frontier economics

CE Delft
Committed to the Environment

In association with
THEMA CONSULTING GROUP

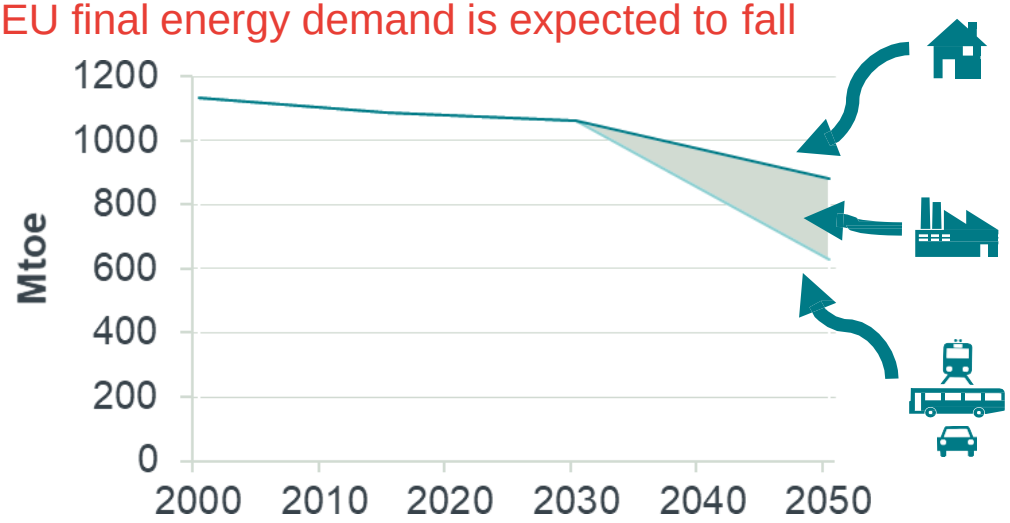
Potentials of sector coupling for decarbonisation - Assessing regulatory barriers in linking the gas and electricity sectors in the EU

Madrid Forum 2019

6 June 2019

Despite the uncertainties, scenario studies consistently find a long-term role for gases…

EU final energy demand is expected to fall

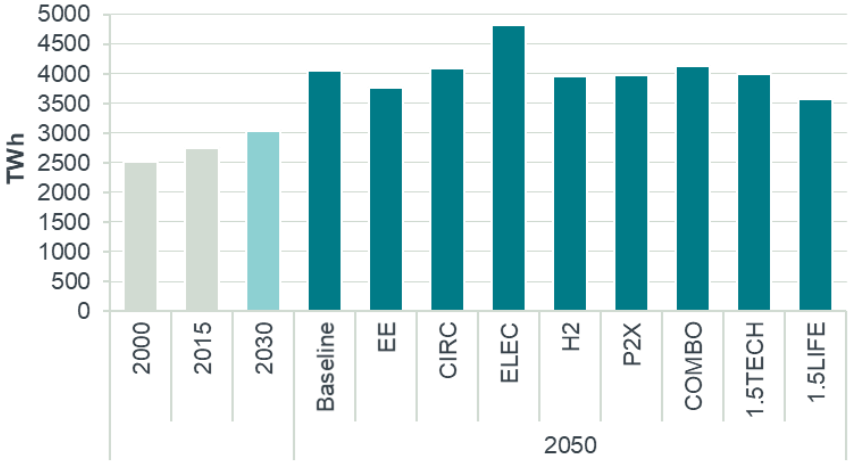


Source: Frontier Economics and CE Delft, based on EC (2018)

