



# Αγορά Ηλεκτρισμού και Χειμερινό Πακέτο ΕΕ

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# Περιεχόμενα

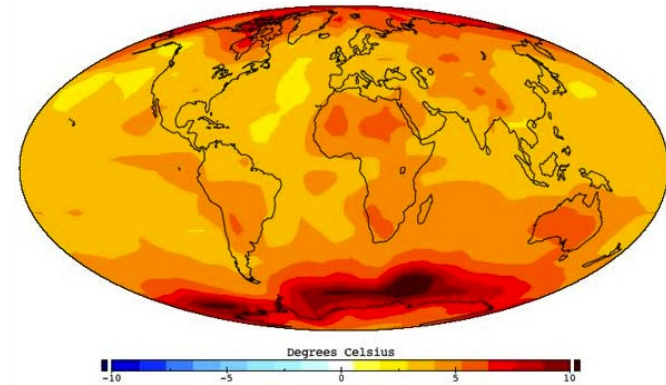
- **Ευρωπαϊκή Ενεργειακή Στρατηγική**
  - Μακροπρόθεσμη στρατηγική (2050)
- **Ευρωπαϊκοί στόχοι**
  - Ενεργειακή Ένωση (2030)
  - Χειμερινό Πακέτο
- **Προκλήσεις ΡΑΕΚ**

# EU energy strategy

## Long term strategy

# Future energy systems

- **Climate change**

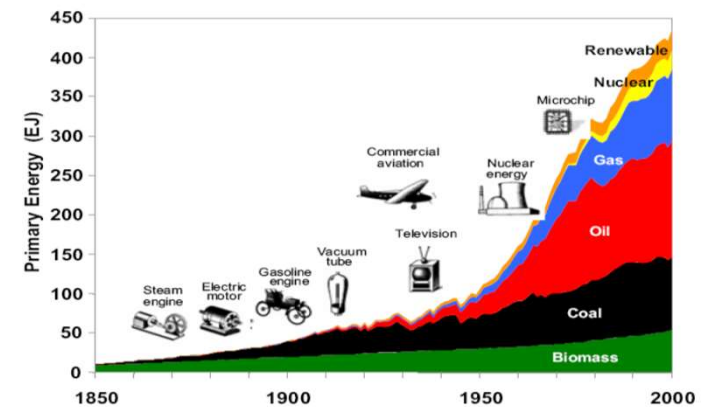


- **Third industrial revolution**

- **Future energy economics**

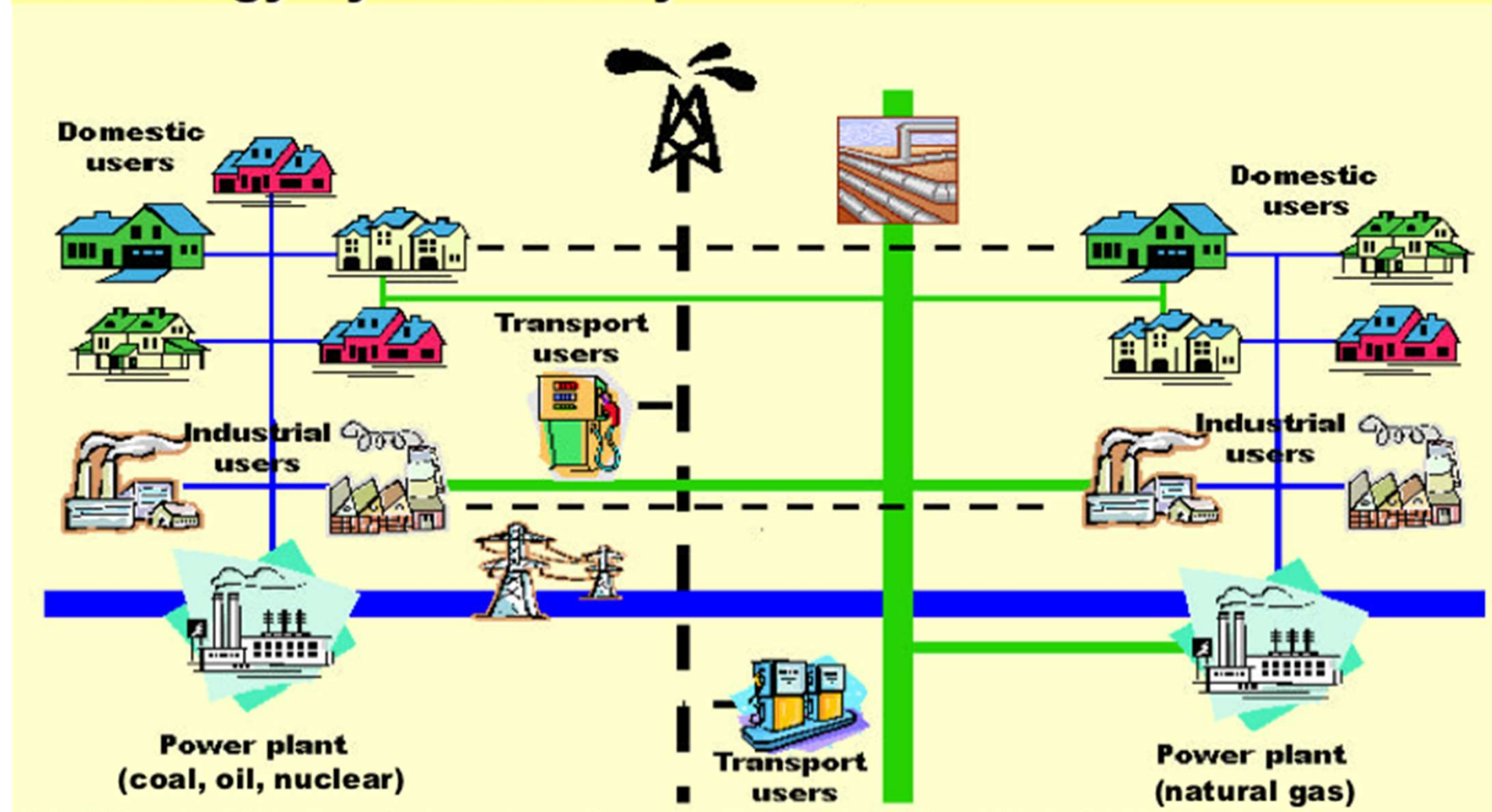
# EU energy objectives

- **greenhouse gas reduction**
- **sustainable production and consumption**
- **competition in electricity and natural gas markets**
- **security of supply**



