WindEurope Response: European Grids Package

General questions

Secure supplies of clean and affordable energy are critical for European competitiveness, preparedness, security and the EU's decarbonisation efforts towards 2030 and 2050. Ensuring a well-integrated and optimised European energy grid is crucial to accelerating a cost-efficient clean energy transition. The mission letter to Commissioner Jørgensen calls to work for the production of "more clean energy" and "the upgrade of the grid infrastructure". Specifically, it is requested to "look at the legal framework on European grids with the aim to help upgrade and expand grids to support rapid electrification [and] speed up permitting" and highlights the need to "upgrade our grid infrastructure and develop a resilient, interconnected and secure energy system".

1. **To what extent do you agree that existing EU legal framework for grids delivers on the following objectives?**

   Mark with an X, once per objective.

	Strongly disagree	Slightly disagree	neutral	Slightly agree	Agree	Don't know
Market integration		x				
Interconnections	x					
Competition / Affordability of energy prices		x				
Energy security		x				

Please explain your reply providing, where possible, qualitative and quantitative evidence.

- **Third party access to grids**: System Operators face little accountability for delayed third-party grid access. In many Member States delayed grid access can be easily justified and accepted by local authorities if the System Operator puts the blame on grid development delays. The legal framework should enforce transparency in connection decisions, require public disclosure of grid access timelines, and mandate justification and publication of hosting capacity methodologies and not only the available capacity.
- **Market integration:** Market integration across the EU remains fragmented due to inconsistent implementation of electricity legislation, internal grid bottlenecks, and limited cross-border coordination. Member States must harmonize network codes such as CACM, Demand Response, and Requirements for Generators, expand Long Term Transmission Rights, and prioritize grid and flexibility investments over bidding zone splits to support renewables and ensure efficient cross-border electricity trade.
- **Interconnection:** Lack of top-down planning in the TYNDP hinders interconnection progress. So far planning hasn't aligned with EU and national climate and energy targets. Many Member States fall short of the 15% interconnection goal. TYNDP 2024 estimates that an additional 88 GW of cross-border transmission capacity is required by 2030, far exceeding the 26 GW

currently expected to be commissioned. The recent Iberian incident shows the need for better interconnection. Stronger regional coordination also in the North Sea is vital. EU-UK trading barriers must be addressed, including CBAM impacts. EU should also better address permitting delays, bureaucracy and public opposition. Interconnections serving European interests should be recognised as central to the functioning of the Single Market. The TEN-E framework should also enforce transparency on national grid projects.

- **Competition and affordability:** Slow grid development, uneven tariffs, and inconsistent connection rules in Network Codes such as Requirement for Generators (NC RfG) on grid forming and hybrid co-located plants will hinder electrification and renewables deployment, leading to higher system operation costs**.** The EU must boost incentives and coordination for grid development, prioritize efficient grid use through hybrid co-located projects, and ensure market-based procurement of grid services. Transparent tariff methodologies will also be key to public trust and investment deployment.
- **Energy Security:** Given the current geopolitical and climate context Europe must accelerate grid expansion and flexibility to enhance energy security and reduce fossil fuel reliance. Homegrown wind energy helps boost Europe's competitiveness, security and prosperity while delivering on decarbonisation. But insufficient grid build-out is hindering its deployment. Other key solutions like storage, grid optimising tech and demand side flexibility remain underdeveloped. A unified framework of scenarios across electricity, gas, and hydrogen will be essential for power system resilience. Security standards for critical infrastructure need to be strengthened and expanded to address very carefully supply chain threats, vulnerabilities and risks.

2. **In your view, what are the main barriers to grid infrastructure development necessary for the energy transition to happen, and at sufficient pace?**

   [Rank them from 1 (most important) to 8 (least important)]:

   - Suboptimal transmission network planning - 3
   - Suboptimal distribution network planning - 2
   - Lengthy permitting - 1
   - Insufficient financing - 4
   - Insufficient supply chains - 5
   - Inefficient use of existing infrastructure - 6
   - Regulatory uncertainty - 7
   - Other (please specify below)

Please explain your reply providing, where possible, qualitative and quantitative evidence.

NOTE: The rating here isn't definitive, as all areas above are priorities and different dimensions of action on grids. e.g., Assigning regulatory uncertainty a '7' is due to the question's format and not the absence of challenges or need for further work in EU regulation.

challenges or need for further work in EU regulation.

- **Lengthy Permitting**

  Permitting delays, often 7–10 years, are a major barrier to grid and energy projects. These are caused by complex layers of approvals, inconsistent EIAs, litigation risks, public opposition and outdated rules for permitting of Repowering and storage projects. EU must enforce RED III, extend streamlined rules to grids, mandate one-stop-shops, harmonize EIAs, and fast-track repowering. Grid projects must be treated as matter of public interest.

- **Suboptimal Transmission Network Planning**

EU transmission planning is reactive and misaligned with net-zero goals. NDPs lack cross-border coordination and rely on outdated demand and generation data. A top-down EU approach, proactive long-term planning, and regular reviews are needed. Strategic queue management and moving away from first come first serve into a dynamic and smart queues management will also help in effectively planning the grid. Regional cooperation especially in the North Sea will also be key to timely and efficient grid development.

- **Suboptimal Distribution Network Planning**

DSOs lack incentives, clarity, and coordination with TSOs for distribution network planning. EU must support anticipatory investments in distribution grids. National Regulatory Authorities (NRAs) need clearer guidance to approve such forward-looking investments. Transparent publication of grid hosting capacity maps will also help. Moreover, DNDPs reflect national flexibility needs as well align with TYNDP.

