

# **EU energy policies related to climate change - roles of regulators in promoting renewable energy**

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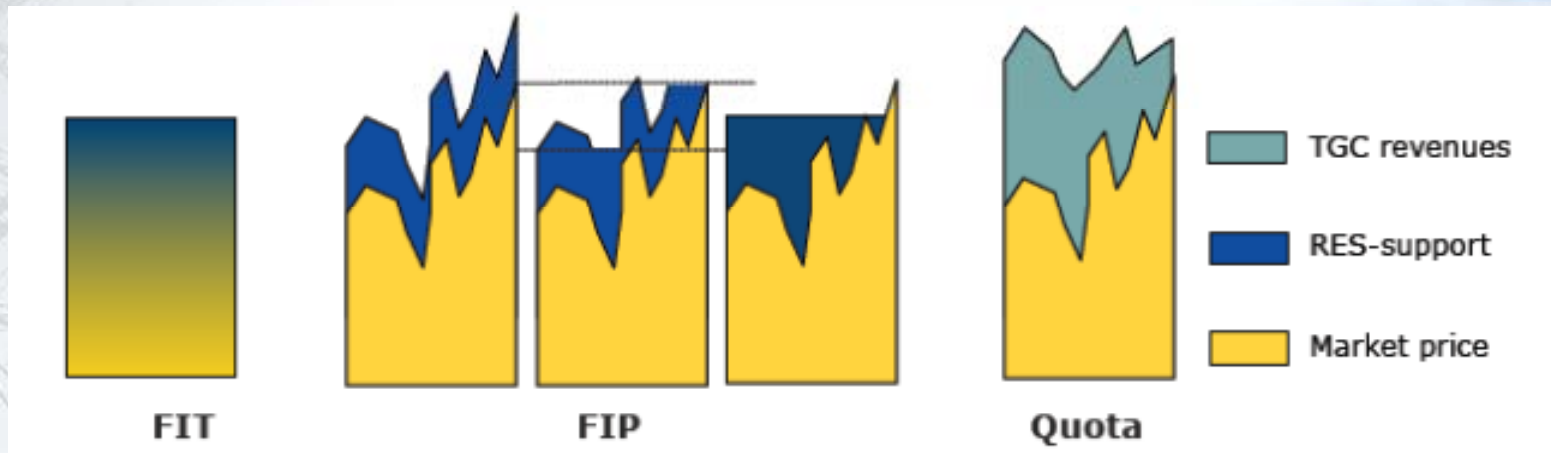
# EU energy policy related to climate change

- EU 2020 targets agreed by Member States 2007
  - Reduce greenhouse gas emissions by 20%
  - Improve energy efficiency by 20%
  - 20% of energy from renewable sources
- EU policy instruments
  - Phase III of the EU ETS
  - EU Renewables Directive
  - New Proposal - Energy Efficiency Directive

# EU Renewables Directive

- Binding national targets combined with cooperation mechanisms
- National Renewable Energy Action Plans
- Regular reports (MS and EC)
- Establishes rules relating to administrative procedures, electricity grid connections and guarantees of origin
- No harmonization of support schemes
- Binding targets for renewables in transports incl. sustainability criteria for biofuels

