The upcoming Grids Package: a critical opportunity not to be missed for the deployment of a European hydrogen infrastructure

The cosignatories call for a dedicated Hydrogen Grid Strategy (encompassing the entire hydrogen infrastructures) to be embedded in the upcoming Grids Package. This will be instrumental in realising the full potential of hydrogen in Europe's clean energy future and competitiveness. It will support industrial decarbonisation, enhance energy system efficiency, drive competitiveness and provide the necessary infrastructure network to scale up low-carbon and renewable hydrogen production, use, and trade.

The access to a viable and functioning network for hydrogen and its derivatives[1] is not only essential for the development of a European low-carbon and renewable hydrogen economy — it is also a cornerstone of a more efficient, flexible, sustainable, autonomous, secure, resilient and competitive energy system. Dedicated hydrogen infrastructure will help integrate variable renewable energy sources (VRES),[2] facilitate sector coupling, provide reliable supply of low-carbon and renewable hydrogen to industry, certainty to existing and new hydrogen projects, optimise energy system assets, and enhance energy security across the continent.

To unlock this potential, the EU urgently needs to broaden its focus towards a more diverse system integration and technology-neutral perspective for infrastructure deployment, and develop, as part of the upcoming Grids Package, a Hydrogen Grid Strategy that takes a forward-looking, and a fully integrated approach to infrastructure planning and financing. A truly multi-modal energy system—combining electricity, natural gas,[3] hydrogen, and CO_2 transport, distribution, and storage infrastructures—will complement the expansion and modernisation of the power grid, while increasing the overall efficiency of energy transport and distribution. This cost-effective system, composed of both import sources and domestic productions, will ensure energy security for end users and will enable the optimal deployment of renewable and low-carbon energy across the EU.[4]

Indeed, investments in hydrogen infrastructure are complementary to and would help optimize power grids by providing flexibility to the system**.** The Grids Action Plan[5] estimates the need for electricity grid investments to reach 584 bn EUR by 2030, and a recent report from the European Commission estimates 1202 bn EUR at the 2040 horizon. In comparison, the investment needs for the repurposing of gas and development of hydrogen infrastructure in EU27 reach only 170 billion for distribution and transmission pipelines at the 2040 horizon (400 bn also including electrolysers, storages, and terminals).[6] The development of a pan-European hydrogen network in a multi-energy model over the 2030-2050 timeframe could save as much as 330 bn EUR compared with a more isolated approach.[7]

[1] According to Article 2, point (2) of Directive (EU) 2024/1788
[2] As defined by Article 2, point (57) and (58) of Regulation (EU) 2024/1789
[3] Including biomethane as defined by Article 2, point (1) of Directive (EU) 2024/1788
[4] According to the Affordable Energy Action Plan, leveraging grid-enhancing technologies and adopting a more flexible system design could reduce conventional grid expansion costs by up to 35%. Source: European Commission, "Action Plan for Affordable Energy: Unlocking the true value of our Energy Union to secure affordable, efficient and clean energy for all Europeans", accessible here.
[5] European Commission, Call for evidence – European Grids Package, accessible here.
[6] European Commission, "Investment needs of European energy infrastructure to enable a decarbonised economy", accessible here.
[7] European Commission, "Hydrogen generation in Europe", accessible here.

Electrification is expected to keep growing and satisfy about half of the final energy demand in 2050 (from 23% today). To accommodate the new demand and the massive installation of renewables, the electricity grid capacity must increase 47% by 2030 and 144% by 2040 in Europe.[8] At the same time, by 2050, grids investment needs will more than double,[9] and the need for flexibility is likely to double by 2030.[10]

Recommendation for an integrated Grid Strategy for hydrogen

In order to realise this integrated vision, **we call on the European Commission to develop a top-down integrated Grid Strategy for hydrogen in the forthcoming Grids Package,** with the following key elements:

