

EU ETS Reform and Renewable Energy

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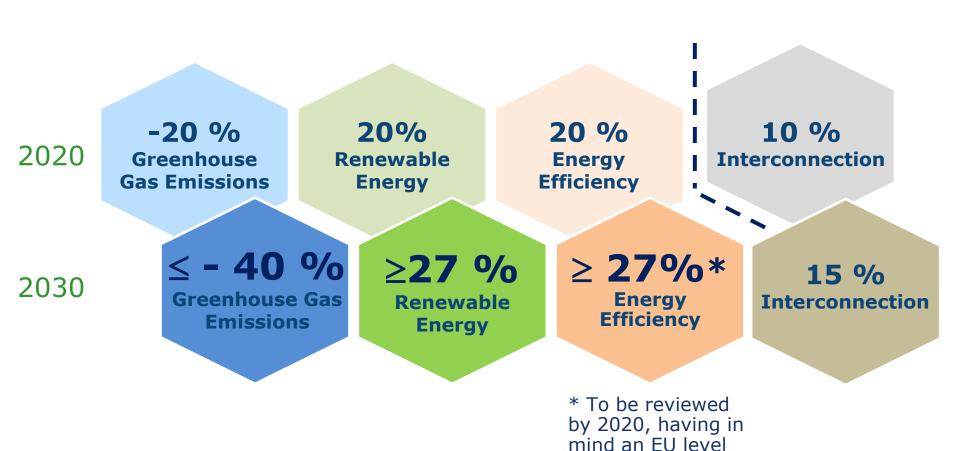
The Paris Agreement

- A legally binding, universal agreement
- 189 nationally determined contributions (NDCs)
- Ambitious long-term goal ("well below 2°C")
- Dynamic 5-year ambition cycle
- Enhanced transparency and accountability
- Greater emphasis on adaptation
- Support for poor and vulnerable countries





2030 EU Framework for Climate and Energy



of 30%



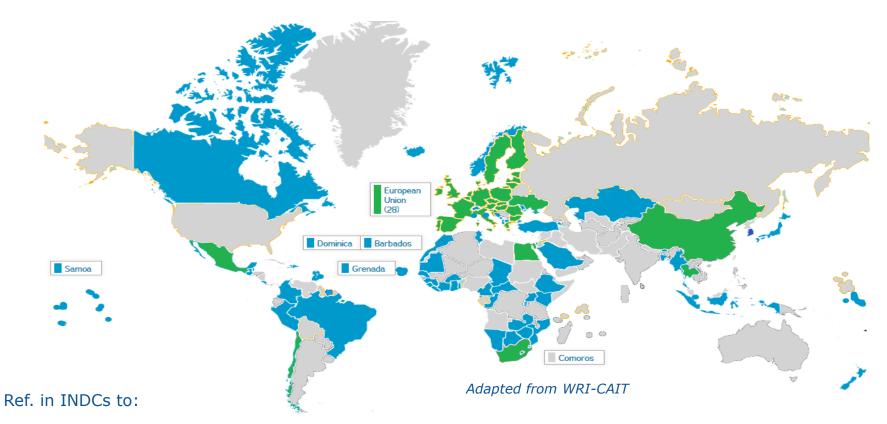
EU Emission Trading System (ETS)

- One EU wide target: -21% in 2020 and -43% in 2030
- One single EU carbon price
- Harmonised infrastructure and operation
 - + delivery of target
 - + cost-effective reductions
 - weak incentives for alternatives (low prices)





INDCs: References to carbon pricing



Climate Action

Domestic ETS and carbon taxes
Planned / possible use of int'al market mechanisms
No specific references or no INDC yet



