

Recommendations for the EU's Announced Grid Action Plan

16 November 2023

ENTSO-E Mission Statement

Who we are

ENTSO-E, the European Network of Transmission System Operators for Electricity, is the association for the cooperation of the European transmission system operators (TSOs). The 39 member TSOs, representing 35 countries, are responsible for the secure and coordinated operation of Europe's electricity system, the largest interconnected electrical grid in the world. In addition to its core, historical role in technical cooperation, ENTSO-E is also the common voice of TSOs.

ENTSO-E brings together the unique expertise of TSOs for the benefit of European citizens by keeping the lights on, enabling the energy transition, and promoting the completion and optimal functioning of the internal electricity market, including via the fulfilment of the mandates given to ENTSO-E based on EU legislation.

Our mission

ENTSO-E and its members, as the European TSO community, fulfil a common mission: Ensuring the security of the inter-connected power system in all time frames at pan-European level and the optimal functioning and development of the European interconnected electricity markets, while enabling the integration of electricity generated from renewable energy sources and of emerging technologies.

Our vision

ENTSO-E plays a central role in enabling Europe to become the first climate-neutral continent by 2050 by creating a system that is secure, sustainable and affordable, and that integrates the expected amount of renewable energy, thereby offering an essential contribution to the European Green Deal. This endeavour requires sector integration and close cooperation among all actors.

Europe is moving towards a sustainable, digitalised, integrated and electrified energy system with a combination of centralised and distributed resources. ENTSO-E acts to ensure that this energy system keeps consumers at its centre and is operated and developed with climate objectives and social welfare in mind.

ENTSO-E is committed to use its unique expertise and system-wide view – supported by a responsibility to maintain the system's security – to deliver a comprehensive roadmap of how a climate-neutral Europe looks.

Our values

ENTSO-E acts in solidarity as a community of TSOs united by a shared responsibility.

As the professional association of independent and neutral regulated entities acting under a clear legal mandate, ENTSO-E serves the interests of society by optimising social welfare in its dimensions of safety, economy, environment, and performance.

ENTSO-E is committed to working with the highest technical rigour as well as developing sustainable and innovative responses to prepare for the future and overcoming the challenges of keeping the power system secure in a climate-neutral Europe. In all its activities, ENTSO-E acts with transparency and in a trustworthy dialogue with legislative and regulatory decision makers and stakeholders.

Our contributions

ENTSO-E supports the cooperation among its members at European and regional levels. Over the past decades, TSOs have undertaken initiatives to increase their cooperation in network planning, operation and market integration, thereby successfully contributing to meeting EU climate and energy targets.

To carry out its legally mandated tasks, ENTSO-E's key responsibilities include the following:

- › Development and implementation of standards, network codes, platforms and tools to ensure secure system and market operation as well as integration of renewable energy;
- › Assessment of the adequacy of the system in different timeframes;
- › Coordination of the planning and development of infrastructures at the European level (Ten-Year Network Development Plans, TYNDPs);
- › Coordination of research, development and innovation activities of TSOs;
- › Development of platforms to enable the transparent sharing of data with market participants.

ENTSO-E supports its members in the implementation and monitoring of the agreed common rules.

ENTSO-E is the common voice of European TSOs and provides expert contributions and a constructive view to energy debates to support policymakers in making informed decisions.

INTRODUCTION

ENTSO-E welcomes the European Commission's announced proposal for an EU Grid Action Plan as a follow up to the successful forum on '[Future of our Grids](#)' on 7 September 2023. ENTSO-E thanks the European Commission for the support in raising awareness of the importance of grids in accelerating the energy transition.

In 2022, ENTSO-E published its '[Vision: A Power System for a Carbon Neutral Europe](#)' in which we concluded that the energy transition is within our reach. Four elements are required to make it happen:

1. A market design fit for carbon neutrality,
2. Flexibility sources to compensate for weather-dependent renewables and increased complexity,
3. Smart and coordinated technology solutions to leverage the current grid, and
4. Investments in new grid infrastructure.

European TSOs are committed to implement all technological and organizational advances available now and in the future power system. Nevertheless, significant investments in infrastructure are still needed even when grids are upgraded with the latest technologies to maximise grid use: for example, investments to connect new carbon-neutral generation to the system; for regional cooperation, system security, exchanges of energy and flexibility; and to accommodate the demand growth due to the electrification of the economy.