- **Intersectoral planning is key for a coordinated and integrated energy system**: The strategy must emphasise the need to coordinate the development of hydrogen, natural gas, electricity, and CO2 infrastructures while efficiently repurposing the relevant methane grid towards a coordinated multi-energy system, both at TSO and DSO-level. A pan-European hydrogen pipeline network developed in parallel to the electric grid efficiently bolsters security of supply, connecting production and demand centers. Hydrogen infrastructure, including storage, energy import terminals, and local and regional networks, bridges the gap between individual companies and the pan-European hydrogen network. This coordinated planning should be grounded in realistic scenarios for expected hydrogen consumption and production to ensure cost-effective and demand-driven infrastructure deployment, including comprehensive information on infrastructure needs to deliver hydrogen to end-users in hard-to-decarbonise sectors, considering their GHG emissions abatement potential - aligning with Art. 55(2)(d), Chapter VIII of the Gas Directive. Additionally, enabling the targeted adaptation and, where appropriate, repurposing the relevant methane grid to renewable and low-carbon hydrogen will help optimising the use of energy infrastructure assets and support a cost-effective energy transition.

- **Facilitating administrative processes**: Hydrogen infrastructure currently faces delays due to permitting processes that can last up to seven years—this must be reduced to ensure timely deployment. Simplification and harmonisation of permitting procedures across Europe is essential to remove such regulatory bottlenecks that slow down hydrogen infrastructure development. The strategy should propose mechanisms to accelerate the development and repurposing of transmission and distribution projects. The Strategy should encourage Member States to implement RED, and NZIA provisions to streamline permitting processes and clarify that these provisions should apply to both renewable and low-carbon hydrogen.

- **Enhanced financial and policy support**: Designated hydrogen infrastructure is particularly capital-intensive, is high risk and needs tailored financing and de-risking tools.[11] The strategy should propose strengthening existing instruments like the Connecting Europe Facility (CEF) and the Innovation Fund to better support hydrogen infrastructure. To support the comprehensive development of the hydrogen market, it is

[8] CAN Europe, EEB, "Wired for Climate Neutrality: A Paris Agreement Compatible (PAC) roadmap for power grids", accessible here.
[9] ACER Market Monitoring Report on electricity infrastructure for 2024
[10] ENTSO-E, System Flexibility report 2024, accessible here.
[11] European Commission, "Investment needs of European energy infrastructure to enable a decarbonised economy", accessible here.

crucial that European Union-level funding for infrastructure is spread across the various hydrogen corridors that are currently under development. It should also explore new risk-sharing mechanisms, including the blending of public and private capital (e.g. via the European Investment Bank, or other EU wide financing tools for Union-relevant critical energy infrastructure), and promote the use of derisking mechanisms such as intertemporal cost allocation to fairly distribute costs between early adopters and future users of the network. Finally, it should also recommend adapting the State Aid framework to reflect the importance of infrastructure. The new Clean Industrial State Aid Framework (CISAF) currently remains narrowly confined to project-specific investments for hydrogen infrastructure. To effectively and critically drive down hydrogen costs over the medium to long term, CISAF should consider broader support for hydrogen infrastructure—extending beyond project-specific funding.

The co-signatories stand ready to work with EU institutions and Member States to make this vision a reality.

Call for evidence on the European Grids Package

Hydrogen Europe response

Contents

Hydrogen Europe welcomes the opportunity to give feedback to the Grids package call for evidence. Access to a viable and functioning network for hydrogen and its derivatives[1] is not only essential for the development of a European low-carbon and renewable hydrogen economy—it is also a cornerstone of a more flexible, sustainable, autonomous, secure, resilient and competitive European energy system. Dedicated hydrogen infrastructure will help integrate variable renewable energy sources (VRES)[2], facilitate sector coupling, provide reliable supply of low-carbon and renewable hydrogen to industry. It will also provide certainty to existing and new hydrogen projects, reduce the risk of stranded assets, and enhance energy security across the continent. **This is why we believe Grids Package should be one of the key drivers for development of the future hydrogen infrastructure ecosystem**.

In addition to the messages and suggestions detailed in our response to the Grids Package consultation, this paper highlights other key issues that should be tackled to boost the deployment of hydrogen in Europe. First, we highlight that **creating the European hydrogen backbone requires first addressing insufficient supply and demand of hydrogen** that impacts risk profile and uncertain financial returns of investments in hydrogen infrastructure. We also bring forward **challenges linked with infrastructure planning which needs to integrate more sector integration principles to create optimal conditions for enabling and managing growing flexibility needs of the power sector**. Last but not least, we provide concrete proposals regarding **financing of hydrogen infrastructure** that must be addressed in this Package.