# Renewable support schemes



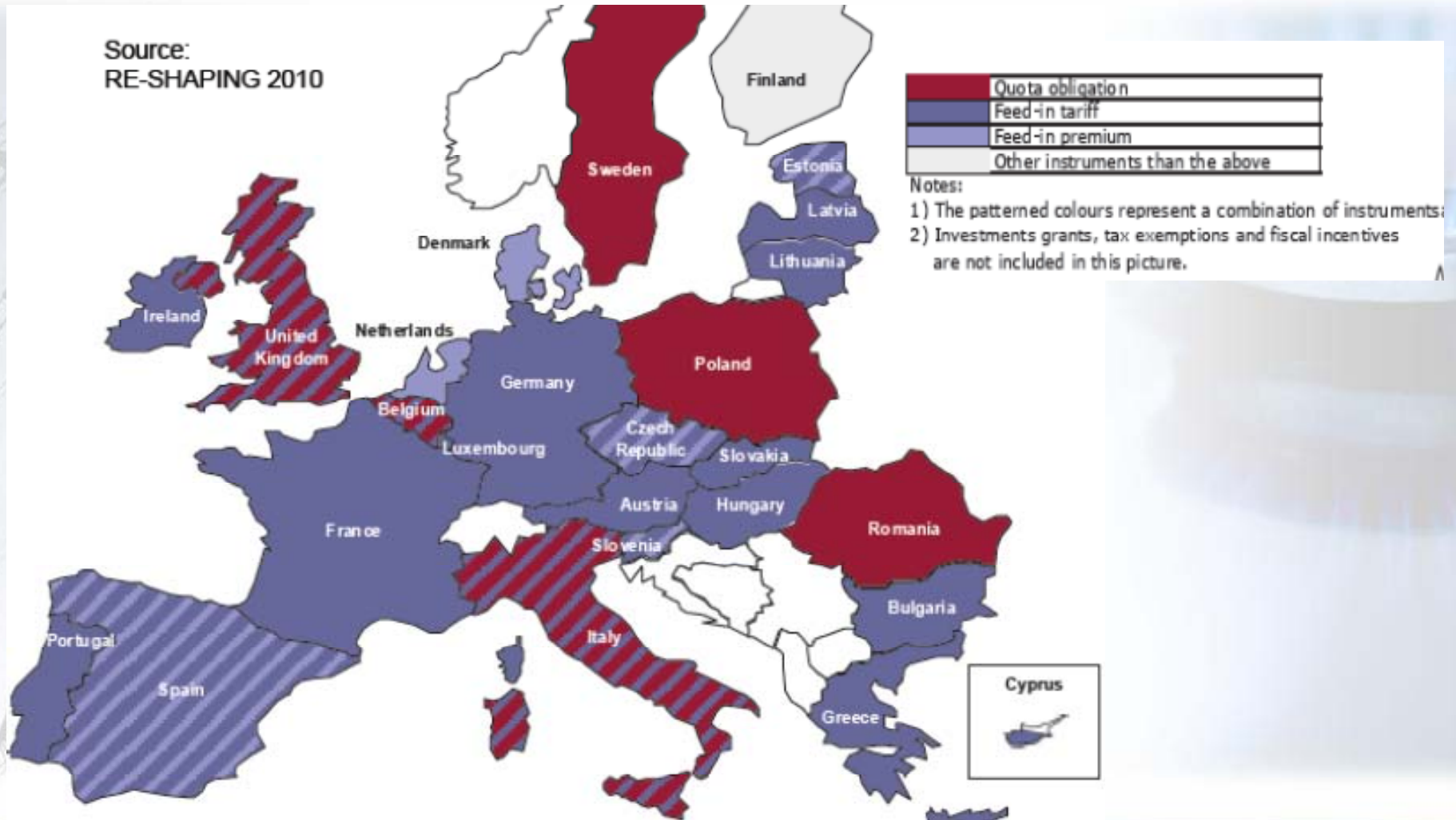
Until now technology-neutral harmonisation proposals have been rejected by Member States and EU Parliament

Under current RES Directive the cooperation mechanisms serve the goal of least cost resource allocation

Alternative harmonisation options need further investigation regarding their impacts on policy effectiveness and costs

