

ACER Consultation on ENTSO-E ERAA 2021

A Eurelectric response paper

December 2021

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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Eurelectric welcomes the methodological improvements in the first European Resource Adequacy Assessment (ERAA 2021) and the work carried out by ENTSO-E. **We particularly appreciate the integration of the Economic Viability Assessment (EVA)**, which we have been asking for for several years.

The assessment of adequacy heavily relies on the future capacity mix. **To ensure that generation assets included in the scenarios are economically viable to operate (or invest in for new assets) and that the results of the economic viability assessment are not distorted**, Eurelectric raises some considerations below and would suggest at least the following improvements.

First of all, as a general remark, Eurelectric regrets the short time for the two consultations established by ACER and ENTSO-E and their order (i.e. the ACER one closing before ENTSO-E's). In our view, this order is problematic: ACER will need to express an opinion on a version of ERAA 2021 that does not include ENTSO-E's views on comments received in their consultation. In practice, the ENTSO-E consultations could potentially raise questions and recommendations for further adjustments, and this would be an interesting input for ACER assessment. Therefore, such a short ACER consultation seems ineffective in fully gathering the stakeholders' views and feedback on ERAA 2021. More detailed feedback will be submitted in the context of the ENTSO-E consultation.

- Overall, Eurelectric notes that, regarding the national results, the appreciation is different. In some cases, results for specific countries seem more acceptable than others. Eurelectric will provide more detailed comments in this regard in the ENTSO-E consultation.
- About the methodology, ERAA 2021 should strive to align with the requirements of the electricity regulation and ACER methodology to ensure better reliability of assessment results. Indeed, while the full methodology is expected to be deployed in 2024, there is still room for improvements even if the implementation challenges of the methodology should not be underestimated. As important attention points, Eurelectric calls on ENTSO-E to:
 - Ensure that an economic viability assessment is properly devised in the methodology, implemented in the ERAA modelling framework and used consistently in the scenarios and sensitivities.
 - Define sufficient alignment and comparability of national TSO input data and assumptions and ensure that they are realistic, robust and forward-looking.
 - Define a correct delineation of the different scenarios and sensitivities: for example, the treatment of capacity mechanisms (i.e. strategic reserves and capacity markets) and the impact of decarbonisation targets (e.g. emission performance standards).

Regarding methodology, Eurelectric stresses the need for rapidly assessing the sensitivity of the results to some key assumptions taking into consideration Flow-Based Market Coupling and its underlying dataset (e.g. list of CNEC to consider) and modelling (e.g. adequacy patch to tackle the Flow Factor Competition) .. Eurelectric will provide further explanation and justification regarding this point as part of the ENTSO-E consultation.

Moreover, Eurelectric underlines that the capacities assumed in the scenarios should reflect, to the best possible extent, the real capabilities of energy networks. It should not take into account artificial increases stemming from capacity calculation methodological aspects

(e.g. the 70% threshold under Regulation 943/2019 or the thresholds resulting from national trajectories in MS with national action plans). Indeed, the resulting network constraints may have to be dealt with through cross-border remedial actions (e.g. counter trading) whose availability, in practice, is not guaranteed in tense situations.

- Assumptions based on the modelling of the realisation of new capacity should be complemented with clarification of uncertainties. Moreover, it is important to ensure full transparency on the assumptions around installed capacity that are considered as existing for any given target year; the assessment should only indicate what new capacities would be required, while clearly highlighting the uncertainties. ERAA 2021 initial hypothesis is questionable as it assumes that reference scenarios in 2025 – the so-called National Estimates, which are based on the National Energy and Climate Plans (NECPs) of Member States – will be successfully achieved.

In this context, the EVA should question both the existing and new generation capacities considered in the NECPs. Just as the existing generators may see their operation compromised if not economically viable, the expected new generation capacity (at least non-renewable capacity), should not be incorporated into the system if they are not considered profitable in the scenario for their assumed lifetime.

