ACER

European Union Agency for the Cooperation of Energy Regulators

ERAA 2025 preliminary input data review

ERAA 2025 Input Data – Call for evidence

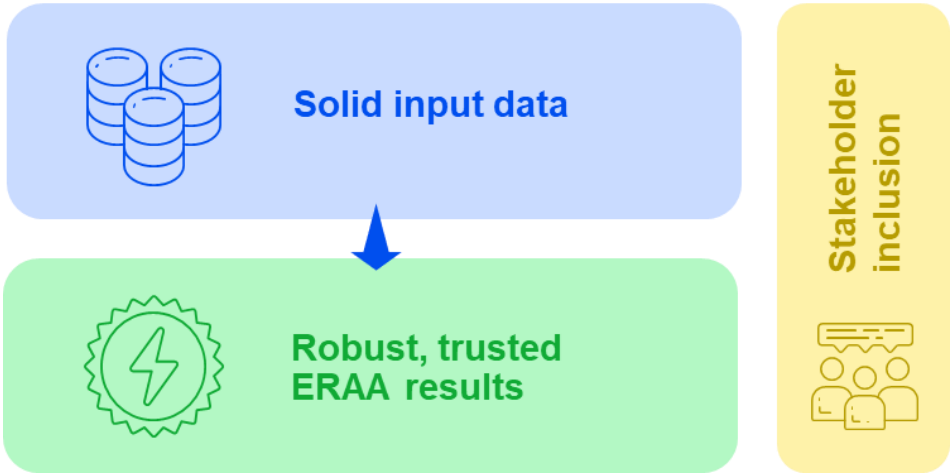
Ljubljana, 22 April 2025

Public

Place for the stakeholders in the ERAA development

In the European Resource Adequacy Assessment (ERAA), the quality of the input data is vital for robust results.

In view of this, ACER appreciates ENTSO-E's efforts to include stakeholders in the preparation of the ERAA 2025 input. Stakeholder feedback allows data verification and provides the necessary transparency.



Transparent process

Considering that stakeholder views are crucial for effective scrutiny of the input data, ACER suggests that ENTSO-E evaluate the feedback gathered during this call for evidence in a transparent manner. By directly linking stakeholder responses to changes in the ERAA 2025 dataset, transparency will be significantly improved.

ACER review for the robust input data

SCOPE

In this review of the input data, ACER assesses the preliminary assumptions for ERAA 2025 that are among the most impactful factors:

DEMAND	**Demand: annual projected volume**
DEMAND RESPONSE	**Demand response**
INVESTMENT	**Economic and technical investment parameters**

The value of national-specific information

ACER emphasises, as also mentioned in the last year's response, that **providing explanations for national assumptions** - such as demand projections - in the form of "country comments" would enhance transparency and foster greater stakeholder engagement.

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Annual demand volume grows rapidly

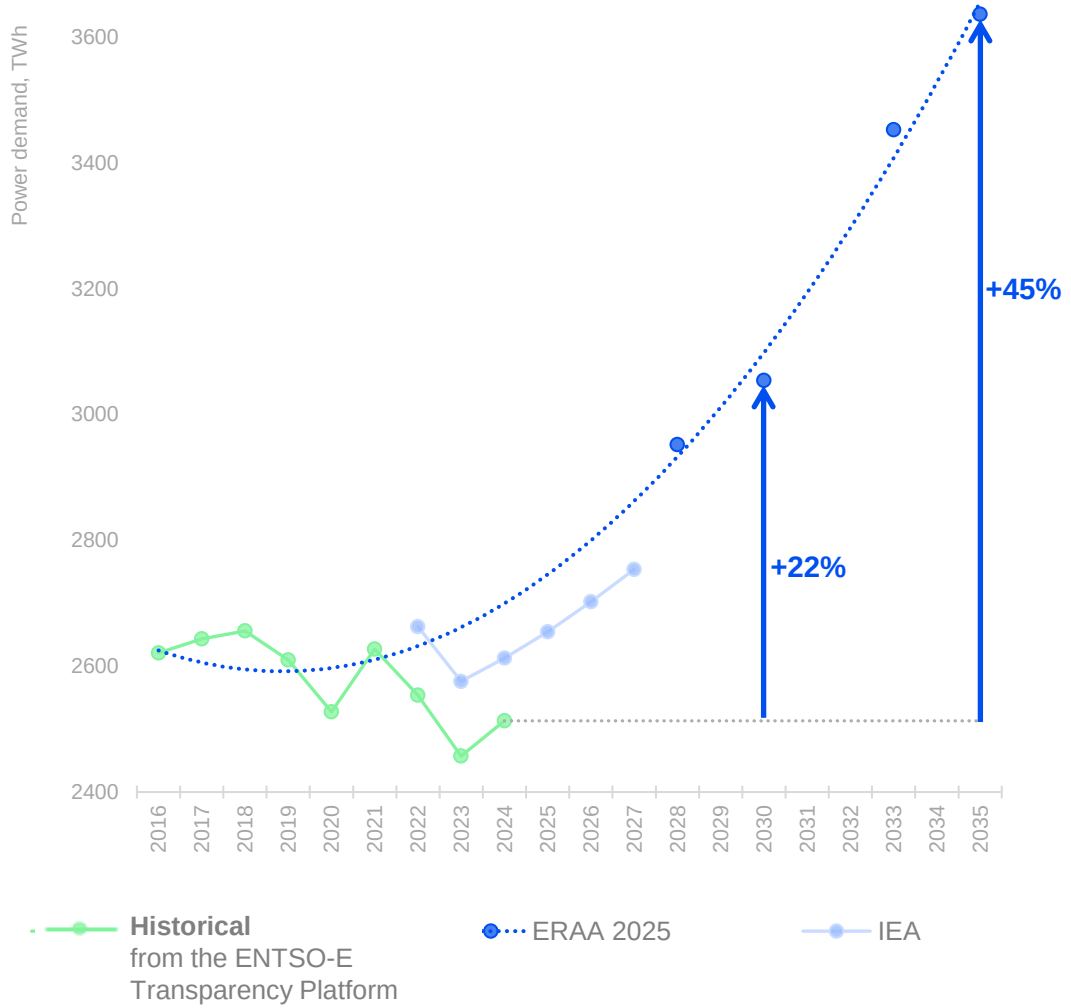
Electricity demand in the EU is expected to rise in the coming years, driven by electrification across sectors.