[1] According to Article 2, point (2) of Directive (EU) 2024/1788

[2] As defined by Article 2, point (57) and (58) of Regulation (EU) 2024/1789

Creating better market conditions for clean hydrogen to solve the chicken & egg problem

Without the infrastructure in place, no financial investment decisions will be taken by potential suppliers to invest in clean hydrogen. And without sufficient hydrogen volumes (both in terms of supply and demand), investment in hydrogen infrastructure will remain too costly and hence too risky for potential project developers. This is the main dilemma that the hydrogen sector faces today that requires a comprehensive approach that encompasses not only aspects linked directly to hydrogen infrastructure but also touching upon rules impacting clean hydrogen production conditions.

1.1 Fostering a fair, technology neutral and simplified framework for hydrogen production

Considering that the **adoption of the LCH DA will require adjustment of the RFNBO DAs**[3], that Energy Commissioner Dan Jørgensen announced an 'omnibus' for energy legislation, and current discussions and initiatives regarding phasing-out Russian Energy supplies, we believe an adjustment of the RFNBO DAs on a targeted basis should be carried out as soon as possible. Such revision would be important because:

- Maintaining monthly temporal correlation would help to keep the cost of hydrogen affordable.
- Extending the transitional period for additionality, together with the 10-year grandfathering period, would enable more investment decisions.
- Reconsidering the restrictions on industrial CO2 use and a broadened definition of possible CO2 sources limited by carbon pricing requirements is necessary to ensure CO2 availability for future projects.

While the Grids Package itself will not address directly the rules laid out in the Delegated Acts, it is important to keep in mind that changes we propose to the DAs will condition success of hydrogen infrastructure deployment that is to be framed and enabled within the upcoming Grids Package. The same applies to the following section.

1.2 Implementing the current regulatory framework designed to create demand for clean hydrogen

- **Rapid and optimized implementation of the Renewable Energy Directive (2023/2413) (REDIII) targets at national level.** REDIII hydrogen targets are likely to result in between 2.1 and 2.4 MT of green hydrogen demand by 2030. Given its importance for the hydrogen market, we urge the Commission to strengthen dialogue with industry and Member States and issue, as complement to the Grids package, a comprehensive guidance regarding the implementation modalities for the REDIII industry targets. The deadline for transposition of RED III has now passed, and we need to ensure Member States have adequate support and clarity regarding their implementation options as well as visibility regarding the consequences of non-compliance with REDIII RFNBO targets.
- **Adapting the Union Data Base for future imports of hydrogen from third countries** – It is important to lift any obstacles to importing clean gases from third countries. Directive (EU) 2018/2001 - REDII (Art 28.2) introduced the concept of a Union Database (UDB), to enable the tracing of liquid and gaseous transport fuels that are eligible for being counted towards RED

[3] Delegated Act 2023/1184 and 2023/1185

targets. The UDB is intended to be the common register for all certified biofuels, bioliquids and biogas that count towards EU targets for renewable energy. However, the European Commission has expressed an intention to exclude the certification of biomethane and by extension biomethane-based fuels when these rely on transport through extra-EU grids (by changing the currently applied certification requirements of Voluntary Schemes and excluding certified and mass-balanced volumes produced in third countries). The European Commission's proposed approach sends a negative signal for hydrogen and its derivatives, which will rely on the Union Database and for which imports are considered of critical importance. No limitation in terms of certification should exist for fuels which demonstrated full compliance of sustainability and GHG emissions saving requirements equivalent to those defined in Renewable Energy Directive. Solving this issue will also be a condition for ensuring compliance with REDIII targets.

- **Establishing and implementing a Hydrogen Import Strategy:** the REDIII, requires "that the Commission shall develop a Union strategy for imported and domestic hydrogen with the aim of promoting the European hydrogen market as well as domestic hydrogen production within the Union, supporting the implementation of this Directive and the achievement of the targets laid down herein, while having due regard to security of supply and the Union's strategic autonomy in energy and level playing field on the global hydrogen market". We call on the Commission to propose this strategy without delay as it has already published the assessment of the National Energy and Climate Plans[4] (which are the basis for this exercise).

