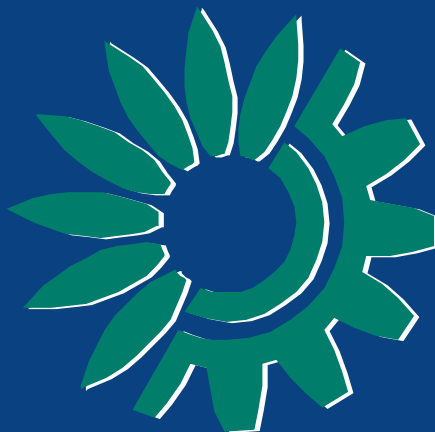


Energy and Environment Indicators



Peter Taylor and Aphrodite Mourelatou

Indicators for Sustainable Energy Development (ISED)

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Presentation overview

- Introducing the European Environment Agency
- Energy and environment indicators
- Indicator examples
- Other energy and environment work

The EEA mission

The European Environment Agency is the EU body dedicated to providing sound, independent information on the environment

It is the main information source for those involved in developing, adopting, implementing and evaluating environmental policy, and also the general public

EEA Activities

The Agency is mandated to:

- describe the present and foreseeable state of the environment from the points of view of:
 - (i) the quality of the environment
 - (ii) the pressures on the environment
 - (iii) the sensitivity of the environmentincluding placing these in the context of sustainable development.
- provide the Community and Member States with the objective information necessary for framing and implementing sound and effective environmental policies

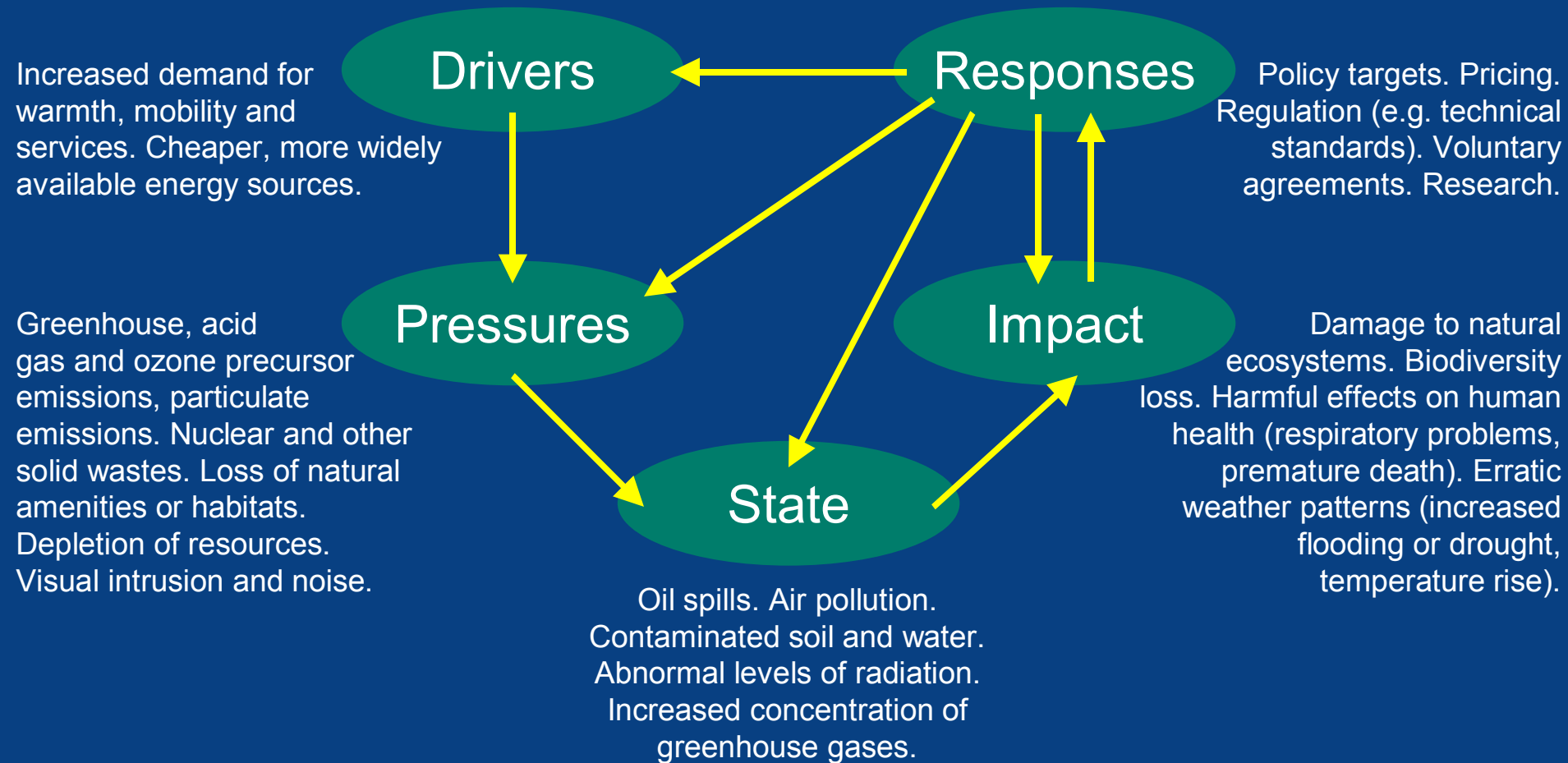
Council Regulation No. 1210/1990 as amended by No. 933/1999

