European Commission

European Union policies and strategies related to the use of coal

Dr. Marion Wilde

Unit International Relations
Directorate- General for Energy

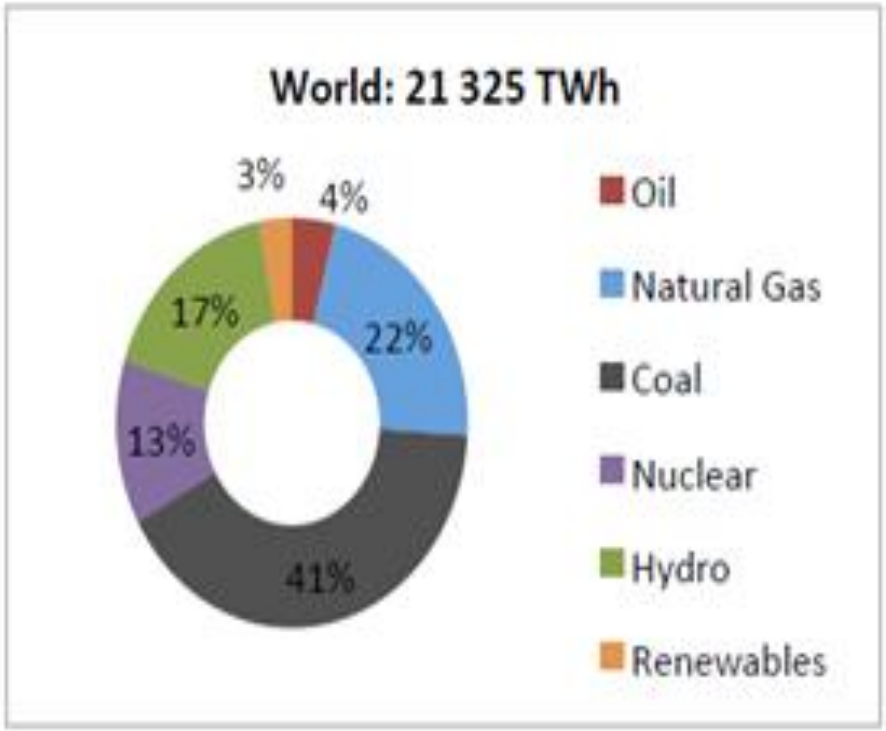
10 December 2012, Moscow

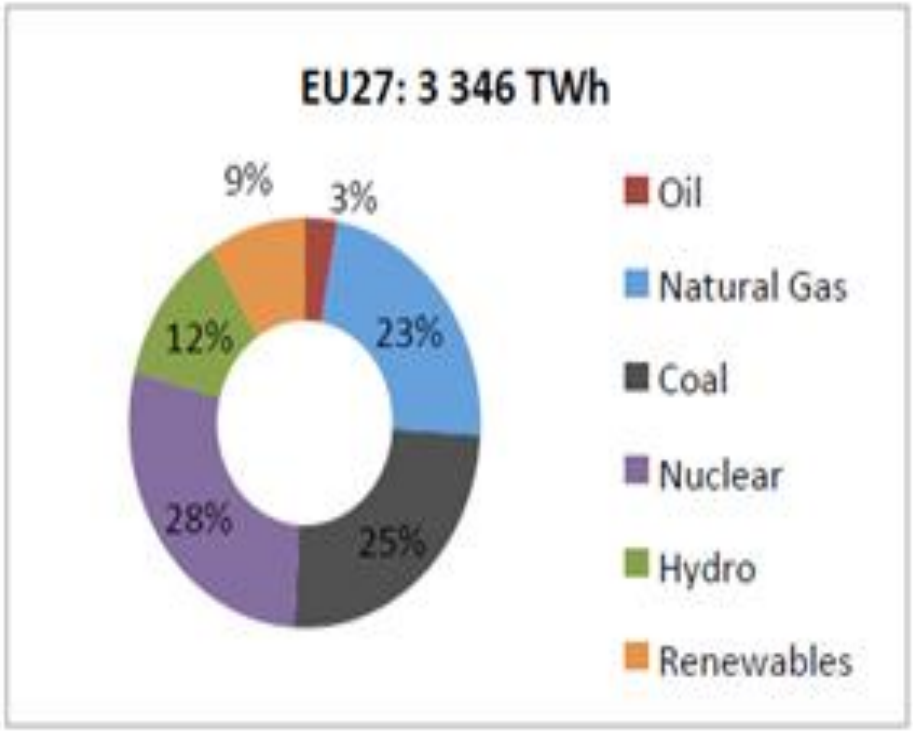
Energy

The role of coal in the EU

- EU is the fourth largest consumer behind China, USA and India (303 Mt hard coal and 415 Mt lignite in 2010)
- Coal use accounts for 16% of EU-27 total energy consumption and 25% of EU-27 electricity generation in 2010
- Coal use accounts for 28 % of global primary energy use and 40 % of electricity output in 2010
- EU domestic coal production in 2010:
    - *412 Mt brown coal/lignite (99 % of total EU lignite consumption)- Trend stable production*
    - *130 Mt hard coal (42 % of total EU hard coal consumption) Trend decreasing production and increasing imports from Russia, Columbia, US, Australia*
- Coal industry important for jobs with 260 000 direct employees and major component in a number of regional economies