- **Insufficient Financing**

TSOs are facing major financial and skills gaps. ENTSO-E estimates €400 billion is needed to fund offshore grid assets by 2050, €260 bn of which would be for the North Seas. But grid financing is hindered by market risks and cost allocation issues among countries. Regional coordination and fair cost-sharing are vital for onshore and offshore grid buildout. EU must scale up CEF and EIB support, enable developer-led investments, and explore new funding tools asap such as through general taxation schemes, support by the EIB or national promotional banks, other national or EU funds combined with private finance.

- **Insufficient Supply Chains**

Grid supply chains are strained, with 2–4-year lead times for key components like transformers. EU lacks the required domestic manufacturing capacity and skilled labour. The EU Grids Package should incentivise long-term contracts between TSOs and DSOs and suppliers to provide the certainty needed for supply chain investment. Grids expansion must be done in time based on anticipatory investment's identification. The recent EIB investment instrument for grid equipment manufacturing is a step in the right direction.

- **Inefficient Use of Existing Infrastructure**

Grid infrastructure is underused due to outdated practices and fragmented regulation. Mechanism such as flow-based methods, grid optimising tech, and hybrid co-located plants can unlock capacity

but need regulatory clarity. Better planning, support and market incentives are also needed to ramp up investments in ready-to-deploy grid stabilisation technologies, such as synchronous condensers, static synchronous compensators and grid optimisation overall.

- **Regulatory Uncertainty**

Regulation till now has focused on avoiding overbuild and stranded assets. But this approach slows the necessary grid expansion. Mandatory and unharmonized rules for hybrid co-located plants and grid-forming add uncertainty. System Operators must be held accountable for access delays. In addition to compensation, such delays should also be protected from detrimental impacts on compliance with other regulatory requirements, such as those relating to contract- for-differences (CfD) start dates.

- **Other:**

➢ **Functional grid tenders**: Offshore wind, set to deliver 300 GW by 2050 in the North Sea alone, requires over EUR 400 bn in grid investments. But today's complex tendering processes aren't built for scale. Industry is spending significant resources solving the complexity of tenders that are not efficiently designed. Tenders should be functional that focus on outcomes like availability, resilience, and efficiency, rather than prescribing technical details. This change could accelerate grid delivery by up to 2 years (25%) and cut societal costs by up to 10%.

➢ **Commitment to RES targets:** There are still uncertainties regarding the level of commitment from various governments, particularly concerning offshore wind development.

➢ **Long-term infrastructure investment**: Uncertainty about governments' willingness to support large-scale infrastructure investments, both nationally and cross-border, especially when cost recovery for TSOs and DSOs leads to higher tariffs for consumers. ACER's 2025 report on Electricity Network Tariff Methodologies in Europe highlights the growing share of network tariffs in final electricity bills, raising concerns about unhealthy intra-EU competition via tariff structures.

➢ **Cost-sharing for cross-border infrastructure**: It is difficult to find a political commitment from Member States to share costs for infrastructure expansion, even when projects' benefits extend beyond hosting and receiving countries. The cost-sharing approaches applied by grid promoters do not capture these benefits. And experience shows that no cost allocation has been possible beyond the asset hosting countries. The 2024 European Commission's guidelines on collaborative frameworks for offshore grids attempt to correct this, but to our knowledge it has not been proven to be used yet.

EU Infrastructure planning

Requirements for planning of transmission network development on a national and European level are included in the internal market legislation (for electricity as well as hydrogen and decarbonised gases) and the TEN- E Regulation. They require the TSOs to put forward network development plans with at least a 10-year outlook for grid

development biannually. At the European level, this is done through the Ten-year network development plan (TYNDP), currently developed by ENTSO-E and ENTSO-G.

The following questions apply to both electricity and hydrogen, please specify the sector you are referring to when answering these questions:

Mark with an X.

- Electricity
- Hydrogen
- Both

3. **To what extent do you agree with the following statements?**

Mark with an X, once per statement

	Strongly disagree	**Slightly disagree**	**neutral**	**Slightly agree**	**Agree**	**Don't know**
The current framework in relation to the TYNDP and national transmission development plans provides for integrated and coherent planning at national and EU level	x					
The TYNDP identifies all cross-border infrastructure needs				x		
The TYNDP identifies all relevant projects to match the actual infrastructure gaps		x				
The TYNDP should have a more top-down European approach to identify cross-border infrastructure needs, meaning going beyond a project bottom-up approach and ensuring that the planning aligns with EU and Member States' climate and energy objectives					x	
The TYNDP should have a more top-down European approach to better link identified needs and					x	

priority projects of European interest						
Projects at national level should align and support priorities of European interest					x	

Please explain your reply providing, where possible, qualitative and quantitative evidence.

The current structure of TYNDP relies too heavily on a bottom-up approach, which limits its ability to deliver integrated, coherent planning across national and EU levels and across energy carriers. Its scenarios are not fully aligned with national and EU energy and climate targets. Focusing solely on EU-level emission reductions overlooks national goals for renewable capacity and electrification. It is also inadequate to effectively coordinate electricity and hydrogen cross-border infrastructure planning and gas pipeline decommissioning or repurposing.

Moreover, the TYNDP process does not adequately reflect national developments, such as delays in grid projects or the content of national network development plans. Cross-border priorities are narrowly defined, leaving infrastructure gaps in regions like northern Italy and western Poland underrepresented despite high curtailment risks. Distribution grid needs, which often have cross-border relevance, are also insufficiently considered.

This misalignment results in a mismatch between planned infrastructure and what is needed to ensure affordable electricity for consumers. Without a top-down planning layer driven by politically adopted targets, energy affordability and security are at risk.