# Current energy system

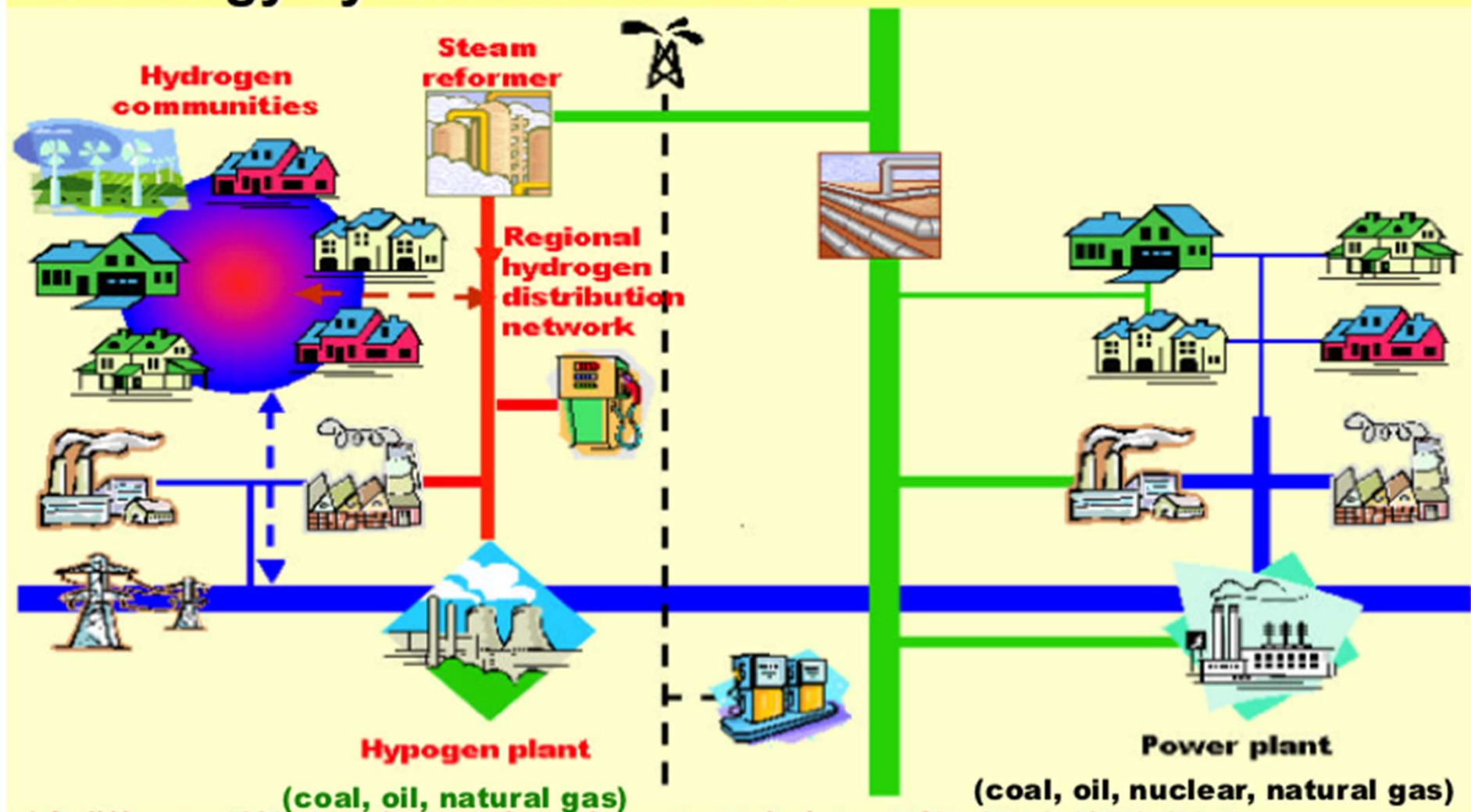
## EU energy system today\*



\* Poullikkas A., 2009, *Introduction to Power Generation Technologies*, ISBN: 978-1-60876-472-3