EEA member and collaborating countries



- Member countries
- Collaborating countries

Reporting on the environmental impacts of energy use



Energy and environment indicator fact sheet principles

- Building blocks of Agency reporting
- A tool to manage information requests and to share knowledge among Agency partners
- A tool to avoid inconsistencies
- Data from recognised international sources (e.g. Eurostat)
- Projections from compatible models
- Regular updates – to take into account either policy developments or the delivery of new data

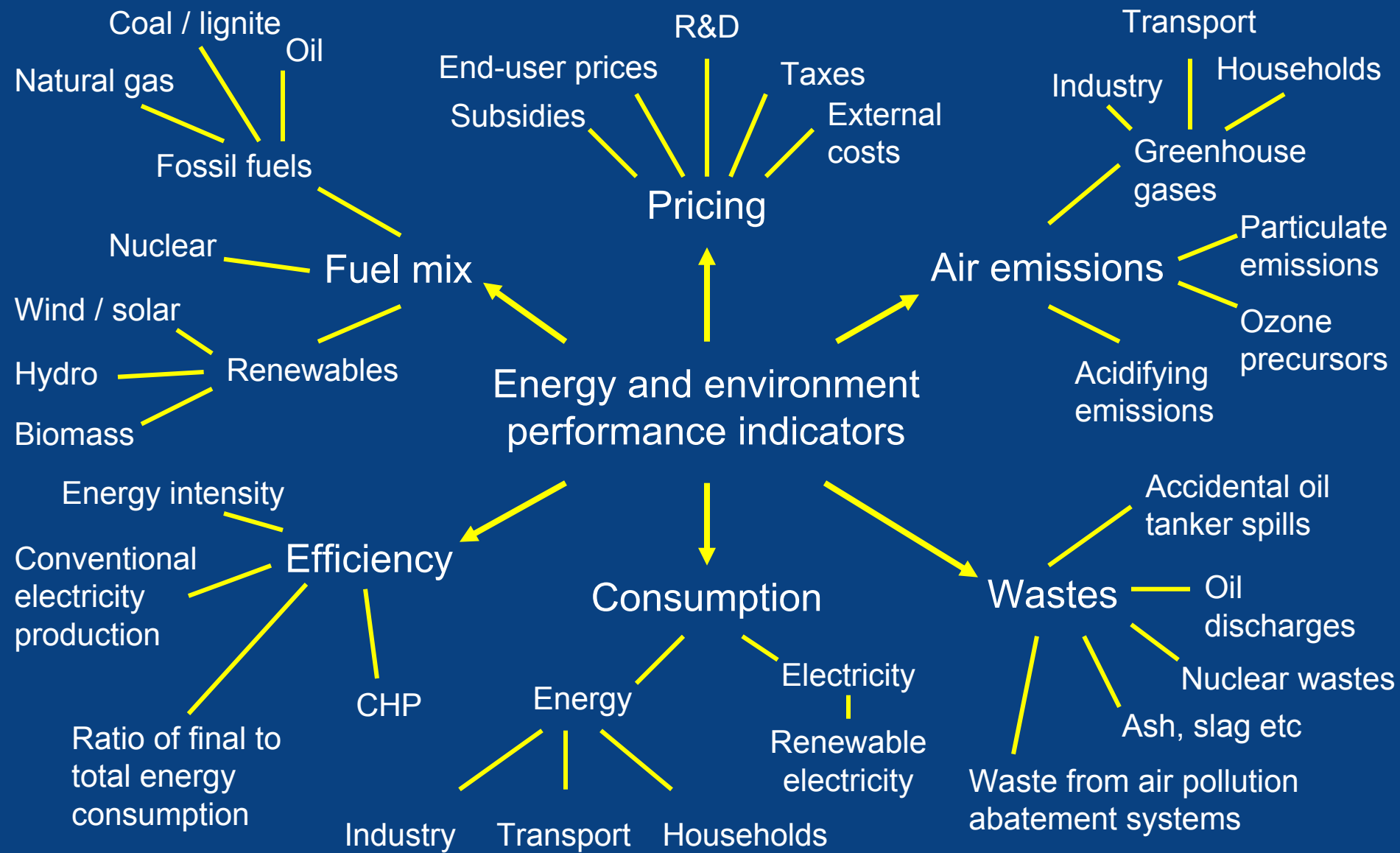
Energy and environment indicators

Development steps

1. Identify key policy questions
2. Identify indicators to answer the questions
3. Develop the indicators by preparing fact sheets for each indicator
4. Produce indicator-based reports on the basis of an integrated reading of the indicator fact sheets

Energy and environment policy questions

- Is the use of energy having less impact on the environment?
- Are we using less energy?
- How rapidly is energy efficiency increasing?
- Are we switching to less-polluting fuels?
- How rapidly are renewable energy technologies being implemented?
- Are we moving towards a pricing system that better incorporates environmental costs?



