

ACER

 Agency for the Cooperation
of Energy Regulators

CEER

Council of European
Energy Regulators



The Bridge Beyond 2025

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The Bridge Beyond 2025: Core themes



Access and
market
monitoring



Transmission
tariffs and
cross-border
capacity
allocation



Governance of
infrastructure
and oversight
of existing and
new entities



Dynamic
regulation for
new activities
and
technologies



The Bridge Beyond 2025: Core themes



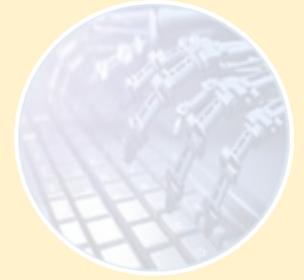
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ACER market health metrics

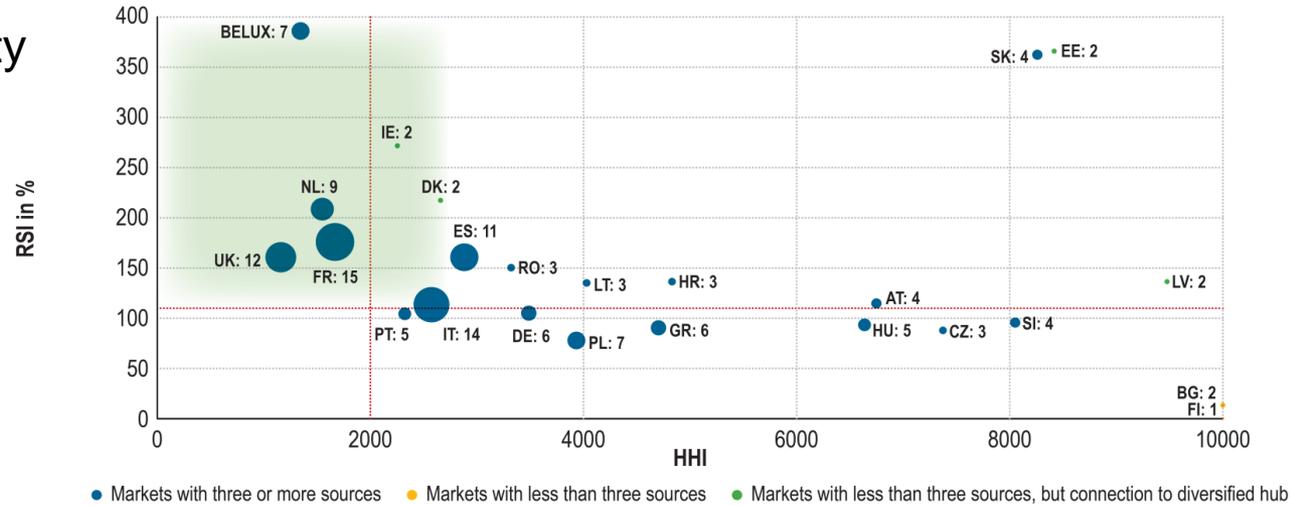
Evaluate whether gas markets are structurally competitive, resilient and exhibit a sufficient degree of diversity of supply.

Some GTM metrics:

- Number of sources
- HHI*
- RSI*

HHI – Herfindahl-Hirschmann Index
*RSI – Residual Supply Index

Overview of EU MSs AGTM market health metrics – 2018

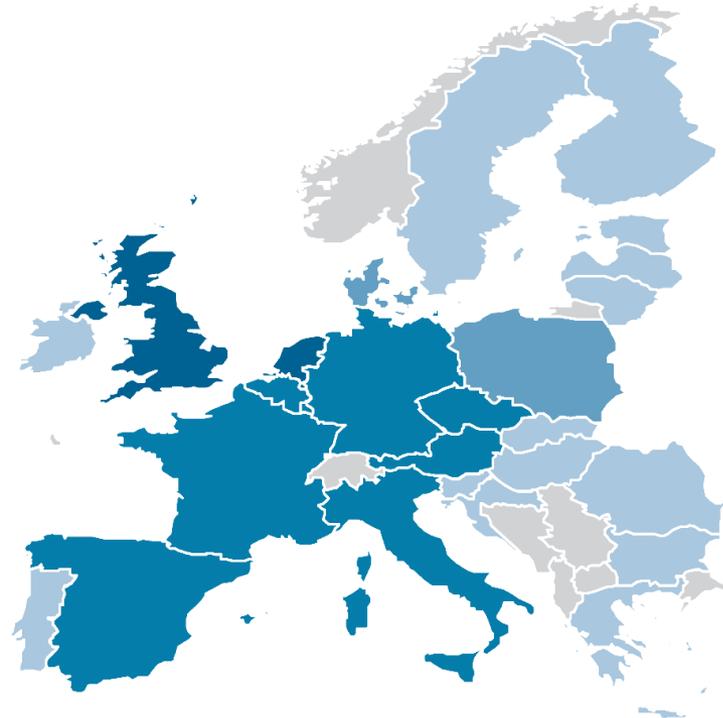


Challenges to be addressed

GTM generally successful but:

- Weak competition in some regions
- Some bottlenecks remain
- Insufficient liquidity on some balancing platforms
- Possible market barriers stemming from administrative and legal

Ranking of EU gas hubs based on monitoring results – 2018



■ Established hubs

- Broad liquidity
- Sizeable forward markets which contribute to supply hedging
- Price reference for other EU hubs and for long-term contracts indexation

■ Advanced hubs

- High liquidity
- More reliant comparatively on spot products
- Progress on supply hedging role but relatively lower liquidity levels of longer-term products

■ Emerging hubs

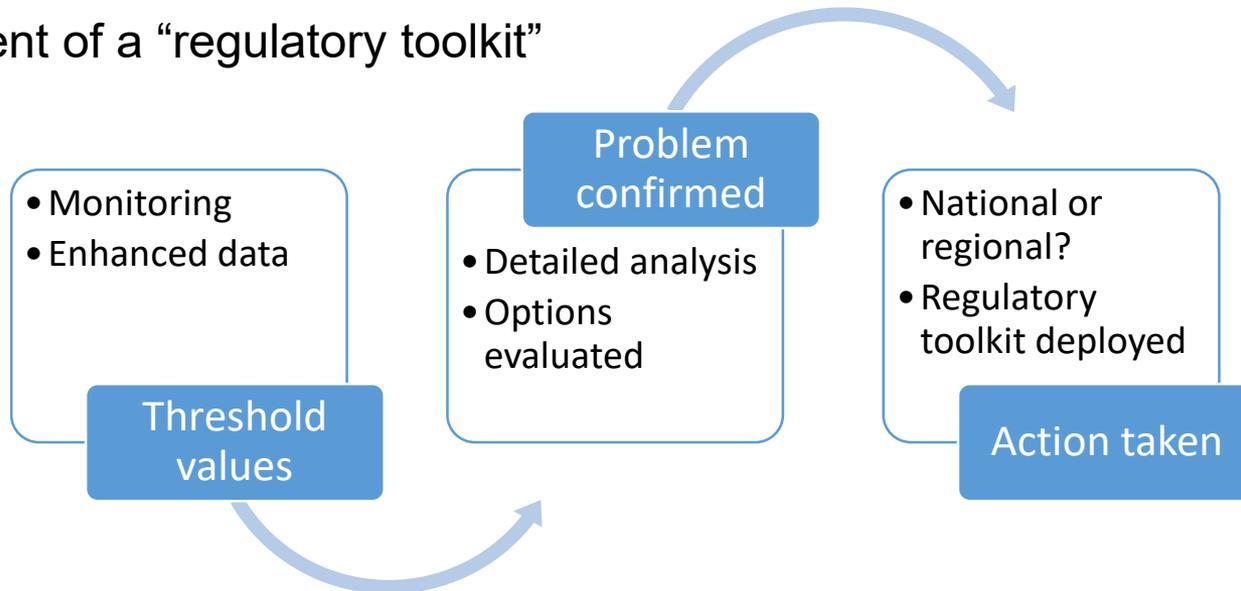
- Improving liquidity from a lower base taking advantage of enhanced interconnectivity and regulatory interventions
- High reliance on long-term contracts and bilateral deals