Gross power generation, World vs. EU 27 - 2010

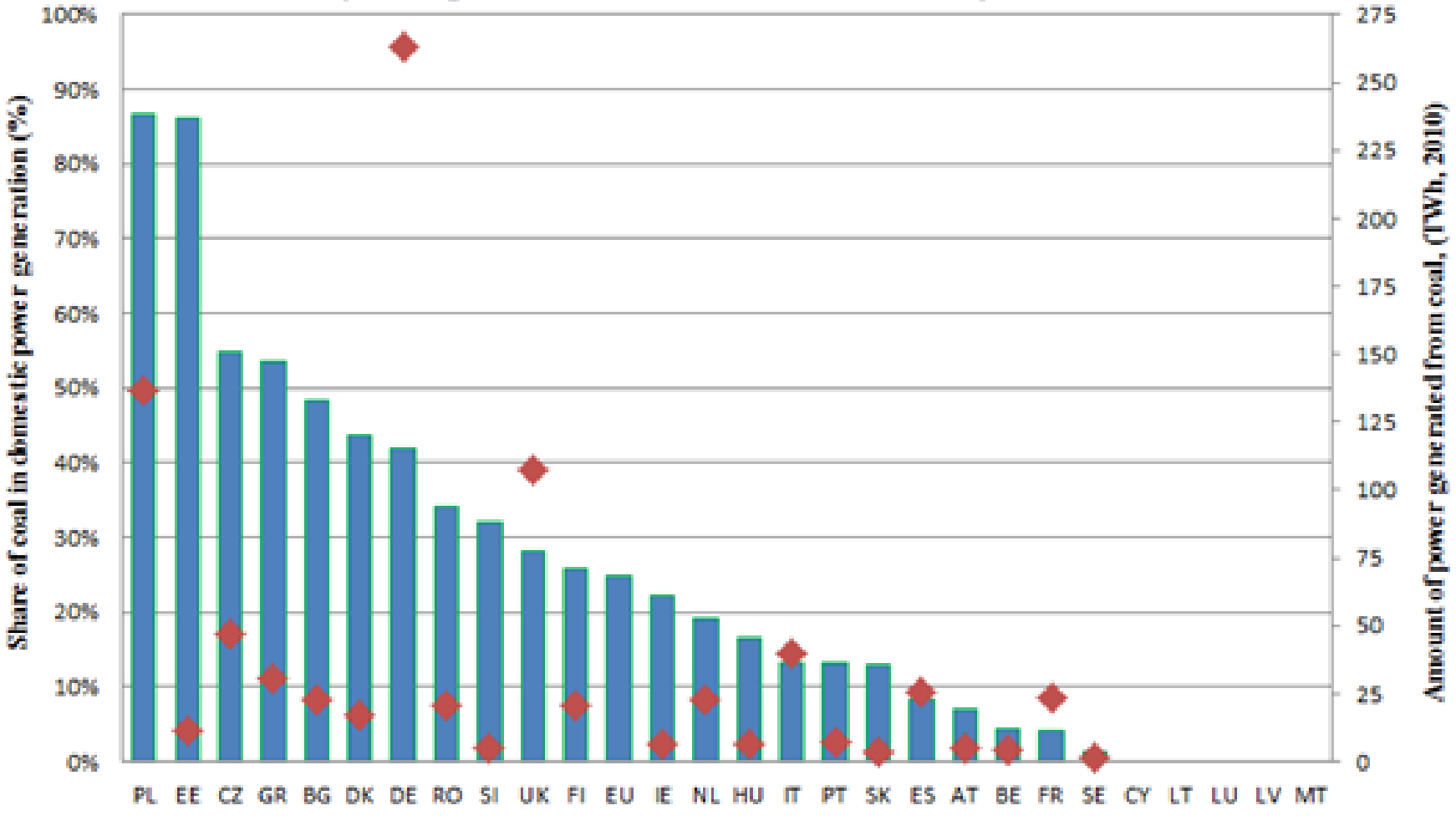




Source: IEA, BP, EURACOAL

European Commission

Coal-fired power generation and its share in EU MSs' power mix in 2010

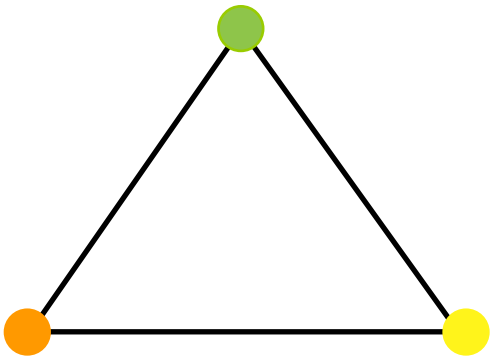


Objectives of EU Energy Policy

- Goal: To ensure that European businesses and consumers obtain safe, secure and sustainable energy at competitive prices.

- **Internal Market**
- **Networks and other Infrastructure**
- **Research & Innovation**

Competitiveness



- **Climate change control**
- **Environmentally friendly production and combustion**

Sustainability

- **International Dialogue**
- **Diversification**
- **Best use of indigenous fuels**

