



Madrid Forum – June 5, 2019: ENTSOG Roadmap for Gas Grids

Making grids ready for transition

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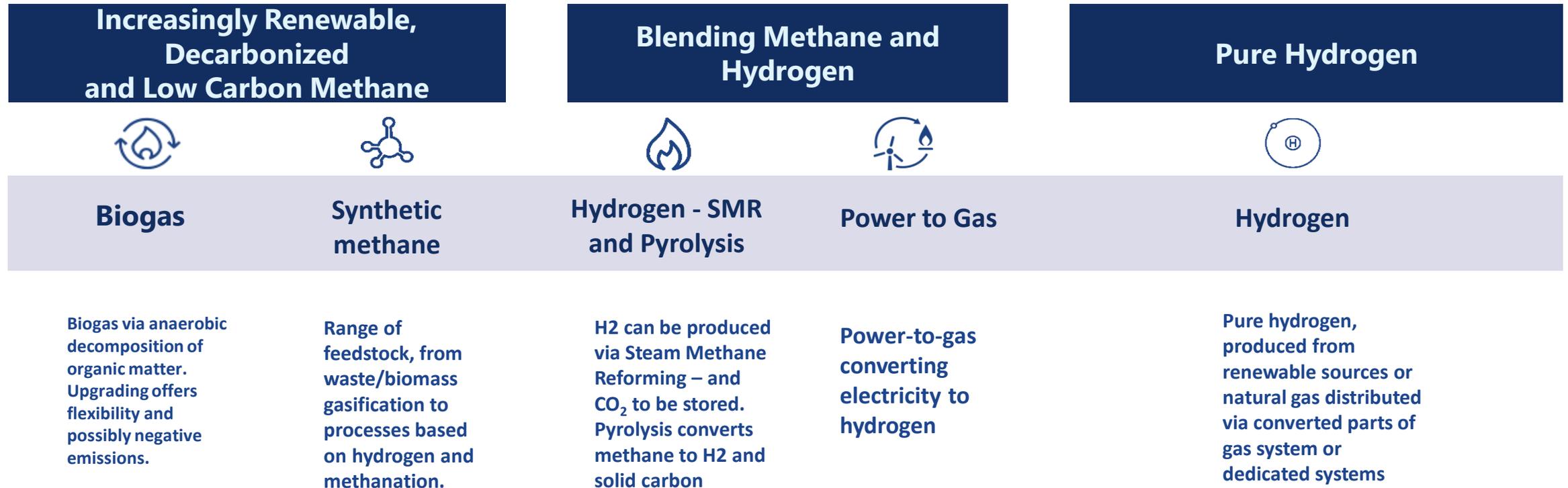


EU Energy Policy Dimensions

	Technical dimension	Market dimension	Climate dimension	Dynamic incentives, regulatory stability, business models & R&D
GOAL	Deliver security of supply in the most efficient way	Creating framework for European gas markets	Support gas infrastructure's contribution to decarbonisation	
TOOLKIT	Safe operations, digitalisation and gas quality management	Tradability of gases within European Internal Market	Enable certificates and guarantees of origin system	
	Investing in robust infrastructure for now & for the future	Create incentives for cross-border and cross-sectoral cooperation by balancing short-term & long-term market signals	Allocate costs of climate change mitigation	