■ Illiquid-incipient hubs

- Embryonic liquidity at a low level and mainly focused on spot
- Core reliance on long-term contracts and bilateral deals
- Diverse group with some jurisdictions having
 - organised markets in early stage
 - to develop entry-exit systems

ACER/CEER response: market monitoring as a basis for action

- Further development of indicators/metrics to measure market performance including sustainability metrics
- Threshold values to indicate potential competition concerns
- Detailed analysis to ascertain the problem and its causes
- Establishment of a “regulatory toolkit”



How can it be done?

- Establish in the EU law a system of tracking indicators
- Metrics and thresholds to be developed and updated by ACER in collaboration with NRAs
- Establish in the EU law a process for NRA analysis of problems and identification of possible response(s)
- “Regulatory toolkit”: GTM tools and other tools such as a market maker function to improve liquidity, adaptation of tariffs, commodity or capacity release programmes
- Actions to be taken by NRAs or by the relevant decision makers should be based on consultation and CBA for major ones
- ACER support for cross-border issues

ACER/CEER response: administrative and legal requirements

- Use licensing and registration requirements to protect market from malicious practices
- System of mutual recognition of licences (or an equivalent mechanism) across the EU
- based on well-defined standardised minimum requirements for licencing, including reliability and financial solvency



How can it be done?

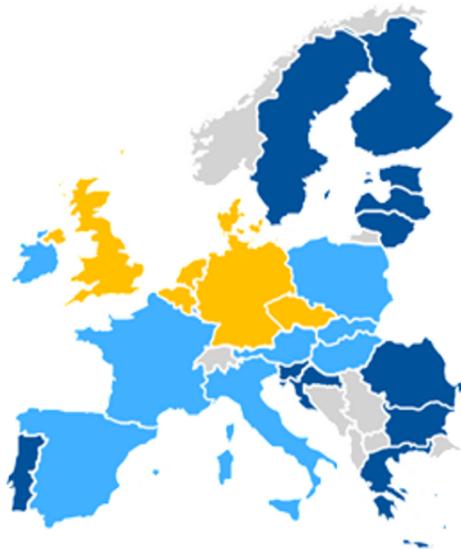
- Combination of ex-ante checks by TSO and/or NRA with requirements for collateral
- EU-level sharing of information on creditworthiness and behaviour of trading parties
- Potential implementation of an EU-wide “blacklist” for companies convicted of fraud
- Ensuring that enforcement action without undue delay (such as revoking licence)

Increased hub price convergence and hub price correlation



Estimated gas supply sourcing costs
Results of Monitoring the Internal Gas Market in 2018

2014: TTF = 23.7 € /MWh



2016: TTF = 15.5 € /MWh



2018: TTF = 20.8 € /MWh



■ <=1 euro/MWh
 ■ 1-3 euro/MWh
 ■ >3 euro/MWh

Challenges to be addressed

- Cross-border tariffs do not appear to be causing major issues on a pan EU basis, however concerns are already present in some regions and may grow
- The possibility for cross-border trade and market integration is impacted by the way in which TSOs allowed revenues are calculated
- Guarantee a fair and efficient split of costs among users to avoid pancaking being an issue
- Differences between gas and electricity tariff frameworks could distort investment and operational decisions in view of future sector coupling
- Risk of market foreclosure in illiquid/concentrated markets due to the securing of most long term capacity by the dominant party

ACER/CEER response

- Prioritise implementation of the EU Gas Tariffs Network Code
- Anchor more firmly the current gas market design in the EU legislation, e.g. definitions of entry-exit system and harmonised capacity products (firm, interruptible and conditional)
- Apply the system of market monitoring and targeted regulation to identify and address any instance where cross-border tariffs become a barrier to trade and where there is a risk of foreclosure of cross-border capacity
- Review the substitutability of gas and electricity assets and ensure that network charges provide a level playing field among them and promote economic efficiency

How can it be done?