ERAA and the EVA should extend their analysis to 2030 and include a trajectory year by year until 2030. Limiting the EVA analysis in 2025 cannot accommodate the investment/divestment decisions and the system needs in terms of adequacy, thus ultimately affecting the expected system adequacy assessment in 2030. In practice, economic viability assessments are only realistic enough if they consider the remaining lifetime of the concerned assets and therefore a set of consecutive years. In addition, the current ERAA assumes that the plants included in the national estimates remain operational until 2025 and analyses whether they will close in that year. But the reality is that some plants have incentives to close as early as 2022.

Eurelectric believes that the analysis of security of supply cannot be limited to observation of next TY 2025. This approach is insufficient if generation adequacy is at risk and should be anticipated each year starting the following year (2022, for ERAA 2021) to capture market dynamics appropriately. Once an adequacy risk is detected, the appropriate solution should be designed, national and European authorities need to approve the appropriate adequacy mechanism (e.g. Capacity Mechanism), auctions should be organised, etc. In practice, once the capacity mechanism is in place there is at least a 3-year timeframe to develop the new firm capacities needed. Therefore, the current timeframe and scope of the ERAA are too narrow.

- We note some inconsistencies regarding LOLE/ENS indicators and expected net revenues, which should be analysed and further explained in the overall EVA results. Eurelectric will provide further explanations and justification regarding this point as part of the ENTSO-E consultation
- About the methodology used for performing EVA, the economic viability assessment is based on an iterative process where multiple adequacy runs are solved to account for successive additions/removals of capacity. Eurelectric believes that such an iterative process is inadequate and inefficient: this approach does not take any advantage of the efficiency of mathematical programming solvers

or the computational capabilities of advanced servers in the field. Indeed, the decisions around asset management (investments, lifetime extension, reconversion, mothballing, decommissioning, etc.) could be directly embedded into the mathematical problem to be solved. Using such a formulation extended to asset management would provide with only one call to the solver (= one adequacy run) the optimal dispatch and asset management decisions without relying on an iterative process.

- **Considerations on Demand Side Response (DSR) to be economically viable in 2025 should be well justified in ERAA and EVA analysis. More details are needed to better understand the fundamentals behind the forecasts, in particular on the assumption taken for DSR & storage potential, (e.g. estimated duration).**
- **We would welcome clarifications on the assumptions related to scarcity prices. Scarcity prices of 15,000 €/MWh are higher than the price cap established for the EU, i.e., 3,000€/MWh and 9,999 €/MWh for day-ahead and intraday markets respectively. Consideration of such a high scarcity price should be justified. Indeed, scarcity prices and their impacts on costs for consumers are a politically sensitive issue in many Member States, esp. in the current context of high energy prices.**
- **System Operators must ensure the security of supply, even in the event of non-favourable scenarios. To this end, the maximum accepted hours of Loss of Load Expectation (LOLE) should be unlikely surpassed. That means the most appropriate adequacy results should be in terms of Loss Load Duration (LLD) at the 95th percentile rather than at average LLD (= LOLE) when compared to reliability standards.**

In many cases, System Operators accept at most a 1% probability of not facing unplanned outages. This restriction provides System Operators with comfortable security margins that cover them from rare events up to 99% probability. This metric opposes the permitted hours of lost load at average LLD in ERAA. That means a very high chance of facing a higher occurrence of losses of load. It should be verified and justified that system reliability standards can accept that risk. Results from ERAA show very different numbers of lost load considering an average scenario, 50th percentile (median) and 95th percentile scenario. For some countries, this should be verified against the national framework and reliability standards. This also explains why it is important to report the full distributions of lost load and energy not served for each country and scenario/sensitivity.

- **Sensitivity analysis of Low Thermal Capacity is lacking a real ambition and should consider the 2030 goals, the impact of the Fit for 55 package and the recent pledges for earlier phase-out of coal/lignite units.**

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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