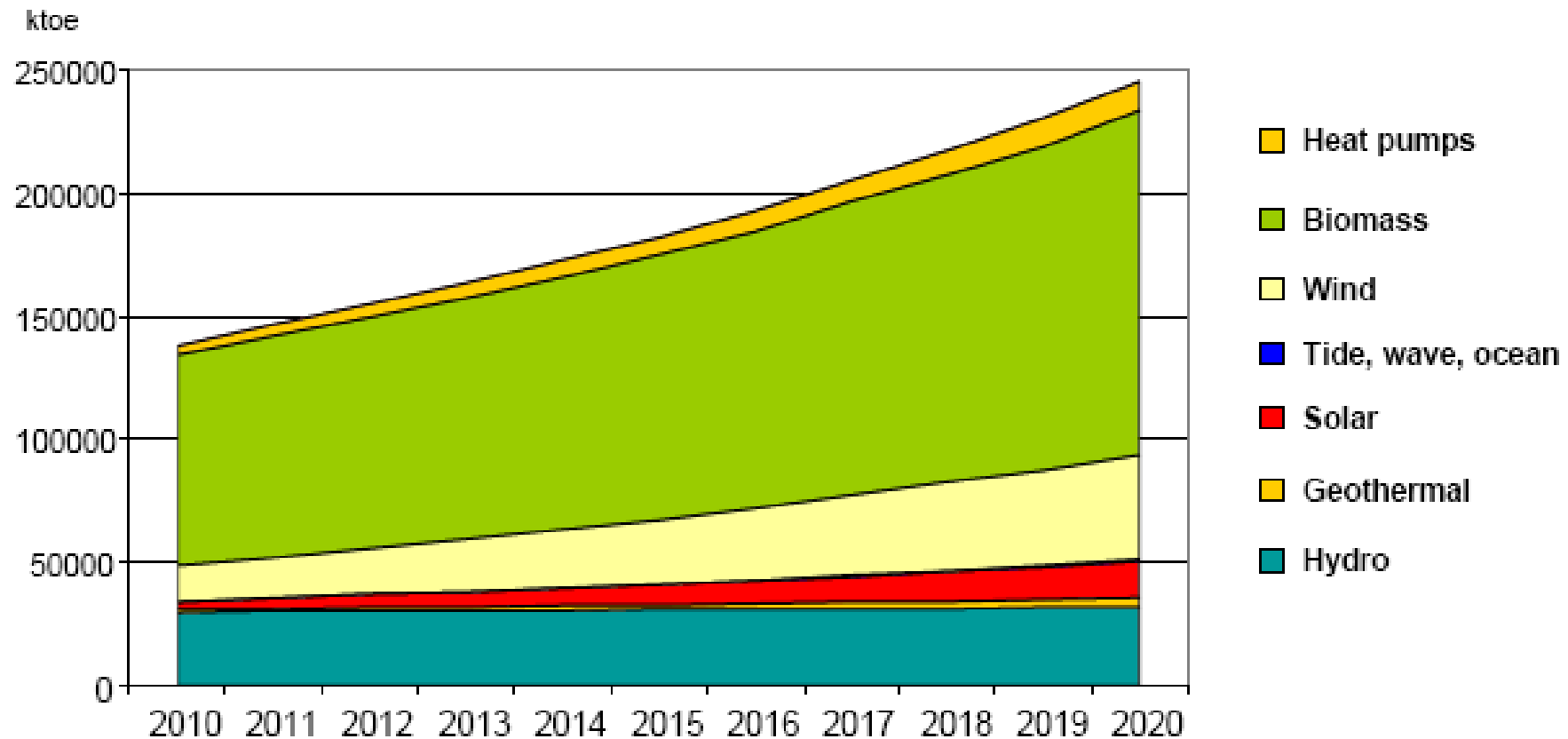
7. EU Energy targets 20-20-20 by 2020

Ü Increase the share of renewable energy sources in energy consumption to 20%



7. EU Energy targets 20-20-20 by 2020

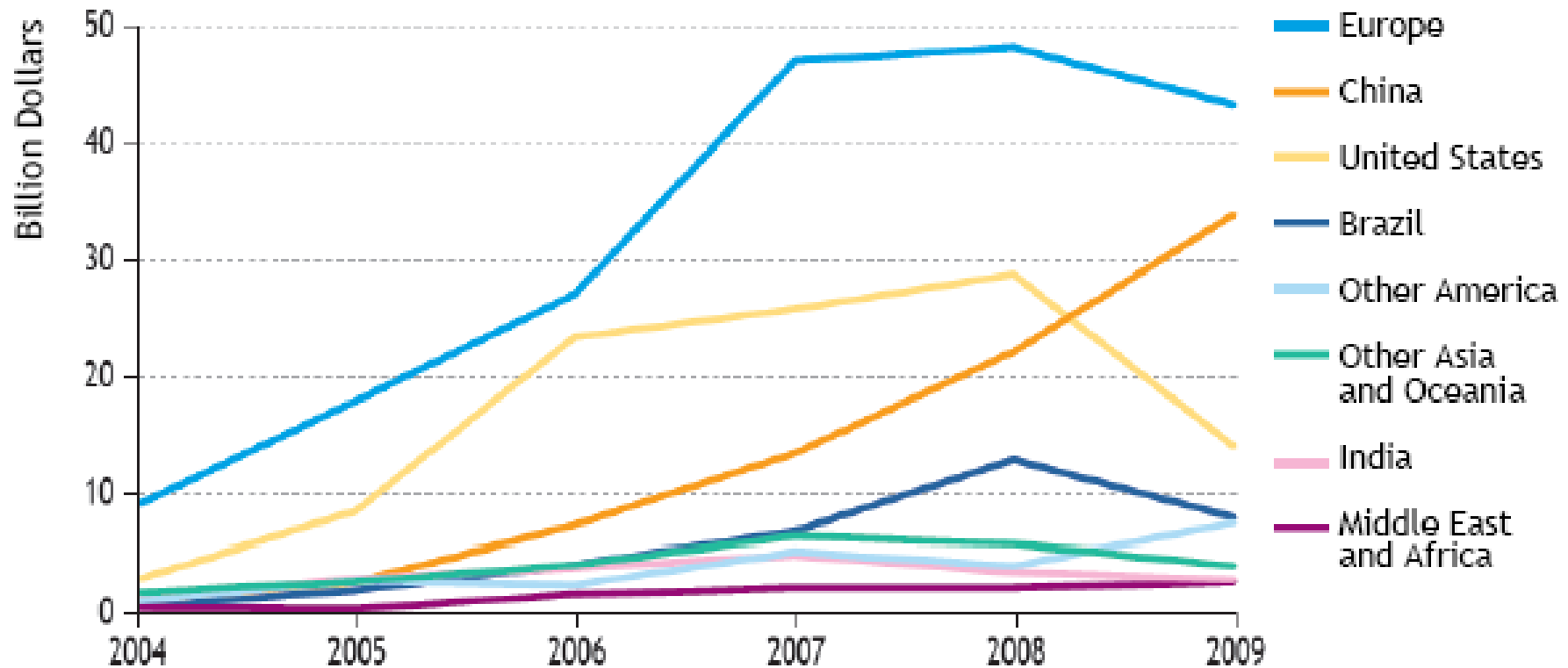
Solar, wind and biomass are the technologies progressing most rapidly. Solar and wind develop for electricity generation while biomass remains dominant for the heating sector.



7. EU Energy targets 20-20-20 by 2020

In 2009, investment in renewable energy fell in the EU by 10% in the context of the economic crisis, while it increased by more than 50% in China...