Security of supply

Energy policy development

Third Internal Energy Market Package

Regulation on security of gas supply

Energy Strategy 2020

Energy Infrastructure Package

Energy Efficiency Directive

Energy Infrastructure Legislative Proposal

External Energy Policy Communication

Communication Smart Grids

Communication on Renewable Energy

Energy 2050 Roadmap

European Energy Programme for Recovery

EEPR

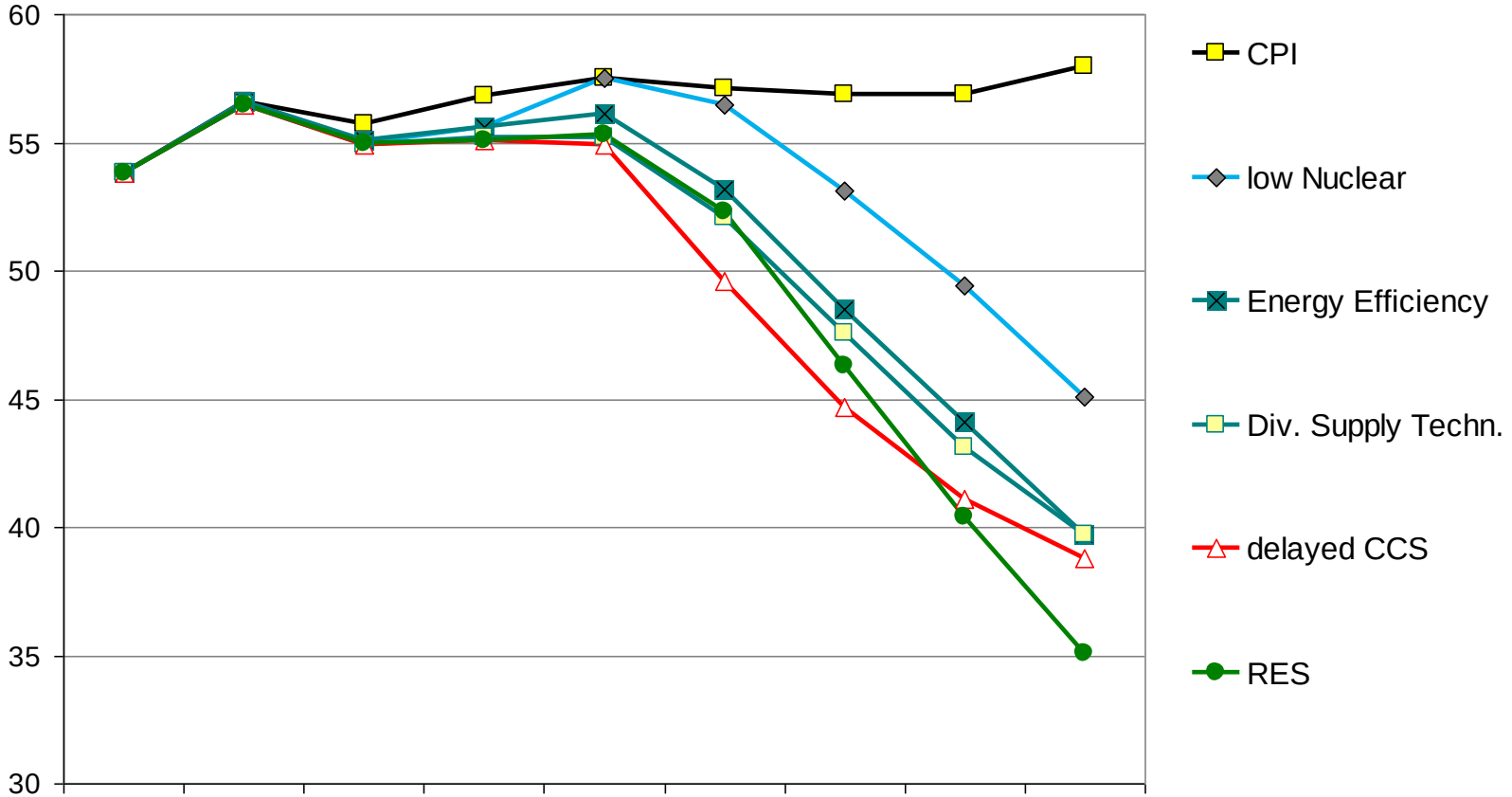
2009 | 2010 | 2011-12

Directorate-General for Energy

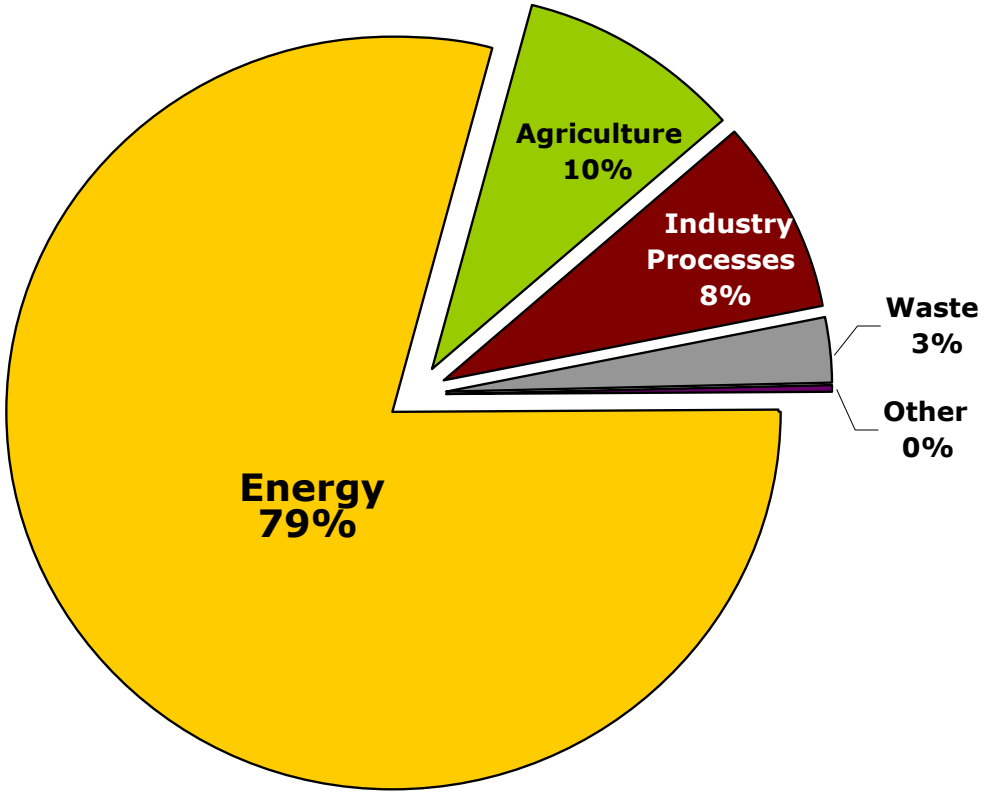