# Future energy systems (optimistic scenario)

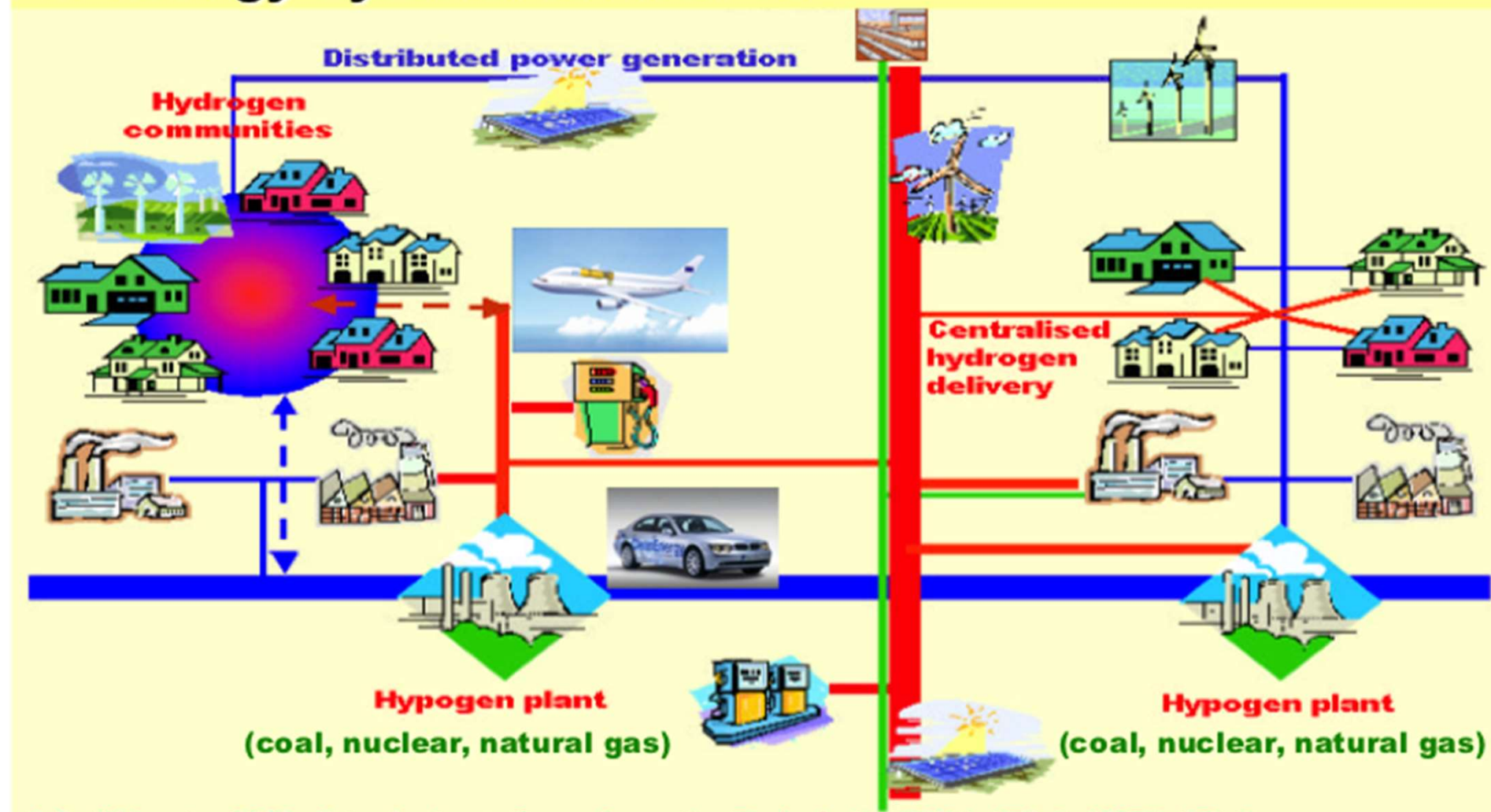
## EU energy system in 2020-30\*



\* Poullikkas A., 2009, *Introduction to Power Generation Technologies*, ISBN: 978-1-60876-472-3

# Future energy systems (optimistic scenario)

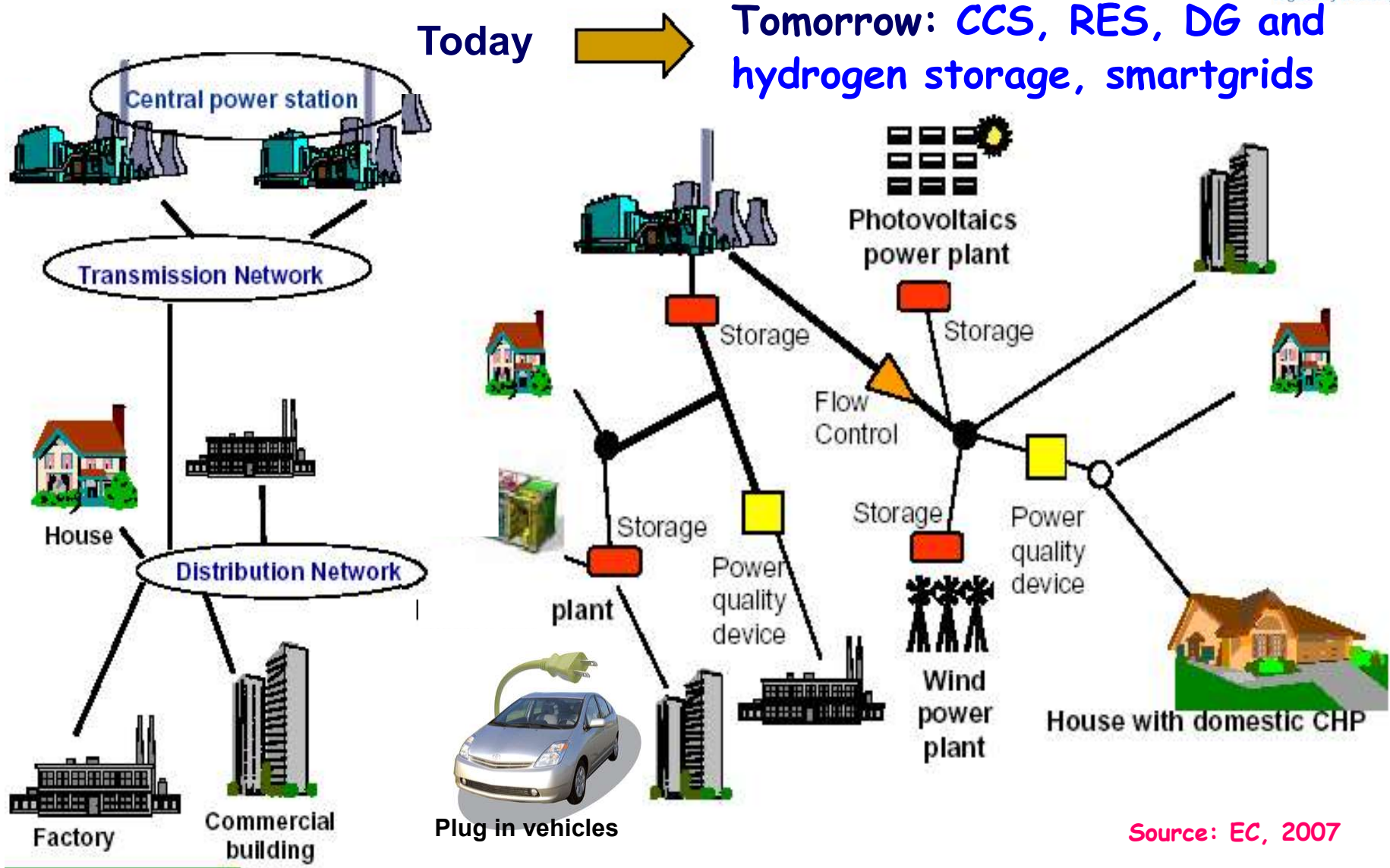
## EU energy system in 2040-50\*



\* Poulikkas A., 2009, *Introduction to Power Generation Technologies*, ISBN: 978-1-60876-472-3

