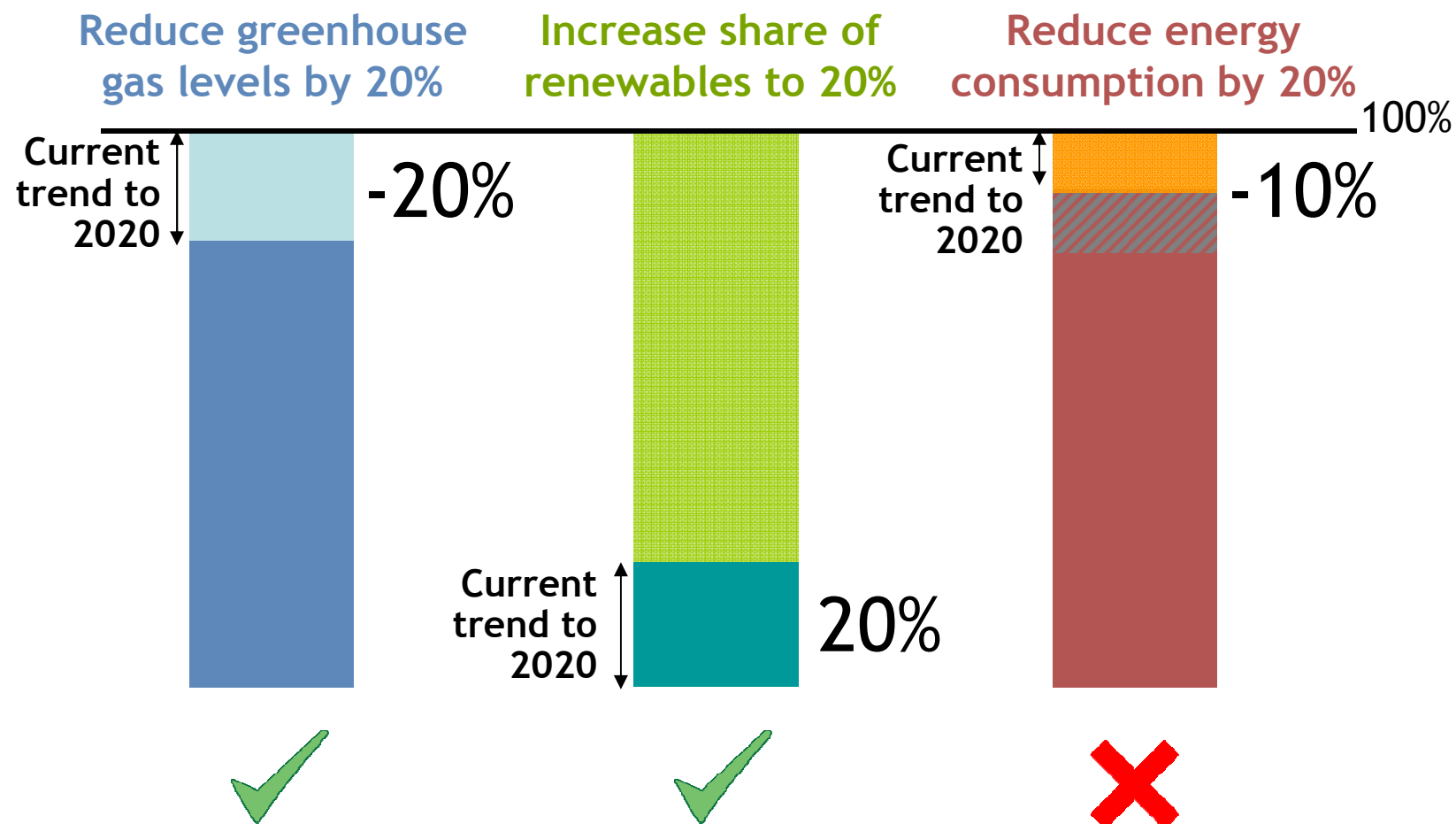


# EU Energy Policies and Financing of Low-carbon Energy

***Dr. Tudor Constantinescu  
Principal Advisor  
European Commission – Energy***

***IENE Workshop. Sofia, October 10, 2012***

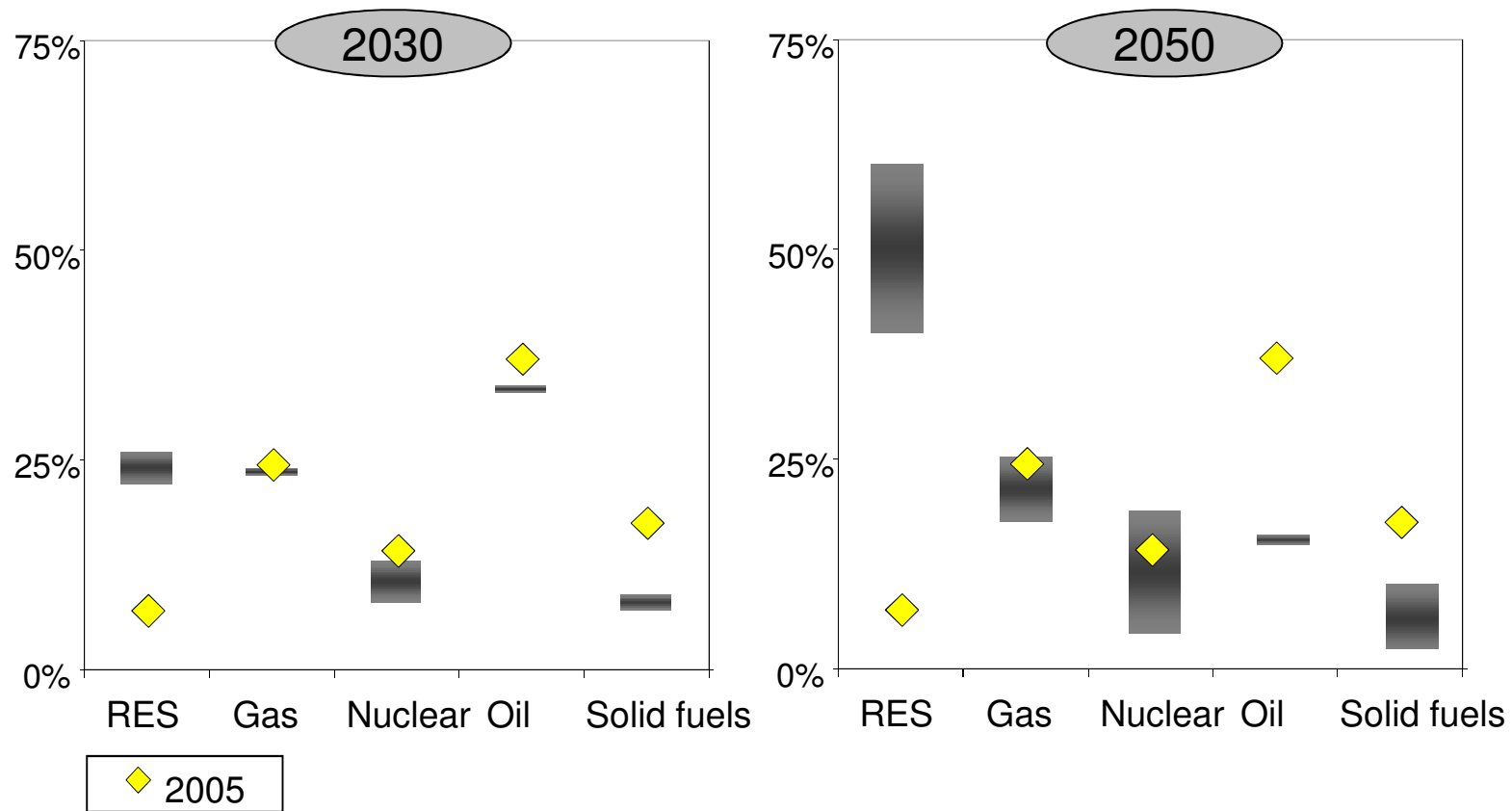
## Meeting our “20-20-20 by 2020” goals



# Looking to the future – Energy Roadmap 2050

- Basis: 20/20/20 objectives of the EU energy policy
- Roadmap 2050: Cutting GHG emissions until 2050 down to 80 – 95 % below the level of 1990
- The Energy Roadmap 2050: the basis for the elaboration of a low carbon 2050 strategy
  - *Supported by multiple **scenario** analyses, to show how to reach the 80 % / 95 % goal while at the same meeting other policy objectives (Competitiveness and Security of Supply)*
  - *Containing robust assumptions for all possible scenarios*

## ● Fuel Ranges (primary energy consumption)



## ● The Way Forward

- 2020 strategy – 20-20-20 targets: precondition!
- 3 « no regrets » options: energy efficiency, renewable energy, more and smarter infrastructure
- Need for fully integrated, well-designed markets for gas and electricity
- Research and Innovation for low-carbon solutions

## ● EU Actions

- Legislation – new EED Directive, EPBD, Ecodesign, RES
- Technological Development – SET Plan
- Funding
- Compliance
- External relations



## European funding mobilised

- Structural funds/ERDF (incl. JESSICA)
- Intelligent Energy – Europe Programme *735 MEUR for 'soft' EE/RES projects*
- ELENA Facility
- European Energy Efficiency Facility *265 MEUR*
- FP7 – SET-Plan
- Smart cities
  - (within the 7th Framework programme for Research)
- Public Private Partnerships
  - (within the 7th Framework programme for Research)