After providing some conditions for successful hydrogen infrastructure development, the following chapter focuses on **concrete measures that should be addressed in the Grids Package in regard to hydrogen infrastructure planning.**

Facilitating and including sector integration in planning

Lagging administrative procedures, but above all permitting issues are slowing down the rollout of hydrogen infrastructure in Europe. To reach climate objectives, the planning process needs to carefully consider the specificities of the hydrogen sector and be done both from the top down (EU level coordination) and bottom-up levels– avoiding over-regulation detrimental to market dynamics. Moreover, to ensure the hydrogen grid is fully integrated and can complement the existing power and gas grids, it must be accounted across sectors in all existing and future planning schemes.

2.1. Implementation of the current regulatory framework

- **Swift implementation of the Hydrogen and Gas package –** the Package contains all the rules necessary for the planning and deployment of hydrogen infrastructure. It will become fully operational only when its main elements are implemented at national level, to provide visibility on who the Hydrogen Network Operators will be in each member state, what rules will define the operation of pipelines (network codes), and how rules for third party access and unbundling regime will be implemented for networks, storage facilities and import terminals. To facilitate implementation, which conditions the kick-off of several concrete projects in Europe, the Commission should swiftly adopt all the implementing and delegated acts prescribed by the Package. **As part of the Grids package, the European Commission**

[4] https://commission.europa.eu/publications/communication-delivering-unions-2030-energy-and-climate-objectives_en

should also develop an interim status for Network operators, to ensure they can be officially part of ENNOH before the Gas Package is fully implemented at national level.

- **Transposing RED III measures for accelerated permitting process**: art 15e of the Renewable Energy Directive creates a fast-track process for permitting for "grid and storage infrastructure necessary to integrate renewable energy into the electricity system". The Commission should develop, **as part of the Grids Package, a comprehensive guidance document with recommendations on how to accelerate permitting processes and include hydrogen production and transport into the scope of existing rules regarding streamlined permitting:**
    - Call on Member States to map out renewable acceleration areas as per their obligation under REDIII. As of now, only seven Member States have transposed the accelerated framework[5];
    - Clarify that dedicated grid areas include hydrogen infrastructure and extend the scope of the measure to ensure all types of clean hydrogen can be included in the areas;
    - Ensure all type of infrastructure not restricted to direct connection to the grid and co located storage, can be included in the acceleration areas. All types of infrastructure need to be developed (transport and distribution pipelines, but also storage and terminals).;
    - Guarantee coherence between different pieces of legislation published on the topic of permitting in a way that will create a clear and predictable framework for hydrogen infrastructure project developers.

2.2. Enhancing existing and devising new planning tools for infrastructure development

- **Including hydrogen production and transmission in planning for offshore renewable energy:** offshore hydrogen infrastructure connecting offshore electrolysers could have a major role in accelerating the development of renewable energy in Europe. Europe aims to connect 111 GW of offshore capacity to the shore, but without including electrolysers and hydrogen pipelines in the planning for new capacities, integrating those vast amounts of energy would be extremely complicated and expensive. This is due to the congestion issues the onshore grids are already experiencing. To remedy this, **the TEN-E regulation (Article 14) should be modified to include much stronger provisions on offshore hydrogen infrastructure connecting offshore electrolysers in the Offshore Network Development Plan (ONDP) elaborated by ENTSO-E.** In addition, ENNOH should be actively involved in the successive iterations of the ONDP. This is vital to enable optimal growth of the offshore wind capacities and support development of progressive, coordinated plans aiming at integration of electricity, gas, and hydrogen infrastructure. Consequently, the next ONDP, expected for 2026 should fully embrace a two-system approach (pipelines + electric cables) that is significantly more cost-effective than an "all or nothing" approach relying solely on electrical connections (as it has been done for the current ONDP version). The next step would be also reconsidering congestion payments mechanisms under the EMD regulation. Outright and unconditional compensation of offshore operators might disincentivize necessary investments in electricity system management. The mechanisms could be modified to make sure a standard

[E] European Commission, "Affordable Energy Action Plan", available here.

compensation to be topped by a premium - in case offshore plant operators commit to investing in flexibility systems that enhance grid management capabilities such as energy storage.

