

Integrating electricity: policies – markets – systems

CEPS/ECN Workshop The future of EU electricity grids



Tadhg O'Briain
DG Energy - B2 – Electricity and Gas

● Where we stand....

- Value of the wholesale electricity market in Europe is over €150 billion, approx. 10%, or cross border trade.
- Annual cost of operating the transmission networks is €10-€11bn.
- Ageing networks
 - » Missing E-W and N-S links
 - » Poorly adapted to renewable and distributed generation
- New institutional architecture with Third Package
 - » ENTSO-E
 - » Agency for Cooperation of Energy Regulators

● From President Barroso's political guidelines for the next Commission

- “New sources of growth... calls for a radical shift in policy making... We need to invest in new infrastructure networks for tomorrow's technologies. The policy shift must be build on open markets and investment regimes at the service of European interest, with **smart regulation for sound markets**...
- “Secure energy supply and good interconnections will be crucial to power future growth. One of the next great European projects is to give Europe **a new European supergrid** for electricity and gas...
- Baltic interconnectors... Nabucco... shows what can be done when... we use an **intelligent mix of regulation and money** to deliver results...
- “The next five years... new initiatives such as a Mediterranean interconnection plan, interconnections for gas, electricity and oil, as well as links between African suppliers and the EU.”

● Things to remember

- Generators – and network operators – must (expect to) recover their Long Run Marginal Cost
- “The customer always pays”
 - » There is no such thing as a free lunch
 - » Subsidies should be in line with public finance principles (VFM, minimum deadweight etc.)

● European Economic Recovery Plan

Response to the financial crisis and to reinforce the EU's energy security of supply

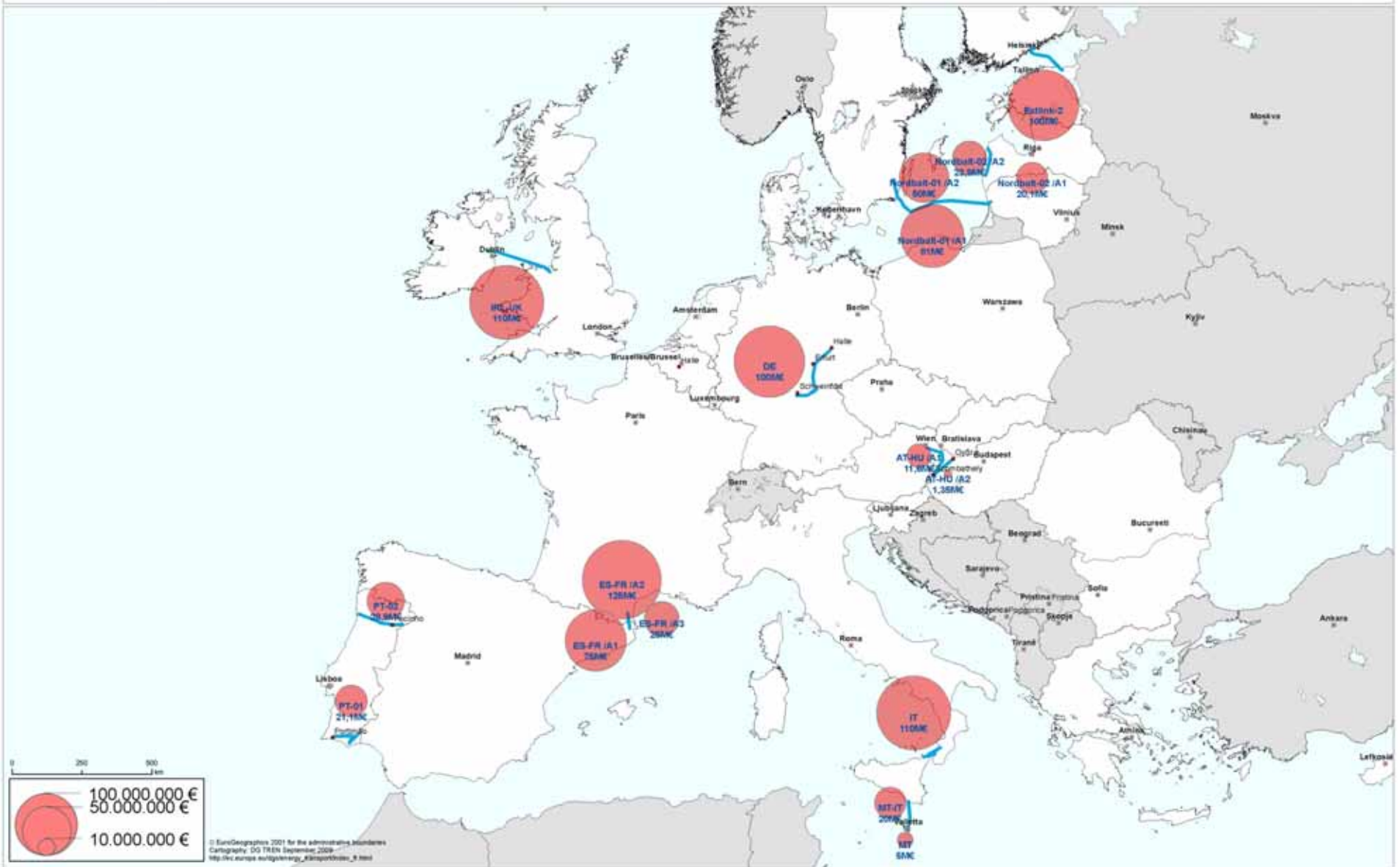
- Proposed by the Commission in November 2008
- Approved by European Council and European Parliament in March 2009 and May 2009, respectively
- EERP funds €5 billion (€3,98 billion energy + €1,02 billion broadband internet connections and rural development)