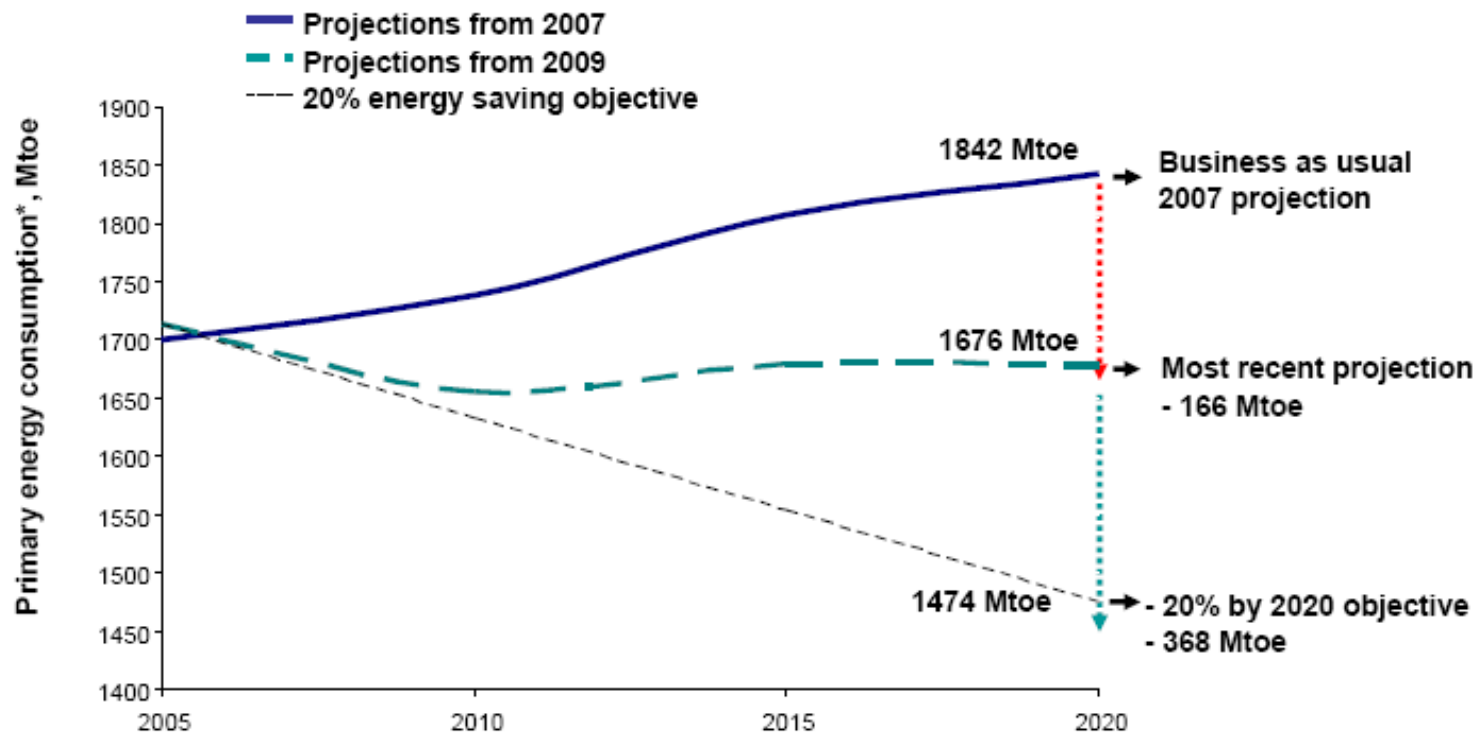
Investment in renewable energy at global level



7. EU Energy targets 20-20-20 by 2020

ü 20% increase in energy efficiency

In spite of progress, significant additional efforts are needed to achieve the -20% energy consumption target.