With renewable electricity accounting for a high share of the mix by 2050

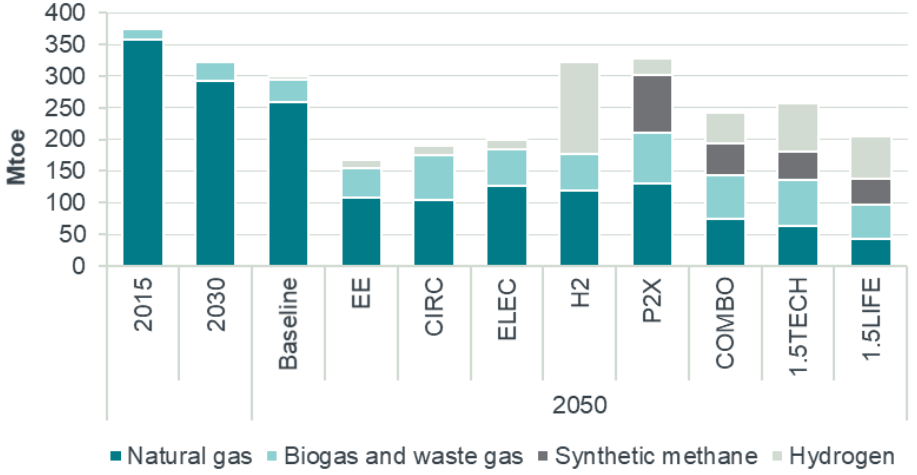
Source: Frontier Economics, based on sources indicated.

While electricity demand is expected to increase



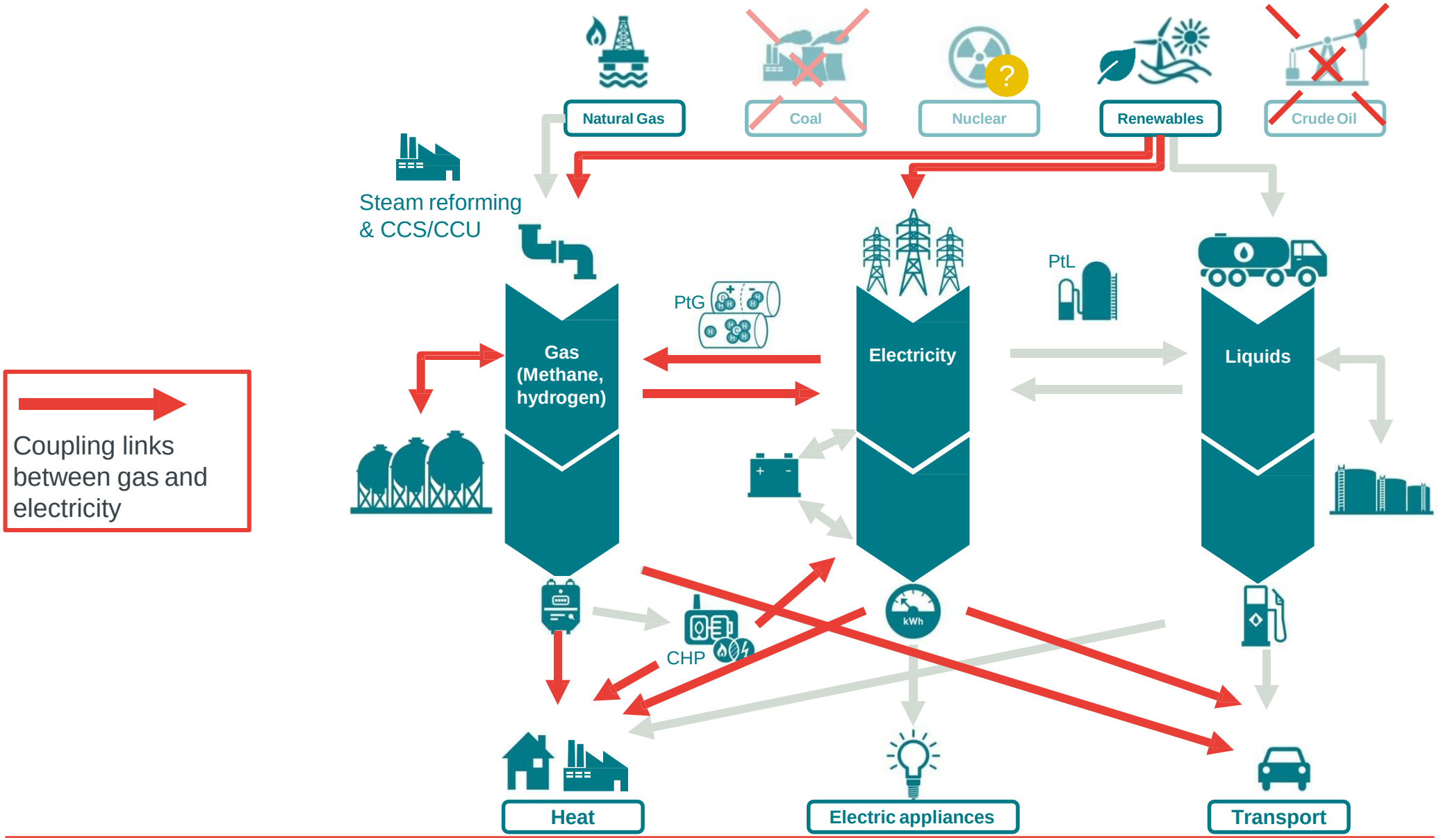
Source: Frontier Economics, based on EC (2018)

