

## Recommendations for a cost-effective transition unlocking the benefits of sector coupling

### 1. Achieve the EU climate objectives through decarbonisation of all sectors of the economy

- Direct electrification based on renewable-based and carbon-neutral electricity supply will make a major contribution to help Europe meet its climate targets.
- Eurelectric members are committed to delivering a renewable-based and carbon-neutral power supply in Europe well before 2050.
- The coupling of electricity and gas systems through **power-to-gas is a potential key link in the transition to a carbon-neutral economy**, needed to complement direct electrification in "harder to abate" sectors.
- In a high-renewable future, **power-to-gas could also support the electricity system to balance the networks and ensure security of supply**. The flexible production and storage of electric fuels such as hydrogen and synthetic gas can complement the provision of carbon-neutral firm/flexible capacity delivered by competing sources (i.e. hydro, nuclear, DSM and storage).
- Europe should therefore strive to **maintain leadership in key emerging energy carriers** such as sustainable hydrogen and renewable power-to-gas.

### 2. Harness the benefits of sector coupling through a cost-effective approach to infrastructure

- We call on the European Commission to **develop a consistent and clear taxonomy of sustainable and other gases**, including power-to-gas fuels that reflects their different lifecycle emissions.
- We call on the European Commission to make **an independent analysis of the potential for future commercial availability/ maturity of those gases in the 2030 and 2050 perspective**, and of the need for green molecules across sectors, which cannot be electrified.
- It is crucial to ensure a **coordinated, cost-effective and future-proof approach to electricity and gas infrastructure requirements and investments**, at both European and national levels.

- The **ENTSOs' joint TYNDP scenarios must reflect this new reality**, ensuring that long term projections for the overall energy and gas demand are Paris Agreement compliant. A stronger oversight by ACER and NRAs will be instrumental to lower the risk of stranded assets.
- **The 2013 TEN-E Infrastructure Regulation should be revised as soon as possible** in light of the changing infrastructure and system security needs taking into account the potential of sector coupling and the importance of DSOs.
- Given current technology, it is likely that **hydrogen produced with renewable electricity will play a key role in the near future**. It is unclear at this stage how hydrogen will be optimally and safely used. The most promising usage in the mid-term seems to be at local level in industrial processes, transport and other applications. Therefore, the need to establish large scale/greenfield hydrogen pipelines should be carefully assessed to ensure economic efficiency.

### 3. Ensure a market-based and competitive development of sustainable gases

- The main goal is that **“new” decarbonised and renewable gases should be supplied and traded on a level playing field with natural gas as part of the gas market**. Possible barriers for entry (e.g. in the form of undue technical requirements) should be eliminated.
- **Eurelectric does not support the introduction of sub-targets for renewable gas penetration**. Until power-to-gas reaches maturity, renewable gases will be used primarily when no competitive electric alternative to fossil fuels exists for some industrial processes and shipping. In this context the implementation of a trading system for renewable guarantee of origin can be a pivotal instrument.
- **Power-to-gas technologies** – once mature and commercially available – **are without any doubt contestable market activities**, which cannot be carried out by regulated entities.
- **Tariff structures should be tailored so that each grid user pays a price covering the costs they induce on the grid**. Eurelectric does not support the implementation of specific electricity and gas grid tariff reductions or specific exemptions to support the development of power-to-gas production units, as it may hamper the principle of cost-reflectiveness.
- **Research & innovation funds and investments should be allocated to the development of competitive carbon-neutral industrial solutions and power-to-gas technologies**, such as green hydrogen or synthetic methane generation to accelerate the transition in hard-to-abate sectors.