* Gross inland consumption minus non-energy uses

7. EU Energy targets 20-20-20 by 2020

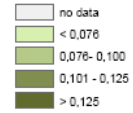
Ü National projections vary to the base year against savings are estimated

	<i>Primary energy savings impact, Mtoe</i>
Austria	7,2
Belgium	9,8
Bulgaria	3,2
Cyprus	0,5
Czech Republic	n.a.
Germany	38,3
Denmark	0,8
Estonia	0,7
Greece	2,7
Spain	25,2
Finland	4,2
France	34,0
Hungary	3,0
Ireland	2,8
Italy	27,9
Lithuania	1,1
Luxembourg	0,2
Latvia	0,7
Malta	0,2
Netherlands	n.a.
Poland	14,0
Portugal	6,0
Romania	10,0
Sweden	12,8
Slovenia	n.a.
Slovak Republic	1,6
United Kingdom	n.a.
EU27	206,9

Source: National reform Programmes presented to the Commission in 2011.

8. ENERGY PRICES

Prices per kWh (€)



ELECTRICITY PRICES (EXCLUSIVE OF TAXES)

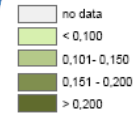
Households

Band DC : 2 500 kWh < Consumption < 5 000 kWh

Prices : 2nd semester 2010



Prices per kWh (€)



ELECTRICITY PRICES (INCLUSIVE OF TAXES)

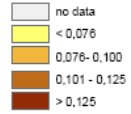
Households

Band DC : 2 500 kWh < Consumption < 5 000 kWh

Prices : 2nd semester 2010



Prices per kWh (€)



ELECTRICITY PRICES (EXCLUSIVE OF TAXES)

Industrial Consumers

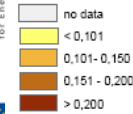
Prices : 2nd semester 2010

Band IC : 500 MWh < Consumption < 2 000 MWh



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Prices per kWh (€)



ELECTRICITY PRICES (INCLUSIVE OF TAXES)

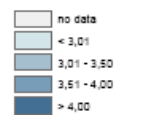
Industrial Consumers

Prices : 2nd semester 2010

Band IC : 500 MWh < Consumption < 2 000 MWh



Prices per kWh (c€)



GAS PRICES (EXCLUSIVE OF TAXES) Households

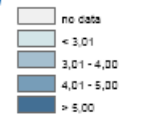
Band D2: 5,56 MWh < consumption < 55,6 MWh

Prices at : 2nd semester 2010



Source : © Eurogeographic for the administrative boundaries; © EUROSTAT

Prices per kWh (c€)



GAS PRICES (INCLUSIVE OF TAXES) Households

Band D2: 5,56 MWh < consumption < 55,6 MWh

Prices at : 2nd semester 2010



Source : © Eurogeographic for the administrative boundaries; © EUROSTAT

Prices per kWh (c€)