- Unlock regulatory tools to address regional concerns, including:
 - Allow reserve price in cross-border capacity allocation to be reduced
 - Consider merging national entry-exit zones
 - Combine mix of measures, including ITC mechanism
 - Allocate costs of network used by domestic & non-domestic flows

In case of regional market mergers

$$\tilde{R}_t = CAPEX_t + OPEX_t + Other_t - Ajust_{t-2}$$

- Undertake a cost-benefit analysis, building on market monitoring system
- Foresee additional transparency requirements if an ITC mechanism is implemented
- Establish clear principles and institutional framework for Inter-TSO Compensation (ITC) implementation
- Create a common criteria for TSOs allowed revenue in case of ITC

How can it be done?

- Electricity and gas tariffs should reflect the costs new assets will impose on the network to foster an efficient sector coupling
- Rethink if and how taxes and levies can be applied in order to minimise possible distortive effects
- Respond to market foreclosure risk using the toolkit provided by the Capacity Allocation Mechanisms Network Code, e.g.:
 - limit capacity in a long-term auction
 - *Use-It-Or-Lose-It* and *Use-It-Or-Sell-It* provisions
 - and over-subscription and buy-back of capacity

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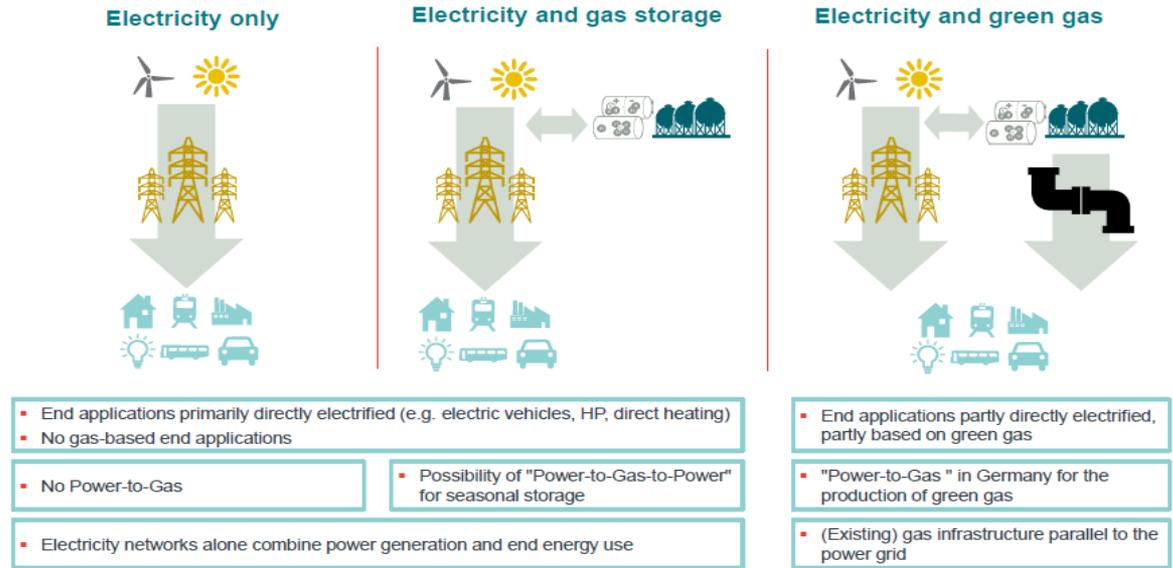
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Infrastructure needs