European Energy Programme for Recovery (EERP)
€3,98 billion

- **€ 2.365 million: gas and electricity infrastructure projects**
- € 565 million: offshore wind energy projects
- € 1.050 million: Carbon Capture and Storage projects



Actions proposed for funding - Electricity interconnectors



● Energy Infrastructure package – the way forward

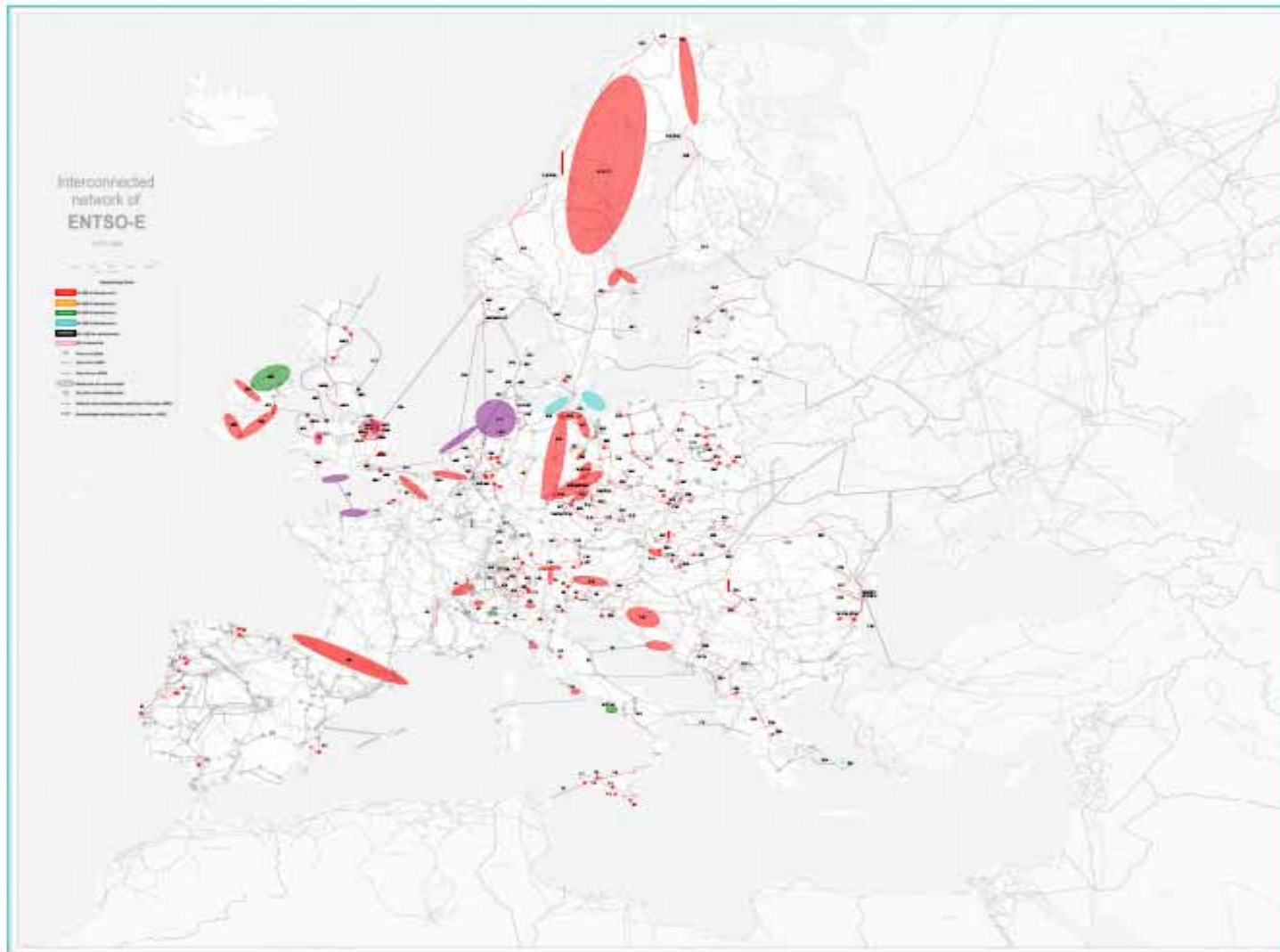
- » **Objectives and priorities** for the development of infrastructure in the 2020/2030 horizon
- » New **Energy Security and Infrastructure Instrument** replacing the trans-European energy network (TEN-E) guidelines and financial regulation
- » Optimal role and level of **different funding instruments**: tariffs, EU contribution, EIB loans and guarantees
- » Integration of the 10-year **network development plan**, developed by ENTSOs (3rd package)