## **EU financing for energy R&D and innovation (2007-2013)**

***FP7 ~ € 2.3 billion (2007-2013) –non nuclear***

***EEPR ~ € 1.6 billion  
(offshore wind and CCS in 2008)***

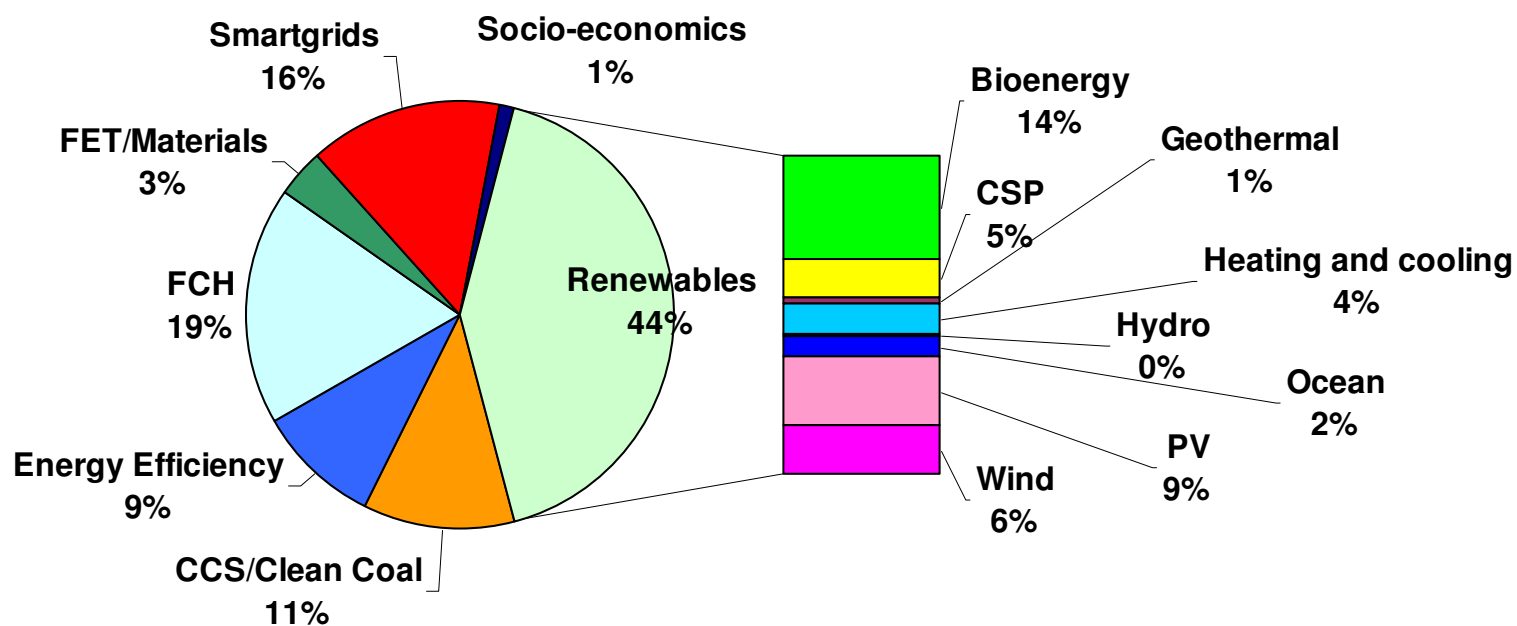
***NER300 ~ € 2.3 billion  
(award decisions 2012)***

***CIP - IEE ~ € 0.7 billion (2007-2013)***



# FP7 coverage (RTD & ENER)

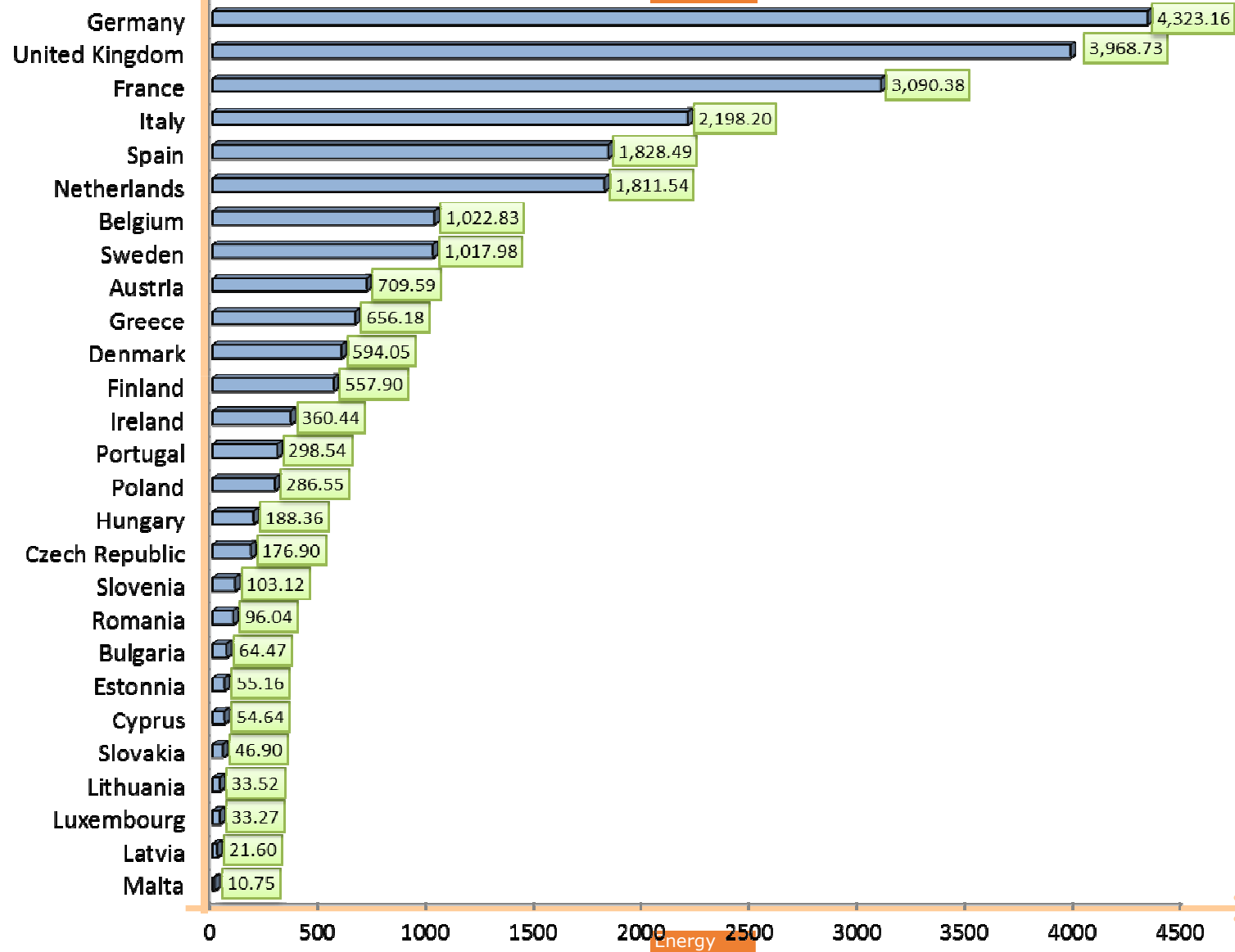
Distribution of budget (projects and contributions 2007-2011)



