Netbeheer Nederland

Authority for Consumers & Markets

Ministry of Economic Affairs and Climate Policy of the Netherlands

Policy reflections on the European energy system and infrastructure

Non-paper on a joint vision for actions by the European Commission

The Dutch Ministry of Economic Affairs and Climate Policy (EZK), the Dutch national and regional grid operators (NBNL) and the Netherlands Authority for Consumers and Markets (ACM) have identified joint prerequisites and priorities for the future European energy system and infrastructure and look forward to working with the European Commission, other European Member States and relevant stakeholders on the following actions:

15 ACTION POINTS FOR A FUTURE PROOF EUROPEAN ENERGY INFRASTRUCTURE

CATEGORY	PROPOSED ACTIONS
General principles	1. Maintain clear and unimpeded pricing signals 2. Facilitate stronger and integrated energy planning
System integration	3. Take energy system integration as a guiding principle 4. Promote interoperability and standardisation of smart heat pumps and smart charging infrastructure
Realization of energy infrastructure	5. Explore further possibilities to streamline permitting procedures for energy infrastructure projects 6. Address obstacles to investments in energy infrastructure 7. Place greater emphasis on the need for a level playing field and cost-reflective tariffs for new technologies such as electrolysers and batteries and the industry
Decentralized and flexible electricity systems	8. Foster flexible use of energy and reinforce demand response 9. Support EU Member States in addressing grid congestion and expand regulatory opportunities for non-firm/flexible connection agreements 10. Review restrictions for network tariffs paid by energy producers
Offshore market design and infrastructure	11. Facilitate the timely development of a comprehensive EU framework for EU offshore bidding zones by providing guidance to EU Member States and make the framework fit-for-purpose 12. Foster, as part of the ongoing assessment, cost-sharing between EU Member States for large scale offshore infrastructure, including hybrid projects and radial connections, and instruments to implement cost-sharing 13. Develop a strategy on the role of offshore hydrogen, including its potential for system integration and the role of Hydrogen Transmission Network Operators in the development of future Offshore Network Development Plans
Renewable and low-carbon gases	14. Require EU Member States to map their biomethane potential and develop strategies and instruments to fulfil this potential, including possible EU targets and the removal of barriers to biomethane market integration, such as GHG accounting rules and gas quality standards 15. Develop an action plan for hydrogen storage, addressing, amongst other things, possibilities for the streamlining of permitting procedures, access to finance and technological development

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Prerequisites for our future European energy system

The EU has set ambitious climate and energy targets in recent years as part of the European Fit-for-55 package for 2030. Furthermore, the European regulatory framework for electricity, gas and hydrogen markets has recently been updated. In order to make the European energy system future-proof and achieve Europe's climate and energy targets, we need a stable and robust European regulatory framework that continues to foster investments in the energy transition. **Clear and unimpeded pricing signals as well as norms and standards for demand response are necessary** to ensure sufficient investment in flexible energy supply and demand. To ensure consumers and companies can choose the right level of risk appetite, this should be accompanied by sufficient possibilities to hedge against price fluctuations (such as liquid PPA markets and the option for fixed price contracts on retail markets).

The energy system will continue to evolve in the coming decades, with increasing cross-border interconnections accompanied by greater and at the same time more decentralisation, flexibility and strengthened networks. Further market integration is needed, both physically through additional interconnectors as well as by means of regulatory integration, which has been shown to decrease the overall flexibility needs of our interconnected energy system. Therefore, we support measures that foster market integration and improve the efficiency of the energy system at the European, national, regional and local levels. Preventing market fragmentation should be a priority. The European Commission should as a matter of urgency **give clarity to those areas of the EU market design where there is still uncertainty. Measures and instruments fostering flexibility should be reinforced** so as to promote demand response to become more standard practice.