➤ November 2010

- Draft 10 year network development plan up to €28 of spending from now to 2014



● Projects with European relevance (LT)

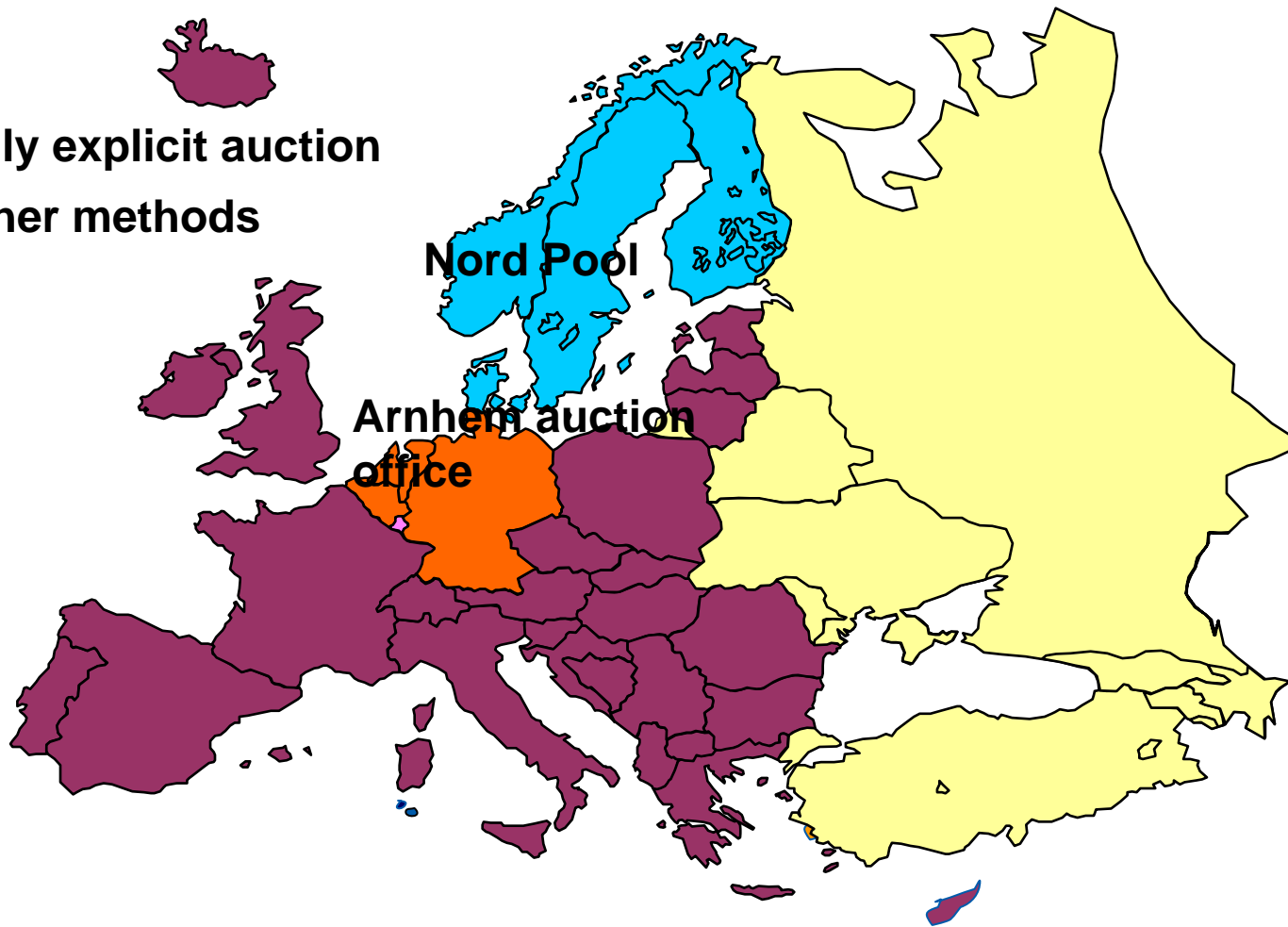


● Congestion management methods in 2000

■ Implicit auction in use

■ Only explicit auction

■ Other methods