Multiple studies, perspectives, interests to address in the neutral way

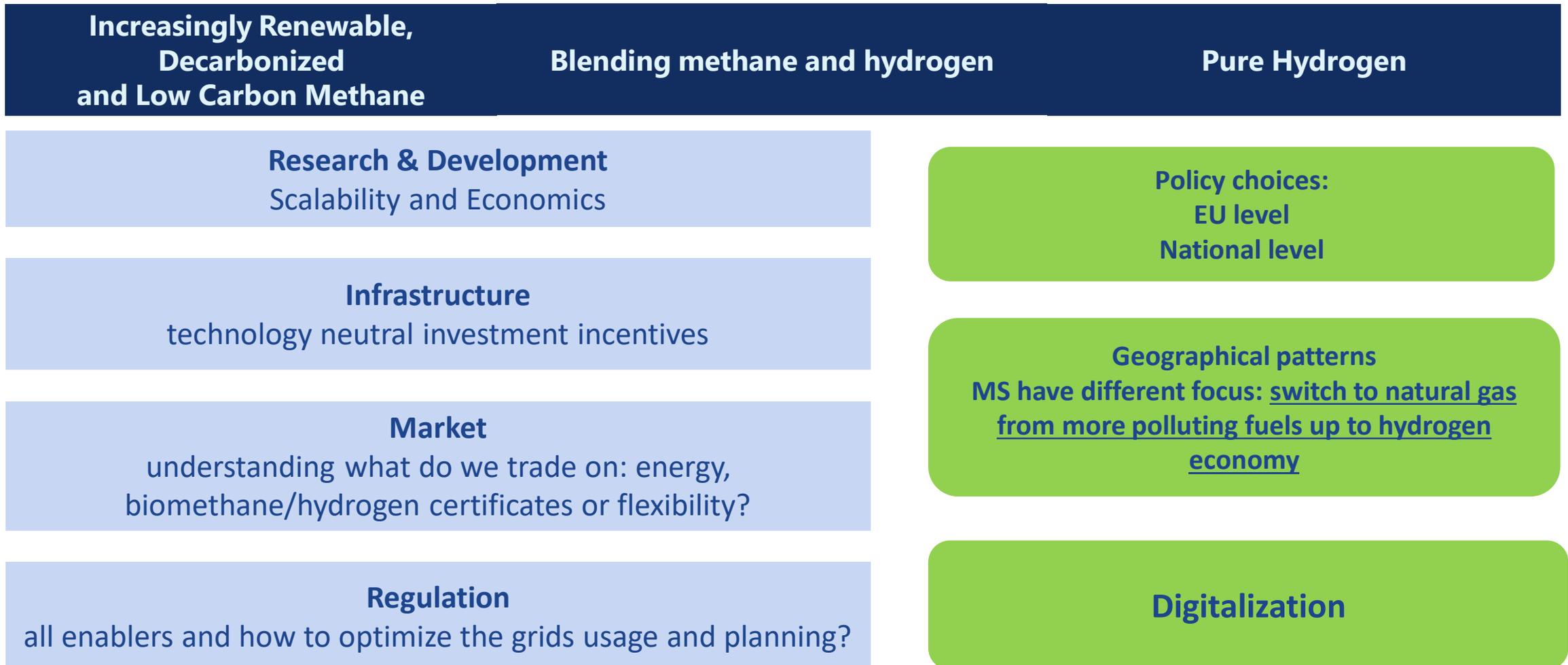
Several Pathways for Making Gas Grids ready for Transition



Common Enablers:

Research & Development + scalability, Carbon Capture, Utilisation and Storage, Gas Quality Management Services and possibly Regional Diversity

