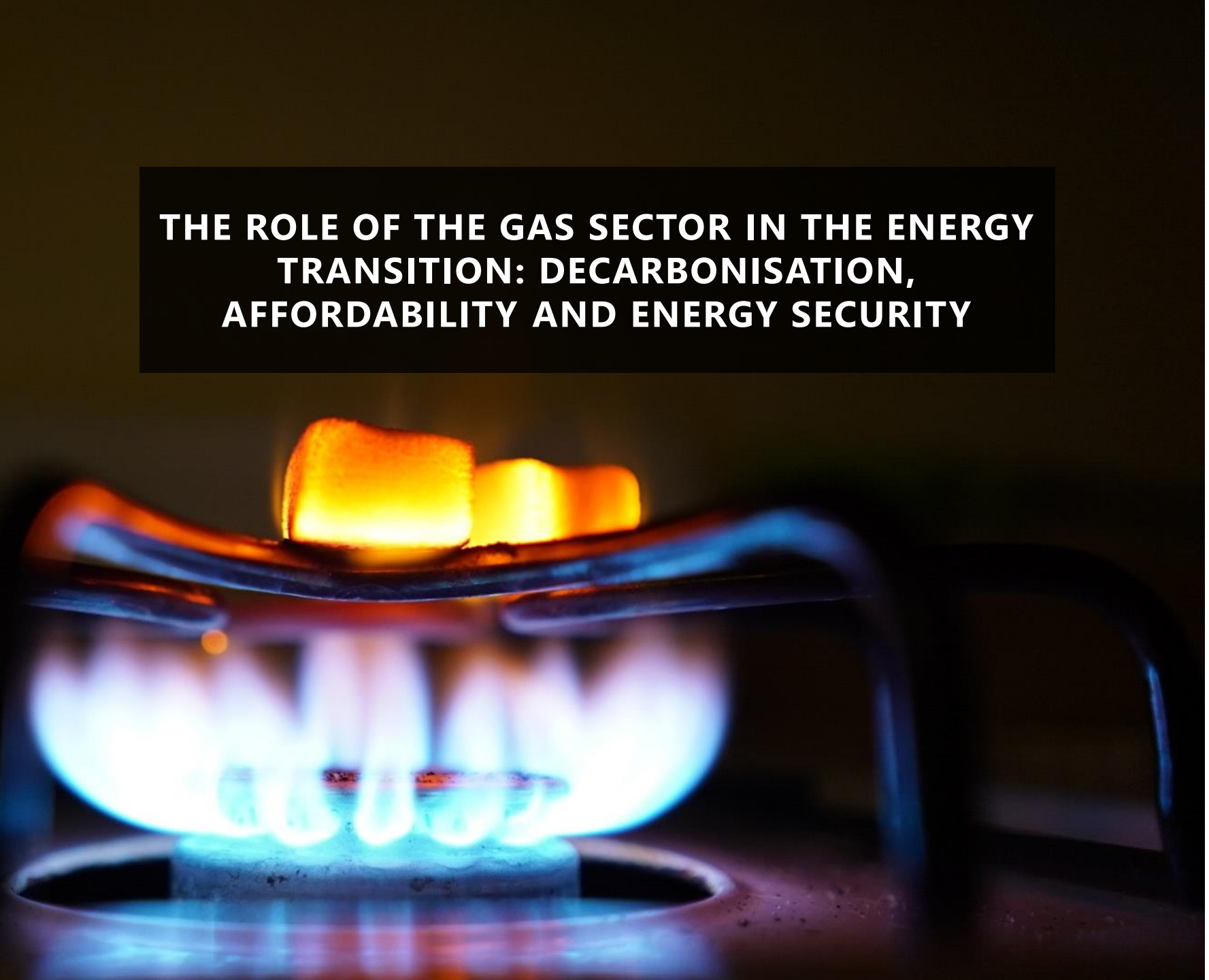
THE ROLE OF THE GAS SECTOR IN THE ENERGY TRANSITION: DECARBONISATION, AFFORDABILITY AND ENERGY SECURITY