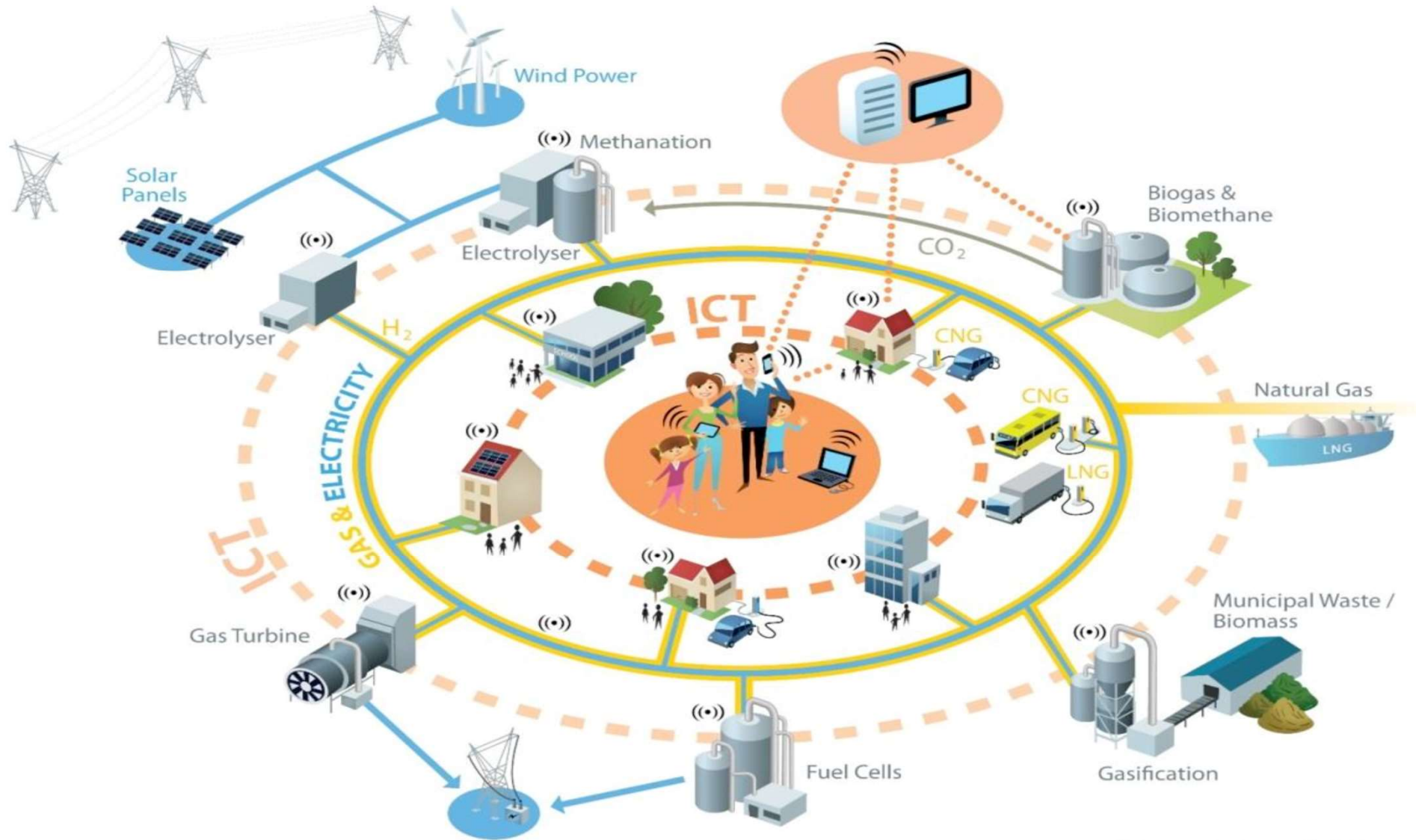


# Future power systems

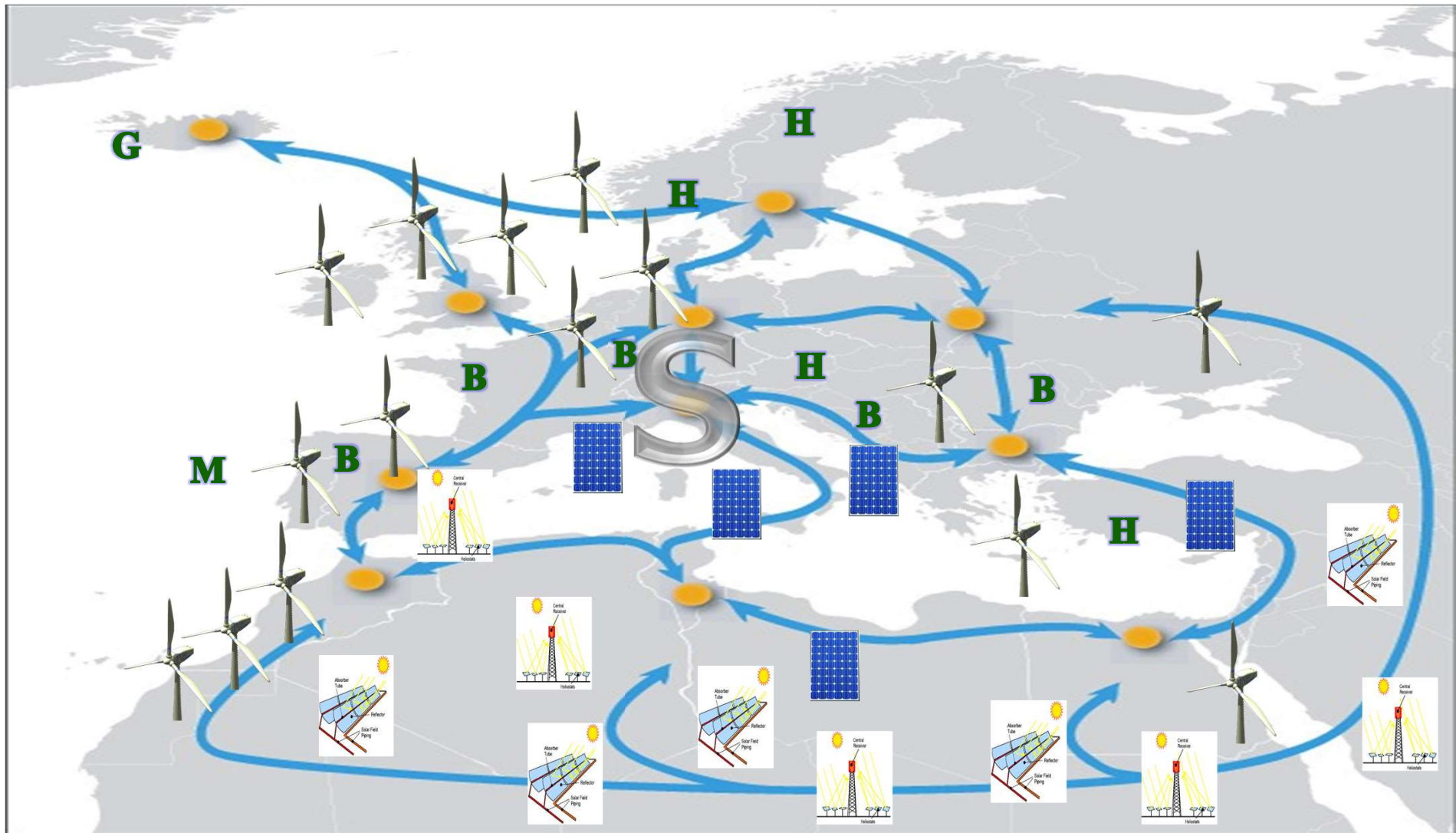


Source: EC, 2007

# End goal – the smart future



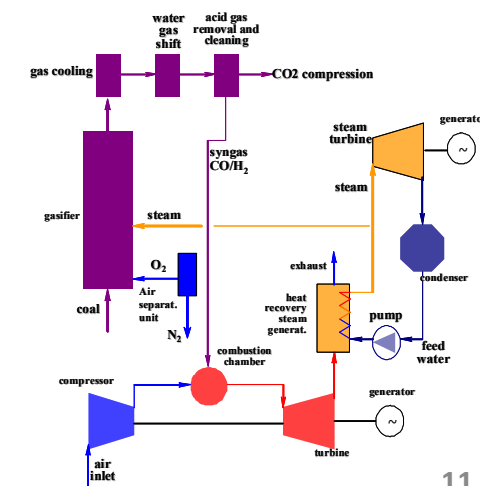
# The Super Smart Grid after 2050\* (may allow for 100% RES)



\* Poullikkas A., 2013, *Sustainable Energy Development for Cyprus*, ISBN: 978-9963-7355-3-2

# Long term EU energy strategy (2050)

- A vision of carbon free EU