To address these gaps, a stronger top-down planning approach is needed at EU and regional levels. Member States should detail in their NECPs how national infrastructure planning aligns with EU grid targets and scenarios, including measures to scale up transmission and distribution investments. The European Commission, ACER, or a neutral third party should lead scenario development, ensuring consistency with national and EU targets (not only for emission reduction) and identifying cross-border gaps. ENTSO-E, ENTSO-G, and ENNOH should validate these scenarios and align their plans accordingly.

While planning should be top-down, Member States must retain the right to reject projects with transparent justification. Long-term support for regional clusters can be ensured by empowering NRAs with net-zero mandates, increasing EU funding to projects that demonstrate strong regional cooperation and clarify joint planning and cost-benefit sharing mechanisms including third countries such as the UK and Norway.

Finally, TYNDP should be complemented by robust regional planning, including bundled project clusters that offer system-wide solutions, especially for offshore grids in the North Sea and Baltic Sea. We look forward to the TYNDP 2026 cycle and its updated scenario methodology, which we hope will better reflect policy targets and real-world implementation challenges.

We look forward to the new cycle of TYNDP 2026 with the updated scenario methodology which we expect to be more practical and aligned with policy targets at national and EU level and practical delays in implementation.

4. **The needs identification at EU level should (you can choose more than one option):**

Select one:

- Cover cross-border projects within the EU
- Cover internal reinforcements in Member States necessary for cross-border projects
- Cover connections with third countries
- Cover non-infrastructure solutions (e.g. grid enhancing technologies)
- Follow a cross-sectoral approach
- Other (please specify below)

If other, please specify:

A comprehensive and realistic assessment of grid infrastructure needs must extend to address the full spectrum of capacity constraints across the European power system. Planning must incorporate Grid Enhancing Technologies like Dynamic Line Rating and advanced FACTS to accelerate deployment timelines, as well as non-wire alternatives such as co-located battery energy storage systems. This will also support decarbonisation and electrification. System planning should integrate cross-sectoral infrastructure, such as linking electricity with hydrogen, e-mobility, and heating networks, to reflect the interconnected nature of the energy transition. Also, third-country cooperation, especially in offshore wind development with partners like the UK and Norway, should be embedded into the EU's strategic grid vision. This is crucial to exploit the renewable potential of the North Sea.

5. **Do you agree with the following statement? The frequency of the identification of system needs process (every 2-years) is fit for purpose.**

   - Yes
   - No

   If no, the frequency should be changed as follows:

   - Yearly, in a more simplified form
   - Every 3 years
   - Less frequently
   - Instead of regular updates, updates when required by major policy changes and developments
   - No opinion

6. **Do you agree with the following statement? The frequency of the scenarios building process (every 2-years) is fit for purpose.**

   - Yes
   - No

   If no, the frequency should be changed as follows:

- Yearly, in a more simplified form
- Every 3 years
- Less frequently, than every 3 years
- Instead of regular updates, updates when required by major policy changes and developments
- No opinion

Please explain your reply providing, where possible, qualitative and quantitative evidence.

Increasing the frequency of scenario building from the current 2-year cycle could be challenging. ENTSO-E has to run full-scale grid and market models across all of Europe, which requires significant time and resources. Updating these models annually would strain capacities, especially in countries with limited technical and staffing resources. Instead of speeding up the cycle, it's more efficient to ensure national network developement plans are better aligned with the TYNDP process. This way, data is updated consistently as it moves from national planning into the European framework, improving accuracy and coordination without overburdening national authorities.

7. **Do you agree with the following statement? The governance framework of the TYNDP, i.e. the role of all individual involved, should be revised.**
   - Yes
   - No

If yes, please explain:

Currently, the process is overly TSO-centric, which limits its strategic value and fails to capture the full range of infrastructure needs and system solutions. The scenarios and system needs of the TYNDP should have a top-down approach and should be drafted by a neutral party, as ACER or the European Commission. TYNDP governance model should be expanded to formally include key stakeholders currently underrepresented: like renewable energy developers, DSOs, or flexibility providers.

In this context, we appreciate being part of the Stakeholder Reference Group (SRG) for improving the scenario building process. Further stakeholder involvement could be achieved through the creation of a structured stakeholder board with voting rights on project prioritisation, more transparent criteria for project inclusion and assessment, and a stronger link between the TYNDP and national permitting and auction frameworks.

8. **In your view, how can the needs for CO2 cross-border infrastructure in the EU be reflected in the PCI/PMI selection process under the TEN-E Regulation? Are there other ways the TEN-E Regulation could support the development of future CO2 cross-border infrastructure?**

Please explain your reply providing, where possible, qualitative and quantitative evidence.

The TYNDP scenarios should clearly justify and transparently quantify the need for cross-border CO_2 networks, especially in comparison to local infrastructure within areas of dense industrial activity. This assessment should rely on realistic assumptions about the deployment of carbon capture, storage, and utilisation (CCUS), particularly regarding efficiency and cost factors.

Electricity network planning at national level

At a national level, transmission and distribution grid operators are obliged to establish respective network development plans ("NDP") at least on a biannual basis, pursuant to requirements of Articles 51 and 32 of the Directive (EU) 2019/944. Plans should set out planned investment, taking into account future development of supply and demand, including renewables generation, flexibility and electric vehicles (EVs) recharging points.

