



Decarbonisation via market integration

XXV. Athens Forum

17 June 2020

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Creating an EU Energy Market



Benefits of the internal energy market: *yearly savings**

➡ **Electricity:**

€12,5 - €40 bn per year

➡ **Gas:**

up to €30 bn per year

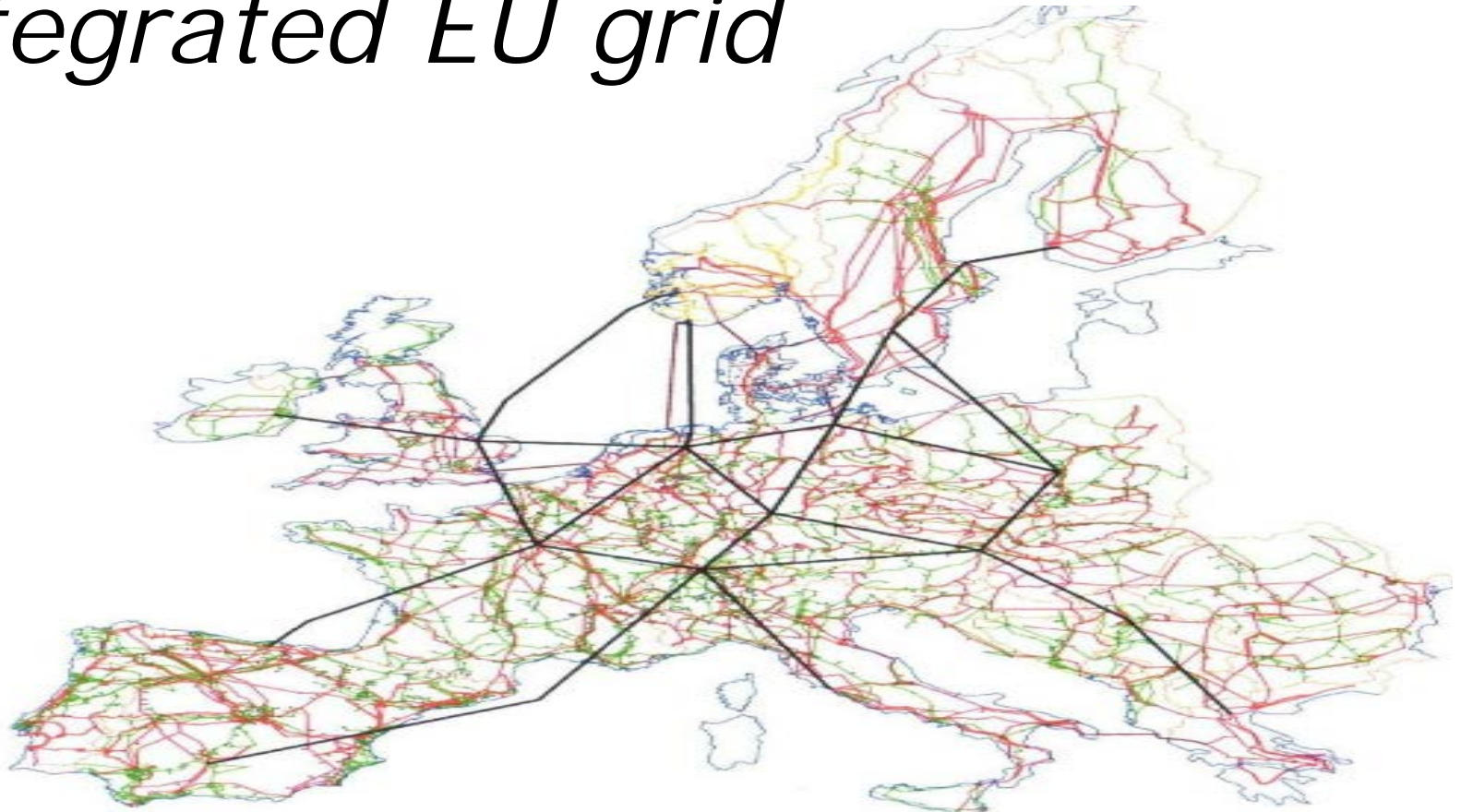
* Study: Benefits of an Integrated European Energy Market (9/2013)