The use of gas infrastructure varies according to policies and actions taken forward, as well as technologies deployed:

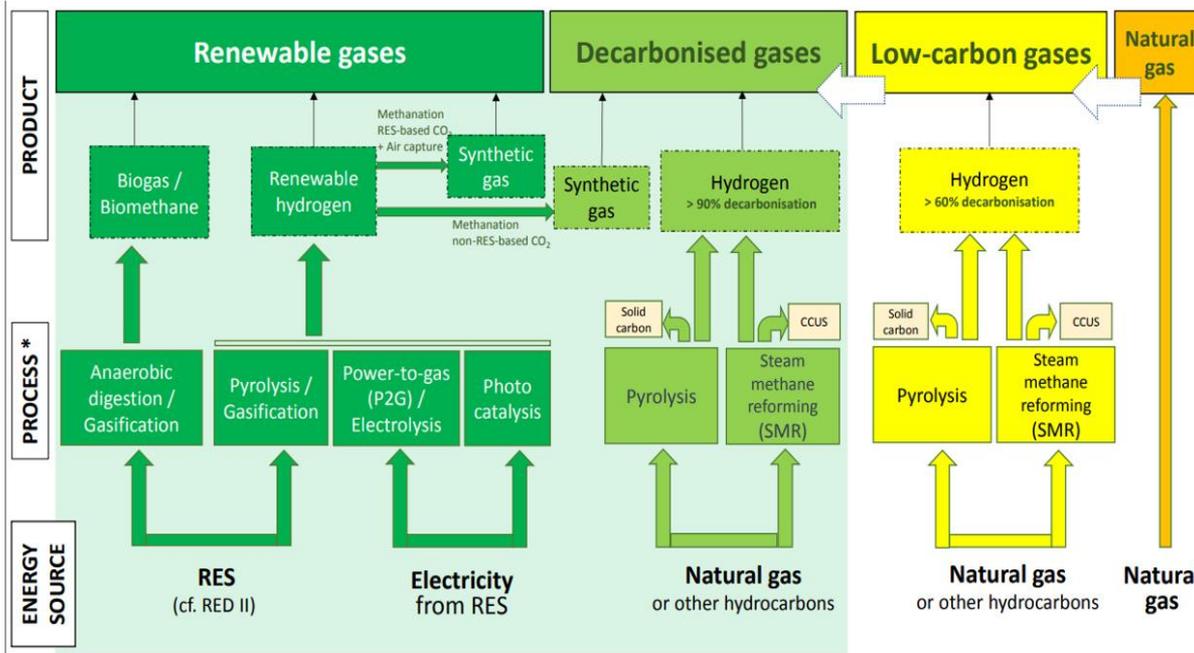
- *Electricity only*: fully electrified society, energy system and grids
- *Electricity and gas storage*: combine electrification with power-to-gas-power solutions for storage with electricity grids
- *Electricity and green gas*: electrification complemented by use of green gas and continued use of gas infrastructure

We consider 3 scenarios with varying degrees of use of gas infrastructure. 95% emissions reduction target for 2050 will be achieved in all of them



frontier economics

So...what role for gas in the future?



New types of gas

Technology options and uses for gas:

- Several energy sources
- Multiple conversion processes
- Variety of products for different uses:
 - Electricity
 - Heating
 - Industrial uses
 - Transport
 - Flexibility
 -

Challenges to be addressed

- Responsibility for planning network infrastructure
- Divergent views on the need for infrastructure
- Blur between competitive and monopoly activities
- Neutrality of TSOs
- Regulation of hydrogen networks, new technologies and new regional entities



ACER/CEER response

- Consider governance arrangements for gas sector in line with electricity
- Increase institutional oversight of ENTSOs
- Develop a coherent approach across multiple sectors to identify needs and to plan infrastructure, in view of sector coupling
- Strengthen Agency role in energy-sector scenario development and TYNDP process, as well as operational planning activities undertaken by the ENTSOs
- Embed robust testing of proposed infrastructure investment under various pathways
- Ensure consistency between EU and national regulatory approval of network development plans, scenario choice should not be left to project promoters
- Future-proof investments in gas infrastructure