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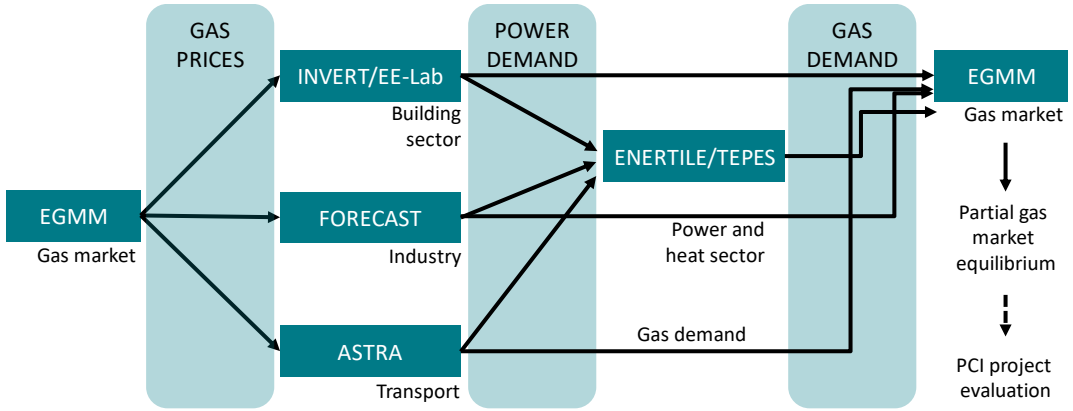
GIE online event, 09.07.2020

SET-NAV project: decarbonisation pathways modelling

	Reference	Diversification	Localisation	Directed Vision	National Champions
EU28 RES gas	Current	High	High	Current	Current
NS 2, TS2	Yes	No	No	Yes	Yes
UA transit	Only spot	Yes	Yes	Only spot	Only spot
EU28 tariffs	Current tariffs	No tariffs	Current tariffs	No tariffs	Current tariffs
EU28 gas cons.	PRIMES reference	Pathways	Pathways	Pathways	Pathways