Gases help with transport / (seasonal) storage needs

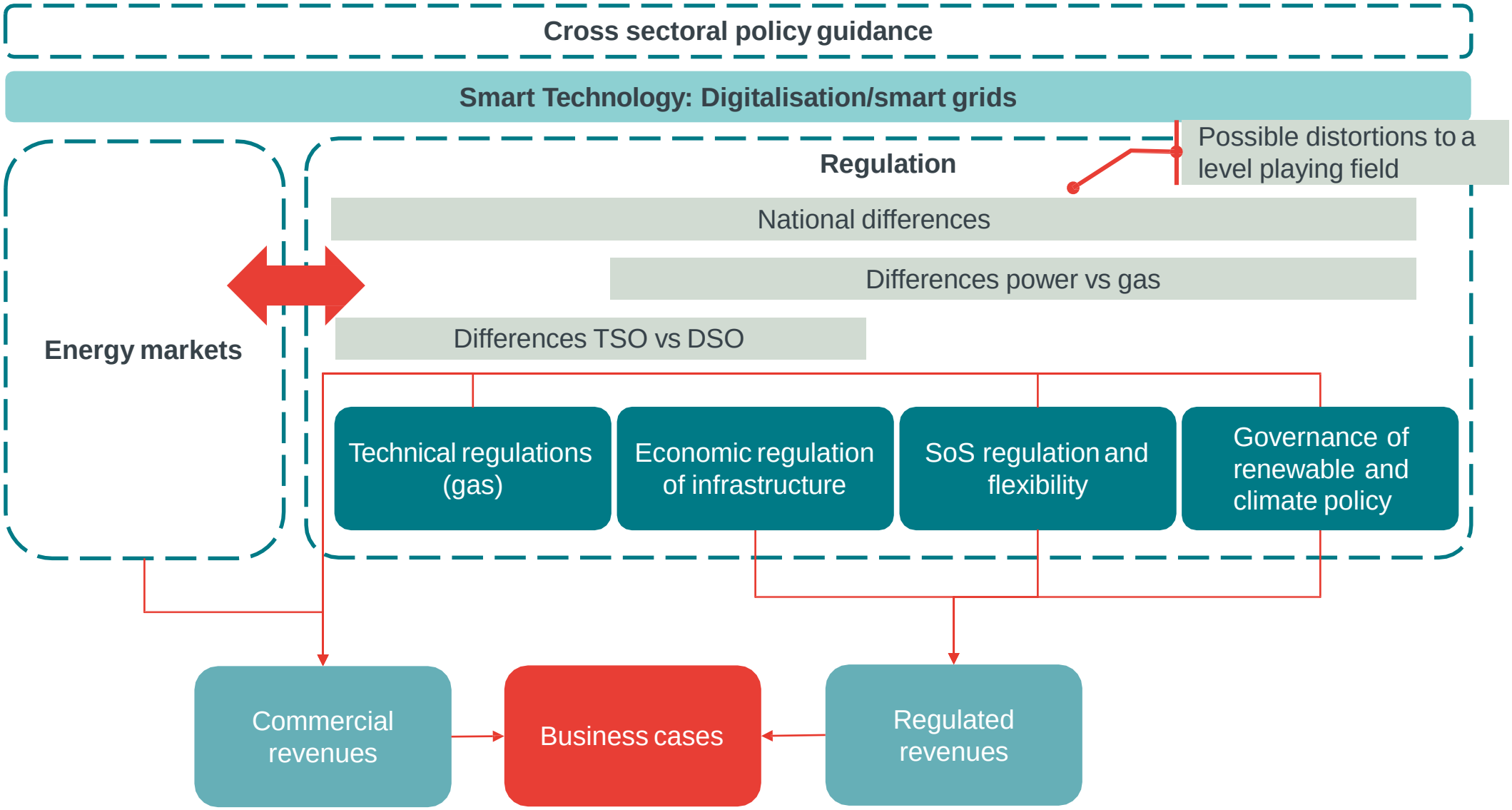


Source: Frontier Economics and CE Delft, based on EC (2018)