9. **Concerning the national transmission and distribution network development plans, do you agree with the following statements?**

   Yes/No

   - The existing legal framework for transmission network development plans is fit for purpose
   - There is a sufficient alignment between national transmission development plans between Member States - NO
   - There is a need for better alignment between national transmission and distribution network development plans across the EU - YES

10. **Concerning the distribution network development plans, to what extent do you agree with the following statements?**

Mark with an X, once per statement

	Strongly disagree	Slightly disagree	neutral	Slightly agree	Agree	Don't know
The existing legal framework for distribution network development plans is fit for purpose		x				
The coverage of small distribution system operators (DSOs) in the network planning is		x				

sufficient under the existing legal framework						
There is sufficient transparency of distribution network development plans		x				
The implementation of the distribution network development plans is sufficient and their objectives met			x			
Distribution grid operators are equipped with sufficient capacity to properly plan distribution grids			x			
There should be a stronger coordination of distribution network planning at EU level			x			

Other:

- Distribution Network Development Plans (DNDPs) are often not published, inaccessible, or lack standardisation and technical detail. This makes them difficult to use for developers and local authorities. DSO planning must be standardised as much as possible to enable data aggregation at regional and national levels, especially for NECPs. These plans should align with national energy goals and realistic demand projections, supported by clear indicators and extended planning timelines. With over 2,000 DSOs across Europe, harmonised planning is a considerable challenge. But a common set of minimum planning principles covering scenario development, stakeholder engagement, and alignment with transmission plans will be essential and helpful. The DSO Entity's 2024 report on DNDP good practices provides a strong foundation for this effort.
- A key gap in distribution network planning lies in the limited implementation of anticipatory investments. While recent EU guidance recognises their importance, national regulatory frameworks must now fully transpose and operationalise these provisions. Legislation should clearly define what qualifies as anticipatory investment, and ensure these are eligible for investment recovery. To manage risk, validation procedures should include cost-benefit analyses that weigh the societal impact of under-utilisation against the risks of delayed capacity, factoring in electricity prices, renewable integration, and curtailment. Countries like Great Britain and France offer useful models in this regard.
- DSOs often lack the institutional and technical capacity to meet new regulatory demands. Requirements such as scenario input, climate-aligned investment planning, and identifying cross-border impacts increase pressure on already limited resources. This is reflected in the underrepresentation of distribution projects on PCI/PMI lists, which remain too complex and resource-intensive for many DSOs to navigate effectively. EU support for DSO capacity building

through funding and technical assistance is essential. The PCI/PMI application process should be simplified for distribution-level projects, and a harmonised planning framework should be mandated for larger and national DSOs. In parallel, DSOs should be supported in investing in smart grid operations to provide flexibility services to TSOs.

- Flexible connection agreements can serve as a short-term tool to manage congestion and improve renewable access, particularly in distribution networks. However, they must remain a temporary solution, as mandated by the revised Electricity Regulation, and not become the default approach. Their use should be clearly limited, with curtailment caps defined in terms of volume, duration, and frequency to avoid uncertainty for developers. These agreements must not replace long-term grid planning and investment. We urge the Commission to provide guidance on their implementation as part of the upcoming framework on grid connection queue management.

Transparency on electricity grid hosting capacity

Article 31(3) of Directive 2019/944 (EU) requires that distribution grid operators provide system users with the information they need for efficient access to, and use of, the system, in particular on capacity available for new connections in their area of operation, information on connection requests as well as on how the available grid hosting capacity is calculated. The EU Action Plan for Grids further strives to enhance transparency by creating a common understanding on the grid hosting capacity calculation across Europe.

11. **Do you consider additional measures necessary to reduce grid connection lead times? Should there be differentiated approaches for different types of uses (industry decarbonisation, residential heat, charging infrastructure)?**
    - Yes
    - No
    - Don't know

If yes, please explain your reply providing, where possible, qualitative and quantitative evidence.

- On grid hosting capacity calculation, action 6 of EU Action Plan for Grids is crucial to prioritize. We understand that the System Operators are focussing on defining key terms, creating a unified access portal for national grid maps, and sharing best practices. This is a welcome step. However, the most critical priority remains establishing a harmonized methodology for calculating available grid capacity across Europe. Without this, even a common platform risks offering fragmented and non-comparable insights due to inconsistencies in national approaches.
- The lack of visibility into current methodologies, some of which we fear may be overly conservative, raises concerns about their role in the growing backlog of renewable energy

projects awaiting grid connection. While national grids have unique characteristics, a broadly consistent calculation framework is essential to ensure fair, accurate, and transparent capacity estimates. Clear guidance from ENTSO-E and the EU DSO Entity would be instrumental in driving this harmonization.

- On reducing grid connection lead times, grid connection queues management reform is urgently needed in Europe to reduce grid connection lead times. The existing first-come, first-served approach is outdated. It allows speculative and immature projects to block capacity, leading to inefficient use of the grid and delays for viable projects. This system must be replaced with a smarter, readiness-based model that prioritizes mature projects such as those with secured permits, financing, and land rights.
- Developers should meet minimum entry requirements, including financial commitments, and comply with binding milestones tied to permitting and construction progress. Projects that fail to meet these milestones should be removed from the queue unless delays are caused by public authorities. This will ensure that only serious, ready-to-build projects occupy grid capacity.
- Projects that offer system wide value, such as hybrid co-located projects with two renewable technologies or co-located storage, repowered wind turines or assets with advanced grid capabilities, should be prioritized once they meet clear entry criteria. Within these filtered categories, a first-come, first-served approach can still apply to ensure fairness and simplicity.
- Permitting processes must be streamlined. One-stop shops should be established to centralize and accelerate application handling. Strategic assets such as battery storage, renewable generation, and industrial decarbonisation projects must be fast-tracked. The EU must ensure full and timely implementation of the Renewable Energy Directive (RED III) and the Emergency Permitting Regulation across Member States. Internal procedures within system operators must also be simplified to avoid unnecessary delays in grid development.
- Anticipatory grid planning is also essential for this. Transmission and distribution system operators must plan for future electrification and renewable capacity needs at least ten years ahead. Grid connection rules must be updated to support co-located renewables and storage, and revenue stabilization schemes must be adapted to reflect the value of hybrid co-located and flexible projects.
- Fair cost-sharing mechanisms between generators and system operators must be established, and developers should be allowed to build grid infrastructure and transfer it to operators under fair remuneration.
- Transparent, real-time information on available capacity and queue status must be made publicly available in a standardized format. TSOs and DSOs should be required to publish this data regularly to support better planning and reduce administrative burdens.