Internal Energy Market - the idea:

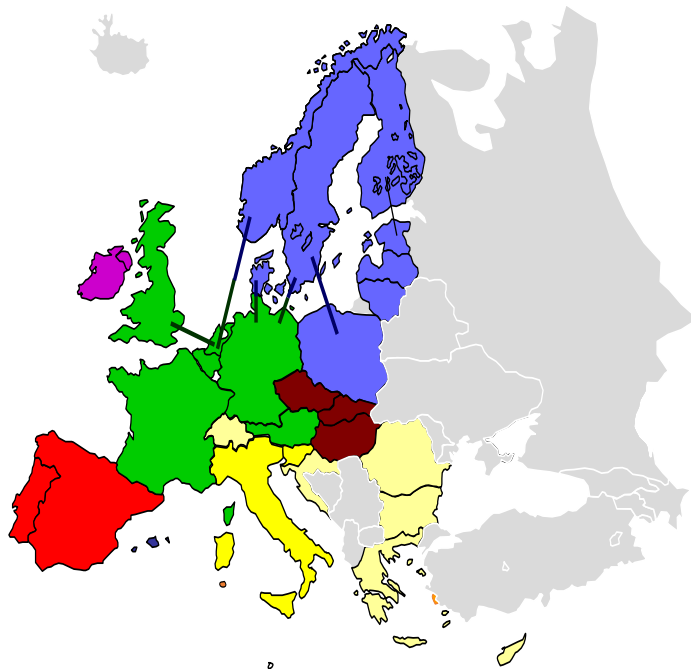
- *Large-scale investments – on fragmented markets?*
- *Security of supply – without cross-border infrastructure & cooperation ?*
- *Synergies (Aggregation, liquidity, competition,...)*
- *Focus: Climate protection*

Main Asset: *Integrated EU grid*



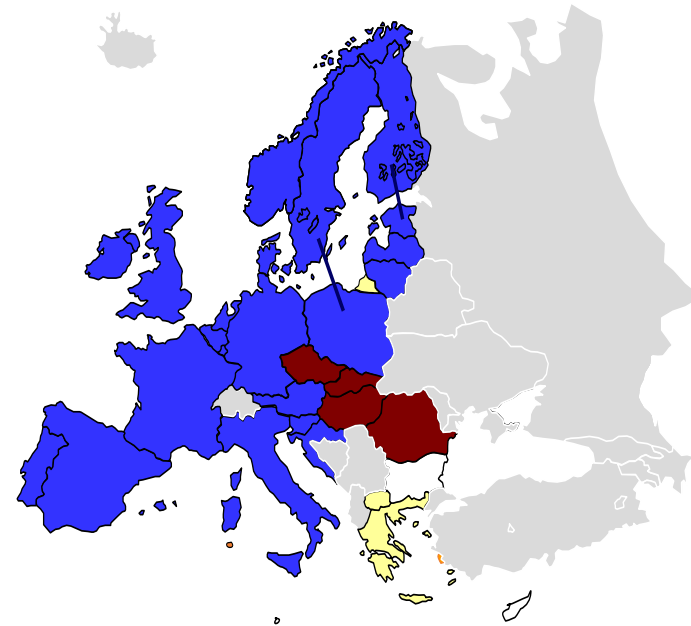
Electricity Market Coupling -

2013



2

2020



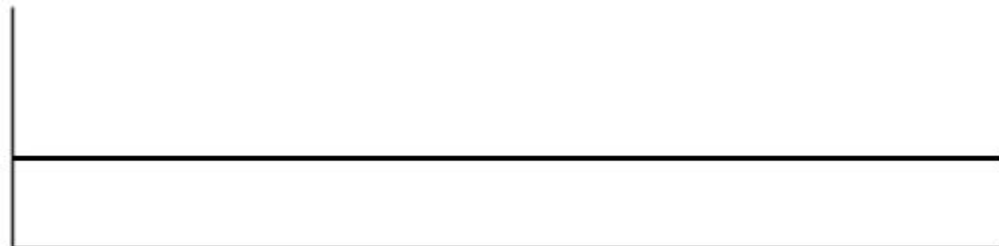
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Disruptive change:

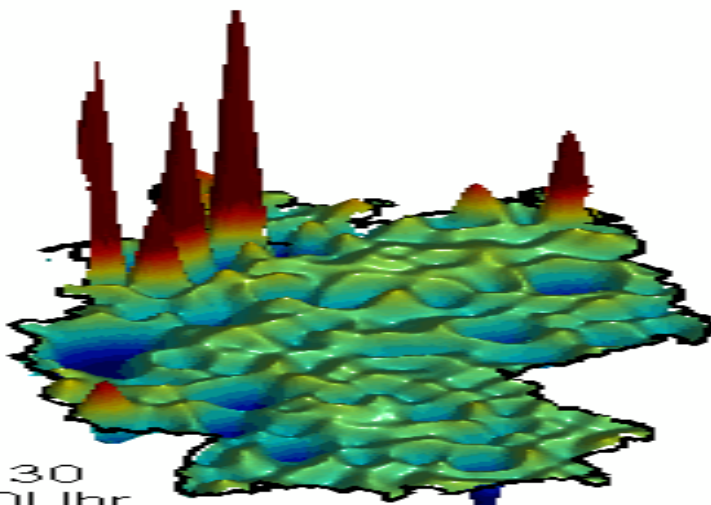


From central / baseload to decentral / volatile

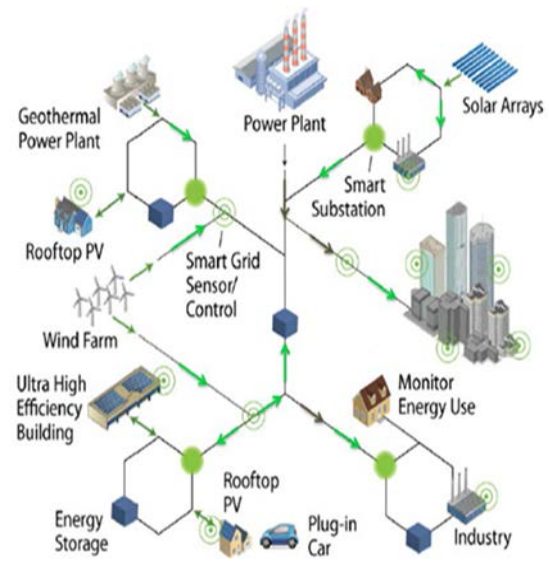
Old Electricity World



New Electricity World



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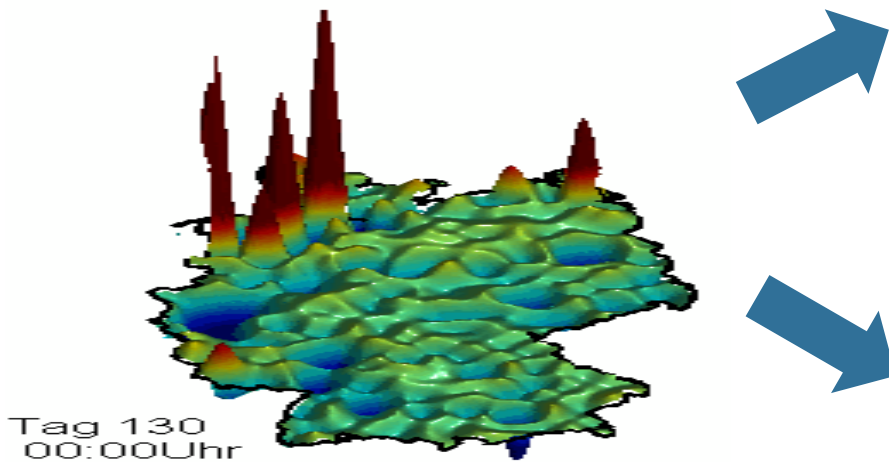
Who can deal better with short-term pricing?



A regulator?



A power exchange ?