Energy and environment indicator fact sheet elements

A main message & main graphic

The policy relevance, the policy context and the environmental context of the indicator

The assessment – trends and causes

References

Data

Meta data

Types of indicator

- Trends over time
- Benchmarking
- Explanatory indicators
- Distance to target

Policy targets

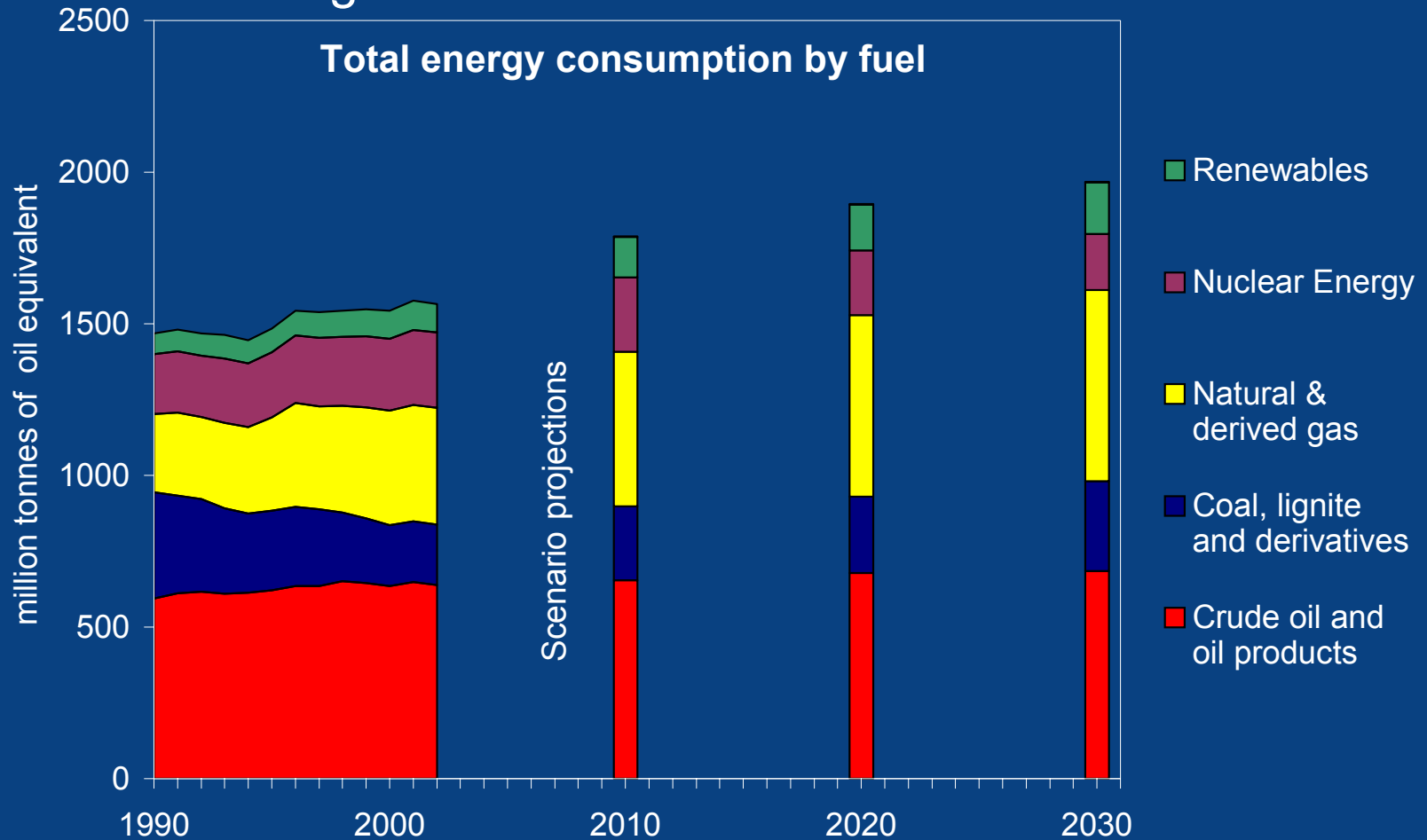


Projections and scenarios