- Main ingredients of future sustainable energy systems:
  - Large scale integration of renewable energy sources
  - Distributed generation
  - Carbon capture and storage
  - Smartgrids
  - Electric vehicles
  - Storage devices
  - Hydrogen

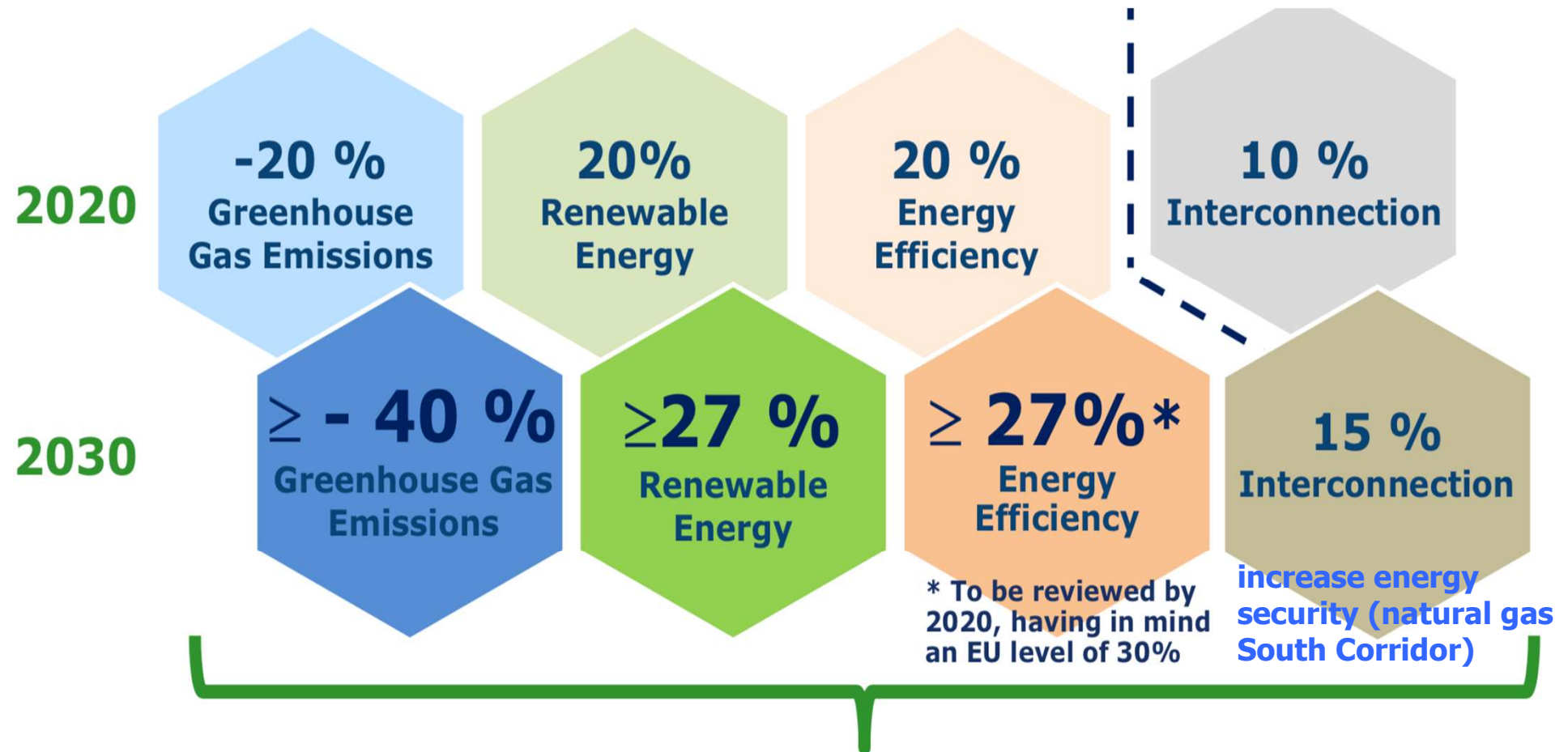


Need to develop advanced simulation  
 tools, new sustainable technologies and  
 infrastructure !!