- **Developing a European Hydrogen Grid Strategy:** in November 2023, the European Commission published a document entitled "Grids, the missing link - An EU Action Plan for Grids" to make sure our electricity grids will operate more efficiently and will be rolled out further and faster. **A similar initiative for hydrogen should be announced in the upcoming Grids Package.** It would help identify the main infrastructure gaps and tackle the needs for hydrogen storage and flexibility to compensate for seasonality and adjust to baseload demand, as well as identify how to integrate different carriers such as ammonia, methanol or LOHC. It would also address development and fast-tracking of key hydrogen projects, long-term network planning (including filling the gaps with DSOs-authored Electricity and Gas Network development plans and Ten-Year Network Development Plan) and retrofitting of existing methane grids for hydrogen compatibility. It would also put forward potential scenarios for national and EU financing mechanisms, with the best existing case studies (more on financing in the following section).

2.3. Creating optimal conditions for enhanced flexibility of power grids

- Power-to-Gas (P2G) units are not traditional electricity consumers. They can act as flexibility and storage assets, capable of reducing consumption when the grid is under stress and ramping up operations when there is surplus renewable electricity. This makes them essential for enabling the integration of variable renewable energy sources (VRES), supporting system stability, and lowering overall energy system costs.

  Network tariffs have the potential to incentivise its flexible behaviour – subject to the availability of a hydrogen backbone and more flexible rules for hydrogen production. Without hydrogen transport infrastructure, these units must be located near offtakers and operate adapting to their load's profile, missing their full flexibility potential. This limitation is further reinforced by the requirements set by the RFNBO Delegated Act (2023/1184), which already imposes strict hourly temporal correlation rules from 2030 that will constrain the ability of hydrogen to operate in a system or market-friendly manner.

  Network tariffs can be a lever of system integration if the framework is right: the EU plans to invest around €1.3 trillion in grid infrastructure by 2040. ACER estimates that this could increase network costs for consumers by over 50% by 2050, with distribution-connected users bearing most of the burden. At the same time, congestion management costs are also rising—reaching €4.2 billion in 2023 alone. To prevent network tariffs from becoming a barrier to P2G deployment, Member States must implement a tariff framework that rewards flexible, system-beneficial behaviour, reduces future network needs through better integration of flexible loads, enables P2G to contribute to grid stability and decarbonisation.

  To unlock the system integration potential of P2G, it is essential that these units are explicitly recognised as a distinct category of network users and receive tailored regulatory treatment.

  To this end, Hydrogen Europe has the following 4 recommendations:
  - **Implement stepwise dynamic network tariffs to incentivise system-friendly behaviour** (provided the monthly correlation requirement under the RFNBO Delegated Act remains in place beyond 2030): Moving directly to a full dynamic network tariffs carries high

uncertainty and risks adding investment barriers. Instead, introducing a base or ceiling tariff with discounts applied when network users—such as P2G facilities—demonstrate system friendly behaviour could be introduced as it would reward flexibility without over penalising hydrogen and other electricity-intensive industries.

- **P2G units should be exempted from charges linked to certain environmental and public policies derived taxes or levies**, as they present positive externalities that are contributing to EU and national climate objectives through decarbonisation, reducing network needs, and enhancing renewable integration.
- **P2G units should be exempted from ancillary service obligation or adequately remunerated for the services they provide**, as they are the only loads already mandated to provide non-remunerated, costly non-technology-fit grid stability services as mandated by the EU Demand Connection Codes (which offers but does not guarantee derogation possibilities).
- **Include environmental, social and system integration criteria when awarding grid access priorities:** P2G supports industrial decarbonisation, local job creation, and foster additional investment into renewables. Member States and/or TSOs should include environmental, social and system integration criteria when awarding grid access; this could allow high system-value technologies such as P2G to have preferential access over other less system-beneficial demand units.

- **Developing an EU strategy on flexibility with storage targets**: according to the Electricity Market Design (EMD) Regulation, the Commission may draw up a Union strategy on flexibility, with a particular focus on demand response and energy storage, which may be accompanied, where appropriate, by a legislative proposal. The European Commission launched a set of Recommendations and a Staff Working Paper on Energy Storage, envisioning more than 200 GW and 600 GW of energy storage capacity by 2030 and 2050, respectively. However, these documents do not present a comprehensive strategy with Key Actions nor binding targets and is heavily focused on thermal storage for long term. **We call on the Commission to make this proposal one of the central positions in its Grids Package**. The strategy could reflect ACER findings in the EU's Indicative National Flexibility Targets, and account for the availability of flexibility across Member States. It should be followed up by a legislative proposal, either independently, or as part of the future revision of the EMD.