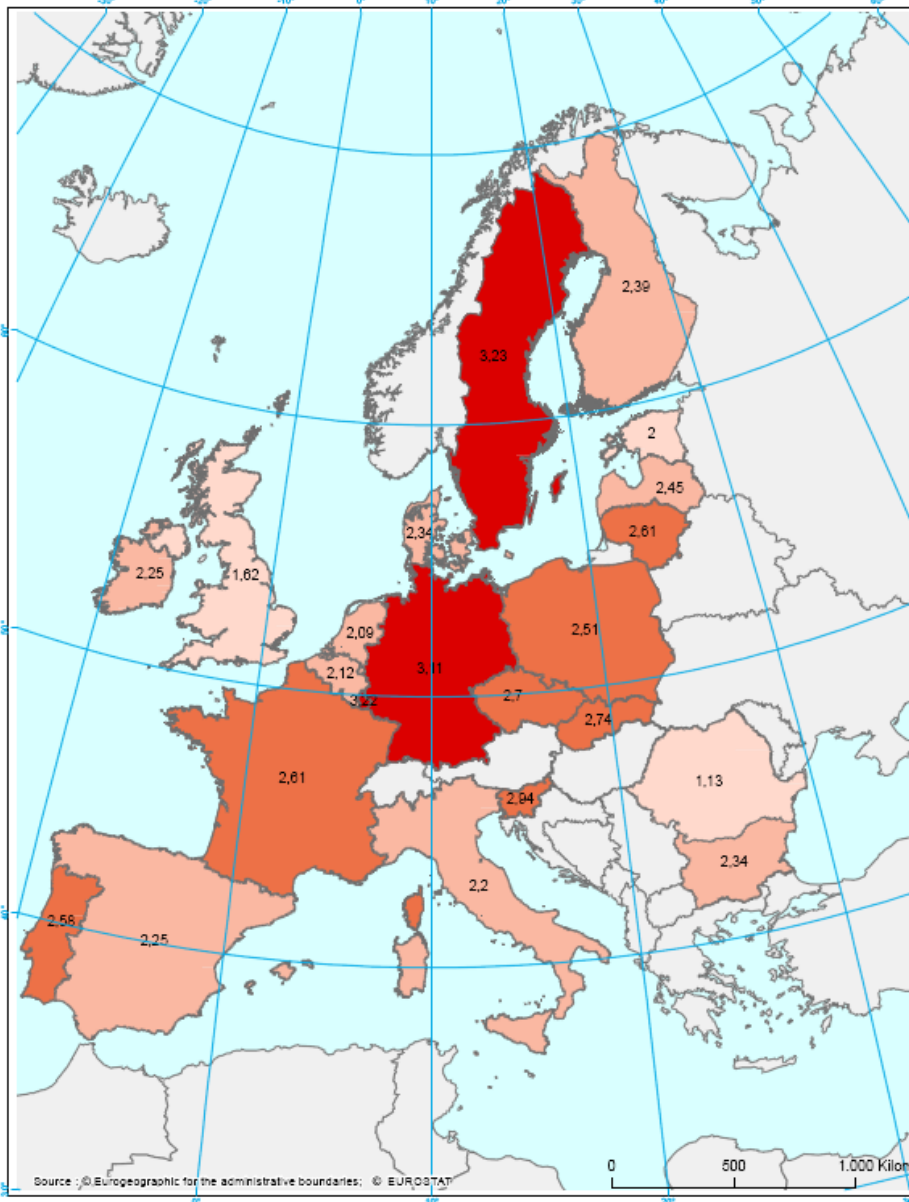


GAS PRICES (EXCLUSIVE OF TAXES)

Industrial Consumers

Prices at : 2nd semester 2010

Band I3: 2,78 GWh < consumption < 27,8 GWh



Source : ©Eurogeographic for the administrative boundaries; © EUROSTAT

Prices per kWh (c€)