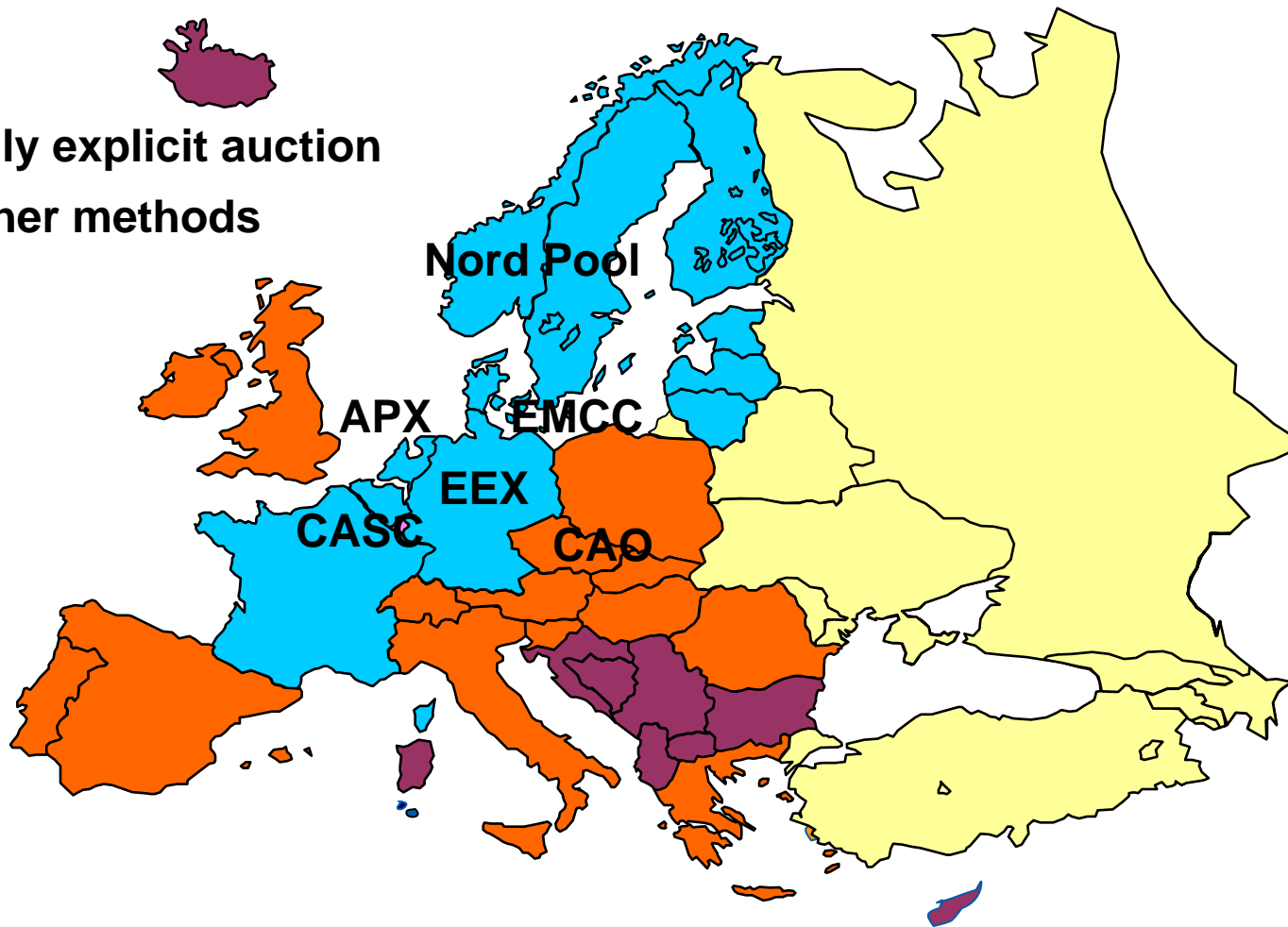


● Congestion management methods in 2010

 Implicit auction in use

 Only explicit auction

 Other methods



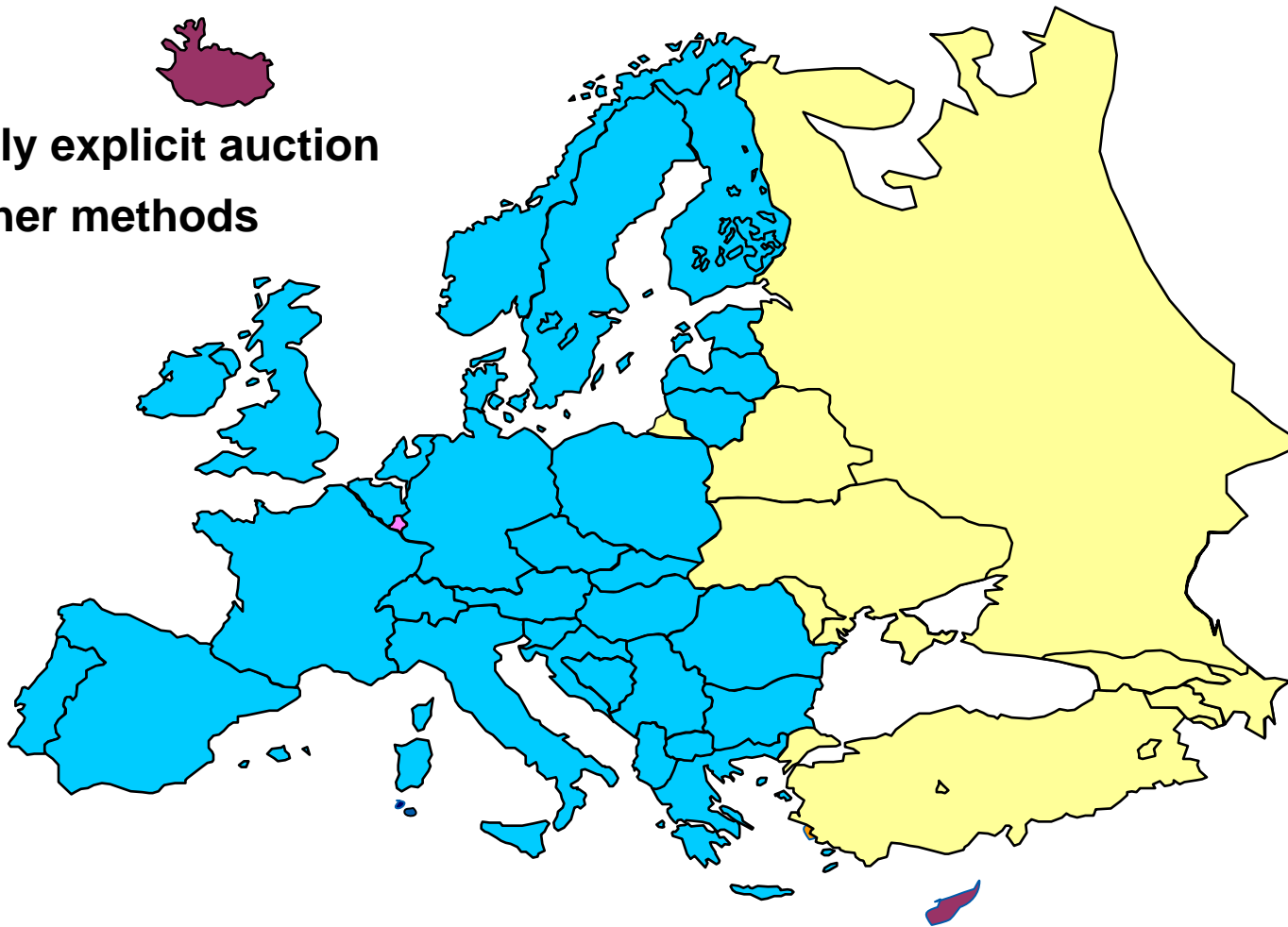
● Congestion management methods in 2015

 **Implicit auction in use**

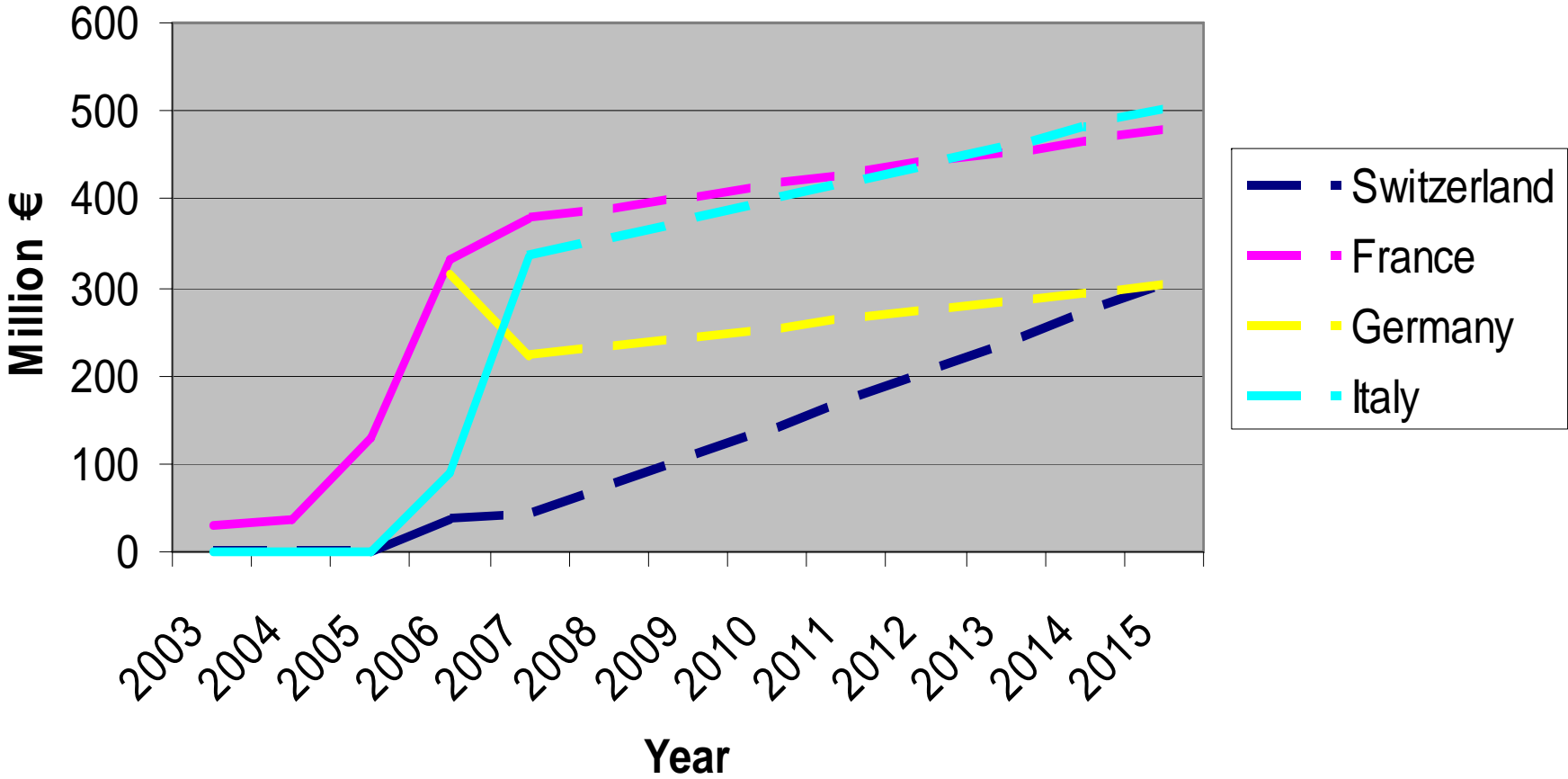