EUROPEAN COMMISSION

Key policy drivers - energy security

Import dependency under current trends and decarbonisation (%)



Key policy drivers - Climate challenge



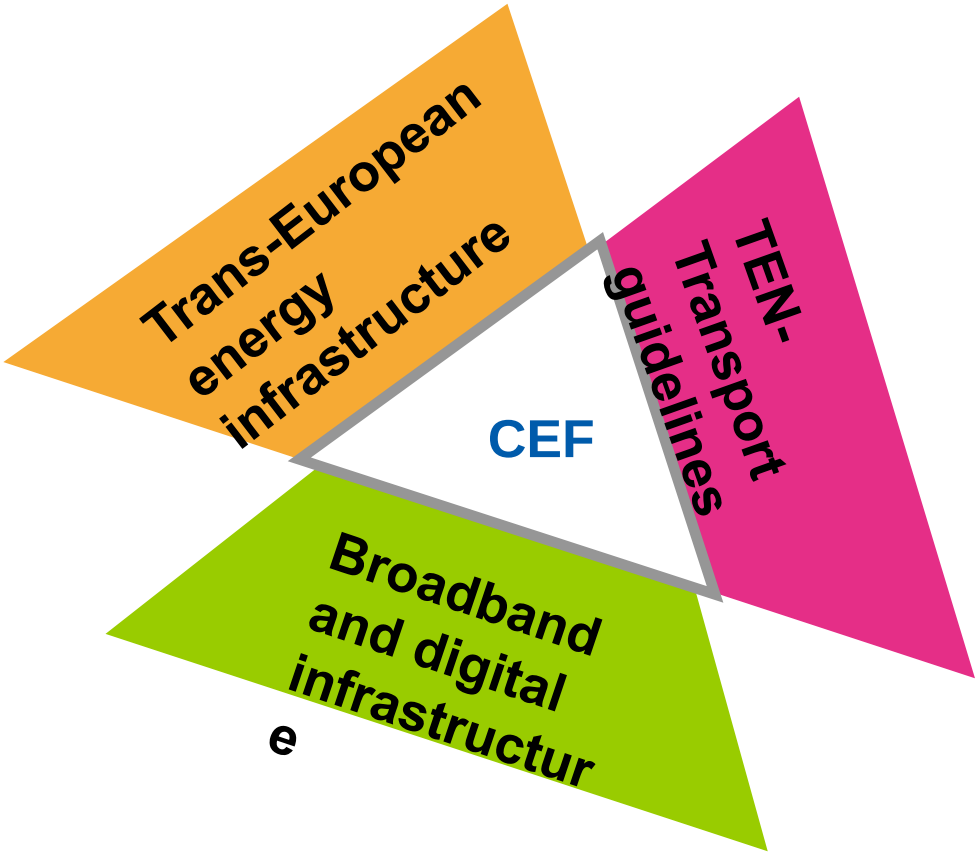
Share of greenhouse gas emissions in 2008