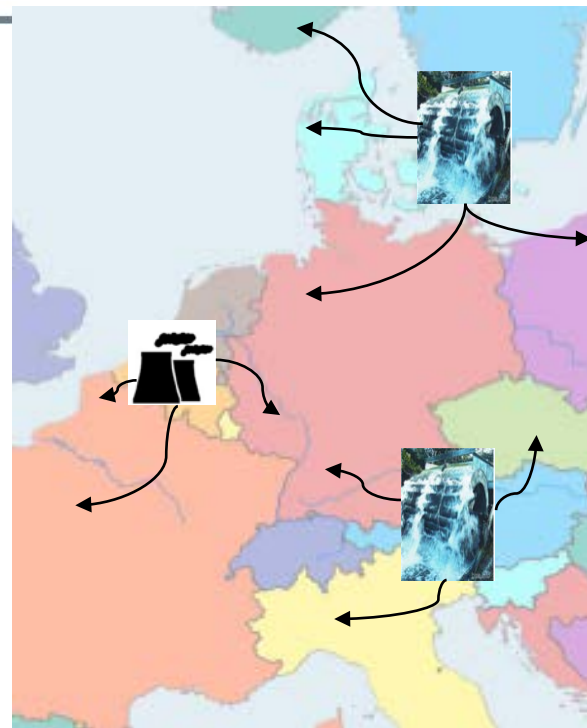
Markets - a vital tool for the Green Deal



Markets - a vital tool for the Green Deal



=> expensive



=> cheap

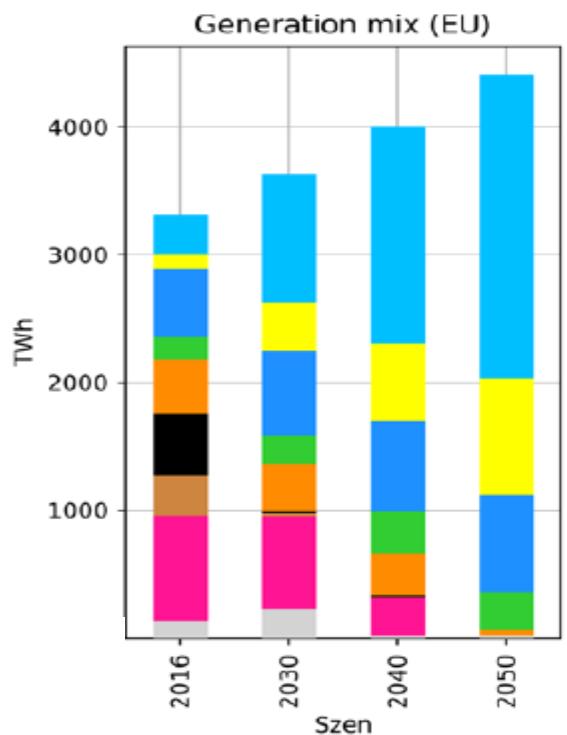
- Level playing field + strong short-term markets + demand response = **€9.5 billion/year of cost savings by 2030**;
- Coordinated approach to resource adequacy = **capacity savings of ~80 GW (4.8 b€/year of investments!)**

Markets - a vital tool for the Green Deal

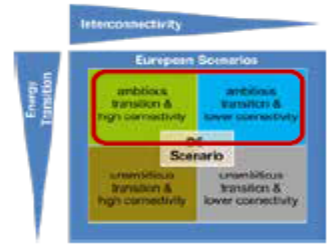
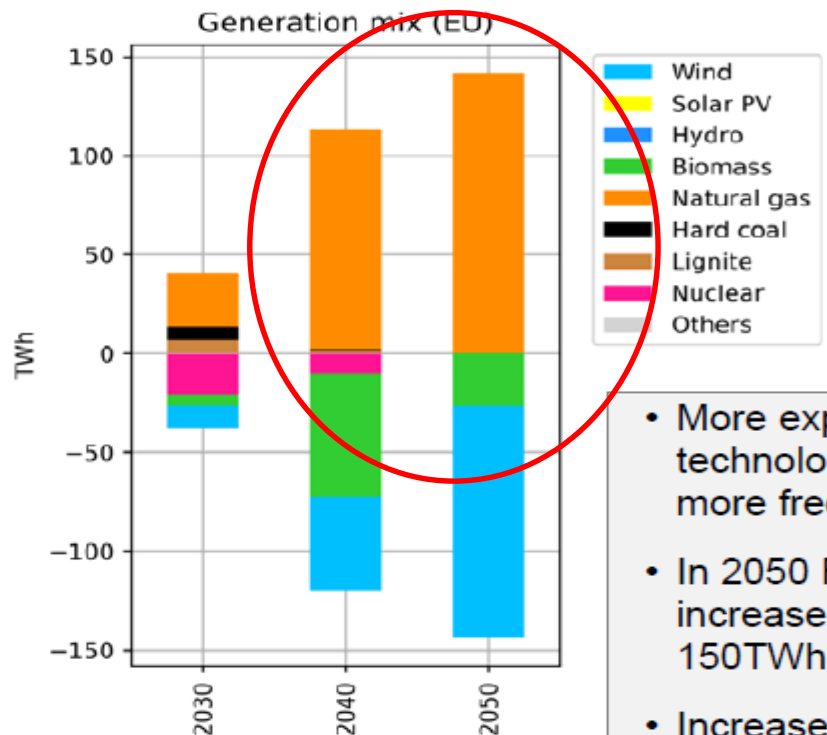