# EC Contribution to FP7



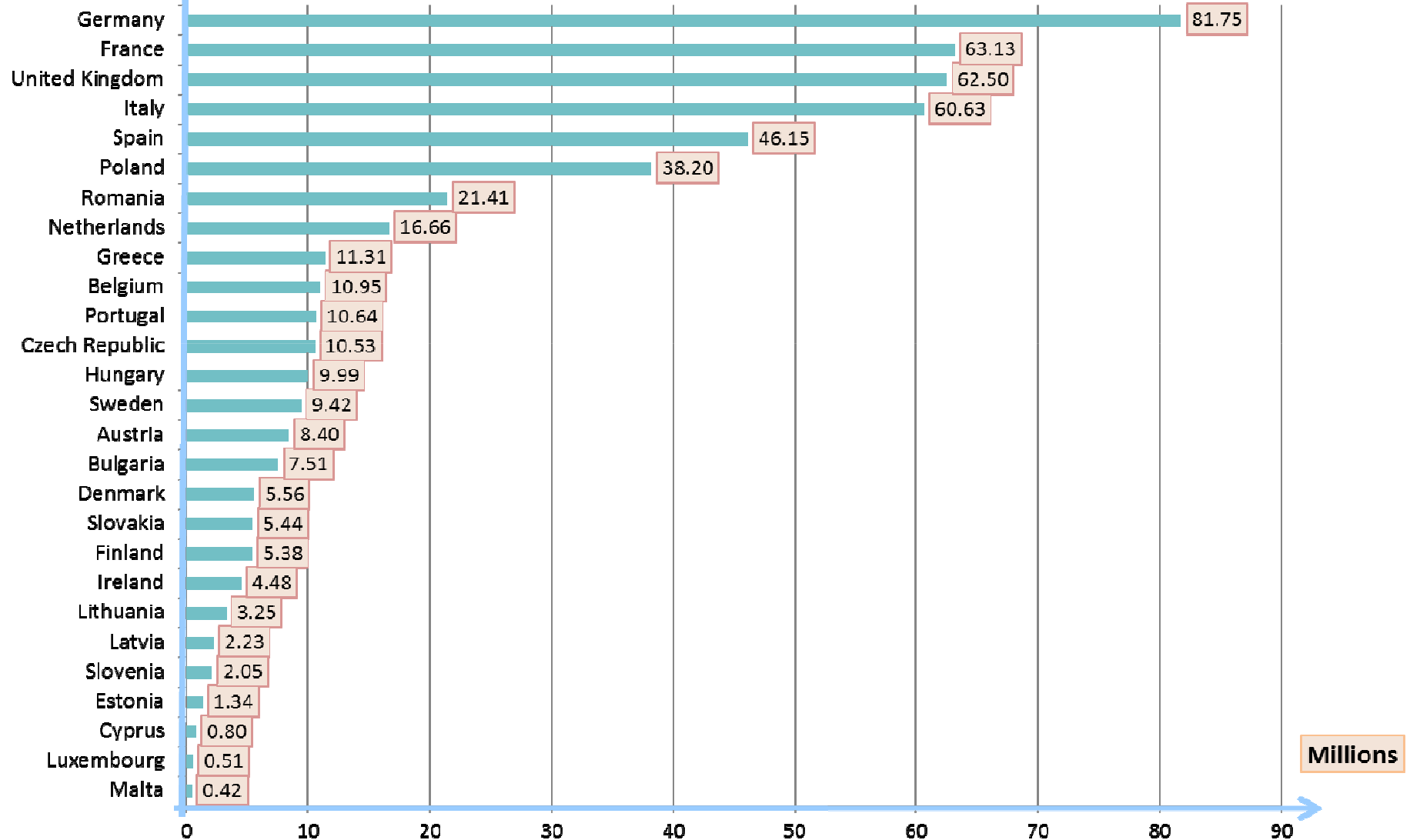
European  
Commission



€

## EU 27 Population

European  
Commission



Energy



# What is Horizon 2020

- **Commission proposal for a 80 billion euro research and innovation funding programme (2014-2020)**
- **A core part of Europe 2020, Innovation Union & European Research Area:**
  - **Responding to the economic crisis** to invest in future jobs and growth
  - **Addressing people's concerns** about their livelihoods, safety and environment
  - **Strengthening the EU's global position** in research, innovation and technology