# EU energy targets

## Energy Union – Winter Package

# EU medium and long term targets

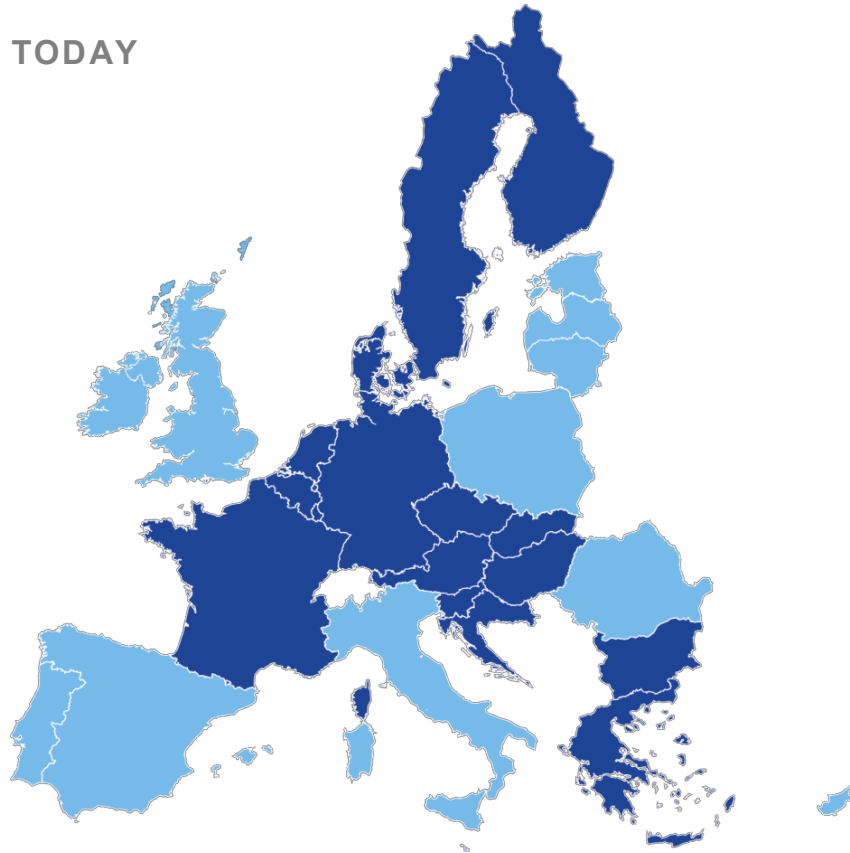


**New governance system + indicators**

**2050 -80% Greenhouse Gas Emissions**

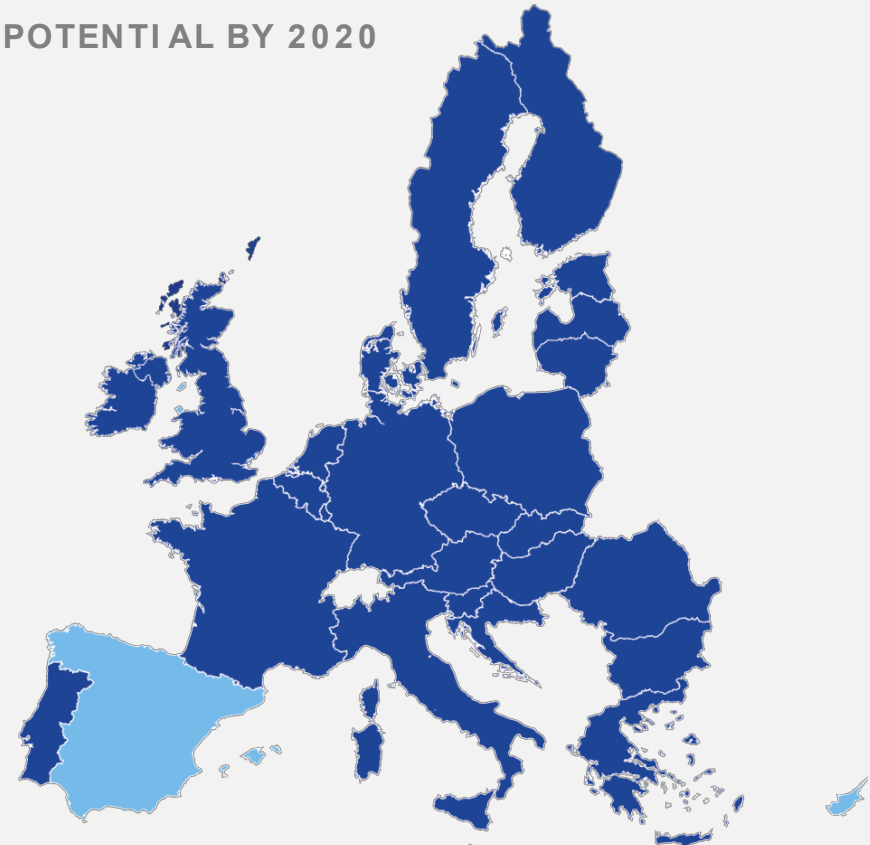
# Connecting electricity markets

TODAY



- Countries meeting the 10% interconnection target
- Countries not meeting the 10% interconnection target

POTENTIAL BY 2020



**Efforts need to be stepped up for those below the 10% target by 2020, mainly Spain and Cyprus, and in view of achieving the 15% target by 2030.**