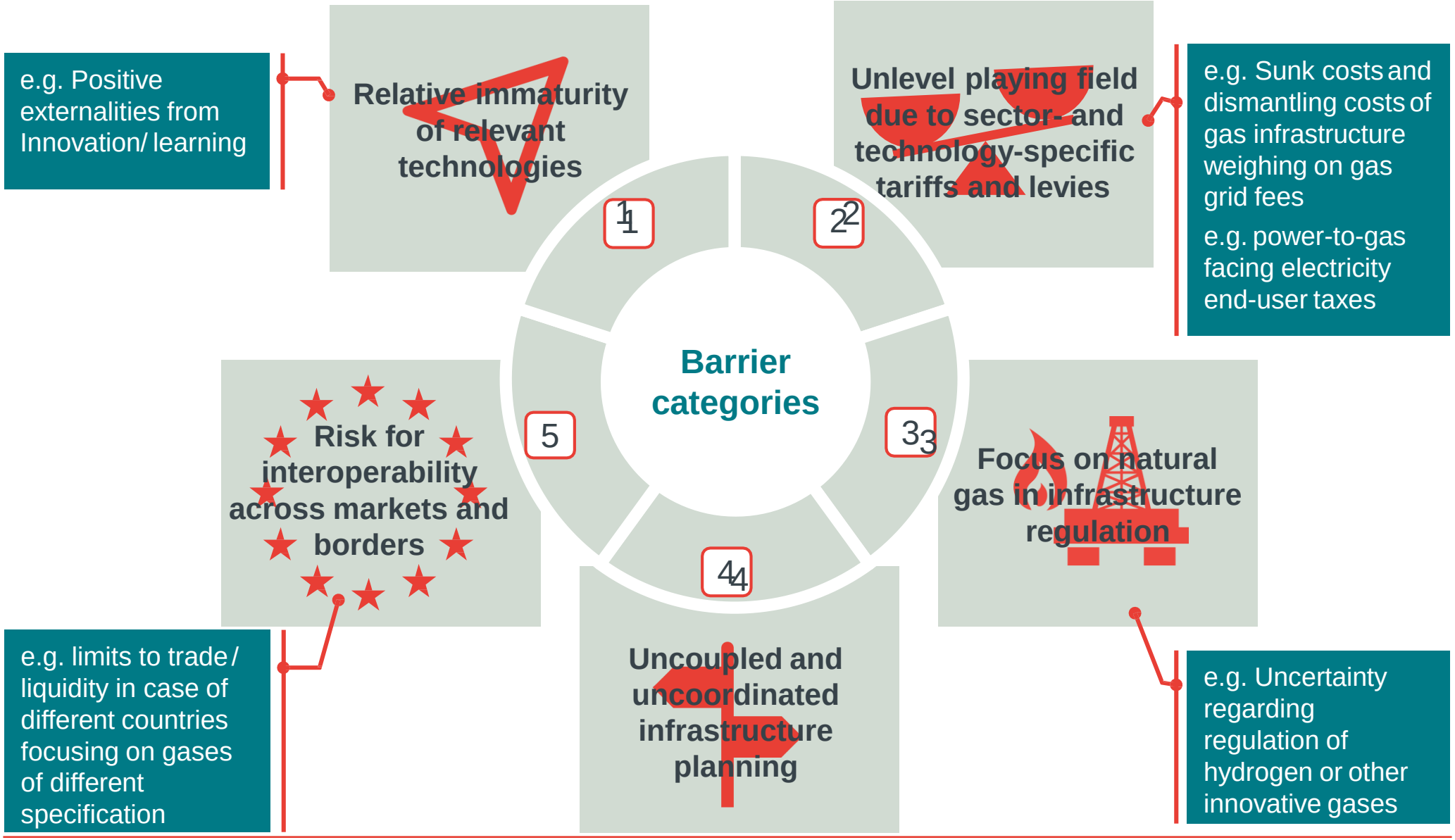
… and increasing interaction between electricity and gas, as well as between different types of gases