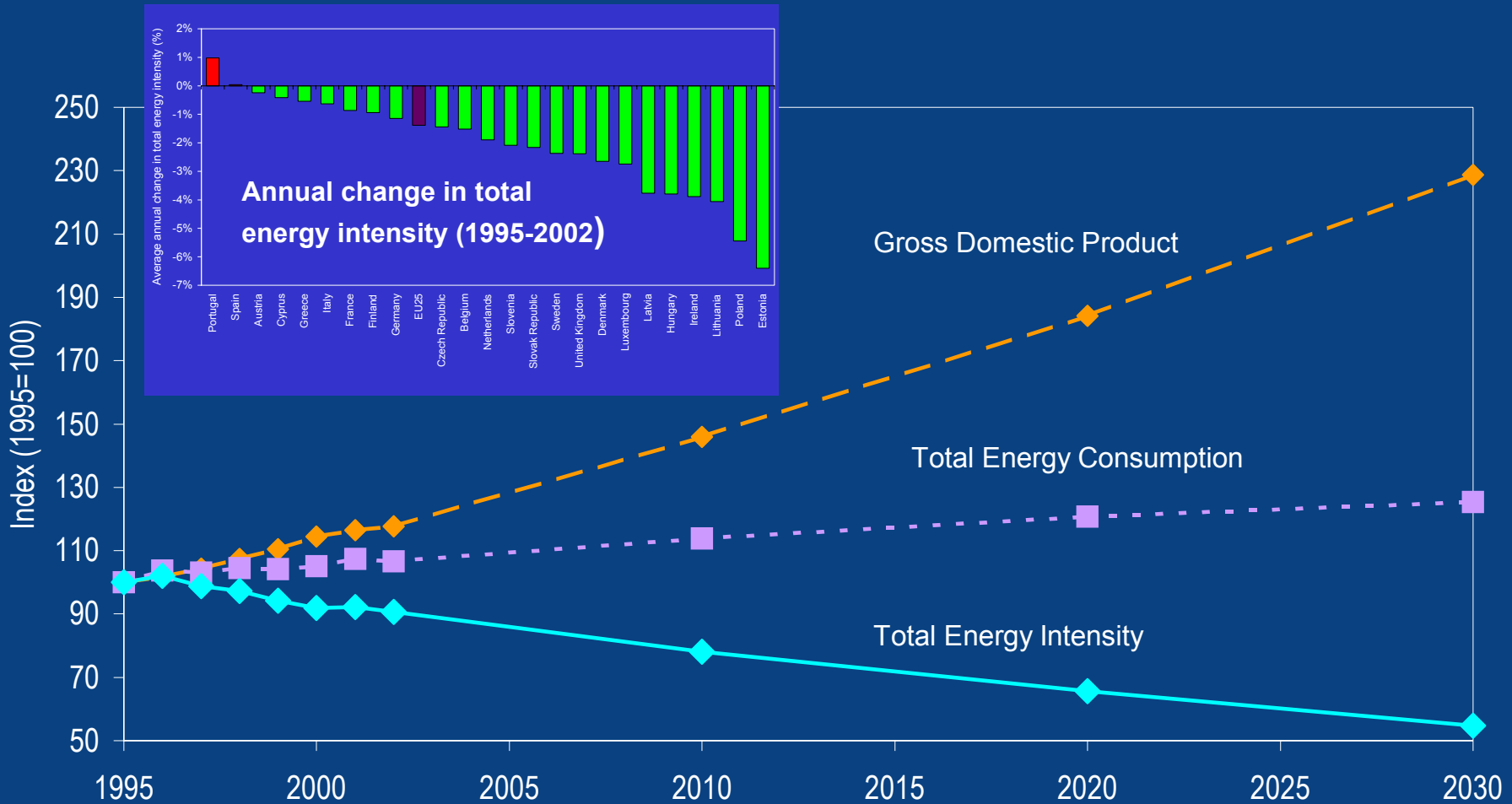
Fossil fuels continue to dominate energy use in the EU25, but environmental pressures have been limited by switching from coal and lignite to relatively cleaner natural gas.



Data sources: Eurostat and European Commission



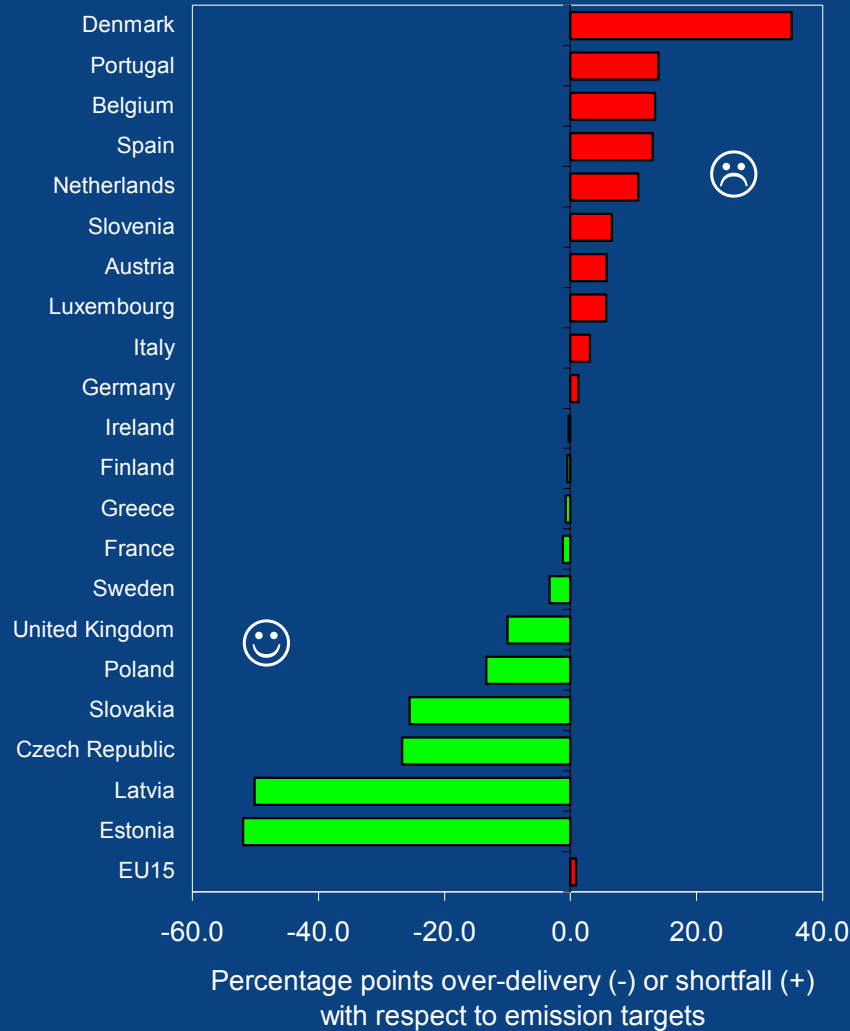
Economic growth in the EU25 is requiring less additional energy consumption in most Member States. Nevertheless, energy consumption is still increasing.