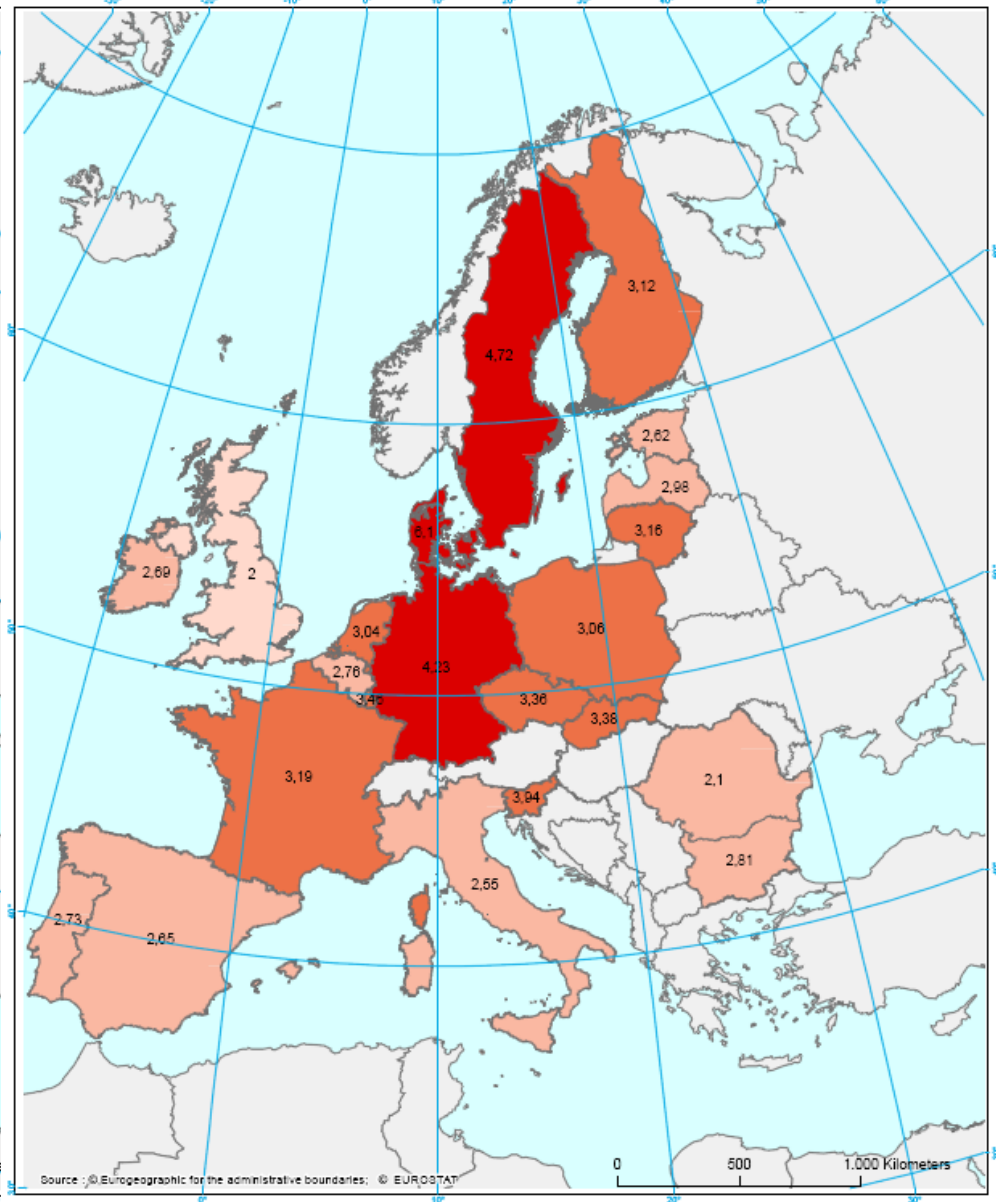


GAS PRICES (INCLUSIVE OF TAXES)