Market design and regulation therefore need to be consistent and technology neutral in a range of areas



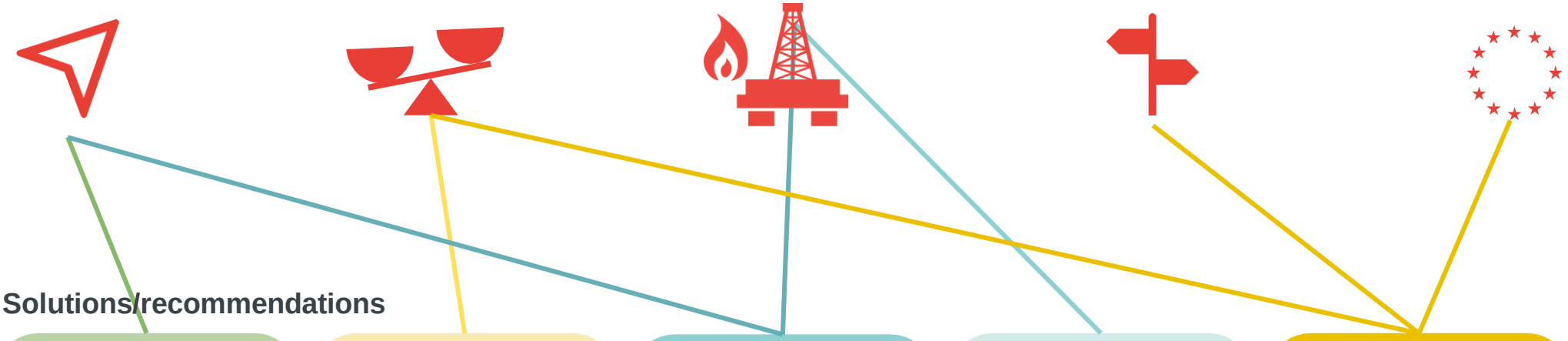
Barriers and gaps can be grouped into five categories



A range of solutions will be required to address the barriers and gaps identified

Barriers

1. Relative immaturity of relevant technologies
2. Unlevel playing field due to sector- and technology-specific tariffs and levies
3. Focus on natural gas in infrastructure regulation
4. Uncoupled and uncoordinated infrastructure planning
5. Risk for interoperability across markets and borders



Solutions/recommendations

- Climate / renewable policy and support for innovation
- Regulatory toolbox to address cost recovery issues
- Fit for purpose market design and charging arrangements
- Clarity on access to infrastructure
- Co-ordinated infrastructure planning and decommissioning

Regulatory clarification – role of grid operators in PtG for R&D/pilots

Clarify who is best placed to bear the cost of stranded assets (and other legacy costs, e.g. for RES support)

Clarify under what conditions Gas Directive rules on TPA / unbundling apply to hydrogen (and other gases)