Data source: Eurostat and European Commission



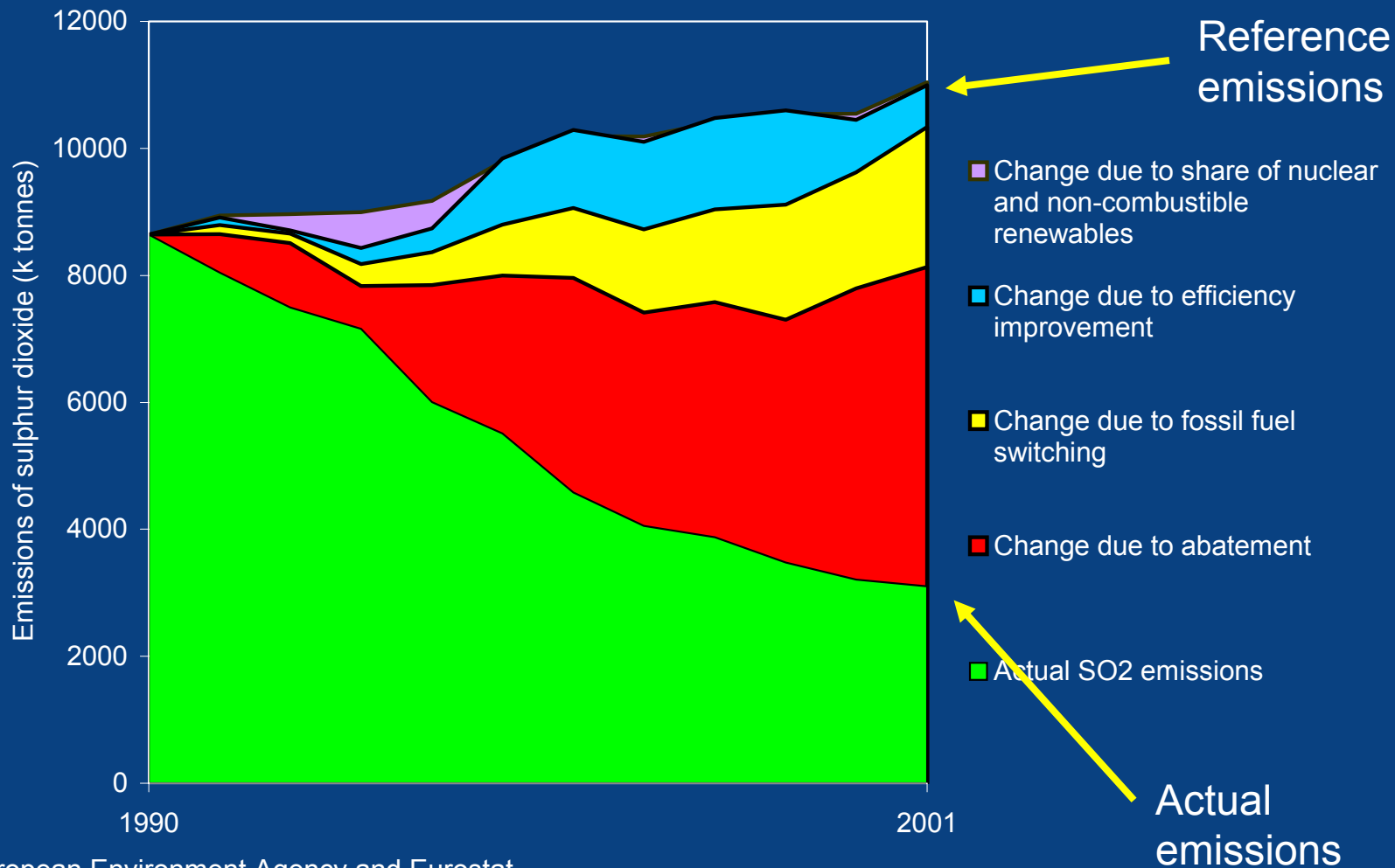
Many of the EU15 are projected not reach their greenhouse gas burden sharing targets in 2010 with existing and planned domestic policies. Most new Member States are on track to meet their targets under Kyoto.