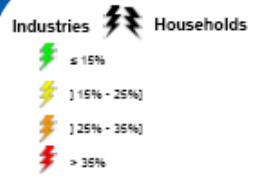
Industrial Consumers

Prices at : 2nd semester 2010

Band I3: 2,78 GWh < consumption < 27,8 GWh

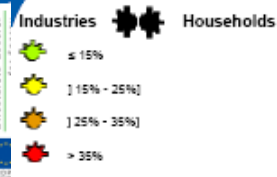
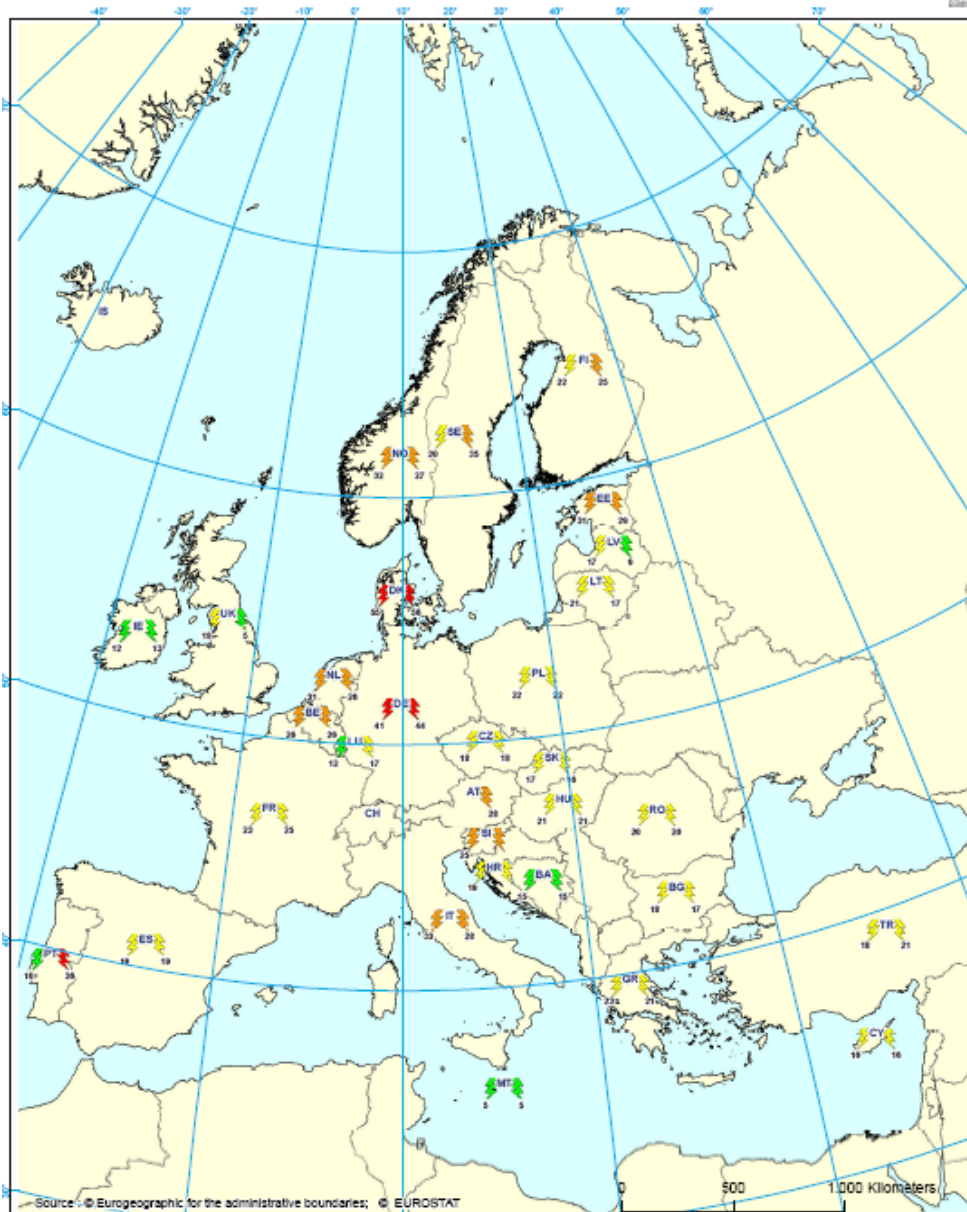