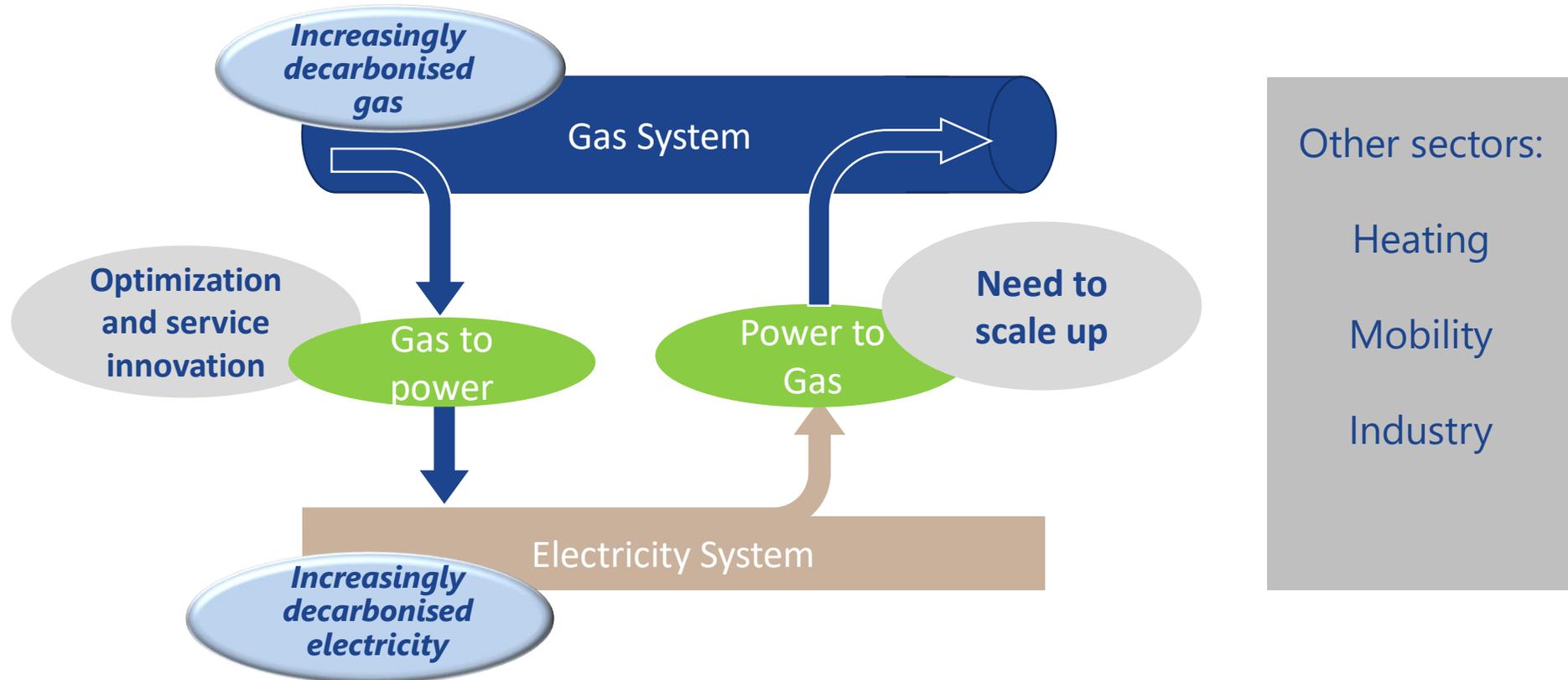
Elements of the Roadmap



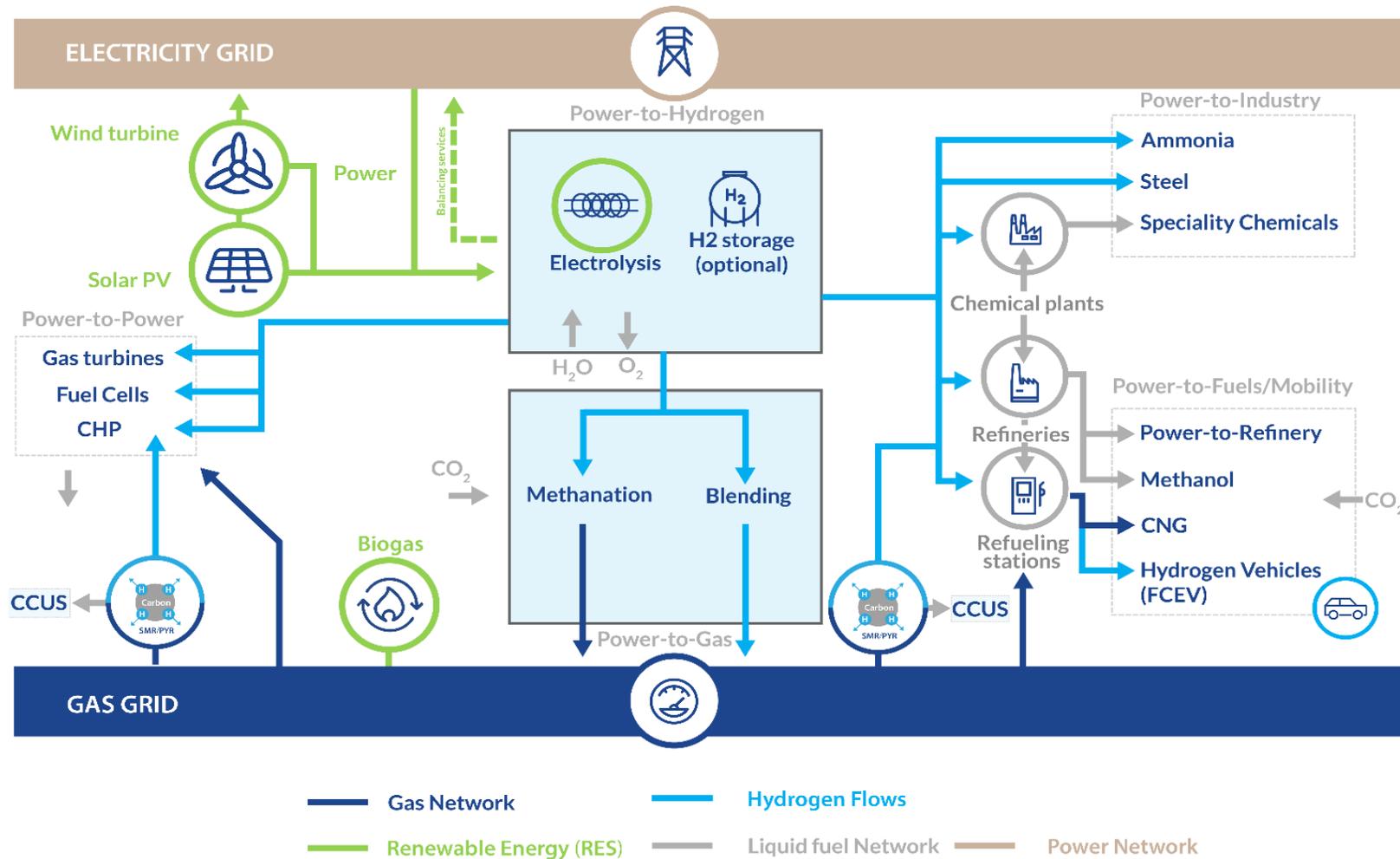
All pathways have their respective consequences in Madrid Forum workstreams.

Coordination of the work of all parts of value chain and institutions is needed.

The Hybrid Energy System



Hybrid Energy System – in the longer run: building on increasingly decarbonized electricity and gas.



The Hybrid Energy System builds on both electricity and gas grids – realising synergies between them and allowing EU economy to obtain flexibility, storage, international transportation capacity and security of supply

Gas Grids can be ready for transition if:

- EU member states to support concept of the Hybrid Energy System – and decide on energy mix, how much methane/biogas/hydrogen
- Gas suppliers, mid-streamers, traders, TSOs, DSOs, consumers – have a shared responsibility for the energy transition and for developing feasible solutions
- Clear investment frameworks for technologies/business models is in place using all financing tools to support level playing field for market players, TSOs and DSOs
- Markets understand how to value and trade energy (kWh), climate value of hydrogen/biogas/methane as well as flexibility and other services
- EU-wide and trustworthy Guarantees of Origin and Certification system to be established
- Sound technological understanding and feasibility is developed on EU level - R&D and Standardisation policy to support relevant technologies, including digitalization
- Energy Conversion and Gas Quality Products and Services innovation progresses to ensure interoperability and cross border flows

These and other questions to be addressed in an upcoming Gas Package

Approach for ENTSOG 2050 Roadmap for Gas Grids

- **To develop Roadmap 2050 for gas grids:**
 - Building on parallel pathways for making gas grids ready for transition - based on various technologies and combinations of efficient usage of the electricity and gas grids
 - Addressing issues related to technical, regulatory, market, consumption and climate aspects.
 - Keep the options open for increased natural gas usage in place of high-carbon intensive fuels, especially in 2020-2030s and continued focus on a well-functioning gas market
- **To facilitate extensive dialogues with stakeholders, EC and ACER/regulators**
 - Engage full value chain – producers, TSOs, DSOs, mid-streamers, traders and consumers
 - Support an open and fact-based approach
- **To support that all relevant technologies** and combinations hereof can contribute to the most efficient transition of the energy sector – both on costs and time.



Thank you for your attention

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