Data source: EEA



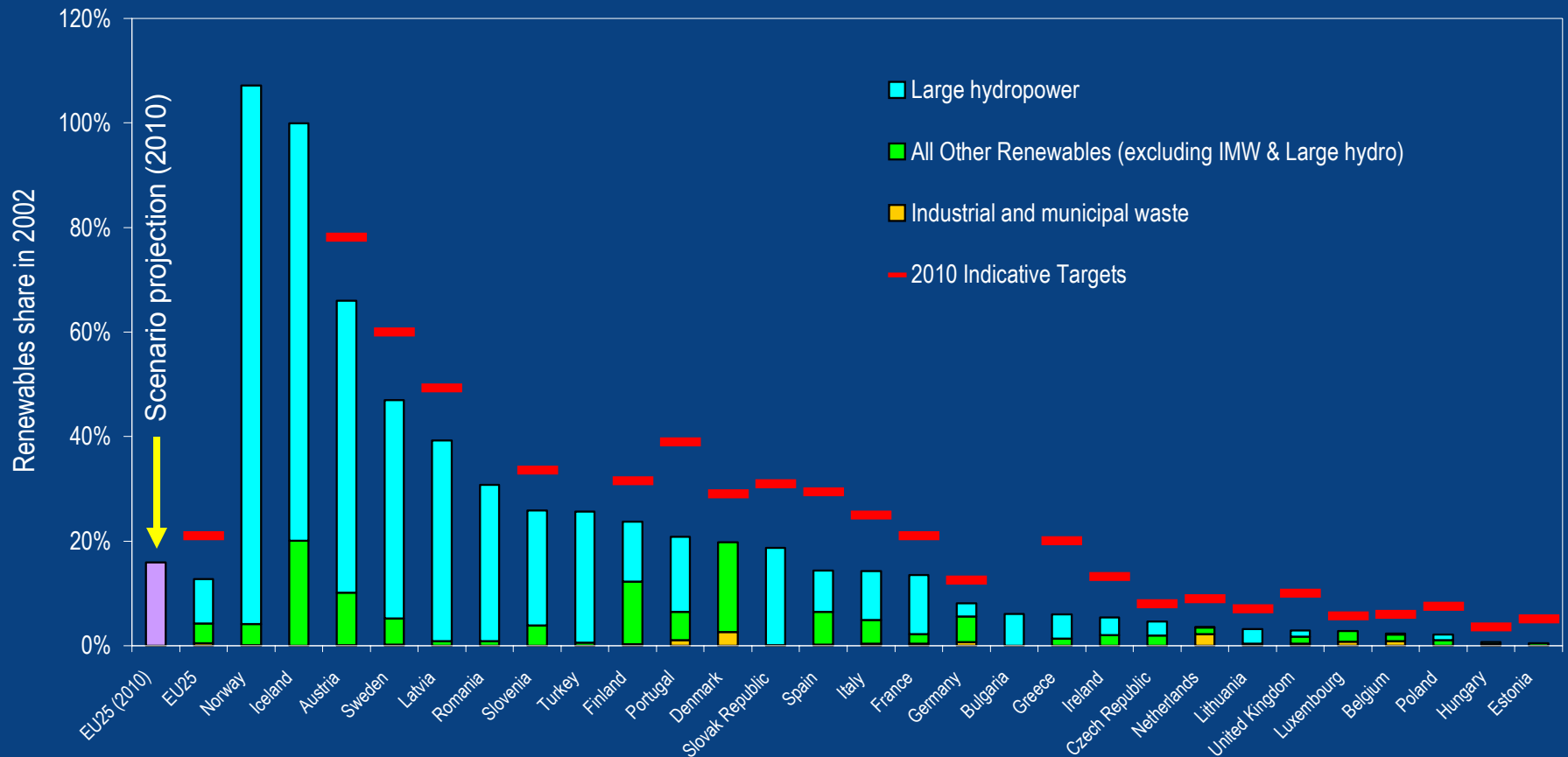
Sulphur dioxide emissions from public electricity and heat production fell by over 60% despite a 28% increase in the amount of power produced.



Data sources: European Environment Agency and Eurostat



Substantial growth is needed to meet the EU and Member States' indicative targets for electricity consumption from renewable sources by 2010.