Permitting

Directive (EU) 2023/2413 (Renewable Energy Directive – RED III), Directive (EU) 2024/1788 (Directive on Gas and Hydrogen Markets), Regulation (EU) 2022/869 (TEN-E

Regulation), and Regulation (EU) 2024/1735 (Net-Zero Industry Act) establish provisions for the acceleration of permitting procedures for renewable energy generation, storage and energy networks including CO2 assets. Whilst some RED III provisions have yet to be transposed by Member States due to upcoming deadlines, permitting procedures are perceived as one of the main cause of delays in project implementation.

12. **In order to accelerate permitting for energy networks, storage and renewables and CO2 assets, to what extent do you agree with the following statements?**

Mark with an X, once per statement

	Strongly disagree	**Slightly disagree**	**neutral**	**Slightly agree**	**Agree**	**Don't know**
The permitting provisions of the TEN-E regulation are cleat and easy to implement					X	
Permitting procedures should be fully digitalised					X	
Availability and sharing environmental and geological data (and other technical data required) should be ensured					X	
One-stop shops for network permitting should be introduced					X	
Environmental assessments should be simplified and streamlined					X	
Legal deadlines for permitting procedures need to be shortened					X	
Deadlines for the permitting of networks should be shortened or established where missing					X	
Deadlines for the permitting of Projects of Common Interest and Project of Mutual Interest should be shortened and clarified to reflect the urgency in implementing these projects					X	

The permitting procedures for storage should be simplified*					X	
The permitting procedures for distribution network projects and small-scale renewable projects, as well as repurposing, refurbishment and repowering should be simplified					x	
The permitting procedures for hybrid projects (combining different technologies, including storage) and other innovative solutions should be simplified					x	

Permitting remains one of the most persistent and significant barriers to the timely deployment of energy infrastructure across the EU, including electricity grids, renewable energy, storage, and CO_2 transport networks. To meet the EU's climate and energy targets, the European Commission must ensure the swift and uniform transposition of the Renewable Energy Directive (RED III) across all Member States. This should be supported by practical implementation guidance, robust monitoring, and enforcement mechanisms.

The most urgent priority is to streamline and harmonise permitting procedures. Every Member State should establish a fully empowered one-stop-shop with legal authority to coordinate and approve multi-agency permits. These authorities must be adequately staffed and resourced to handle the growing volume and complexity of applications. Full digitalisation of permitting processes, including access to environmental and geological data, will reduce administrative burdens and improve transparency. Member States should also be required to report regularly on permitting progress and compliance with statutory deadlines, with clear accountability mechanisms in place.

The revised TEN-E Regulation introduces a "pre-consultation" step (Article 9.4), However, if project promoters are required to conduct this EU-mandated consultation in addition to a second consultation as part of the national permitting process, it creates a duplicative burden. Permitting remains a national responsibility, and diverging interpretations of TEN-E especially in cross-border contexts (Articles 9.5 and 9.6) further complicate the process. Harmonised guidance is needed to avoid duplication and misalignment.

Environmental Impact Assessments (EIAs) are another major source of delay. National inconsistencies in screening and interpretation prolong timelines. To address this, penalties for unjustified delays in EIA processing should be introduced and harmonised across Member States. Long-term data collection requirements such as two-year environmental studies can impose excessive burdens on projects. RED III Article 16a rightly limits the permit-granting process to a maximum of two years. Publicly held environmental and geological data should be made digitally accessible to project promoters. When data is collected privately, overly complex and unstandardised sharing requirements should be avoided to prevent disincentivising early investment.

Permitting frameworks must also evolve to reflect the realities of modern energy systems. Hybrid co-located projects should be allowed to submit joint applications under a unified process. Storage assets must no longer be treated as consumption; a single permitting process should apply to both import and export capacity for battery energy storage systems (BESS). Retrofitting storage onto existing generation assets should not trigger a full re-permitting process. The Network Code on Requirements for Generators (RfG) should include clear language to support faster grid connection of co-located assets, reducing time and cost for developers.

Repowering faces similar challenges. In many Member States, repowering is treated as a new development, despite being an upgrade of existing infrastructure. Dedicated permitting frameworks are needed to reflect the reduced environmental footprint of repowering. These should include shorter timelines, streamlined grid connection procedures, and exemptions from EIAs unless substantial changes such as significantly larger turbines are introduced. The RfG should clearly define what constitutes significant modernisation to ensure consistency and transparency, which is currently lacking in the draft.

Grid infrastructure permitting must be accelerated. Grid development should be classified as being of overriding public interest. Permitting for grid reinforcements and new infrastructure must follow the same streamlined procedures as renewable generation. The EU should also promote anticipatory grid planning, requiring TSOs and DSOs to plan for future electrification and renewable capacity at least 10–12 years ahead.

Facilitating investments in grid infrastructure

Article 16 of the TEN-E Regulation facilitates investments with cross-border impact through a cross-border cost allocation (CBCA) framework where the relevant national regulatory authorities (NRAs) jointly agree on CBCA decision. Where there is no agreement among the NRAs, they may jointly request ACER to decide on the investment request including the CBCA.