 **Only explicit auction**

 **Other methods**

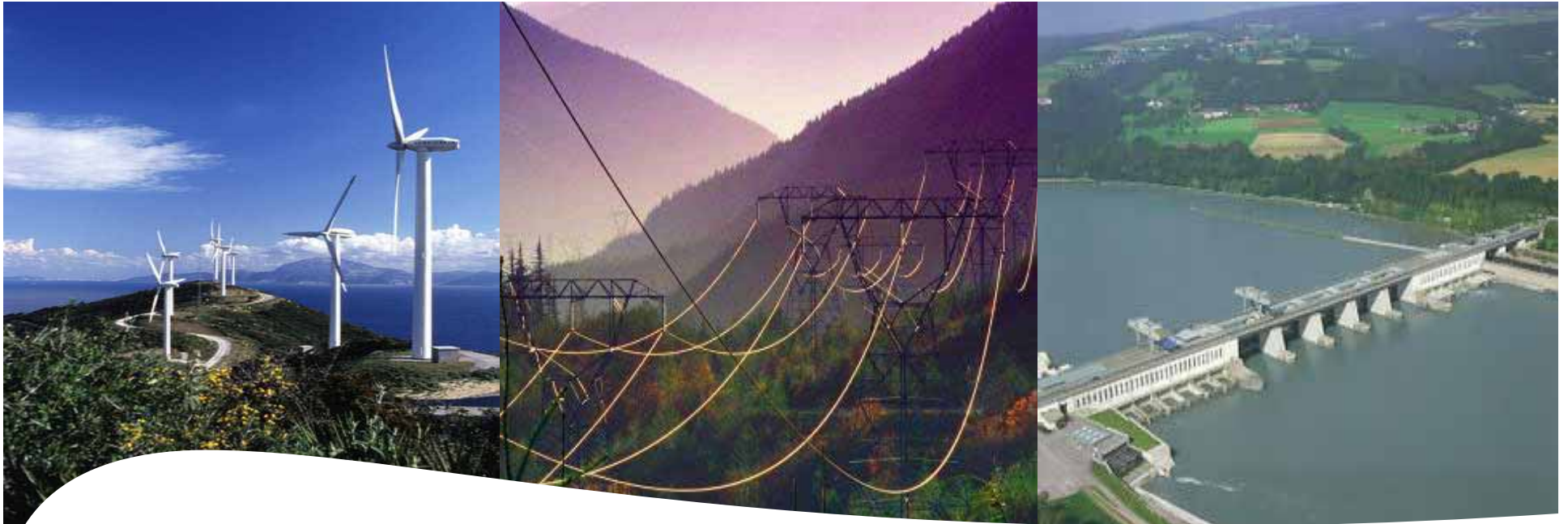


Congestion rents 2003 - 2015



● Smart Grids

- Why its **large-scale deployment** has not yet happened?. Some reasons:
 - Limited pilot experiences so far
 - Limited statistical significance of the quantification of benefits achieved in these experiences
 - Existing uncertainties regarding the global investments needed, the new market models and the technology needed
- Key challenges for the Smart Grid deployment are largely of **regulatory nature**
- In 2009 **Task Force established** to advice the Commission
 - policy and regulatory directions at European level
 - coordinate the first steps towards the implementation of Smart Grids under Third Energy Package.
 - Reporting mid 2011



Integrating electricity: policies – markets – systems

CEPS/ECN Workshop The future of EU electricity grids



Tadhg O'Briain
DG Energy - B2 – Electricity and Gas