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The long-term deployment of networks and
production capacities in Europe
Some thoughts from a regulator's perspective

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REGULATING INFRASTRUCTURE DEVELOPMENT

- **Regulators' oversight upon infrastructure development**
 - EU regulation is based on a « pass through » principle: costs of regulated operators are covered by network tariffs
 - Regulators assess the efficiency of investments: need for new assets and level of costs
 - Cost and benefit analyses require long term simulations of future dynamics of energy systems
- **Long term assessment of infrastructure needs (NDPs, TYNDPs)**
 - Scenarios: different pictures of supply and demand for the next decades
 - Market simulations help calculating the collective value of projects (i.e. effect of a new interconnection on cross-border trade and price spreads)
 - Assumptions on energy mixes and location of production and consumption areas have a structural effect
 - Challenge: address « circular issues » (are new infrastructures necessary or just get a value from a certain situation?)

A VERY UNCERTAIN CONTEXT

- Some critical parameters change often:
 - CO₂ emissions targets
 - Value of CO₂
 - Renewables targets
 - National commitments vs European ambitions...
- Scenarios highlight a lot of different combinations between energy carriers (power, gas, hydrogen), technologies, levels of electrification...
- Open issues remain (such as flexibility, seasonal storage, level of reliability standards) in a decarbonised world
- **The example of hydrogen**
 - A lot of expectations to foster the energy transition, with a large scale development of electrolysers
 - But no market yet (except classical industrial use of H₂), no clarity about infrastructure needs (electricity lines vs pipelines)
 - Problems of cost levels and the availability of low carbon power
 - H₂ fundamentals may be significantly different from those of electricity and gas

WHAT STRATEGY?

- **Flexible regulatory principles**

- Future developments may require specific business models just to « allow things to happen »
- In the past, network energies developed within fully or partially integrated value chains
- Challenge: needs identification before going ahead with large scale investments
- In the absence of technological break, an incremental approach seems appropriate (progressively adapting the system)

- **Market design in energy**

- Competitive markets are efficient in terms of price coordination
- But new technologies are costly and generally need a public support, losses (incl. conversion) along the value chains must be minimized
- Viewed from today, prices are unlikely to send relevant investment signals
- Back to the fundamentals: long term risk mitigation is critical for investment



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Merci pour votre attention

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