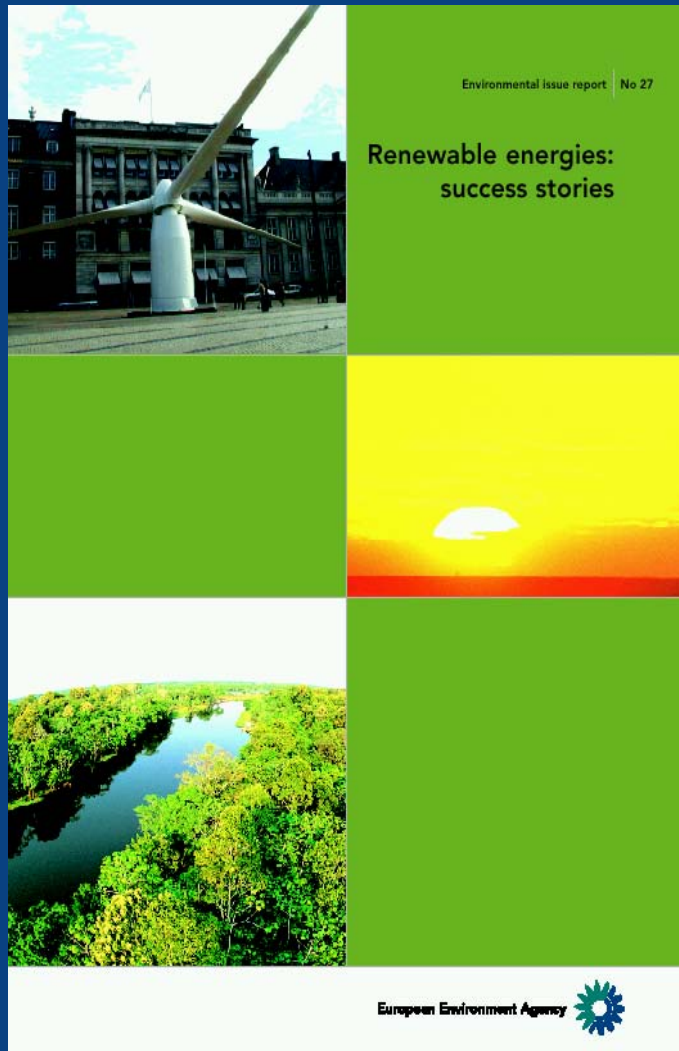


Data source: Eurostat

Other energy and environment activities

- Past
 - Renewable energies success stories
 - Energy subsidies
- Future
 - Further work on energy and environment indicators to enhance analysis and policy relevance
 - Investigate optimal mix of renewable energy sources, taking account not only the economic and energy aspects but also the environmental costs and benefits
 - Work on the health implications of energy production and consumption

Renewable energies: success stories



- Presents a series of case studies of successful renewable energy developments in EU Member States
- Identifies factors that can influence the success of the implementation of renewable energy schemes
- Aims to assist EU decision-makers and policy implementers in their efforts to meet renewable energy indicative targets

Successful Member State/technology combinations (EU15 only)

Technology: Selection criteria (see note 1):	Photo- voltaics	Solar thermal	Wind	Biomass: power	Biomass: district heating (1993–98)	Biomass: biofuels (see note 2)
Austria		✓ ✓		✓	✓ ✓	✓
Belgium				✓		
Denmark		✓	✓	✓		
Finland		✓	✓	✓		
France			✓		✓	✓
Germany	✓ ✓	✓ ✓	✓ ✓	✓		✓
Greece		✓				
Ireland		✓	✓			
Italy		✓	✓	✓	✓	✓
Luxembourg						
Netherlands	✓	✓				
Portugal			✓			
Spain	✓ ✓		✓ ✓	✓		
Sweden			✓	✓	✓ ✓	
UK		✓				

Biomass district heating refers to heat output from heat plants only.

Note 1: Two criteria for selection are used:

- ✓ (left) represents a contribution of at least 10 % of the total EU increase in absolute terms, 1993–99;
- ✓ (right) represents a percentage increase greater than the EU percentage increase, 1993–99.

Note 2: Biofuels only:

- ✓ represents those Member States which indicate that they use biofuels (most do not).

Success factors

Political	How strong is political support for renewable energy?
Legislative	How accessible is the energy market to independent electricity producers?
Financial	How accessible is funding for investments in renewable energy projects?
Fiscal	How favourable is the fiscal infrastructure for renewable energy?
Administrative	How favourable are the administrative arrangements for obtaining permission to construct a renewable energy project?
Technological development	Is there support for the development of strong national capabilities in renewable energy technologies?
Information, education and training	Is support given to widely disseminate information on the benefits of renewable energy?