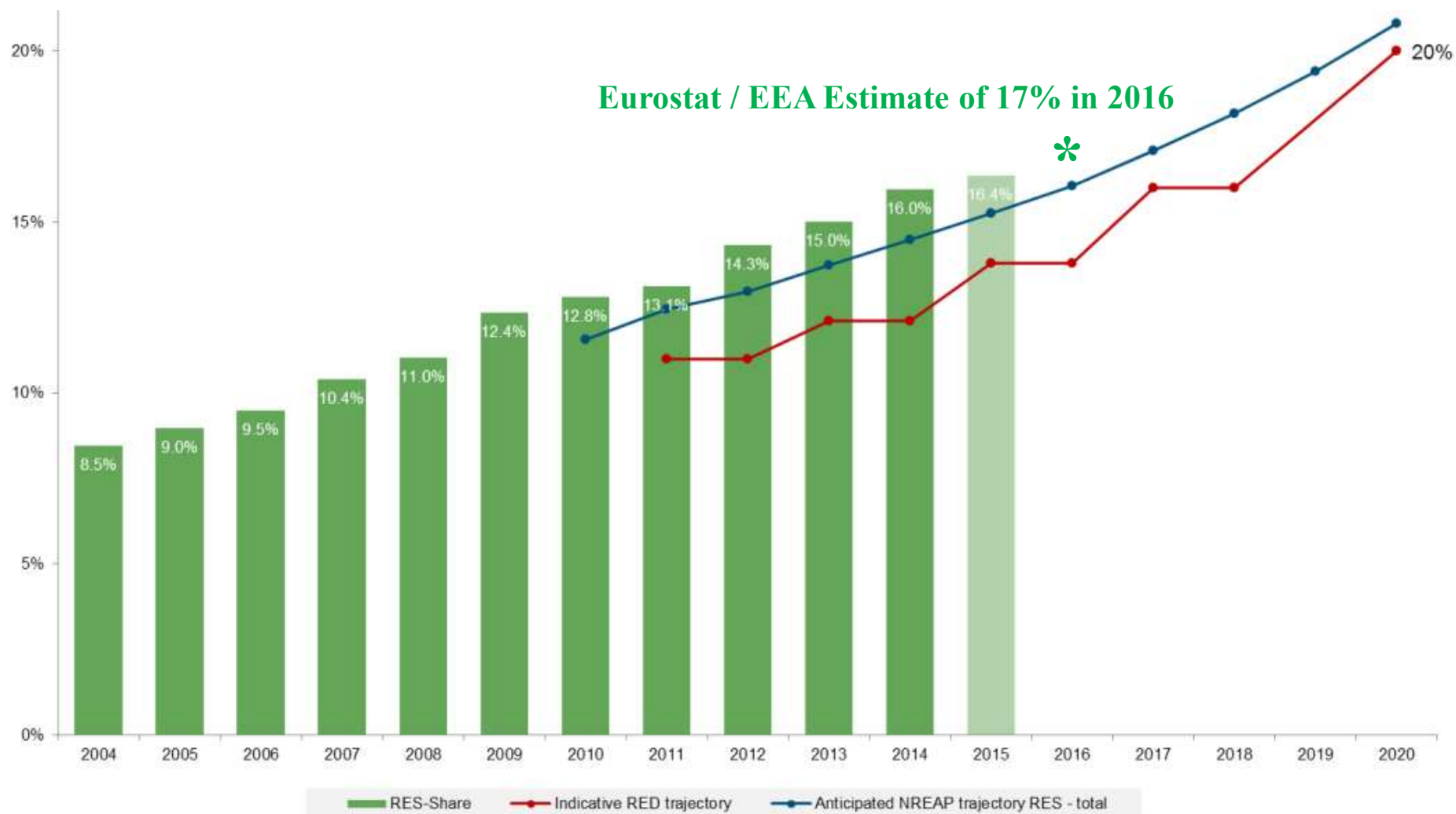
# Current RES share per MS

(in % of gross final energy demand)





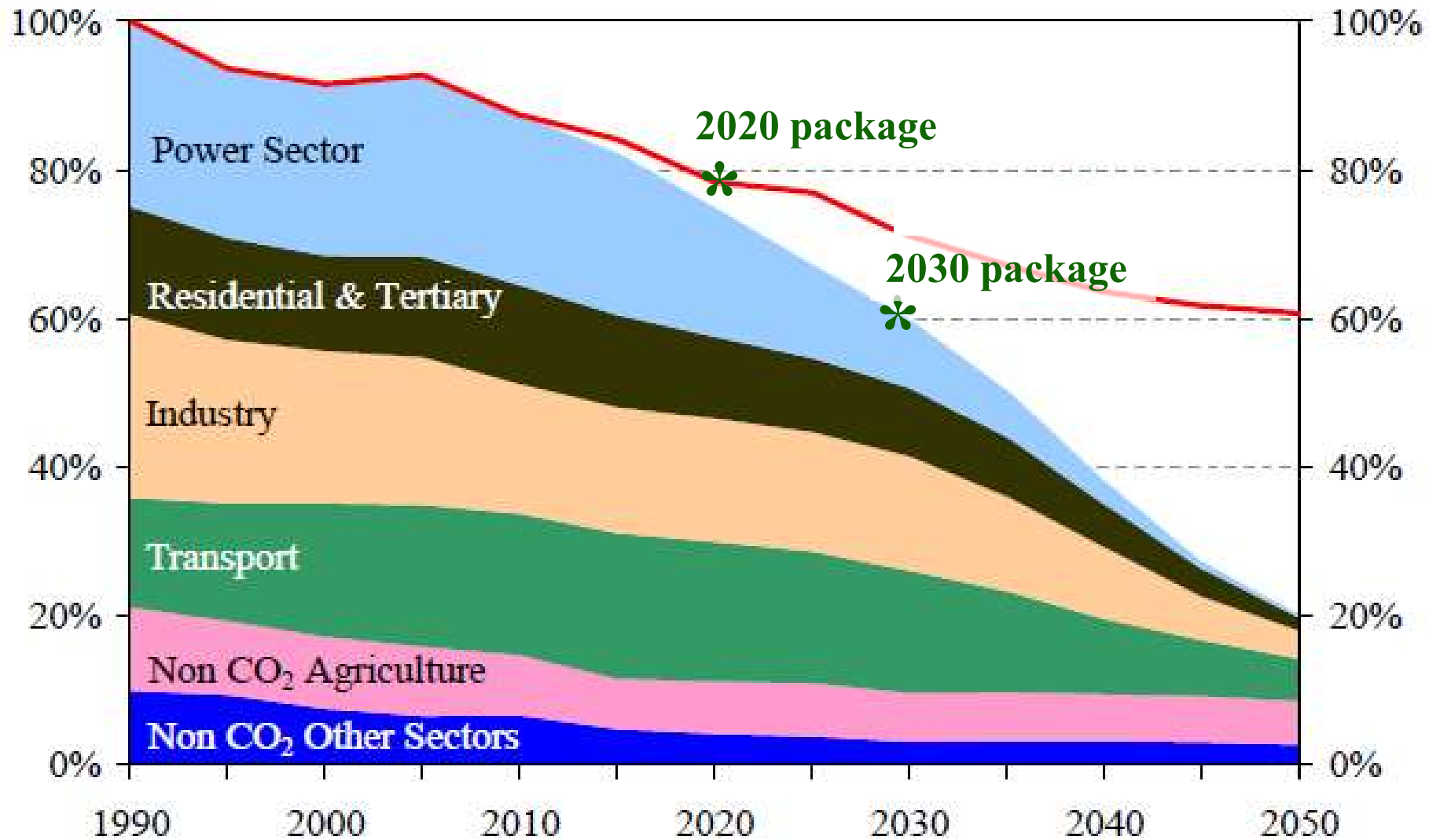
# EU RES share by 2020



**RED: Renewable Energy Directive**

**NREAP: National Renewable Energy Action Plan Trajectories**

# EU reduction in greenhouse gas emissions



# Elements of Winter Package



**Energy Union  
Governance**



**Energy Efficiency**  
(Energy Efficiency  
Directive, European  
Performance of  
Buildings Directive)



**Renewables**  
(Revised Renewable  
Energy Directive)



**New Electricity  
Market Design**  
(including Risk  
Preparedness)



**Energy prices  
and costs  
report**

- **A set of coherent measures**

# Clean energy for all Europeans

## Citizens at the centre

- **Completion of the internal electricity market**
- **Common tariffs within EU**
- **More and more prosumers and definition of their basic rights**
- **Authorised to sell excess electricity to the grid, “without disproportionate procedures and charges that are not cost effective”**
- **Able to choose and change suppliers (like other consumers)**