# Renewable support schemes

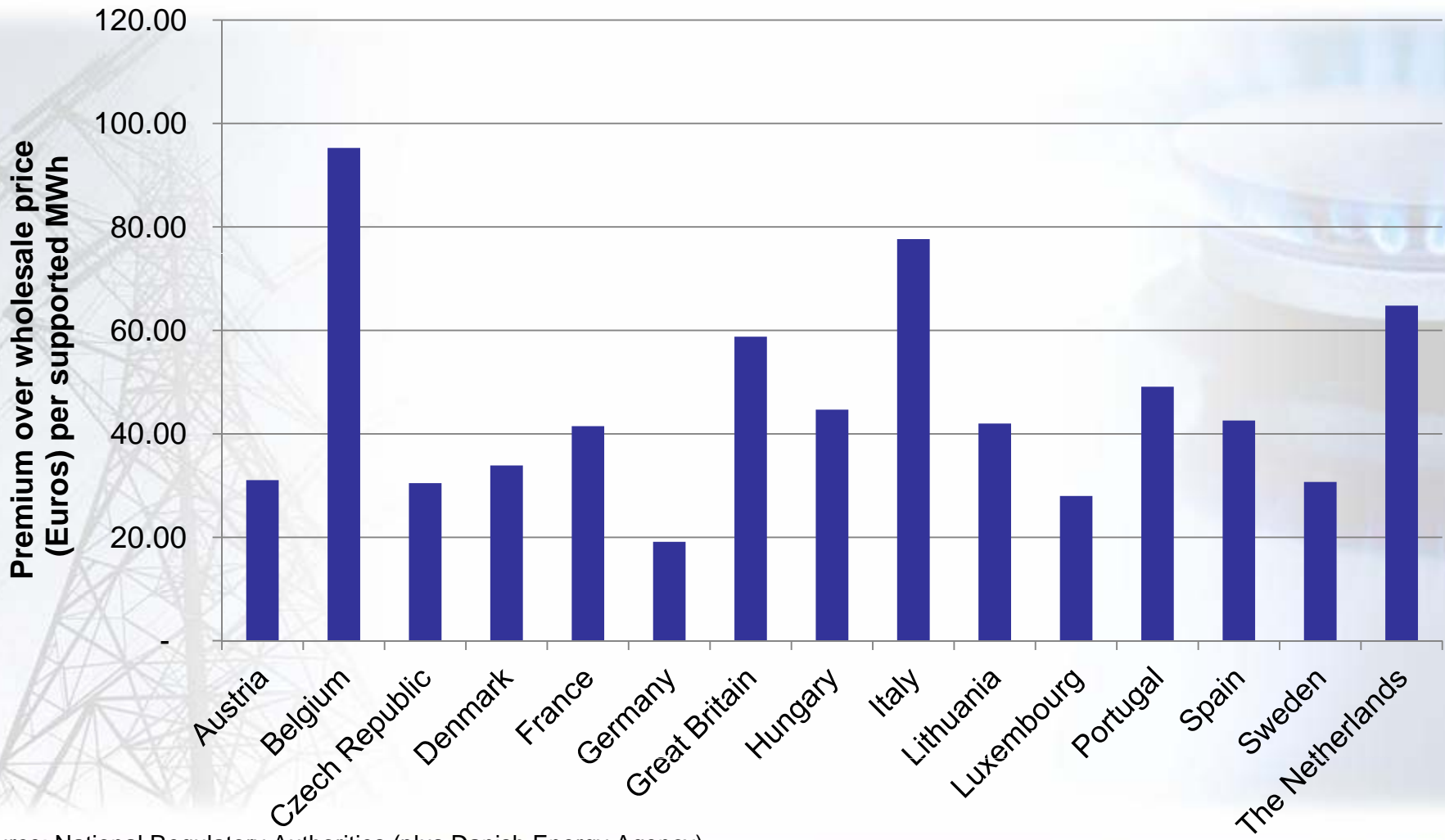
Source:  
RE-SHAPING 2010



## Objective:

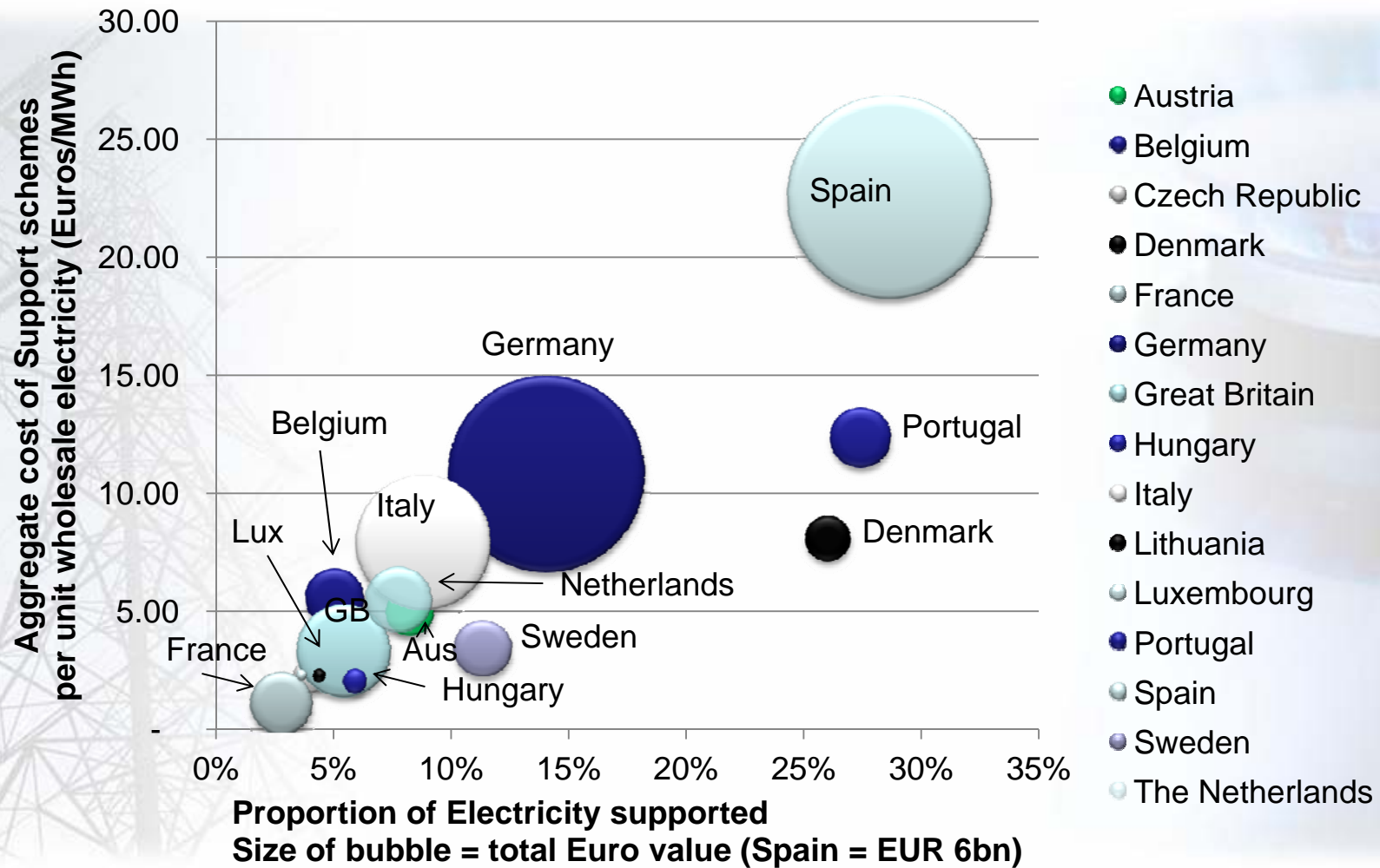
- For 2009, consistent comparison of renewable electricity support schemes across Europe
- Scope: feed-in tariffs, feed-in premium, quota obligations (Green Certificates), investment grants only in one case; in aggregate and split by technology
- Evaluation of “premium” above average wholesale prices. Does not include impact of RES on wholesale prices per se.

# Average support for onshore wind



Source: National Regulatory Authorities (plus Danish Energy Agency)

# RES support values



Source: National Regulatory Authorities (plus Danish Energy Agency)



# Implications of non-harmonised RES support schemes within the EU

- How do support schemes affect investment?
  - How long do support schemes take to attract investment? What length of support is offered? Do support schemes distort investment signals for other generation? What are the effects of regulatory uncertainty on investment (e.g. switching schemes)?
- Do (and how) support schemes affect the wholesale markets?
  - Do (and how) they affect coupled markets? What (if any) are the consequences of lack of harmonization?
- Study to be finalized during 2011

# ICER VWGII on Climate Change

- Report on Renewable Energy and Distributed Generation
- Focus on challenges related to the integration of renewable generation and distributed generation into the grids and energy markets, and the regulatory solutions proposed to address these.
- Case studies from Australia, the Americas, the European Union and Africa
- Additional case studies on China, India, Brazil and South Africa
- Approval of the report is scheduled to mid November



# North Sea Countries Offshore Grid Initiative (NSCOGI)

- Scope: Find common solutions to possible future grid infrastructure developments in the North Sea
- MoU between ten North Sea Countries - chaired by Governments (rotating)
- Governed by Steering Committee and Program Board
- Three working groups
  - WG 1 - Grid configuration and integration
  - WG 2 - Market and regulatory issues
  - WG 3 - Planning and authorization procedures
- Deliverables: June 2011, December 2011, June 2012, December 2012 (final)

# Future Challenges - Conclusions

- EU renewable targets will result in large volumes of intermittent production and flows
  - Need to secure effective utilization of the network (smart grids) and the “right” cross border capacity
  - Need for support systems with locational signals?
- Large volumes of renewable production from different sources influenced by different support schemes
  - Support schemes influence responses to market signals: affect maximum and minimum prices etc.
- Increased volatile prices and price spikes
  - Need for capacity markets?

Thank you for your attention!  
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