Source : ©Eurogeographic for the administrative boundaries; © EUROSTAT



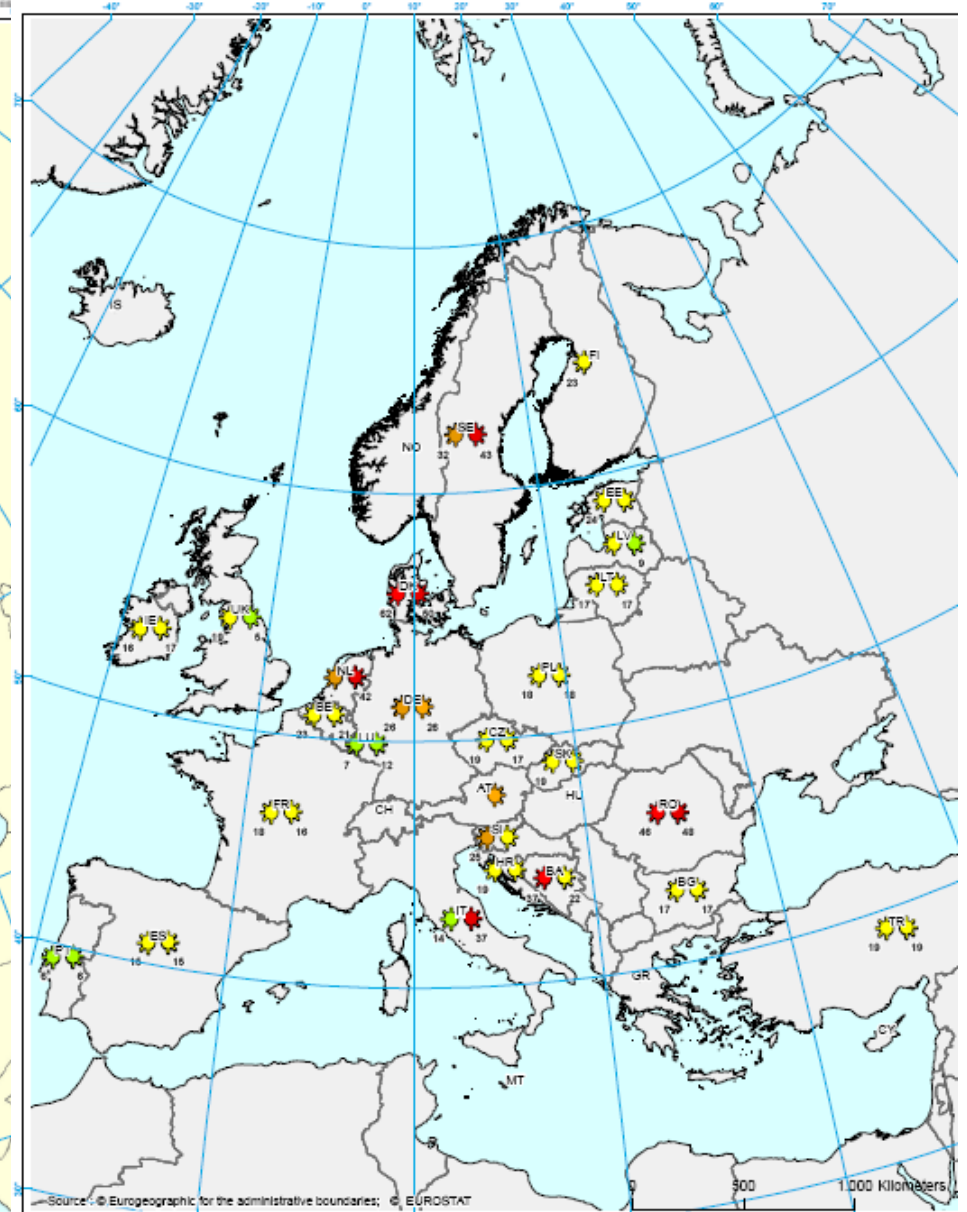
TOTAL TAXATION IN ELECTRICITY PRICE

Prices : 2nd semester 2010



TOTAL TAXATION IN GAS PRICE

Prices : 2nd semester 2010



Consumer prices of petroleum products (Inclusive of duties and taxes)

The following maps are refreshed on a monthly basis and are available [here](#), along with the underlying data:

- [Automotive Gas oil \(Diesel Oil\)](#)
- [Euro-Super 95](#)
- [Total Taxation Share in the end consumer price for Euro-Super 95 and Diesel Oil](#)

9. Some concepts and definitions

- Ü **Gross inland consumption** is the quantity of energy consumed within the borders of a country. It includes deliveries to the energy transformation sector and to the energy industries themselves.
- Ü **Final energy consumption** is the energy finally consumed in the transport, industrial, commercial, agricultural, public and household sectors. It excludes deliveries to the energy transformation sector and to the energy industries themselves.
- Ü **Primary energy production** is the extraction of energy from a natural source.
- Ü **Energy import dependency** shows the extent to which a country relies upon imports in order to meet its energy needs. Formula: net imports / (gross inland consumption+bunkers) (bunkers = quantities supplied to sea-going ships)
- Ü **Renewable energy** includes hydroelectricity, biomass, wind, solar, tidal and geothermal energies.