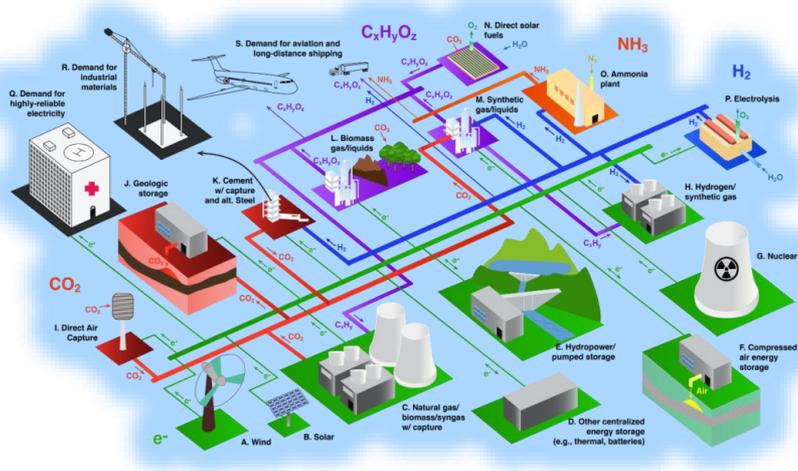
How can it be done?

- Change EU gas legislation in relation to Ten-Year Network Development Plan (TYNDP), Network Codes, Agency powers, enforcement of ENTSOs' compliance with obligations, exemptions and planning obligations for distribution systems
- Mandate the Agency to approve ENTSO budgets and work programmes, including ability to request amendments
- TSOs should only delegate or mandate legally required tasks if the same regulatory oversight is assured over the new entity
- Agency should approve energy-sector scenario development, TYNDP proposals or prescribe binding guidelines for TYNDP development and CBA methodology, without however overwriting national approvals of the NDP
- Empower all NRAs to approve national development plans



Examples of need for reinforced oversight of infrastructure planning

- The choice of scenarios and needs can materially influence the choice of investments, so it should not be left to promoters of those investments
- In sector coupling context, solution providers (including TSOs and flexibility providers) could propose ways to meet those needs, which could be network-based or not