***Three priorities: Excellent science, Industrial leadership and Societal challenges***



## Horizon 2020 - Energy: ambitious budget allocation

### *Secure, clean and efficient energy: 6 327 M€*

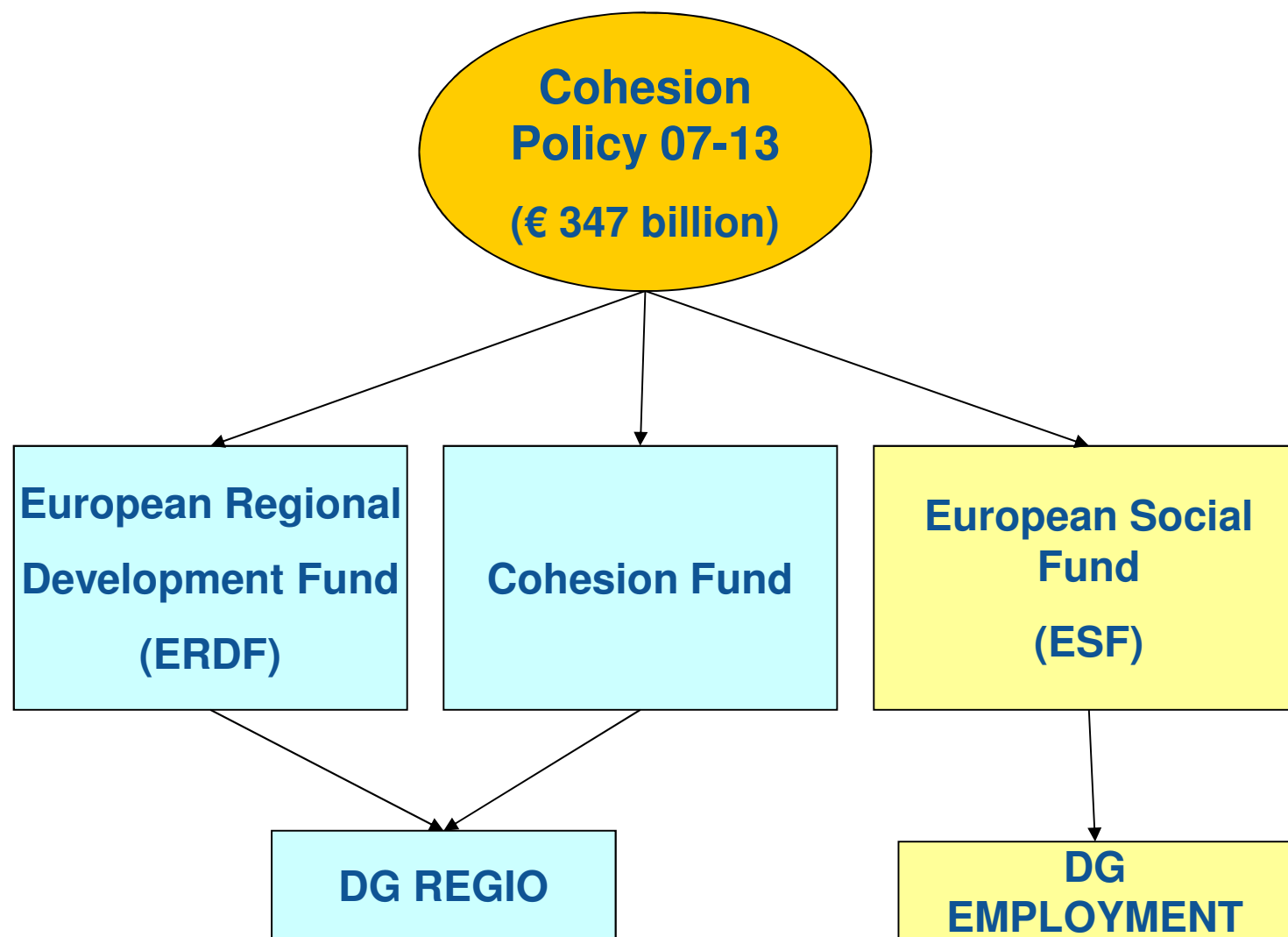
- In average 900 million€/year
- Covering: research, demonstration , innovation (previously FP7 and IEE)

### *Access to risk-finance: 1 131 M€ for SET-Plan projects*

- Debt and equity
- Cooperation with the EIB, inspired from FP7 risk-sharing finance facility