Cooperation between Member States, TSOs, DSOs and National Regulatory Authorities at both the national and regional level contributes to a more coordinated approach on energy infrastructure and the energy system. In the Netherlands, we are developing **stronger and more integrated 'energy planning'**, with a community- and region-oriented approach to strengthen the electricity grid, incorporate flexible energy demand and supply and apply a system approach with some solutions like hydrogen being primed to benefit the energy system. This approach implies that in some cases the concept of 'first come first serve' needs to be relinquished in favour of societal prioritisation. We call upon the European Commission to facilitate this type of planning within the European regulatory framework.

Other prerequisites such as value chains, digitalisation, resilience, raw materials, space and labour force will require continued attention of the European Commission.

System integration

Building on the EU strategy on Energy Systems Integration, the EU should take **energy systems integration as a guiding principle,** also with a view to focusing more attention on cost-efficient opportunities. In EU policy, electricity and gas are still too often separate worlds. We urge a more comprehensive approach at the European level, also in joint planning exercises, based on a long-term perspective of the energy system and the energy grids of the future.

The EU should further **promote interoperability and standardisation of smart heat pumps and smart charging infrastructure.** Policy initiatives aimed at implementing the energy transition should place a stronger focus on hybrid solutions (e.g. heat pumps, see EPBD), integrated policy (e.g. room to choose one DSO Entity for electricity, gas and hydrogen) and

region-specific circumstances that can foster system efficiency (e.g. to prevent building multiple grids).

Realisation of energy infrastructure

We welcome the EU Action Plan for grids addressing the main challenges in expanding and making better use of our electricity grids. Improved long-term planning, better usage of grids, cross-border cost sharing, improved access to finance and faster permitting are key to making our energy infrastructure future proof. We encourage the European Commission to keep the promotion of energy infrastructure high on its agenda.

Speeding up and **streamlining permitting procedures** remain important for achieving the timely realization of energy infrastructure. The EU already offers opportunities in REDIII and the hydrogen and gas markets decarbonisation package, and under Council Regulation 2022/2577. However, current analyses indicate that the impact for local and regional energy infrastructure remains uncertain. The European Commission should clarify and, where necessary, explore a possible expansion of procedural exemptions benefiting distribution projects. The European Commission should furthermore explore possibilities for the streamlining of permitting processes also for other types of energy infrastructure like hydrogen, CCS and storage, which are not covered in RED III.

Major investments in a well-interconnected European energy infrastructure need to be made in the coming years, both at the transmission and the distribution level. As a result, network tariffs will rise further, which may undermine the affordability of and hence public support for the transition. We therefore ask the European Commission to **address obstacles to investments in energy infrastructure** by EU Member States, especially for publicly owned grid operators who require additional capital from their shareholders, which is budgetary relevant. EU funds such as Connecting Europe Facility (CEF) could play an important role in incentivising projects with a strong cross-border focus.

We urge the European Commission to place greater emphasis on the need for a **level playing field and cost-reflective tariffs for new technologies such as electrolysers and batteries and the industry** and to explore whether a further harmonisation of network tariff methodologies might be desirable in this regard. Member States should not pursue a 'race to the bottom', luring private investments with a competition for the most attractive exemptions. Safeguarding the level playing field within the EU helps to keep collective costs of our energy system affordable.

Decentralised and flexible electricity system

Grid operators are investing massively in expanding, maintaining and strengthening their networks to integrate new capacity on the grid. However, in many places the supply and/or demand for electricity is growing faster than the rate at which the grid can be expanded. This has negative consequences, such as network congestion. Faced by increasingly volatile electricity supply and rising demand we will need to find the right balance between the interest of consumers in unrestricted use of energy and feasibility, timing and affordability of grid expansion, while at the same time ensuring system stability. The European Commission should establish an active dialogue on a common vision of how to resolve this conflict of interests as well as the right tools to address these challenges. In addition to grid expansion, this requires a different approach that facilitates close alignment of energy usage and production in terms of location and time as well as a **more flexible energy useage**.

