

TYNDP 2024 scope and engagement plan

A Eurelectric response paper

June 2023

Eurelectric represents the interests of the electricity industry in Europe. Our work covers all major issues affecting our sector. Our members represent the electricity industry in over 30 European countries.

We cover the entire industry from electricity generation and markets to distribution networks and customer issues. We also have affiliates active on several other continents and business associates from a wide variety of sectors with a direct interest in the electricity industry.

We stand for

The vision of the European power sector is to enable and sustain:

- A vibrant competitive European economy, reliably powered by clean, carbon-neutral energy
- A smart, energy efficient and truly sustainable society for all citizens of Europe

We are committed to lead a cost-effective energy transition by:

investing in clean power generation and transition-enabling solutions, to reduce emissions and actively pursue efforts to become carbon-neutral well before mid-century, taking into account different starting points and commercial availability of key transition technologies;

transforming the energy system to make it more responsive, resilient and efficient. This includes increased use of renewable energy, digitalisation, demand side response and reinforcement of grids so they can function as platforms and enablers for customers, cities and communities;

accelerating the energy transition in other economic sectors by offering competitive electricity as a transformation tool for transport, heating and industry;

embedding sustainability in all parts of our value chain and take measures to support the transformation of existing assets towards a zero carbon society;

innovating to discover the cutting-edge business models and develop the breakthrough technologies that are indispensable to allow our industry to lead this transition.

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WG Regulation & Network Customers
WG E Mobility
WG Electrification & Energy Efficiency
WG RES & Storage
WG Thermal & Nuclear
WG Power & Gas Interactions
WG Hydro
WG Wholesale Market Design & Investment Frameworks
WG Market Integration & Network Codes

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Public Consultation on TYNDP 2024 scope and engagement plan until 8 June

4. Which part(s) of the TYNDP do you most often refer to?

a) scenarios

b) Information on system needs (transmission and /or storage)

c) Information on infrastructure

d) CBA results

How do you make use of the selected products? (Required)

Eurelectric is carrying out a study on decarbonisation scenarios to reflect on the latest challenges faced by the EU and the corresponding policy discussions. TYNDP 2022 scenario was the starting point to define our business-as-usual scenario. The dataset associated with the TYNDP 2022 scenario was extensively used to build our scenarios. Given the guidance represented by these scenarios to policy making, it is critically important that assumptions to feed TYNDP 2024 are sufficiently supported and consistent with likely evolution of the integrated energy system along with a very high share of distributed energy sources connected to the distribution grid.

Moreover, some of Eurelectric's members are building their own internal energy scenarios for strategy-purposes and are constantly challenging their vision with others'. TYNDP's vision which comprises dataset hypothesis and narratives on scenarios are very important for our members to carry out benchmarking practices. They also use them for their external communications and internal discussion.

We refer to information on system needs and information on infrastructure to benchmark the results of our scenario studies. Sometimes, we use this information to highlight the challenges for electrification and the need for investments.

5. Please rank the following time horizons in the order of importance in identifying future system needs (1: most important; 3: least important)

(Required)

2030 (2)

2040 (1)

2050 (3)

6. Please rank the following time horizons by order of importance to perform the cost-benefit analysis of projects (1: most important; 3: least important)

(Required)

2030 (2) –

2040 (1)

2050 (3)

7. How would you evaluate the proposed TYNDP 2024 stakeholder engagement plan?

What are the most important elements? (Required)

Provide any other suggestions or areas of improvement

Eurelectric welcomes the improvement ENTSOs have been making on the stakeholder engagement overall TYNDP process. However, there is still room for improvement as it was addressed by ACER referred to the stakeholder engagement on TYNDP 2022. TYNDP 2024 stakeholder engagement timeline seems to be tight in terms of the clustering of multiple consultations just before the summer which represent a challenge for stakeholders to give timely and valuable feedback and to ENTSOE to incorporate constructively the observations. Although not in the scope of this consultation and not shown in the TYNDP 2024 stakeholder engagement timeline, the public consultation on TYNDP 2024 scenario storylines that has been getting postponed since September 2022 is also now anticipated in June. Planning multiple consultations at a time could create constraints to organisations in terms of resources and unclear impact of such feedback in the final documents.

We would like to welcome the improved cooperation between TSOs and DSOs in the TYNDP scenario development with the close cooperation of EU DSO entity TYNDP taskforce and ENTSO-E , with a) more transparent access to datasets hypothesis, assumptions and CBA modelling and b) realistic deadlines in order to support and incorporate stakeholders' contributions. We would like to assert for a constant improvement in this cooperation as the role of DSOs in the future network development plan and generally in creation of sector development conditions is growing as more and more distributed energy resources are becoming part of the energy system and new market structure is being developed. Therefore, DSO's expert knowledge should be further utilized, and their role should be more significant and highlighted also in the stakeholder engagement plan.

8. What changes would be important to reflect in the next TYNDP editions?

Explain (Required)

We urge ENTSOs for the following considerations in the next TYNDP editions:

1. We would like to have EU's latest policy ambition (REPowerEU, NECP's of 2023 and the European Climate Law) comprehensively included in the upcoming TYNDP editions. From the overview document it is not clear whether the 2030 horizon will be considered in the system needs study. 2040 horizon is given the most importance stating that the relevant infrastructure projects due to commission by 2030 are already under development today. This seems to be too good to be true considering the latest policy ambitions from Fit for 55 package and lately from RePowerEU (which might be approved this summer). Latest policy ambitions will require the current electricity generation installed capacity to be almost doubled by 2030. This includes more than 750 GW new renewable capacity and more than 120 GW new storage capacity to be installed by 2030. The TYNDP 2022 system needs study which has not

included this increased ambition might not have captured the system needs which might arise due to the latest developments. Hence, we would like to assert that the importance of 2030 horizon should not be underestimated in the system needs study. Furthermore, TYNDP system needs study only included transmission infrastructure and no storage candidates for 2030 horizon. Considering the huge renewable capacity to be included by 2030, including storage candidates is highly needed.