Source: European Commission & EEA 2010

Second Strategic Energy Review – Best Use of Indigenous Fossil Fuels

- It recognised the potential contribution of EU's indigenous energy resources to energy security
- Role of coal in the domestic energy supply as an important complement to oil, gas as well as renewables
- Long-term use of coal requires:
  - *Highly-efficient plants and wide availability of CCS*
  - *Competitive and environmental acceptable coal production*

Energy Infrastructure Package – COM legislative proposal- 19 October 2011



Financial Regulation

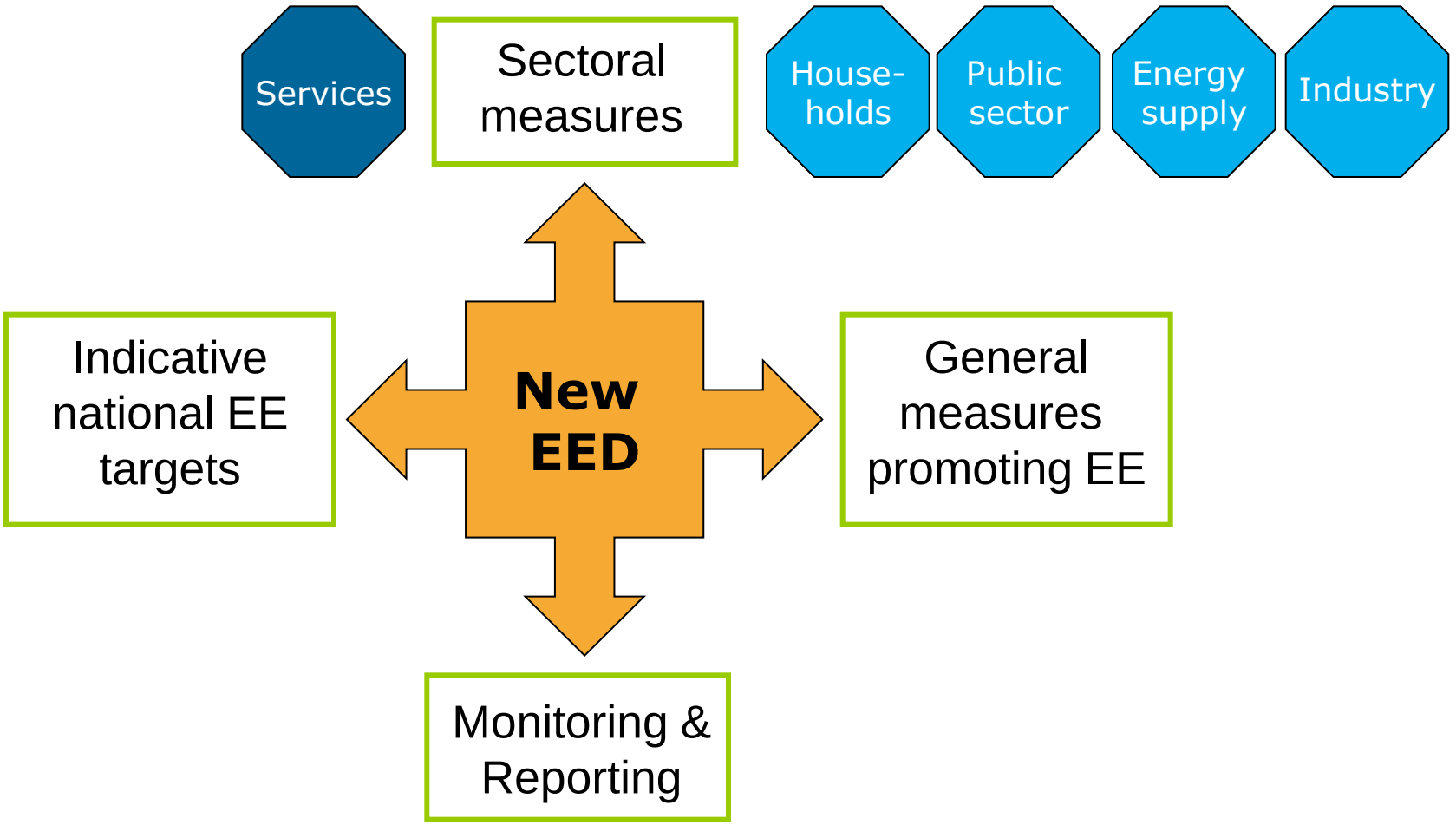
Connecting Europe Facility

- Budget of 50 bn EUR
- Energy – *9.1bn*
- Transport – *31.7bn (incl 10bn cohesion)*
- ICT – *9.2 bn*
- Project Bond *Pilot*

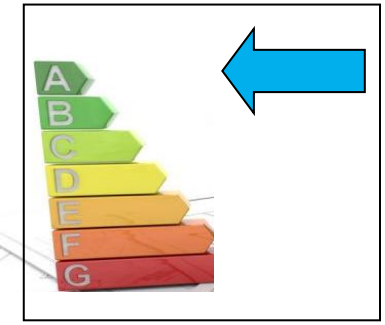
Energy Roadmap 2050

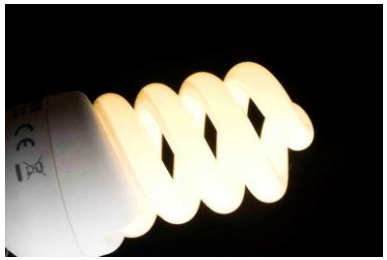
- *Current situation: 187 GW installed coal capacity*
- *Current policy initiative projection until 2050: 104 GW*
- *Decarbonisation scenario (Diversified supplied scenario) projection until 2050: 84 GW*
- *Coal in the EU adds to a diversified energy portfolio and contributes to security of supply. With the development of CCS and other emerging clean technologies, coal could continue to play an important role in a sustainable and secure supply in the future*
- ***The long-term future of coal use requires the utilisation of CCS***

NEW ENERGY EFFICIENCY DIRECTIVE



EED



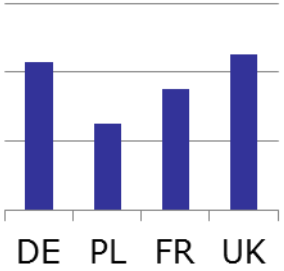


- Public sector to lead by example: Refurbishment of central government buildings
- Long-term strategies for general building stocks
- Energy efficiency obligation schemes for utilities or alternative energy efficiency programs
- Empowering consumers through accurate and frequent individual metering and billing

EED

- Efficient generation of heat and electricity

- Energy efficiency in the grid



- Indicative targets

EED – CHP Article 14

- *Comprehensive national assessments to improve efficiency in heating and cooling*
  - based on country-wide economic analysis of the costs and benefits (heat mapping and planning)
  - Using an integrated approach (looking at all supply options)
- *Measures and strategies to implement efficient heating and cooling solutions based on CHP, district heating and cooling (DHC) and renewable energy sources*
- *Electric power generation and industrial installations above 20 MW capacities to prepare cost-benefit analysis on CHP and connecting to DHC networks*
- *CHP and DHC networks should be implemented when cost-effective*

Transition to low carbon and low emissions energy systems

- *EU's agenda set out steps in transition to high-efficiency and low carbon energy systems - integrated climate and energy policy*
- *Emission Trading System (EU ETS) – cap and trade system putting price on CO2 emissions and incentivising market players to invest in low carbon technologies*
- *Lowering emissions from coal power plants like SO2, NOx and particulates*