13. **To what extent do you agree with the following statements?**

Mark with an X, once per statement

	Strongly disagree	Slightly disagree	neutral	Slightly agree	Agree	Don't know
The current cross-border cost allocation (CBCA) framework is fit for purpose		x				
An investment request within the CBCA framework could also cover several projects ('bundling') to facilitate cost sharing amongst more Member States beneficiaries					x	
The CBCA framework should be developed further to facilitate that investment costs are shared amongst countries, beyond hosting					x	

Member States, in proportion to the expected benefits						
The role of involved actors (Member States, NRAs, ACER, TSOs) should be revised to facilitate the process					x	

The governance model of the current CBCA framework must evolve, as itis too slow and risk averse. ACER and the European Commission need a stronger role, with the authority to intervene early in the process to resolve deadlocks and guide cost allocation decisions. ACER should issue early opinions and facilitate consensus to reduce uncertainty and accelerate project timelines.

The EU should establish a structured forum for NRAs to exchange on CBCA challenges, build trust, and align on methodologies, similar to the Offshore Transmission Cooperation (OTC) for TSOs or the North Seas Energy Cooperation (NSEC) for ministries. Early and active involvement of NRAs will reduce perceived risks and increase the likelihood of project approval.

The CBCA framework must allow more flexible cost-sharing arrangements that go beyond compensating net-negative impacts. TSOs must improve cross-border collaboration, particularly in data sharing and joint planning. ACER should support this by facilitating early dialogue and helping align national perspectives.

The framework must also support bundling of multiple cross-border upgrades into a single investment request. This is especially important for offshore wind hubs and meshed grid zones in the North Sea and Baltic regions. Bundling simplifies planning and enables more equitable cost sharing. The framework should also apply the beneficiary-pays principle more consistently, ensuring that countries benefiting indirectly (through price stability, congestion relief, or enhanced security of supply) contribute fairly to project costs.

It should also expand to fully include hybrid projects, cross-border radials, and co-located generation-demand hubs. Postponing generation considerations until after regional grid planning risks the buildout of these assets. National differences in grid connection responsibilities—where TSOs manage them in some countries and developers in others—further complicate coordination and highlight the need for early, integrated planning.

14. **To what extent other instruments or tools (beyond CBCA) should be considered or modified to facilitate financing of cross-border infrastructure?**

Mark with an X, once per statement

	Strongly disagree	Slightly disagree	neutral	Slightly agree	Agree	Don't know
Inter-Transmission System Operator Compensation (ITC) mechanism				x		
Sharing of congestion income				x		

Common/regional regulated asset base (RAB)				x		
Ex post conditionalities						x

A broader set of financial and regulatory instruments must complement CBCA to ensure timely and equitable development of shared assets, as CBCA alone cannot unlock the needed investment.

Congestion income must be systematically reinvested into cross-border infrastructure upgrades rather than used to offset national tariffs. This approach supports system-wide optimisation and avoids reinforcing national silos in tariff design.

Regional regulatory asset bases (RABs) should be introduced to enable joint investment in shared assets such as offshore grid hubs or hydrogen-ready corridors. These RABs would distribute costs and risks based on usage or benefit rather than geography, making large-scale projects more financially viable and politically acceptable across Member States.

The Inter-Transmission System Operator Compensation (ITC) mechanism should be modernised to reflect real-time power flows and incentivise cross-border flexibility services.

Finally, while performance-based funding can be useful, ex post conditionalities must be applied with caution. Retroactive conditions or vague performance metrics create investment uncertainty and can deter both public and private financing.

Funding the necessary grid reinforcements and adaptations will require mobilisation of significant financial resources. Grid operators, both at the transmission and distribution levels, are faced with an unprecedented increase in the volume of capital expenditure possibly affecting credit rating and access to capital.

15. **In your view, which financial obstacles are most relevant for investments in infrastructure projects?**

Mark with an X, once per statement

	Strongly disagree	**Slightly disagree**	**neutral**	**Slightly agree**	**Agree**	**Don't know**
Access to debt					x	
Access to equity			x			
Access to counter-guarantees					x	
Regulatory risk					x	
Access to public funding (EU/national)					x	

16. **If needed, what financial measures could be considered to further support transmission infrastructure?**

EU needs more funding from different sources: public, private, and a mix of both. Relying only on grid tariffs to fund grid development might significantly increase these tariffs in some jurisdictions and make it even politically unviable.

As an example, among the solutions currently under discussion for offshore grids are the use of Special Purpose Vehicles (SPVs) to attract capital for regulated offshore grid assets; dedicated European Investment Bank (EIB) loans to support TSOs or specific projects with affordable financing; and the application of cap-and-floor models—such as those used in the UK—to stabilize revenues for merchant interconnectors.

Public EU and national funding are essential and will remain the main finance source, even though in some Member States this sort of funding is not easily accessible for grid finance especially for distribution grids. However, in some cases, especially for small DSOs not able to take up big risk at once, combining public and private investment could also be beneficial. Certainly, Member States would need to find ways to implement this keeping return on investment rates not much higher than the current WACC so that the impact on network tariffs does not make it unviable for end-users. It could for instance be combined with longer pay back times compared to the current frameworks.

Government-backed guarantees, as the ones proposed in the Wind Power Package or the Clean Industrial Deal, for grid supply chains are another option. In addition, green or infrastructure bonds backed by public institutions can attract private capital while keeping investor confidence high.

Finally, the EU should make cost-sharing rules for cross-border projects simpler and more consistent across countries. It could also increase scrutiny about the transparency and justifiability of taxes and levies in network tariffs. This would help reduce political friction and regulatory delays.