BAU

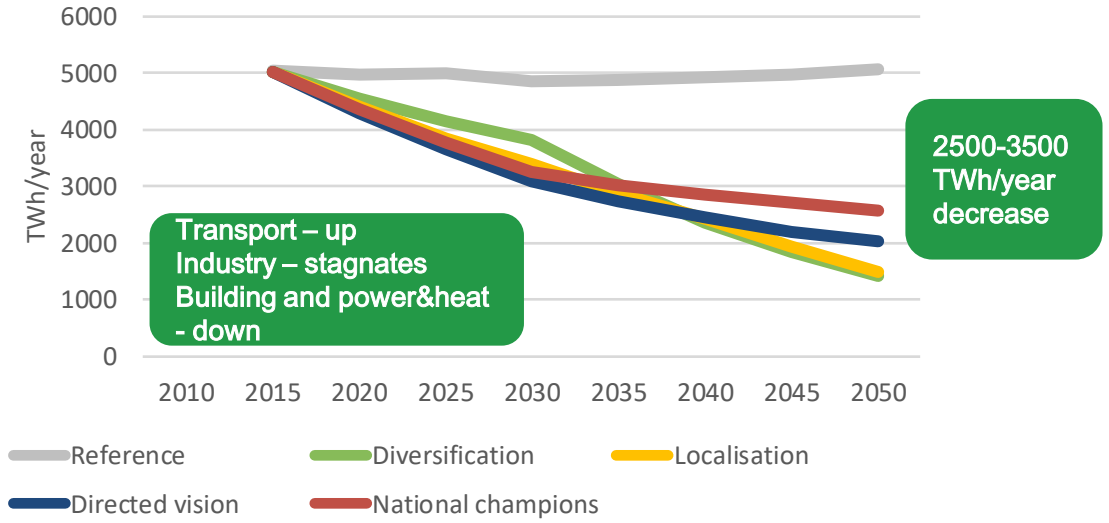
Pathways

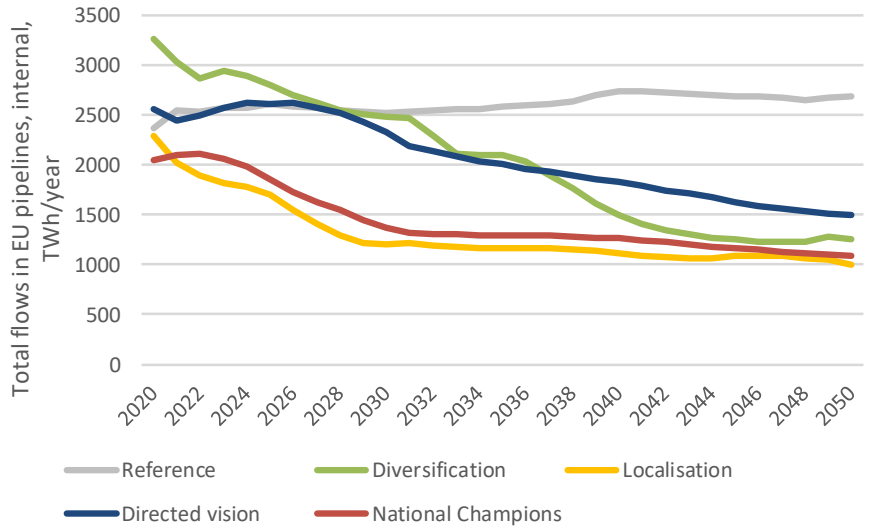


https://www.set-nav.eu/sites/default/files/common_files/deliverables/WP9%20Pathways%20Summary%20Report%20%28D9-4%29.pdf

Deep decarbonisation can only be reached with drastic decrease in gas consumption

- 2500-3500 TWh/year lower natural gas consumption (power&heat and building sector)
- Effect on stakeholders:
  - Consumers: lower gas bill, switching to DH, heat pumps, energy efficiency
  - Gas upstream Europe: ~50% lower revenues
  - TSOs: 75% lower revenues; possible higher tariffs; under-utilised infrastructure
  - SSOs: lower storage use
  - External suppliers (RU, NO, LNG): increased competition, lower prices for European consumeres





Main messages of the SET-NAV modelling

- **Large fall-back in gas consumption**. From 5000 TWh/year to 1500-2500 TWh/year in the different decarbonization scenarios.
- **Change in patterns of main consuming sectors** from building and power sector to industry and transport > detrimental effect on storages and the seasonal patterns
- **Possible tariff increase.** Disappearing gas flows and 10-15% yearly utilization by 2050. 1-3 €/MWh tariff increase on exit points to consumers
- **Possibility for decommissioning or new use for the system:** under-utilization may deem infrastructure unnecessary
- **No strategic pricing possible in the shrinking market**. Increased competition of upstream pipelien and LNG supliers keeps price levels down
- **Less severe import dependency and SOS issues in gas:** Biogas and P2G solutions result in 30-40% import dependency by 2050 instead of current 75%
- **No new major pipeline infrastructure is needed.** LNG and minor projects connecting isolated markets to the common European market may be justified.
- **SET-Nav Pathways are not the only option.** Demand outlooks of the gas industry seem however not to count on the demand drop presented in this report. Decarbonisation is achieved in the IEA, Eurogas, Eurelectric scenarios and other outlooks by other technologies (CCS, RES gas) and consider the gas as an important part of the supply mix on the longer term and keep the infrastructure alive.

SET-Nav
Strategic Energy Roadmap

Non-paper of 8 Eastern-European EU MSs on future role of gas

- Role of natural gas in climate-neutral Europe: Position paper of Bulgaria, Czechia, Greece, Hungary, Lithuania, Poland, Romania, Slovakia
  - gas provides the fastest and the most affordable intermediate path to a less carbon-intensive economy, an improvement of air quality (reducing premature deaths due to air pollution) and allows for gradual and effective contribution to EU's climate neutrality by 2050.
  - gas turns out to be a substantial back-up and balancing source for development of renewable energy and electricity system
  - the discontinuation of support for further development of gas infrastructure contributing and enhancing the energy transition will make it very difficult for many Member States to mobilise enough investment to cover massive needs for key energy infrastructure projects
  - Gas infrastructure should be therefore considered as one of enablers of sustainable and swift transition towards cleaner heat and electricity generation, transport, industrial processes and residential heating and cooling
  - it is of crucial importance to maintain EU support and financial assistance for the development of gas infrastructure through enabling framework, structural funds and investment loans.

https://www.euractiv.com/wp-content/uploads/sites/2/2020/05/Non-paper-Role-of-gas-in-climate-neutral-Europe-Final.pdf

Role of gas in NECPs

- Hungary
  - Gas consumption falls to 6 bcm/year to 2040 (currently 10 bcm/yr)
  - Main savings in residential consumption (building envelope, reducing gas share in DH to 50%, heat pumps)
  - No measurable goal in P2G and Hydrogen solutions

- Poland:
  - increased gas use and possible infrastructure development
  - Interconnectivity, strategic gas projects

- Czechia
  - Increased use of gas capacities for electricity generation
  - 18-25% share of gas by 2040 in the primary energy mix (Currently 17%)

- Slovakia
  - Projects PL-SK and Eastring
  - Possible conversion of storages to CSS

Thank you for your attention

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