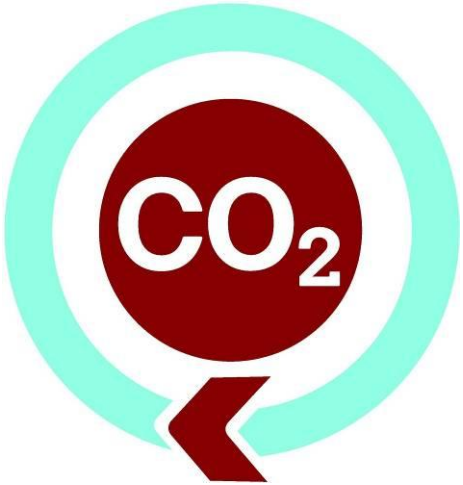
Two relevant legal acts - directives:

- **Integrated Pollution Prevention and Control (IPPC)**
- **Large Combustion Plants (LCP)**

Industrial Emissions Directive adopted in 2010.

- **Recasts seven directives in one act**
- **Stricter limits on air, soil and water pollution**

Policy Objectives



Demonstrate CCS by 2015

Commercially viable CCS after 2020

COM Initiatives on CCS

- **Legal Framework – CCS Directive (Capture ready requirements regulated)**
- **Successful demonstration - 2 funding instruments (EEPR / NER 300)**
- **Project Network – Knowledge sharing**
- **Innovation - European Industrial Initiative under the SET plan**
- **Public Acceptance**

Where do we stand?

- **6 projects receive EU funding from EERP**
  - 1 project has been terminated
  - none has taken FID yet
  - only 2 projects could be operational by 2016
- **Under NER300, 2-3 projects may be funded (award decision end 2012)**

CCS Perspectives

- Energy Roadmap 2050 shall help to develop a long term European energy policy while guaranteeing competitive markets and security of supply
- CCS is part of this policy. Decisive actions are needed to overcome current delays in demonstration and allow CCS to realise its potential

- Cross border cooperation is needed to develop integrated CCS concepts and Infrastructure Development (new Infrastructure Package)

- Business Case for CCS - Industry and Member States financial commitment- further investments in R&D

EU External Energy Policy Priorities

(Communication "The EU Energy Policy: Engaging with Partners beyond Our Borders" – 7Th September 2011)

- Further developing the external dimension of the **internal energy market**;
- Working on partnerships for **secure**, **safe**, **sustainable** and **competitive energy**;
- Enhancing developing countries' **sustainable energy access**;
- Fostering the **promotion of EU policies** beyond its borders.

International cooperation on energy technologies

- **Guiding principles**
  - Common interest, mutual benefit and reciprocity
- **Three main categories of third countries**
  - Developed countries
  - Emerging economies
  - Developing regions
- **Strategic Energy Technology-Plan is the Framework in context with FP 7**
- **New approach on enhancing international Research and Innovation cooperation**

International Fora

- EC engaged in multilateral & bilateral international cooperation in the field of energy on policies, development and take up of clean energy technologies, in particular
    - *Clean Coal technologies and CCS*
    - *Renewable Energies*
    - *Energy efficiency*
    - *Smart cities/grids and urbanisation*
    - *Methane emissions from coal mines, oil and gas operations*
- Bilateral:
    - *South Africa: EU SA WG on coal, CCT and CCS)*
    - *EU- US Energy Council with three working groups*
    - *EU China Energy Dialogue (Coal value chain WG – NZEC)*
    - *India: EU India Energy Panel (Coal, CCT, Energy efficiency, urbanisation)*
- *International: Clean Energy Ministerial, IEA (e.g. IEA CCC), IRENA, Carbon Sequestration Leadership (CSLF), Global CCS Institute (CCS Network), Global Methane and Gas Flaring Reduction Initiatives (GMI- GGFR), UNECE-Sustainable Energy*