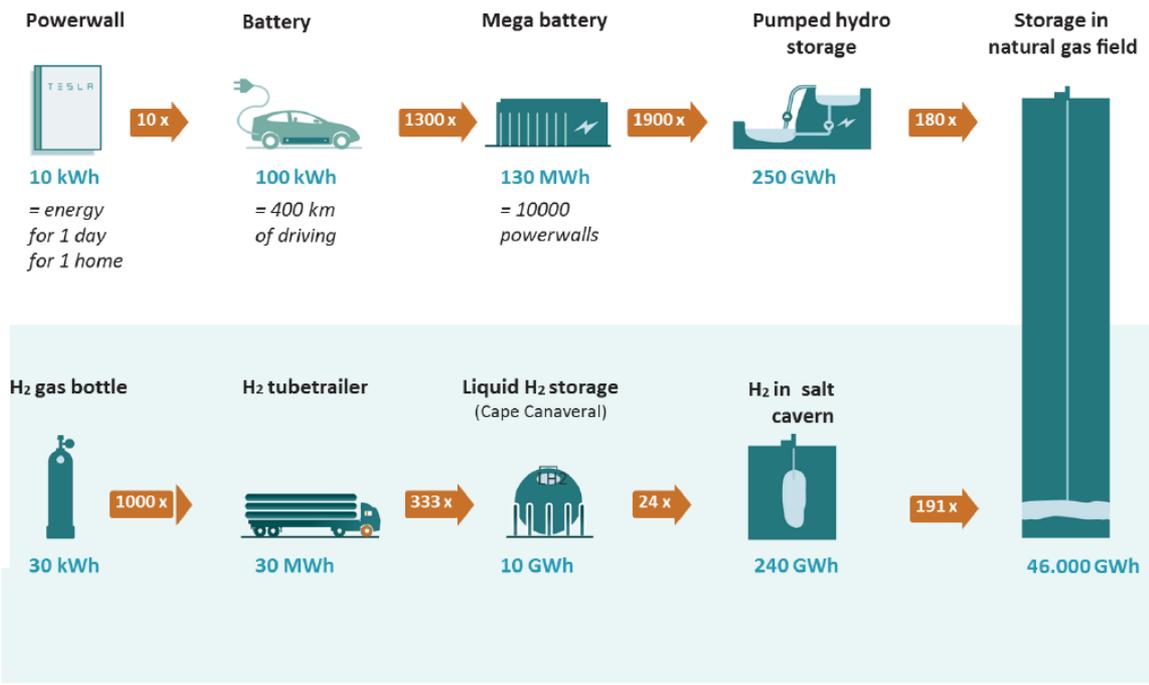
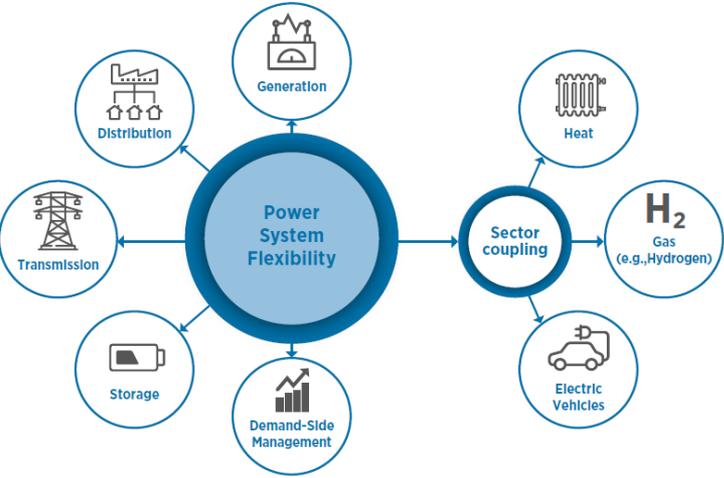
How can it be done?

- Establish consistent definitions, criteria and policy scenarios at EU level, driven by the National Energy and Climate Plans, including:
- Speed of decarbonisation in different sub-sectors,
- Extent of technological innovation and energy efficiency improvements,
- Trends in demographic and economic factors
- Include full assessment of decarbonisation effects and its monetisation in CBA
- Avoid investments geared solely towards fossil fuels
- TSOs and DSOs (above a size threshold) should measure and publicly report on methane emissions data

Examples of integrated infrastructure planning

- A coherent planning approach should integrate power-to-gas and with energy management services for households, transport, services and industry
- Agency should approve energy-sector scenarios and needs identification, to be used to develop alternative, realistic pathways, taking into account and promoting availability of efficiently produced “green” gases, and identifying related system needs

Future role of gas: flexibility



The potential gas contribution to flexibility

In a decarbonised and decentralised system, all elements and energy vectors need to work together seamlessly