Creating an adequate financing framework

To properly translate the strategic and planning exercise into reality through the investments carried out by stakeholders, the right market signals are necessary. They must include to the best extent possible, all existing externalities and benefits that hydrogen Infrastructure brings to the system. Indeed, even with adequate planning and regulation in place, the future of European hydrogen infrastructure will still largely depend on availability of tailored funding.

3.1. Adapting the existing funding mechanisms to better suit infrastructure development needs

3.1.1. Connecting Europe Facility revamp

CEF Energy should be adapted to the scale of the hydrogen infrastructure network. The most recent PCI list highlights some issues within the mechanism that should be addressed to enable effective and speedy development of hydrogen infrastructure. **This could be addressed in the revised TEN-E regulation or as part of the Grids package:**

- **The overall budget of CEF Energy should be increased:** The current envelope – amounting to approximately 5.84 billion euros – which is to be split between all PCI categories – does not reflect the scale of infrastructure investment needs in Europe. In the last CEF-E round, hydrogen projects got awarded only 20% of the budget, against 60% for electricity infrastructure. To put this amount into perspective:
    - The recent EU Grids Action Plan estimates the need for electricity grid investments to reach 584 bn EUR by 2030, and a recent report from the European Commission estimates 1202 billion at the 2040 horizon. Electricity is expected to satisfy about half of the final energy demand in 2050 (from 23% today). To accommodate the new demand and the massive installation of renewables, the electricity grid capacity must increase 47% by 2030 and 144% by 2040 in Europe. The need for flexibility is likely to double by 2030;
    - In comparison, the investment needs for the repurposing of gas and build out of hydrogen infrastructure reach 170 billion for distribution and transmission pipelines at the 2040 horizon (400 billion also including electrolysers, storages, and terminals)[6]. Investing in hydrogen infrastructure will partially relieve the need for electricity grid expansion by providing flexibility to the system. The development of a pan-European hydrogen network in a multi-energy model over the 2030-2050 timeframe could save as much as 330 billion EUR compared with a more isolated approach.
    - **The envelope of CEF-E should be boosted to ensure it can support conjointly the development of all types of infrastructure.**
- **The rate of co-funding for electrolysers and hydrogen infrastructure should be 75% of the total eligible cost**. Most often, CEF energy offers only 30-50% funding for infrastructure works, which is insufficient to de risk projects in development. Electrolysers and hydrogen PCIs represent key assets for the reinforcement of union wide security of supply; they strengthen solidarity of the Union by enhancing cross-border energy security, enabling a just and inclusive transition, supporting shared climate goals, and fostering economic cohesion through joint investment and market integration. Hydrogen infrastructure is also highly innovative because it enables the transport, storage, and use of a clean, versatile energy carrier across sectors and borders, using new technologies like high-pressure pipelines, repurposed gas grids, and liquid hydrogen terminals that are key to a decarbonised, integrated energy system. **Consequently, they should be eligible for the highest co-financing rate of 75% (as per art 15(3)(b) of the Regulation 2021/1153 Connecting Europe Facility).**
- **Overall, the PCI/PMI selection process should be enhanced through:**
    - **Fast-track procedure for renewing PCI/PMI status.** The current framework governing the PCI process is characterized by excessive procedural duration and a limited validity period of only two years for PCI status. This temporal constraint introduces a degree of uncertainty for project promoters and investors, while simultaneously generating avoidable administrative burdens for promoters, the European Commission, and

[6] See study commissioned by the European Commission, from February 2025, "Investment needs of European energy infrastructure to enable a decarbonised economy" , https://op.europa.eu/en/publication-detail/-/publication/864c619c-e386-11ef-be2a-01aa75ed71a1/language-en

National Regulatory Authorities. To enhance procedural efficiency and regulatory clarity, it may be appropriate to introduce a streamlined mechanism for the renewal of PCI/PMI status in cases where no material changes have occurred since the previous designation. Under such circumstances, a simplified validation—rather than a comprehensive reassessment—could be employed. This expedited review would enable the continued monitoring of previously approved projects without subjecting them to the full rigour of the initial evaluation process. Such an approach would not only reduce administrative overhead for all stakeholders involved in the Regional Groups but also foster a more stable and predictable environment for infrastructure development, particularly for projects that have already advanced significantly toward implementation.