The EU Grid Action Plan promotes efficiency and smart solutions. However, the European Commission should further **intensify its support for EU Member States to address grid congestion and expand opportunities within the European regulatory framework to increase flexibilit**y. This can be achieved for instance, by demand response management, batteries and standardisation of the use of smart charging, smart heat pumps and flexible industrial production. The European Commission should **expand regulatory opportunities for non-firm/flexible connection agreements**, to tailor the needs of consumers, while also giving consideration to the use of flexibility for adequacy and for grid congestion. In addition, the EU should **review the current restrictions set at the EU-level for network tariffs paid by energy producers,** which may hinder cost-reflective tariffs, so as to incentivise electricity producers to use the energy grid more efficiently.

EU offshore market design and infrastructure

The EU should further enable the build-out of offshore renewable generation and the offshore grid. We need to **work on the timely development of a well-designed framework for offshore bidding zones** as part of the existing electricity market design to ensure that projects are realised on time. The development of offshore bidding zones can improve market and system efficiency, reflect physical constraints of the grid and provide appropriate price signals to market participants, taking into account a level playing field for system integration. In order to make offshore bidding zones work for market parties and system operators in a coherent manner and ensure interoperability, a clear regulatory framework covering topics such as the functioning of balancing markets, forward markets and system operations in offshore bidding zones, is necessary. **The European Commission should provide guidance on this framework and make it fit-for-purpose** to enable EU Member States to actively develop new offshore infrastructure and projects.

To ensure the optimal exploitation of the potential for offshore wind in the EU and the roll-out of the necessary infrastructure for the benefit of all Member States, the European Commission should **foster cost sharing between Member States for large-scale offshore energy infrastructure projects** where the costs of the investments primarily lie within one or a few hosting Member State(s) and part of the benefits go to other countries. As part of the ongoing assessment, the European Commission should explore cost sharing for hybrid projects as well as for radial connections and instruments to implement cost-sharing between Member States.

Offshore hydrogen will also be crucial for offshore system integration. We therefore call on the European Commission to **develop a strategy on the role of offshore hydrogen,** including production and networks, and to identify and address potential barriers. Hydrogen Transmission Network Operators and ENNOH need to play a formal role in the development of future Offshore Network Development Plans (ONDP) to better take into account the advantages of offshore hydrogen production. The European Commission should foster offshore hydrogen tenders ensuring that multiple electrolyser developers are involved in developing the technology. Furthermore, offshore energy developers should be incentivised to utilise curtailed electricity for the production of offshore hydrogen, improving system integration and allowing more renewable energy to be developed.

Renewable and low-carbon gases

Studies on infrastructure scenarios with a long-term perspective on the future energy system in 2030 and 2050 show that a resilient, cost-efficient and sustainable energy system requires more renewable and low-carbon gases as well as stronger infrastructure for hydrogen and

biomethane. For different sectors (industry, mobility and the built environment) we foresee a supplementing role for biomethane and hydrogen to decarbonise the energy consumption of end users and to support the necessary flexibility in the energy system. The EU will have to give more attention and stimulus to the role of biomethane in the energy system of the future and equip network operators for this task. The production of biomethane could be encouraged by implementing EU targets or mandates. We propose to **establish a requirement for Member States to map their biomethane potential and develop strategies and instruments to fulfil this potential**. To realise a fully integrated biomethane market attention for market barriers, such as inconsistent CO_2-emission accounting rules and gas quality standards, is needed.

The recently finalised hydrogen and gas markets decarbonisation package will be a very important stimulus to hydrogen value chain development. Hydrogen storage will play an important role in balancing the hydrogen system and will contribute to energy system integration. **A dedicated EU action plan for hydrogen storage is needed** to provide certainty to market participants about the necessary capacities and to address specific barriers for the development of hydrogen storage. Faster and more streamlined permitting procedures for new storage projects will be required to reduce lead times and to mitigate the associated commercial risk. Access to finance and de-risking tools should be facilitated. Additionally, we should foster the technological development of different types of storage such as salt caverns and the repurposing of depleted gas fields as well as a better understanding and mitigation of technical risks. Public and rapid sharing of data and insights from (subsidised) research and (pilot) projects is key in this regard. Finally, public perception should be addressed at different levels to ensure sufficient support is obtained and held.