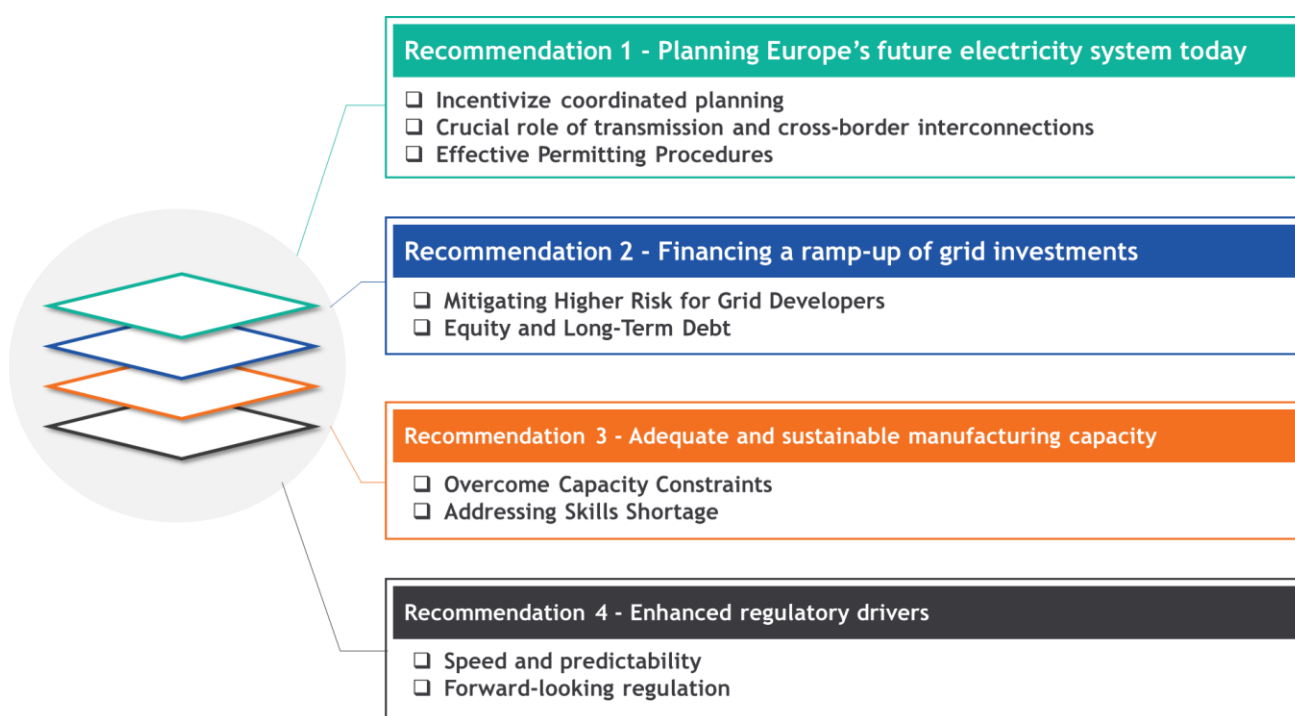
European TSOs project 220bn€ investments up to 2030, and investments of 700bn€ up to 2050 with probably more in offshore expected. This is a significant double-digit growth in TSO investments from 20bn€/year today to 35bn€/year by 2040. To achieve this, ENTSO-E identified in its TYNDP that 6bn€ of investments in cross-border capacity are needed each year over the coming decade. For consumers, this investment should provide a positive societal return of 9bn€ lower system costs each year, mainly due to strengthening the internal market and reducing total system costs, especially in reduced dependence on fossil fuel generation.

ENTSO-E now presents a first set of recommendations for this action plan, based on the outcomes of the 'Future of our Grids' Forum. We look forward to a continued engagement with the European Commission in coming weeks to further share and expand on possible actions and solutions on this key topic to achieve carbon neutrality in Europe.

ENTSO-E Recommendations

First and foremost, the EU’s announced Grid Action plan should be a tool to develop and disseminate a **coherent narrative on the role of electricity grids** in facilitating the energy transition objectives, which will be essential for stakeholder involvement and social acceptability.

Our specific recommendations focus on four key areas:



Recommendation 1 - Planning Europe’s future electricity system today

1.1 Incentivize coordinated planning - As we developed in our Vision for carbon neutrality, the future power system in Europe will be part of a System of Systems, which will need strong cooperation between transmission and distribution, onshore and offshore, and amongst different energy systems, both at European and local levels. All operators will be key enablers and facilitators to make this future energy systems work. We underline the importance of forward-looking regulation that incentivizes a consistent long-term System of Systems planning and encompasses both offshore and onshore, as well as transmission and distribution aspects. A comprehensive approach to grid development - building on existing mandates like TYNDP and ONDPs - is vital.

1.2 Crucial role of transmission and cross-border interconnections - The development of cross-border interconnections should remain a priority across Europe and the PCI/PMI process is a key tool to give this attention to electricity projects. In a fully carbon-neutral Europe, the electricity transmission grid will be the backbone of the future energy system. European regions will have different characteristics in terms of renewable generation and load patterns. The pan-European transmission grid allows to integrate all regional energy systems and facilitate balance in situations

of regional surplus and deficits. In particular in weaker connected parts of the European system, it is essential that all actors deliver on the achievement of the electricity interconnection target of at least 15% provided that system benefits outweigh costs and complemented with actual system needs as highlighted in the TYNDP.