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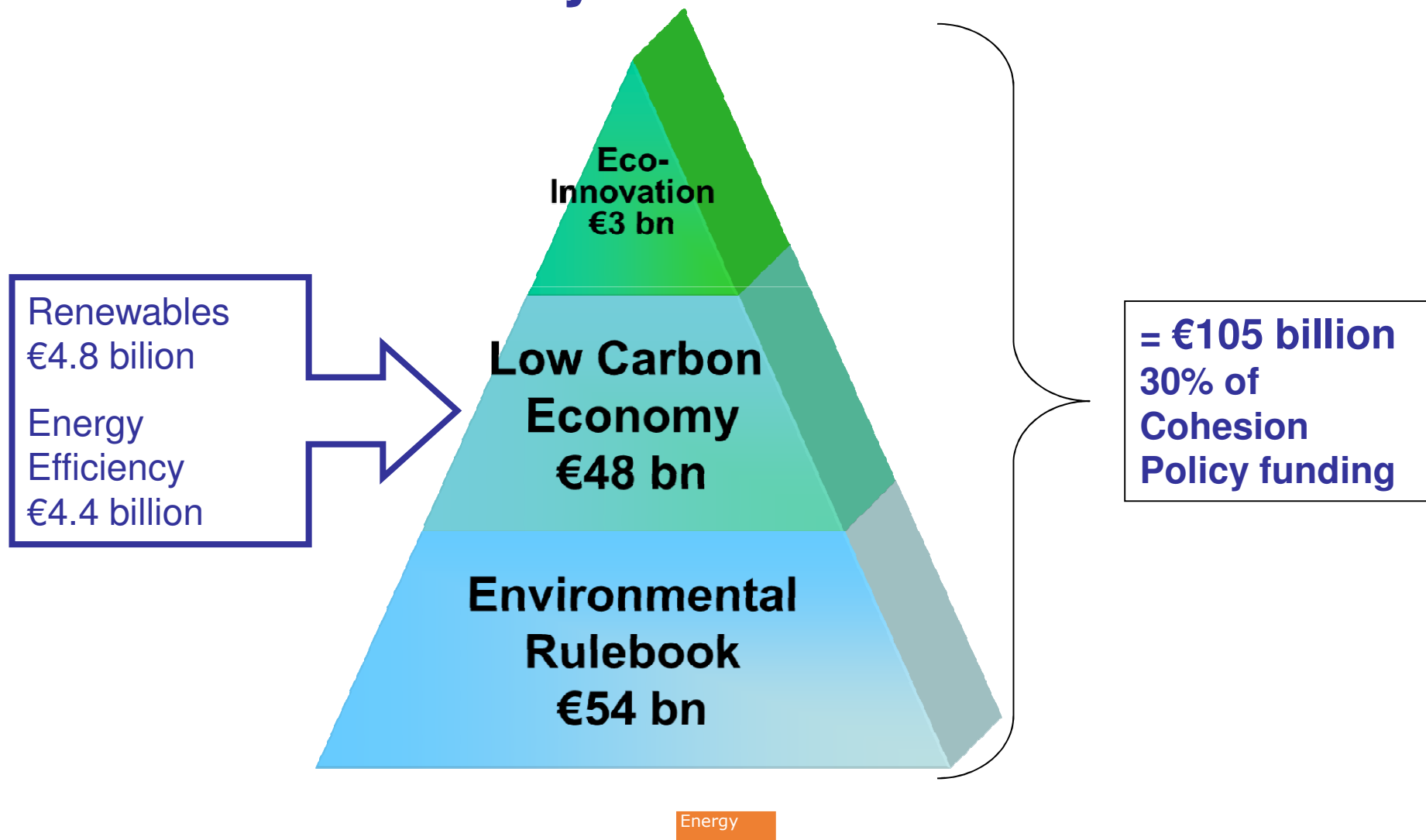
Energy



## Functioning of Cohesion Policy

- European Commission & Member States negotiated / agreed National Strategic Reference Framework (NSRF) and Operational Programmes (OPs) at national and/or regional level for 2007-2013.
- Member States alone select and implement the projects in line with priorities of the OPs (principle of 'shared management') – by Managing Authorities.
- Major Projects: Investments of more than € 50 million are submitted and approved by the Commission.
- Co-financing rate of 50% (competitiveness regions) or 75/85% (convergence regions) at programme level.

# “Green economy” investments 2007-2013





## Energy Efficiency in the “Recovery Package”



*Amendment to ERDF regulation (May 2009)*

*Up to 4% of the national ERDF allocation can go to energy efficiency and renewable energy in housing, potentially € 8 billion*

*Member States define eligible categories of existing housing, to support social cohesion*

*June 2010: Further regulatory amendment to facilitate the use of innovative financial instruments in this area, in addition to JEREMIE and JESSICA (JESSICA initiative also delivering EE & RES investments in the urban context)*



# Financial Engineering 2007-2013

***Financial Engineering in Cohesion Policy:** Innovative way of delivering CP support through revolving financing instruments (using new structures and processes), complementary to traditional non-repayable public support through grants*

***Article 44 of the GR enables support through FEIs in three thematic areas:***

- **Art 44 (a): SMEs, including micro enterprises**
- **Art 44 (b): Sustainable urban development**
- **Art 44 (c): EE & RES in the building sector, including existing housing**