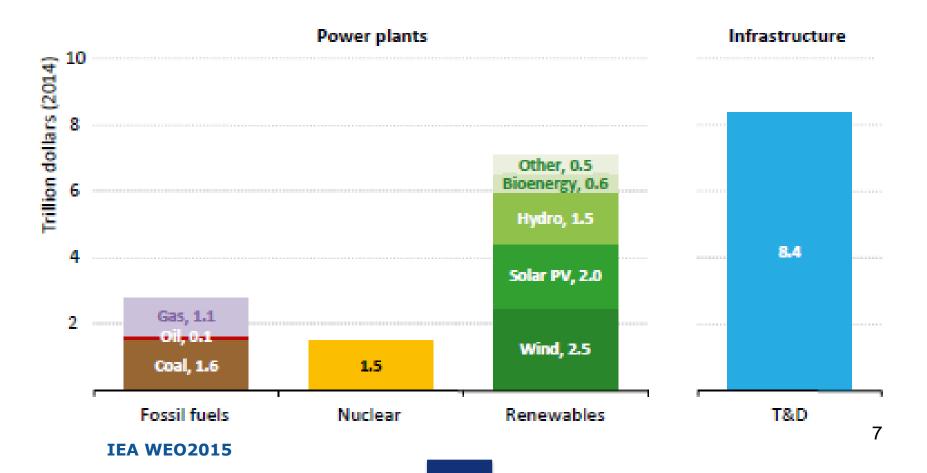
Renewable Energy Directive

- Differentiated national targets, adding up to 20 % for the EU by 2020
- National (wide ranging) support schemes
 - delivery of target: 16 % in 2015 (8% in 2008)
 - impact on internal electricity market
 - Overcompensation ?
 - Fragmented markets
 - cost-effectiveness



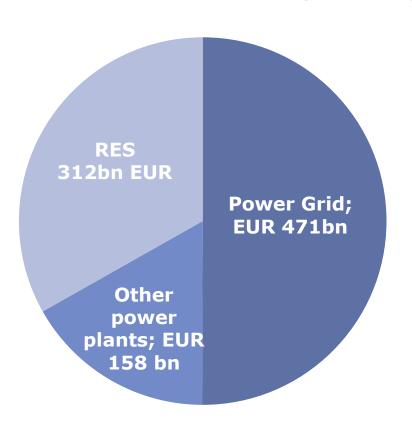


Potential impact of INDCs on global cumulative investment in the power sector, 2015 - 2040





Investment Needs for the EU power sector, 2021-2030



 Total needs in <u>power</u> <u>sector</u> 2021-2030: Est. EUR 941 bn

 66% of all power plant investments are for renewables for 2021-2030





EU - key determinants for renewables development

Wholesale electricity price

- To balance supply and demand
- To provide sufficient revenues to cover full costs of generators

EU ETS price

- To increase relative price of fossil fuels
- To generate revenues for low carbon policies

Costs of renewables

 Expected to decrease further and become increasingly competitive





EU ETS – preparing for 2030

Market Stability Reserve (MSR) as from 2019

- ETS revision for post-2020 period
 - Increased reduction of cap by 2.2%/year
 - Fixed auction share of 57%
 - Better targeted free allocation for industry





EU ETS – auction revenues, 2020-2030

- EU Member States should use 50% of their ETS auction revenues for climate-related purposes
 - more than 6bn allowances in total to be auctioned
- Innovation Fund for low-carbon innovation
 - → 450 mio allowances
- Modernization Fund for energy investments in lowincome Member States
 - ⇒ 310 mio allowances





"High price" scenario

- Wholesale electricity price (incl ETS price) ≥ RES costs
- Electricity supply and demand are in equilibrium
 - Scarcity pricing yields sufficient revenues to cover full costs of generators
- ETS price plays out its full force
 - Gas more competitive than coal
 - RES competitive with gas
- Support to renewables
 - Support to innovation through EU funds (Innovation Fund, Horizon2020)
 - State aid for innovative technologies?
 - Obligation on electricity suppliers to deliver certain share of renewables? Climate Action



"Low price" scenario

- Wholesale electricity price (incl ETS price) < RES costs
- Temporary oversupply on electricity market
 - Low prices help EU competitiveness
 - But renewables not competitive at low prices
- MS could use ETS revenues to support renewables and balance market
 - Market-based support for mature renewables: competitive bidding, investment support, technological neutrality
 - Support to take out power capacity based on conventional fuels?
 - Importance of regional/EU wide cooperation
- EU-wide support from ETS revenues?
 - EU funding instrument (guarantees)?
 - Technologically neutral RES auctions at EU or regional level? 13





Role of EU governance for renewables

- Transparency
 - Provide information on MS policies
 - Facilitate regional cooperation
 - Improved investment planning
- How could Member States contribute towards EU renewables target?
 - National policies and investments
 - Financial contributions to EU-wide/regional auctions and EU projects?
- How to fill "gap" in case national policies do not add up to 27 %?
 - EU-wide auctions financed by MS' ETS revenues?
 - Taking account of early actions by MS





Conclusions

- ETS plays double role for support of renewables:
 - Increases competitiveness relative to fossil fuels
 - Provides revenues that can be used to further support innovation and competitiveness of renewables
- Harmonized rules are essential to create common market for renewables:
 - Market design
 - EU ETS
 - Market-based support for renewables





Thank you!

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