On offshore hybrids, the generation part of offshore hybrids and the market risks arising from the offshore bidding zone configuration complicated investment decisions for developers. These include volume and price risks which are not fully covered by current EU or national mechanisms. To mitigate these risks, two-sided Contracts for Difference (CfDs) offer the most straightforward and effective form of revenue stabilization. Cross-border Power Purchase Agreements (PPAs) could also be de-risked through the introduction of longer-term Financial Transmission Rights (FTRs) or mechanisms that cover the price spreads across bidding zones. Additionally, the Transmission Access Guarantee (TAG) should be applied even where TSOs meet the 70% cross-border capacity availability requirement.

17. **If needed, what financial measures could be considered to further support distribution infrastructure?**

DSOs should benefit from a broad mix of financial tools as TSOs do, including public funding, and private investment. Targeted support is needed for low- and medium-voltage upgrades, which are essential for integrating distributed energy resources and electrifying homes, businesses, and transport. DSO financing should prioritise solutions that improve grid

observability, flexibility, and connection efficiency. Cost-sharing models must also be adapted so that first movers such as EV hubs or industrial parks aren't unfairly burdened with the full cost of infrastructure that will benefit many future users.

DSOs need clear rules to access debt and equity markets. Direct public funding should not exclude investments from being included in the regulatory asset base (RAB). Public support should focus on smoothing the impact of rising network costs on consumers, especially during the early stages of electrification, through special funds or non-linear depreciation models. Public loans with low interest rates or de-risking tools should be made available to support these DSOs where needed. EU legislation should remove unnecessary caps on DSO investment (as in Spain) and allow investments that are managed and overseen by national regulators.

18. **If needed, what financial measures could be considered to further support hydrogen infrastructure?**

19. **If needed, what financial measures could be considered to further support CO2 infrastructure?**

Supply chains

Constrained supply chains and a lack of skilled workforce are being cited the major hurdles hindering grid development. The 2023 Action Plan for Grids included concrete action to address the often fragmented technical requirements for grid components through a common specifications workstream, as well as the need for greater visibility on future investments planned. The Union of Skills package adopted on 5 March 2025 targets the identified gap in skills - particularly those needed for the energy transition, investing in people for competitiveness, reinforcing the Competitiveness Compass and the Clean Industrial Deal.

20. **To what extent do you agree with the following statements?**

Mark with an X, once per statement

	Strongly disagree	Slightly disagree	neutral	Slightly agree	Agree	Don't know
The current network development plans at EU and national level provide sufficient visibility for the supply chain for the purpose of investment planning		x				
There is a need for better visibility to ensure sufficient investment in the supply chains					x	

Manufacturers need clearer, more detailed, and more coordinated signals to scale up production in time to meet Europe's energy and climate goals.

A centralised supply chain dashboard that tracks investment needs by voltage level, component type, and Member State can be a helpful tool. This would help manufacturers anticipate demand and align production timelines with grid expansion.

TSOs and DSOs must coordinate more closely with equipment manufacturers. Rolling forecasts tied to auction calendars and grid CAPEX plans would give suppliers the predictability they need to invest in new capacity. At the same time, access to regional and national incentives must be simplified so manufacturers can act quickly on expansion decisions.

21. **To what extent do you agree with the following statements?**

Mark with an X, once per statement

	Strongly disagree	**Slightly disagree**	**neutral**	**Slightly agree**	**Agree**	**Don't know**
There is a need for further harmonisation of equipment requirements within the EU, for the purpose of scaling up supply chains and their repair capacities					X	

The EU should establish common technical standards for key grid components such as protection relays, SCADA systems, and transformer ratings. Standardisation would enable modular, industrialised production, helping manufacturers achieve economies of scale and speed up delivery. It would also simplify procurement and reduce the burden on engineering teams. That said, grid tenders must not be rigid technical prescriptions but apply functional requirements. Tenders should focus on what systems must deliver, not how they are built. This change alone could cut project timelines by up to 25% and reduce costs by 10%.

The EU should encourage cross-border repair and maintenance partnerships that would help overcome OEMs capacity constraints and reduce downtime. Today, manufacturers face a patchwork of technical specifications, often unique to each project or country.

Beyond equipment, the EU should support a pan-European certification scheme for skilled grid labour such as cable jointers and high-voltage installers and invest in public-private training platforms tailored to DSO and EPC needs.

22. **Is there a need for additional EU action to address supply chain bottlenecks in the energy sector, following recent initiatives?**

- Strongly disagree

- Slightly disagree
- Neutral
- Slightly agree
- Strongly agree
- Don't know

23. **Is there a need for additional EU action in the field of skills for the energy sector, following recent initiatives, such as the Union of Skills?**
    - Strongly disagree
    - Slightly disagree
    - Neutral
    - Slightly agree
    - Strongly agree
    - Don't know

Digitalisation and resilience

Digitalised and resilient grids are essential from a security of supply perspective. Actions were put forward also as part of the Action Plan for Grids adopted in 2023. By the end of 2025, a common Technopedia Platform operated by the ENTSO-E and the EU DSO entity should materialize, providing an overview of existing grid enhancing technologies. Enhancing the security and resilience of cross-border energy infrastructure projects is crucial for ensuring a reliable supply of energy. It is also a key priority of the current Commission mandate, especially in the context of emerging risks such as climate change impacts and malicious attacks on critical energy infrastructure.