Sector coupling

Integrated energy system

Multiple sources of flexibility

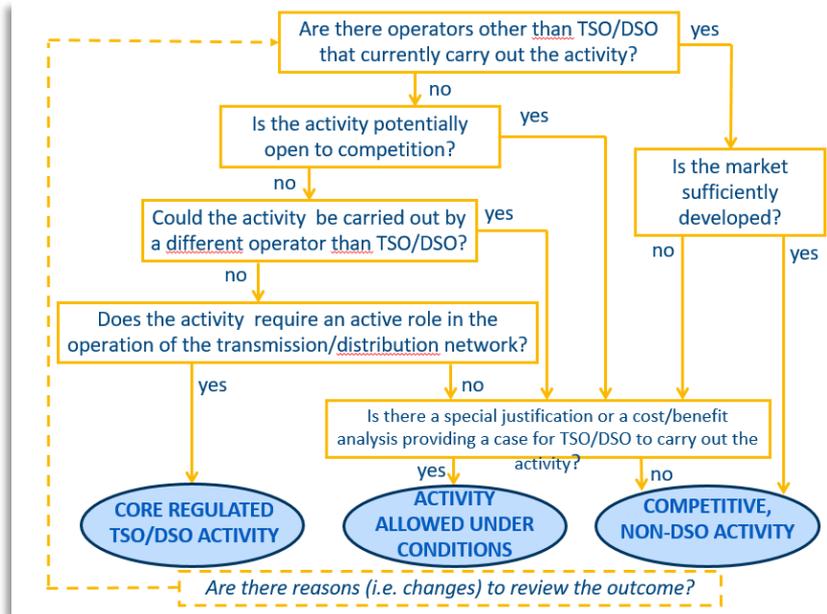
Challenges to be addressed

- Technical issues, such as the definitions of various decarbonised energy products
- Impact of these new solutions and technologies on competition and on regulated monopolies
- Possible distortions or unintended consequences resulting from competition between gas and electricity
- Uncertainty as to how new assets and activities will be treated in regulation



ACER/CEER response

- Promote a market-based approach to new activities and technologies
- Review market rules across gas and electricity
- Adopt a dynamic regulatory approach
- Establish a harmonised framework based on common standards and definitions
- Provide an “EU umbrella” for a sandbox approach
- Parallel the role of TSOs and DSOs for electricity storage and recharging points
- Amend existing tools to promote decarbonisation investments in the TYNDP and PCIs
- Bring gas DSOs into a European DSO entity
- Develop regulatory treatment on blending of hydrogen in gas networks



Example of a clear framework for competitive vs. non-competitive activities

- If market is not already bringing forth needed investment in an activity, use competitive tenders
- If no interest, analyse costs/benefits and impact on competition
- In such cases, grant limited exemptions to TSOs/DSOs to allow them to invest in order to get the market started
- Consider additional restrictions, e.g. requiring investments to be through a separate but related company for greater transparency, and requirements to divest once the market is ready to take over

How can it be done?

- Establish effective definitions and monitoring, unambiguously determining types of decarbonised gas
- Gather from TSOs, DSOs and GO issuing bodies reliable fundamental data on gas production assets in place and planned, which should be available at European level
- Coordinate preparatory assessments of hydrogen blending, at European level at least in terms of principles or methodology
- Where hydrogen networks become widespread, and where blending of decarbonised gas increases in existing networks, extend existing Gas Directive and Regulation to apply beyond natural gas to include decarbonised gases, with clear carve-outs for direct pipes to individual (or small clusters of) industrial users where additional regulation is unwarranted

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Key conclusions:

- Clearly define and integrate decarbonised gases into existing gas markets, valuing their environmental benefits and applying consistent principles across the EU to facilitate blending
- Monitor sustainability indicators alongside the Gas Target Model competition metrics
- Establish a new system of dynamic and targeted regulation in EU law, built on robust market monitoring and analysis
- Put in place ex-ante and ex-post measures to mitigate risk of fraudulent behaviour on wholesale markets
- Mutually recognise licences across the EU
- Promote a technology-neutral level playing field for conversion and storage facilities
- Facilitate new assets and activities through regulation, including “sandboxes” while maintaining the principle of unbundling
- Ensure an effective regulatory framework at EU level for infrastructure planning consistent with national NDP approval
- Plan future-proof investments in gas infrastructure, including re-use and re-purposing and consistency with decarbonisation targets
- As currently the tariff design does not appear to be causing major issues at a pan-EU level, the implementation of the Tariffs NC shall remain a priority. Where there are regionally concerns that tariff designs cause problems, legislative change can unlock regulatory tools to eliminate any barriers to trade

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