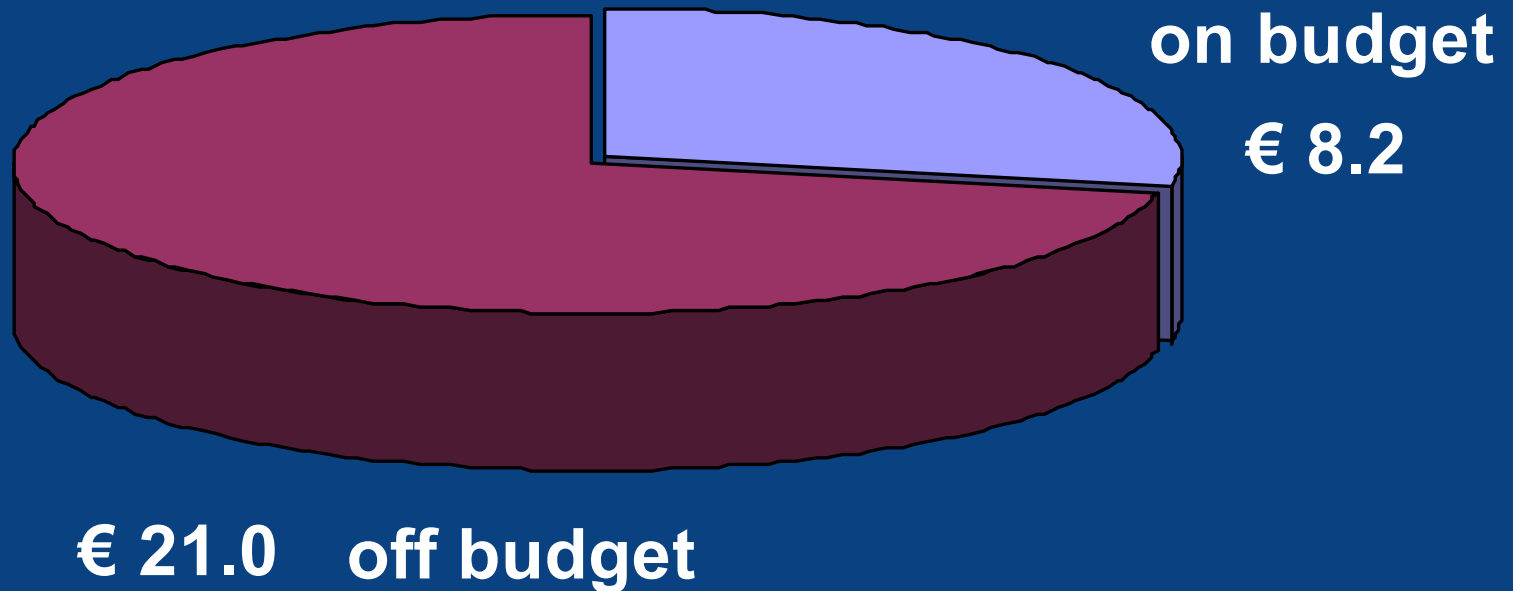


Energy subsidies in the EU

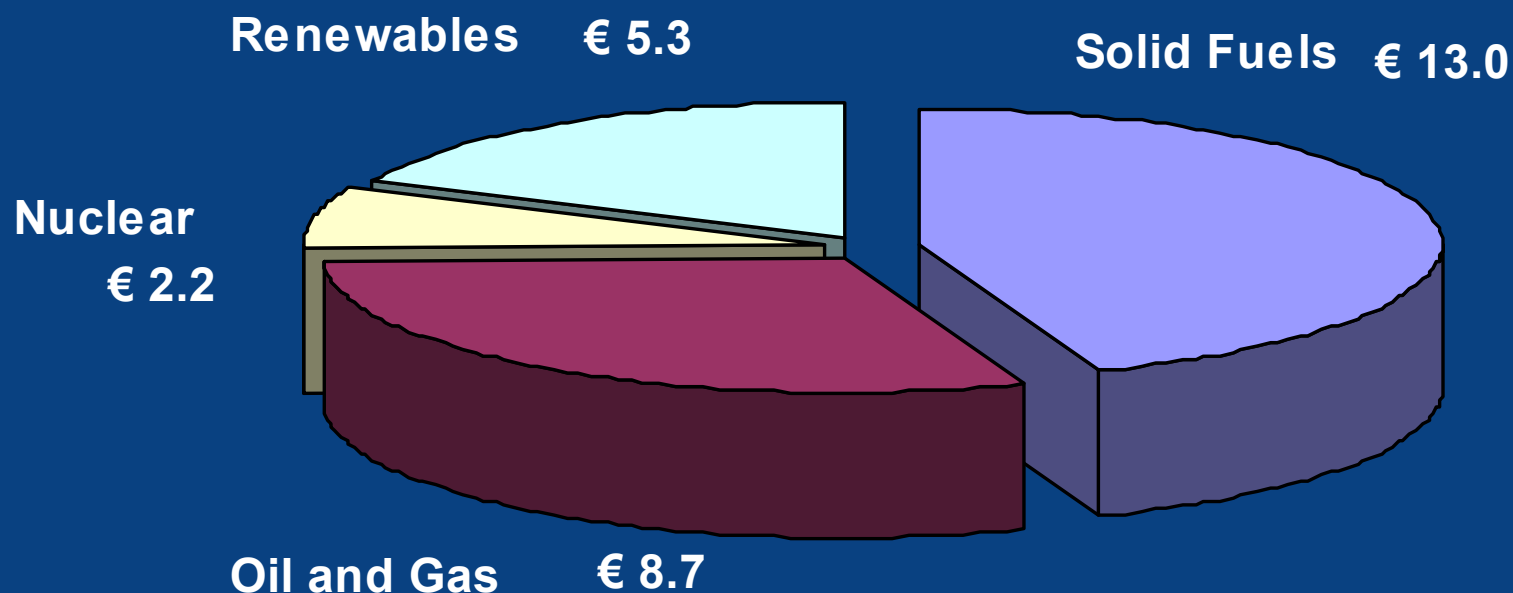
- No agreement on what constitutes an energy subsidy
- No comprehensive central EU record, only for coal the Producer Subsidy Equivalent
- Multiple sources/estimates create confusion

Estimates of total energy subsidies, EU 15, 2001, (EUR billion)

Over €29 billion in subsidy support in 2001



Estimates of energy subsidies by fuel, EU 15, 2001 (EUR billion)



Moving Forward

- Harmonise subsidy definitions and reporting
- Internalise external costs of environmental impacts and fossil fuel price volatility
- Link subsidies to environmental impacts
- Create long-term price signals to meet security and environmental needs

Further information

- **European Environment Agency (EEA)**
<http://www.eea.eu.int/>
- **Energy and environment**
http://themes.eea.eu.int/Sectors_and_activities/energy

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