**FEIs are e.g. referred to as venture capital funds, guarantee funds and loan funds**

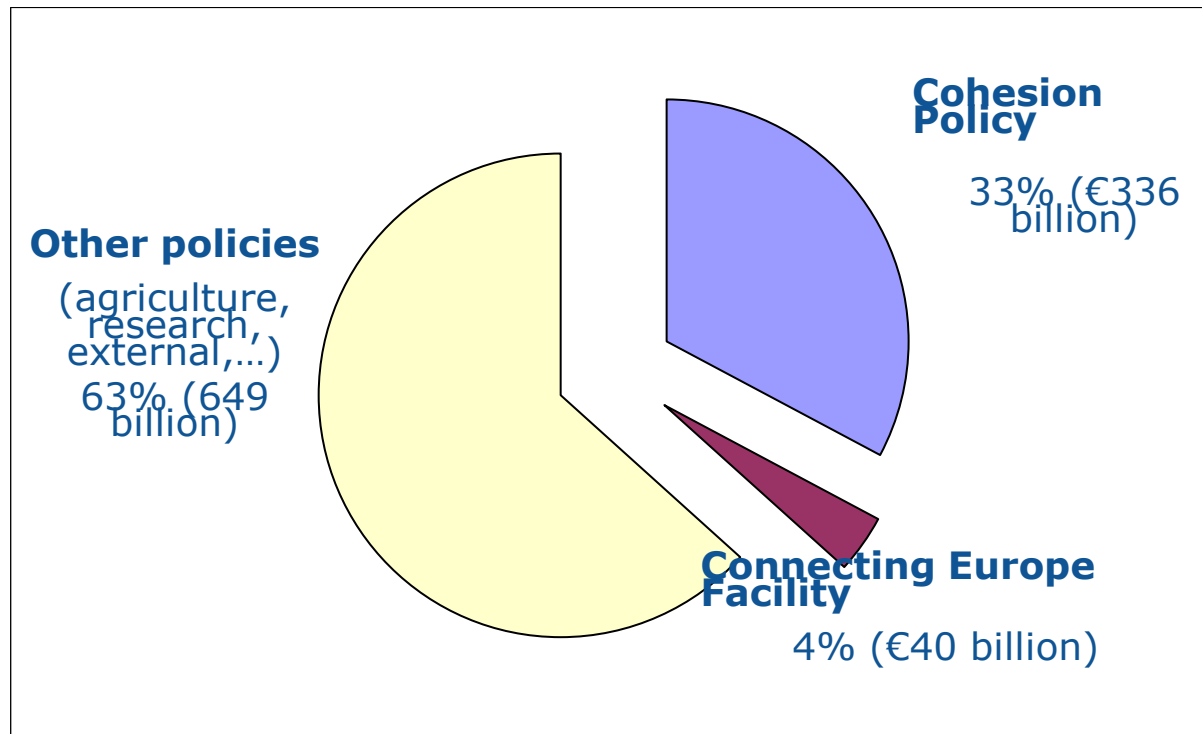
***FEIs represents a new approach to CP support, resulting in***

- **different implementation structures as compared to grants,**
- **new partnerships in promoting and delivering this form of CP support,**
- **the need to offer assistance to our stakeholders in the design and implementation of FEIs.**



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## MFF 2014 - 2020



*"Ambitious but realistic" proposals issued by the Commission in June 2011 for a Multiannual Financial Framework 2014-2020*

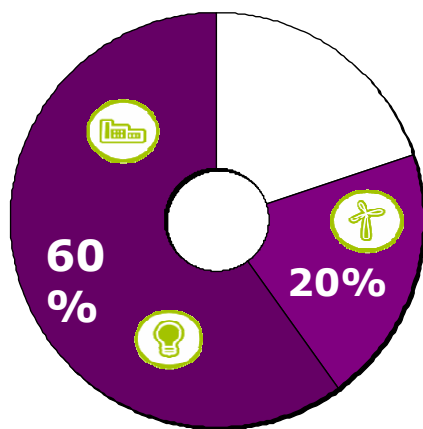
## Concentrating resources to maximise impact

**Concentration of ERDF investments on:**

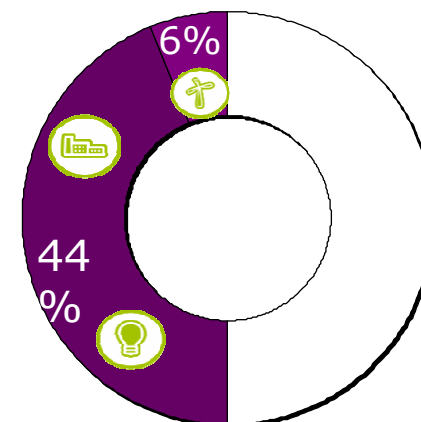
energy efficiency & renewable energy 

research & innovation 

competitiveness of SMEs 



**More developed & transition  
regions**



**Less developed regions**

**flexibility – different regions have different needs**

special arrangements for ex-convergence regions



# Connecting Europe Facility (CEF)

Proposed funding (million euro, 2014-2020)

- €31.7 billion to upgrade Europe's transport infrastructure, including €10 billion from the Cohesion Fund for transport projects in the cohesion countries.
- €9.1 billion for investments in trans-European energy infrastructure.
- €9.2 billion to support investment in fast and very fast broadband networks and pan-European digital services.