  - Standardized, more transparent and accelerated selection process through **enhanced application process itself – this could be done through development of official guidelines for project promoters who wish to submit their projects;**
  - Better communication with candidates during the evaluation process - candidates frequently struggle to obtain timely and clear information during what can be a very lengthy and complex evaluation period. The criteria and reasoning behind certain decisions are not always communicated in a consistent or accessible manner, leaving applicants uncertain about how to improve or adapt their proposals for future calls. This opacity can discourage participation and reduce trust in the process. To ensure fairness and foster stronger engagement, the **European Commission should commit to greater transparency by regular updates, and more detailed feedback throughout the selection process.**

- **Modified assessment criteria for storage projects:** the current assessment criteria and methodologies used to grant PCI status are not reflecting the characteristics of storage and the specific value added to the energy system through underground hydrogen storage. Out of 20 hydrogen storage projects submitted so far, only 7 projects were selected. This should serve as a lesson to ensure that **the subsequent calls better reflect the benefits associated with these new types of infrastructure rather than try to implement a read across from the natural gas market.** Also, the focus on physical connections between Member States makes it particularly difficult for storage operators to demonstrate cross-border impact, while key benefits that underground hydrogen storage can bring to the system are not well reflected in the PCI assessment methodology
- **Enhancing Access to CEF Funding for hydrogen infrastructure.** The current framework governing access to CEF funding—particularly the requirement for a Cost-Benefit Cross-Border Allocation (CBCA) decision prior to grant eligibility—warrants reconsideration in the context of hydrogen infrastructure development. Introducing greater flexibility, such as allowing applications based on a conditional CBCA could significantly accelerate the implementation of PCIs, potentially reducing timelines by a year or more. CEF support has proven instrumental in advancing PCIs by offering targeted financial assistance for both preparatory and construction phases. This funding has mitigated investment risks, enhanced project credibility, and contributed to broader public acceptance. Furthermore, the TEN-E Regulation should establish clear procedural milestones and deadlines for the Investment Request process. Doing so would ensure a more predictable and efficient rollout of hydrogen infrastructure across the EU, aligning with broader climate and energy objectives.

3.1.2. Electricity Market Design adaptation to fit the purposes of the Grids Package

- **Addressing investment signals across different timeframes for storage**: While the current electricity market design incentivizes short-term storage investments through the marginal pricing in the electricity market, sending investment signals to long-term storage remains a challenge. One way to address it would be through **the adaptation of capacity mechanisms to storage configurations as well as including hydrogen storage into non-fossil flexibility support schemes. The upcoming Grids Package should set up as action points for the Commission to address these challenges.**

3.2. Develop efficient derisking mechanisms

Energy networks are usually financed by network users. This will not be replicable for hydrogen, as it is still a nascent market. The Grids Package should introduce guidance on how to derisk significant investments required.

- **At Member States level**, this should build on the expected methodology from ACER to be published in August this year on intertemporal costs allocation mechanisms.
- **At European level,** In order to further facilitate the development of a robust hydrogen market across Europe the integration of inter-temporal cost allocation as a strategic de-risking instrument should be developed. This mechanism would serve to safeguard the revenue streams of HTNOs, while shielding them from disproportionate exposure to market-related uncertainties, such as volume risk. A comparable model has already been implemented at the national level in Germany and could serve as a reference for broader application at the European level. To enhance investor confidence and accelerate project implementation, the introduction of a cap on hydrogen network tariffs, coupled with revenue guarantees for infrastructure operators should be proposed. These guarantees could be provided either collectively by the Member States involved in specific hydrogen import corridors or centrally by a European institution. Such financial safeguards could be structured in various formats, tailored to the specific characteristics of each project, and would play a critical role in enabling the timely deployment of infrastructure essential to the creation of an integrated European hydrogen network. A hybrid approach based on this could be applied to hydrogen corridors. This could combine regulatory allocation mechanisms via NRAs/ACER, EU funding (e.g. CEF, Innovation Fund), and political agreements between Member States. This would help de-risk investments, ensure fair cost-sharing, and accelerate the rollout of transnational hydrogen corridor