Electricity production Europe ambitious scenario – ENTSO-E area

High connectivity



Effects of a lower connectivity



- More expensive technologies must be used more frequently
- In 2050 RES curtailment increases by approx. 150TWh.
- Increase in emissions is the result of higher use of natural gas esp. in 2040 and 2050

Effects of a delayed NTC-expansion | DG Energy | Brussels - 13.05.2019

Markets - a vital tool for the Green Deal



Market-based *electricity trade across borders*

=> *Also a tool for decarbonisation?*

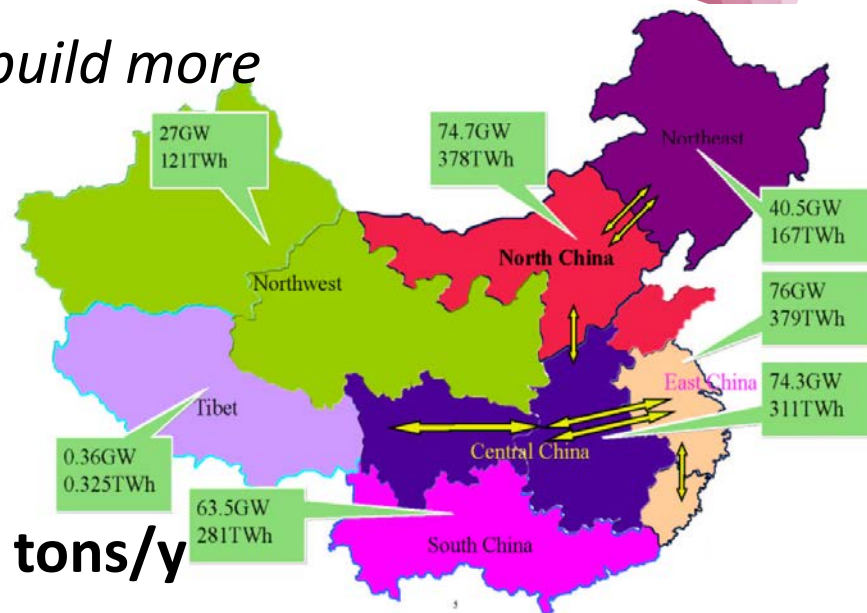
Example: IEA study on potential in China*:

- *Introduce market based dispatch & spot markets with market coupling*
- *Allow trade between regions and build more interconnections*
- *Give flexibility a price*

⇒ **operational cost: 15% reduction**
(USD 63 billion(y))

⇒ **Electricity price: -10%**

⇒ **CO2 emissions: minus 750 million tons/y**
[equals all German emissions (!)]



*<https://webstore.iea.org/china-power-system-transformation>

Markets - a vital tool for the Green Deal



“Renewables Require Aggregation”

⇒ Market-based electricity trade across borders is a BEST PRACTICE for the Green Deal





So: What are then the obstacles to cooperate in the region?

- **Money?** *(but: most infrastructure is already prepared)*
- **Missing common rules?** *(but: 3rd Package applies)*
- **Hesitation to depend on neighbours?**
=> see Athens Forum 2019: "lack of political support" as main reason for slow progress (49%)

=> Let's find out & discuss solutions !



Thank you very much

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