24. **Do you agree that there is a need for additional EU action concerning visibility and quantified benefits of innovative, digital and grid enhancing technologies?**
    - Strongly disagree
    - Slightly disagree
    - Neutral
    - Slightly agree
    - Strongly agree
    - Don't know

25. **In your view, should there be further measures to increase the efficiency of the existing grid?**

    - Yes
    - No

If yes, please specify:

- The EU should require Member States to implement digital platforms that integrate harmonised TSO and DSO data. Developers urgently need access to reliable, timely, and harmonised grid data to plan projects effectively. Today, inconsistent formats, limited transparency, and fragmented data between TSOs and DSOs force developers to rely on inefficient, resource-heavy methods often leading to speculative applications and grid congestion. These platforms must provide detailed, regularly updated information on grid capacity, connection requests, load forecasts, and planned reinforcements. Integration with GIS-based systems and machine-readable formats will further improve usability. Stakeholder input during platform design is essential to ensure the tools meet real-world needs, while access should be limited to relevant actors to protect critical infrastructure.
- System operators must be incentivised to optimise existing infrastructure using innovative technologies like dynamic line rating, high-temperature superconductors, and advanced power flow control. EU and national financing schemes should support their deployment, and cost recovery mechanisms must be in place to reward smart operation and innovation. These must also be duly considered in the network development plans.
- The regulatory framework must treat CAPEX and OPEX equally. The current model rewards capital investment but discourages lower-cost, operational solutions like grid-enhancing technologies (GETs). Full implementation of Article 18 of the Electricity Market Design Regulation is needed, with NRAs designing tariff models that reward efficiency, flexibility, and digitalisation. NRAs should also benchmark TSOs and DSOs on GET adoption and define KPIs to track progress such as line utilisation, hosting capacity, and digitalisation levels.
- The EU should support innovation through dedicated R&D funding, pilot support, and third-party innovation schemes. Examples like Norway and the UK's show how targeted support can accelerate deployment.
    - Under Norway's R&D funding scheme, DSOs can receive full financial coverage for eligible R&D projects up to 0.3% of their regulatory asset base
    - The UK's Strategic Innovation Fund (SIF) is open to third-party innovators with a total funding pot of £450m. Norway also has a framework for pilot and demonstration projects.

All this said, these efforts must complement and not replace necessary grid reinforcements.

Security and resilience

26. **To what extent do you agree with the following statements?**

Mark with an X, once per statement

	Strongly disagree	Slightly disagree	neutral	Slightly agree	Agree	Don't know
The current EU legal framework, beyond the TEN-E Regulation, sufficiently addresses resilience and security criteria for cross-border infrastructure projects including recent and emerging risks such as climate change impacts						
Projects of common interest (PCIs) and Projects of mutual interest (PMIs) should be subject to additional security criteria to reduce exposure and/ or enhance readiness against physical and cyber risks						
The existing EU legal framework for grids, beyond the TEN-E Regulation, allows to avoid non-trusted actors' participation in critical cross-border infrastructure projects						

Flexibility

Pursuant to the existing EU regulatory framework, distribution network development plans shall provide transparency on the medium and long-term flexibility services needed and consider alternatives to grid development (such as flexibility, demand response or innovative grid technologies). There is also ongoing work between TSOs, DSOs, ACER and the Commission following up on the most recent revision of the Regulation (EU) 2019/943 on the internal market for electricity in 2024, mandating the regulatory authorities or dedicated authorities to conduct biannual assessment of flexibility needs. The relevant methodology, explaining inter alia the link to the network planning should be adopted in Q3 2025.

27. In this context, do you agree that the existing framework is sufficient for considering flexibility needs in network planning and development

- Strongly disagree
- Slightly disagree
- Neutral

- Slightly agree
- Strongly agree
- Don't know

Most countries still now have not yet integrated flexibility procurement into DSO planning. TSO-DSO coordination is still fragmented, and flexibility especially from battery storage, demand response, and hybrid co-located assets is often treated as passive rather than as an active system resource. System operators must consider flexibility as part of network planning. This includes aligning regulatory incentives to treat CAPEX and OPEX equally, so operators are not penalised for choosing smarter, operational solutions. NRAs should benchmark flexibility uptake and define clear KPIs to track progress.

National implementation of the national flexibility needs assessment methodology as mandated by Electricity Market Design (EMD) reform is essential. These assessments must focus on climate-neutral technologies and align with broader EU planning exercises, such as the TYNDP and cross-border infrastructure needs. Without this alignment, flexibility risks being sidelined in long-term grid development.

The EMD reform also mandates NRAs to develop national frameworks for flexible grid connections, but there is no clear guidance or timeline for doing so. This creates uncertainty and risks inconsistent approaches across Member States. The upcoming Network Code on Demand Response should provide clear definitions such as what constitutes a firm versus flexible connection, and offer guidance on contract duration, curtailment rules, and compensation. Unfortunately, the draft Network Code doesn't contain such language.

EU-level coordination is essential to avoid cases where TSOs are offering 100% flexible connections, which can create major risks for developers, especially in projects like offshore wind where location and timing are fixed. We urge the Commission to provide guidance on implementing flexible connection agreements as part of the upcoming guidance on grid connection queues management.

Simplification

28. **In view of simplifying the PCI/PMI selection process, to what extent do you agree with the following statements?**

Mark with an X, once per statement

	Strongly disagree	Slightly disagree	neutral	Slightly agree	Agree	Don't know
The current frequency of the PCI/PMI selection process (every 2 years) should be decreased e.g. every 3 years						
Project with PCI/PMI status should not be required to reapply for each PCI/PMI process, provided certain conditions are met (e.g. sufficient maturity, progress)						

The application process should be further simplified						

Please specify your reply providing, where possible, qualitative and quantitative evidence.

29. **In view of additional simplification measures, to what extent, do you agree that there is potential for simplification in the following areas?**

Mark with an X, once per statement

	Strongly disagree	**Slightly disagree**	**neutral**	**Slightly agree**	**Agree**	**Don't know**
TYNDP process: Scenario building						
TYNDP process: infrastructure gap identification						
TYNDP process: Project assessment						
Offshore network development planning process						
PCI/PMI project monitoring and reporting						

Please specify your reply providing, where possible, qualitative and quantitative evidence.