1.3 Effective Permitting Procedures - The EU Grid Action Plan should focus on further support in streamlining of grid infrastructure permitting procedures. We ask the EC to send a strong signal and provide support to Member States on the importance to fasten the permitting procedures for grids, in particular via swifter implementation of the RES Directive relevant provisions. We welcome the continuous efforts to have effective permitting procedures for renewable energy projects. We ask that permitting for grid projects, which are essential for renewable energy projects, are equally promoted and not left behind.

Recommendation 2 - Financing a ramp-up of grid investments

2.1 Mitigating Higher Risk for Grid Developers - We propose that the EU Grid Action Plan puts in place platforms, complementing the successful Copenhagen Energy Infrastructure Forum, for collaboration of grid developers, institutions, regulators, and financial market. The platform could highlight the higher risk profiles due to increased investment requirements – more assets, inflation and increasing upfront payments due to supply chain constraints – and monitor the risk of delays on reaching planning objectives. It is crucial to reinforce the essential role of grids as a dependable signal to attract investors.

2.2 Equity and Long-Term Debt - We encourage the EU Grid Action Plan to highlight the provision of more equity and explore the possibility of longer-term debt to match the extended investment horizons of TSOs and DSOs. This financial stability is essential for long-term grid development. TSOs need to raise equity for their unprecedented investment programs. This asks for adequate remuneration within regulatory regimes to ensure that TSOs remain or become attractive to solid investors and maintain a stable rating. Some TSOs need to raise high amounts of debt on the financial market while keeping a solid rating to keep capital costs for the customer affordable. We propose that the European Commission leads a dialogue to further develop the regulatory regimes as well as the rules and requirements of the capital markets, including the criteria of rating agencies, to retain access to diverse funding sources.

Recommendation 3 - Ensuring adequate and sustainable manufacturing capacity

3.1 Overcome Capacity Constraints - We recommend that the EU Grid Action Plan recognizes the significant capacity constraints which exist today in manufacturing of components and solutions required for the development of the European grid. To address this issue, grid technology providers call for clear long-term commitments from grid developers for technology procurement. Grid developers, in turn, demand clear commitments from the industry to invest in manufacturing capacity and supply chain organizations, in a way that clearly benefits the European economy. ENTSO-E is ready to coordinate and provide quantified technology needs for European TSOs based on coordinated input from TSO national plans, pan-European views from TYNDP and ONDPs, and alignment with the DSO Entity regarding distribution needs as a basis for the capacity building. Manufacturers also expect enhanced investment conditions for new industrial capacities. This includes regulatory and financial frameworks that support the industry. It is crucial to secure

competitive supplies of critical raw materials like aluminium needed for grid technology production within Europe. The EU Grid Action Plan needs to include a call for structured dialogue with all relevant stakeholders to enhance Europe's resilience and strategic autonomy on manufacturing capacities for power grid technologies within the EU.

3.2 Addressing Skills Shortage - The EU Grid Action Plan needs to give importance to attracting more people to technical careers. We highlight that the energy industry is already facing a significant shortage of technical personnel, and the need for skilled individuals in the energy sector is expected to rise significantly in the coming years. Reskilling the existing workforce is also deemed necessary to support the energy industry, particularly in facilitating the deployment of digital technologies. We welcome the various existing European initiatives on skilled workforce in the energy sector and recommend that the European Commission includes grids when such initiatives are set up for example in the renewable energy sector.

Recommendation 4 - Enhanced regulatory drivers

4.1 Speed and predictability - We urge that in coming months a discussion is initiated with the European Commission, Member States and regulatory authorities to enhance the portfolio of European and National regulatory tools to meet current needs of the energy transition. The regulatory framework must remain predictable, balanced, and aligned with financial markets to avoid favouring specific types of investments.

In particular, the regulatory framework should incentivise the implementation of innovative technologies in the grid which are aligned with the Energy Efficiency First principle. It must also provide clear and coherent incentives for facilitating anticipatory investments. The EU Grid Action Plan should support regulatory authorities in enhancing these investments in dialogue with the TSOs.

4.2 Forward-looking regulation - To provide better guidance, policymakers should define a net-zero mandate for regulatory authorities or at the very least ensure closer compliance of regulatory decisions with energy policy. This mandate can then act as guiding principle for future regulatory decisions.

Regulatory cost benchmarks must focus on the future and not calculate efficiency on historic investments solely. Sustainable behaviour must be rewarded.

LIST OF ACRONYMS/ABBREVIATIONS

TYNDP	Ten-Year Network Development Plan
TSO	Transmission System Operator
ONDPs	Offshore Network Development Plans
EC	European Commission
DSO	Distribution System Operator
PCI/PMI	Project of Common Interest and Project of Mutual Interest