# Criteria for projects of common interest (I)

Projects of common interest shall meet the following **general criteria**:

- (a) the project is necessary for the implementation of the energy infrastructure priority corridors and areas set out in Annex I;
- (b) the project displays economic, social and environmental viability;
- (c) the project involves at least two Member States or has a significant cross-border impact.



## Criteria for projects of common interest (II)

The EE and RES relevant **specific criteria** for sustainable and green energy include:

- (a) sustainability, inter alia through **transmission of renewable** generation to major consumption centres and storage sites;
- (b) **involvement of users** in the management of their energy usage;
- (c) **avoidance of carbon dioxide emissions** at low cost while maintaining security of energy supply.

## Energy

- *Energy liberalisation requires a market-based approach and creating a level-playing field*
- *EU priorities and reliance on the market and the user pays principle to deliver the projects*
- **Guidelines Annex** determines 12 priority corridors/areas, which require EU action, and a process to translate these into concrete action (projects of common interest):
  - **Regional cooperation on infrastructure → combination of top-down policy steer and bottom-up identification**
  - **Regional cooperation as cornerstone of market integration, competition and flexibility**
- **CEF Annex** defines those corridors/areas, which are eligible for funding under the CEF instruments



# CEF: Electricity interconnections

- example, CE and SE Europe



## Projects to be considered as potential PCIs (list is not exhaustive)

New interconnection between Hungary and Slovakia

New interconnection between Germany and the Czech Republic

New interconnection between Slovenia and Italy

Interconnection upgrade between Bulgaria and Romania, and Bulgaria and Greece

Capacity increases between Germany and Austria, and Poland and Germany

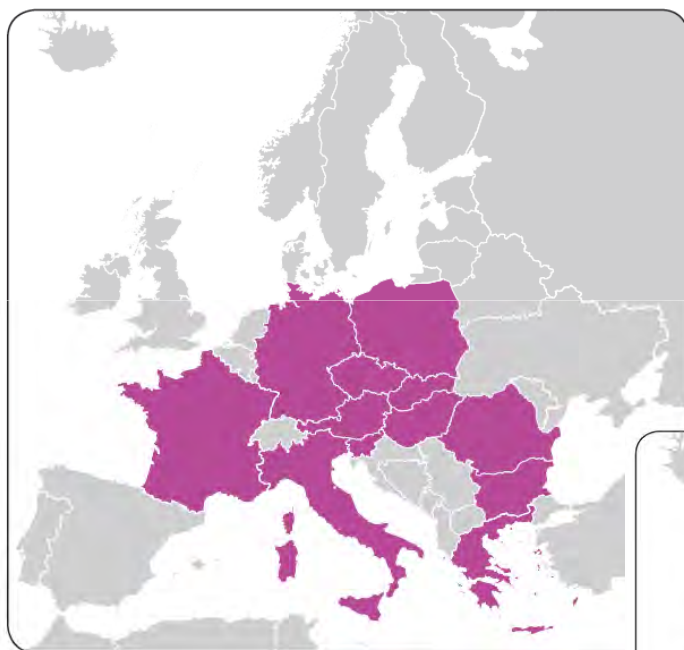
Capacity increase between Slovenia and Hungary/Croatia<sup>8</sup>

Strengthening of North-South infrastructure within Germany



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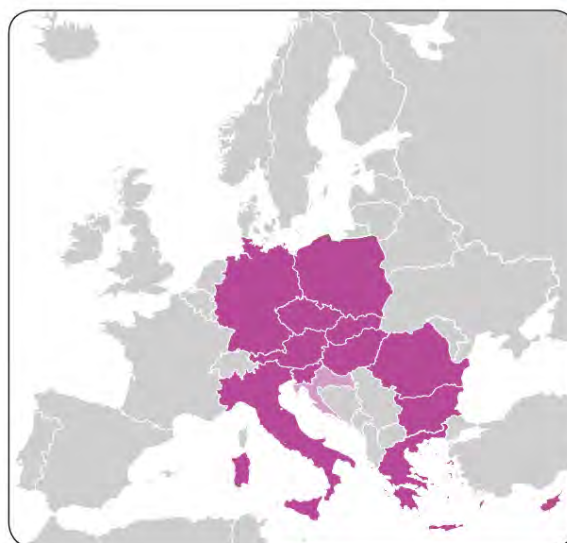
# CEF: the Southern Gas Corridor and Gas interconnections in CE and SE Europe



## Projects to be considered as potential PCIs (list is not exhaustive)

Gas transmission infrastructures, including new pipelines across Turkey and/or transmission solutions across the Black Sea, to connect gas producing countries in the Caspian (e.g. Azerbaijan, Turkmenistan) and Middle East (e.g. Iraq) to EU Member States

Gas transmission infrastructures required for connecting EU Member States to gas suppliers in the Eastern Mediterranean and the Middle East



## Projects to be considered as potential PCIs (list is not exhaustive)

New interconnection between Slovakia and Hungary

Interconnections linking Slovenia, Italy and Austria

Interconnection upgrades between Czech Republic and Poland

New LNG regasification terminal in Croatia<sup>10</sup>

Reverse flow upgrades between Bulgaria and Romania, Hungary and Romania and Bulgaria and Greece



***Thank you***

*tudor.constantinescu@ec.europa.eu*