POSITION

Subject: FEBEG response to the Public Consultation on the scenarios for the 10-year Federal Development Plans Electricity and Hydrogen
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General remark

In order to ensure its transition to a carbon-neutral society by 2050, Belgium is counting on the development of electrification and the use of green molecules for applications that cannot be electrified (either technically or economically).

FEBEG believes that there indeed could be value in developing development plans for electricity and molecules together. If both plans are not coordinated, there is a risk of creating scenarios that are inefficient or unnecessarily expensive for society. **The planning process should aim to minimise the total cost of infrastructure for both electricity and hydrogen, while ensuring that Belgium's climate targets are met.**

FEBEG noticed during the scenario workshops that, currently, the scenarios under consideration do not sufficiently address greenhouse gas reduction targets. For hydrogen, there is a legal requirement (Art 14 §2,4° of the Hydrogen law) to ensure investments are compatible with climate goals, but this is not the case for electricity. As a result, the proposed scenarios may fall short of both national and European climate commitments. FEBEG recommends that all scenarios should be explicitly designed to support decarbonisation and cost efficiency, comparing pathways based on current policies with those that would achieve the 2030 targets, always keeping the net-zero goal for 2050 in mind.

Demand Assumptions

Methane Demand

There are inconsistencies in the historic methane demand values reported by Fluxys compared with those from FOD Economy (*SPF Economie, P.M.E., Classes moyennes et Energie*), excel data file accompanying the Belgian Energy Data Overview, 26 June 2025.). These differences should be clarified, and it should be made clear whether the figures are based on high or low heating values. This transparency is important for accurate planning and comparison.

Hydrogen Demand

The forecasts for hydrogen demand are significantly lower than what is currently observed in the market and what is expected for the future, especially in industrial sectors. Current demand is 18-19 TWh and expected to remain stable until 2030 after which (CREG, Etude (F)2761, 12 July 2024) projections reach 35 TWh up to 143 TWh by 2050.

From our understanding, some hydrogen demand seems hidden within methane balances (methane demand reported for SMR- H2 production). Additionally, the role of hydrogen produced from ammonia cracking is not clearly explained and it is not clear how this demand is accounted for. For FEBEG, it is important that these things are clarified in the scenarios. FEBEG urges that demand assumptions should be realistic, transparent, and reflect the full range of technologies and market needs.

Electricity Supply and Flexibility

Solar PV

FEBEG is sceptical about projections that solar photovoltaic capacity will reach the 'very high' scenario of 98GW by 2050. Technical and market constraints, such as grid congestion and negative electricity prices, already pose challenges at current capacity levels. Therefore, FEBEG only sees the 'low' (30 GW) and 'central' (42GW) scenarios as realistic and can understand a 'high' scenario (66GW) to be included to simulate an exceptionally high outlook.

Offshore Wind

FEBEG supports ambitious targets for domestic offshore wind, recognising its importance for the energy transition. FEBEG supports the development of non-domestic off-shore. However, for offshore wind projects outside Belgium, there should be more clarity about the sources of information, the political context, and which countries are involved.

Thermal Capacity

Maintaining existing gas-fired power plants is essential for ensuring a reliable electricity supply in a system that relies more on intermittent sources. The mechanism for remunerating capacity must be fully functional, with appropriate price caps and eligibility criteria, so that these assets remain attractive for investment and operation. FEBEG points out that the primary objective of CRM is to ensure security of supply through steerable generation, storage, and demand response. However, CRM does not aim to make generation greener. For this reason, it is important not to exclude certain technologies that contribute to security of supply—such as gas-fired power plants in Belgium—based on restrictive CO2 criteria. In any case, the operating hours of these power plants—and consequently their CO2 emissions—will naturally decrease over time, given the influx of renewable production. Nevertheless, the capacity they provide (MW) must remain present in the electricity system.

Storage

Large-scale storage connected to the transmission grid is crucial for balancing renewable energy sources. However, investment in storage is currently hindered by regulatory and market barriers, such as limited connection capacity and lengthy approval processes. FEBEG believes further improvements in the CRM mechanism and sustained exemption from grid tariffs are very important to allow the necessary further development of large scale batteries.

Current assumptions about how much small-scale battery capacity will be available to the market may however be too optimistic as EVs are expected to fulfil the role of home batteries via V2H, V2L or V2G technology in addition to grid-scale batteries connected to the transmission grid.

End-User Flexibility

FEBEG notices that there might be an error in Table 11 as it shows current battery-to-market share of 92% which is not the case as far as we know. Flexibility in electricity consumption, especially through smart charging of electric vehicles and dynamic tariffs, is key to managing peak demand and integrating renewable energy. FEBEG members are already bringing products on the market to incentivize charging at moments that are beneficial to the system and for the integration of renewables.

Molecules: Biomethane and Hydrogen

Overall, FEBEG emphasizes the complementary nature of the two drivers of decarbonization: decarbonized molecules and electrification, which will enable Belgium to achieve climate neutrality by 2050, i.e., an economy with net-zero greenhouse gas emissions.

Biomethane

FEBEG notes that the targets for local biomethane production have been delayed by a decade (Compared to “Green gas, an opportunity for the future”, Gas.be presentation to FEBEG 09/2023), leaving stakeholders uncertain about the reasons for such a delay.

Hydrogen

Hydrogen supply scenarios should recognise a broader range of production technologies, including those that offer higher carbon capture rates (such as Auto-Thermal Reforming, the technology considered for the H2BE project, which the consultation incorrectly associates with SMR technology). Infrastructure for hydrogen and carbon dioxide should be developed together to enable the growth of new value chains. Assumptions about electrolyser capacity should be cautious, reflecting recent delays and cancellations of projects in Europe. In the context of the consultation, it would be beneficial if the methodology is published on how the electricity consumption and hydrogen production are calculated.

Conclusion

FEBEG calls for a joint approach to scenario development that minimises total system costs and supports climate targets. Demand and supply assumptions should be realistic and transparent, and policy frameworks should encourage investment in flexibility, storage, and low-carbon technologies.