# Key aims of recent Winter Package



- **To establish a common power market design across EU and to ensure the adequacy power systems**
- **To promote the better integration of electricity produced from RES into the market**
- **To advance energy efficiency, energy cleanliness and energy performance**
- **To implement rules on the governance of the Energy Union**

# Legislative proposals of Winter Package



- **Proposals for a recast of the Internal Electricity Market Directive and Regulation**
- **Proposal for a recast of the Renewable Energy Directive**
- **Proposal for a recast of the ACER Regulation**
- **Proposal for a revised Energy Efficiency Directive**
- **Proposal for a Regulation on the Governance of the Energy Union**

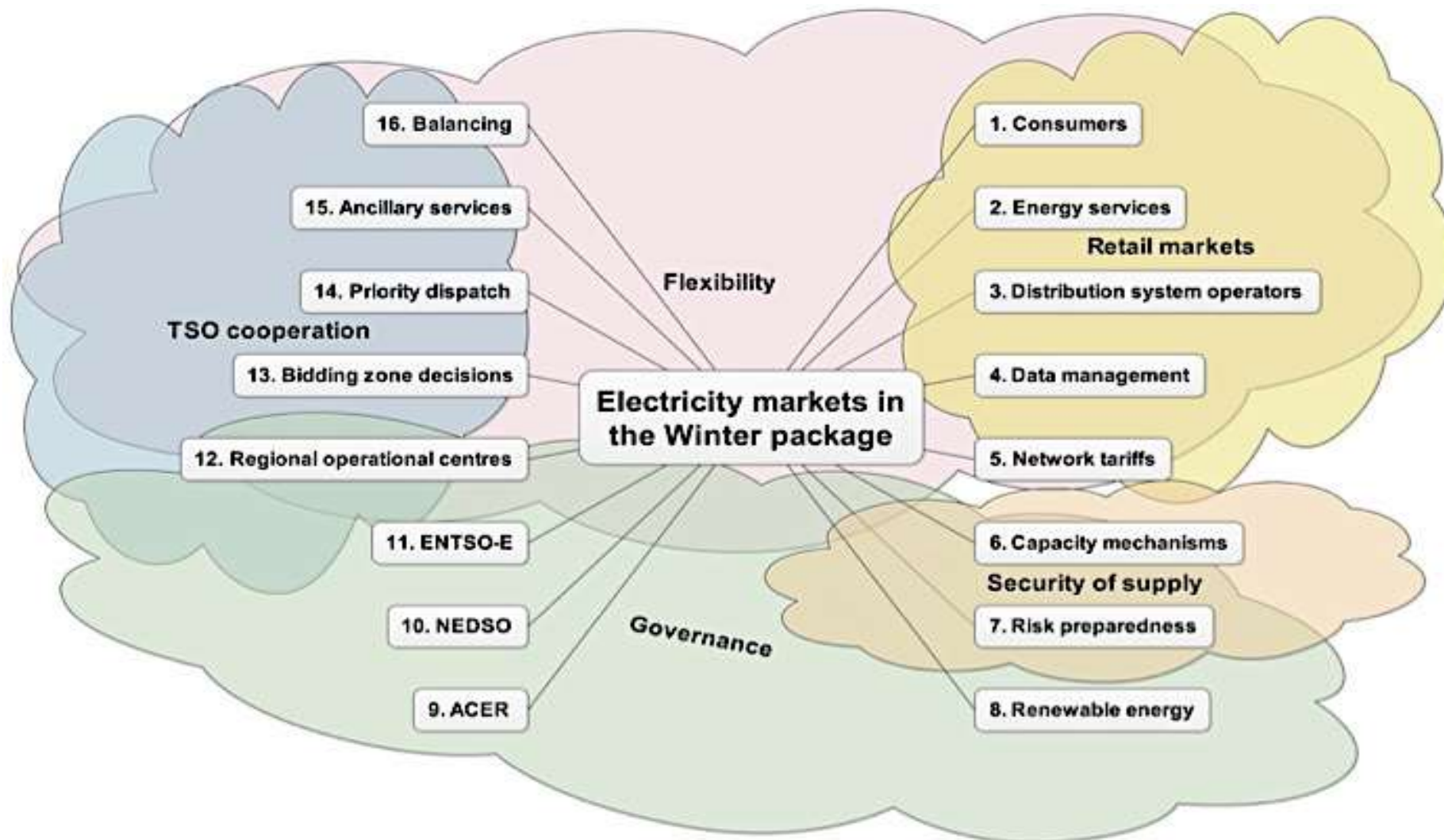
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# Additional documents of Winter Package



- **Large number of Communications**
- **Large number of Commission Regulations**
- **Large number of memos, factsheets, reports, impact assessments**
- **Other documents covering various topics, ranging from capacity mechanisms to eco-design, bioenergy sustainability, energy prices and costs, energy funding, innovation and transport**

# Electricity markets in Winter Package





# CERA challenges

## Towards 2030

# Βραχυπρόθεσμες ενέργειες ΡΑΕΚ



- Υλοποίηση του νέου μοντέλου αγοράς ηλεκτρισμού
- Ολοκλήρωση του λειτουργικού και λογιστικού διαχωρισμού της ΑΗΚ
- Εκσυγχρονισμός κανονισμών αδειοδότησης ηλεκτρισμού και φυσικού αερίου
- Δημιουργία πλαισίου αγοράς φυσικού αερίου
- Καθορισμός επιλογών για την εισαγωγή και τη δημιουργία αγοράς φυσικού αερίου για χρήση σε όλους τους τομείς της οικονομίας
- Ένταξη συστημάτων αποθήκευσης ενέργειας
- **Εκπλήρωση στόχων ΑΠΕ για το 2020**