2. Another point of focus should be the offshore network development plan. Investments in offshore wind that have a long planning horizon are very dependent on a forward-looking planning in the whole transmission system. Getting the offshore wind power from production surplus areas to consumption surplus areas is key to a cost-efficient energy transition. In this context, we urge that the upcoming editions of the ONDPs should be as comprehensive as possible.
3. It is also worthy to underline the big share and activity of DSOs as users of existing and future distributed flexibility sources with more bi-directional flow of energy. In this context, TYNDP should also base more on DSO analysis and shows the needs, opportunities, and challenges in this spectrum.
4. It would be interesting to see the successful PCI projects commissioned and their commissioned years. A comparison between the real commissioned year and the estimated commissioning year would be interesting to assess the ambition in estimating the commissioning year by the project promoters. Also, it would be useful if the progress of the PCI projects is monitored or assessed. This is necessary to make the modelling assumptions more real and robust and avoid modelling based on just announcements.
5. Additionally, identification of system needs for infrastructure investments should fully incorporate the sectoral integration dimension for next TYNDPs, encompassing the synergies between power, gas and the future hydrogen systems, for both flexibility management and curtailment risk handling of the electricity grid.

In this goal, ENTSOs have to work together on a joint power, gas and hydrogen interlinked model with a short time resolution to meet the temporal correlation requirements of the power grid, its implications for stemming from an efficient intermittency management of renewable energy sources and the potential cases and areas in which that gas & hydrogen systems can deliver in a cost-effective way thanks to their flexibility levers (cf. gas-to-power and power-to-H₂/gas streams) vs. other flexibility alternatives. ENTSOs presented latest innovations that would be done in modelling in the last TYNDP scenario workshop which includes advancements in the power, gas and hydrogen integration in the modelling approach. Eurelectric is looking forward to see the earlier mentioned suggestions incorporated in this approach with a detailed CBA analysis including the cost of the deployment of the infrastructure.

Eurelectric also calls for more detailed sensitivity analyses on the impact of stringent climate conditions (daily extreme peak, 2-week extreme cold snap, 2-week extreme cold snap under a “Dunkelflaute” scenario, cold winter) on the resilience of the energy system and how both gases and electricity systems would interact with each other in such conditions, on top of other technical parameters such as efficiency in buildings, heat pump efficiency at peak, charging behavior of electric transport users.

Moreover, it would be useful to streamline the scenarios with the NECPs update process, so that information of national policies taken into account for the national trends scenarios are as up to date as possible:

9. General comments – Please use this field to share with us any other idea or comment

Eurelectric is not sure about the motivation behind questions 5 and 6 in this consultation. All the time horizons including 2030, 2040 and 2050 are equally important for us and we find that it's not appropriate to rank the time horizons. If the ranking is done to limit some of the analysis to only the most important time horizon we do not support this approach. It is important to have focus on both the near term and longer term as the planning is tied together for cost efficient achievement of climate and energy targets in 2030, 2040 as well as in 2050. We are experiencing a dynamic reality with revolutionary changes in the energy sector. This implies that the realization of the 2030 goals will directly influence the changes in aims and terms of the planning for 2040 and 2050. Focussing on longer-term horizons like 2040 and 2050 is important for strategic planning and broader perspectives on the transition to a sustainable and resilient energy system, it is crucial to strike a balance by addressing shorter-term horizon (2030) to ensure that immediate needs and milestones are met while progressing towards the long-term objectives but in such dynamic reality probability of goals realisation rapidly decrease or increase during time period.

Unlike the past, energy market circumstances is changing due to more and more bi-directional flow of energy together with an increasing role of the distribution grids (with significant investment plans) and of the facilities connected to them in the evolving energy system. This would mean that TSOs and DSOs should improve their cooperation in the network development planning. Wherever relevant, DSOs should be also part of the decision-making process. A strong cooperation between TSOs and DSOs in shaping TYNDP can result in more accurate investment decisions in line with the current needs of the member states' grids.

Additionally, Europe has undergone significant change since the scoping of the TYNDP 2022 process two years ago. The double urgency to transform Europe's energy system in ending the dependence on Russian fossil fuels and tackling the climate crisis is tackled through the REPowerEU Plan. This plan is setting the scene for the transformation in the next ten years and the European Climate Law is setting the legal framework to make Europe climate neutral in 2050. It is also time to significantly change the TYNDP main planning scenarios for grid build out to align with this new reality.

The National Trends+ scenario must be a scenario that leads to net zero in 2050. In this way, the planning scenario avoids systematically underestimating the societal benefit of interconnectors and transmission build out and the real system needs and potential gaps up to 2035 and 2040 can be explored.

For the TYNDP 2024 Cost-Benefit Analysis of projects the scenario used should include REPowerEU for 2030 and for 2040 it should be a National Trends+ scenario that has a clear trajectory to a net-zero society in 2050 as demanded by ACER and in line with the European Climate Law. For example, the Danish TSO Energinet has already adopted the approach of making the planning scenario comply with climate neutrality in 2050 as the most likely scenario or 'middle scenario' to 2050.

If the planning scenario does not take sufficient build out of renewables into account, there is a huge risk in the CBA of underestimating the benefits of proposed interconnectors in terms of RES integration and likely also security of supply.

Eurelectric pursues in all its activities the application of the following sustainable development values:

Economic Development

- Growth, added-value, efficiency

Environmental Leadership

- Commitment, innovation, pro-activeness

Social Responsibility

- Transparency, ethics, accountability



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