While this increase is anticipated, **ERAA 2025 input data suggest demand projections far above the historical, real-life trends.** They are also higher than other projections of the sector, e.g. IEA.

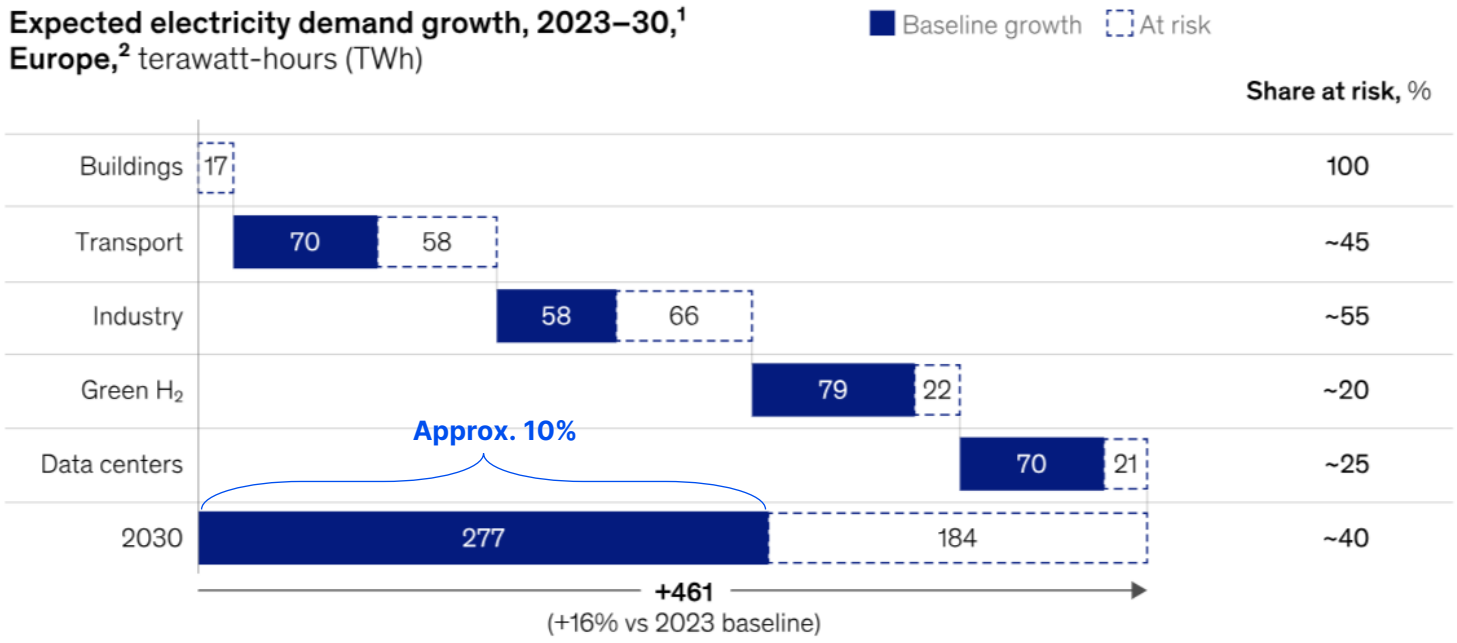
Solid, realistic ERAA input for demand should reflect a best forecast of the future, supported by clearly verifiable drivers.

Solid input data

ERAA 2025 appears to overestimate the future demand in the EU. The drivers and values per sector behind the high demand growth comparing with historical trends are not clear. Likewise, it is not specified whether ERAA 2025 demand follows particular NECP targets or projections.



Alternative projections show a weaker demand growth



[1]Base case projection from McKinsey's Continued Momentum 2024 scenario; demand at risk estimated with a sensitivity to technology adoption rates and industrial output reductions.
[2]EU-27, Norway, Switzerland, and the United Kingdom.

Source: McKinsey, Global Energy Perspective 2024.
ACER elaboration in light blue.

McKinsey considers that the total demand in Europe would increase in the baseline scenario by around **10%** (277 TWh) for the period 2023-2030.

At the same time, ENTSO-E forecasts the demand increase of **22 %**.

The consultancy highlights several key risk factors for Europe's demand growth, including the anticipated decline of industrial output, slower electrification and supply chain issues.

Note: The geographical scope of McKinsey's analysis is broader, as it includes also Norway, Switzerland and the UK.

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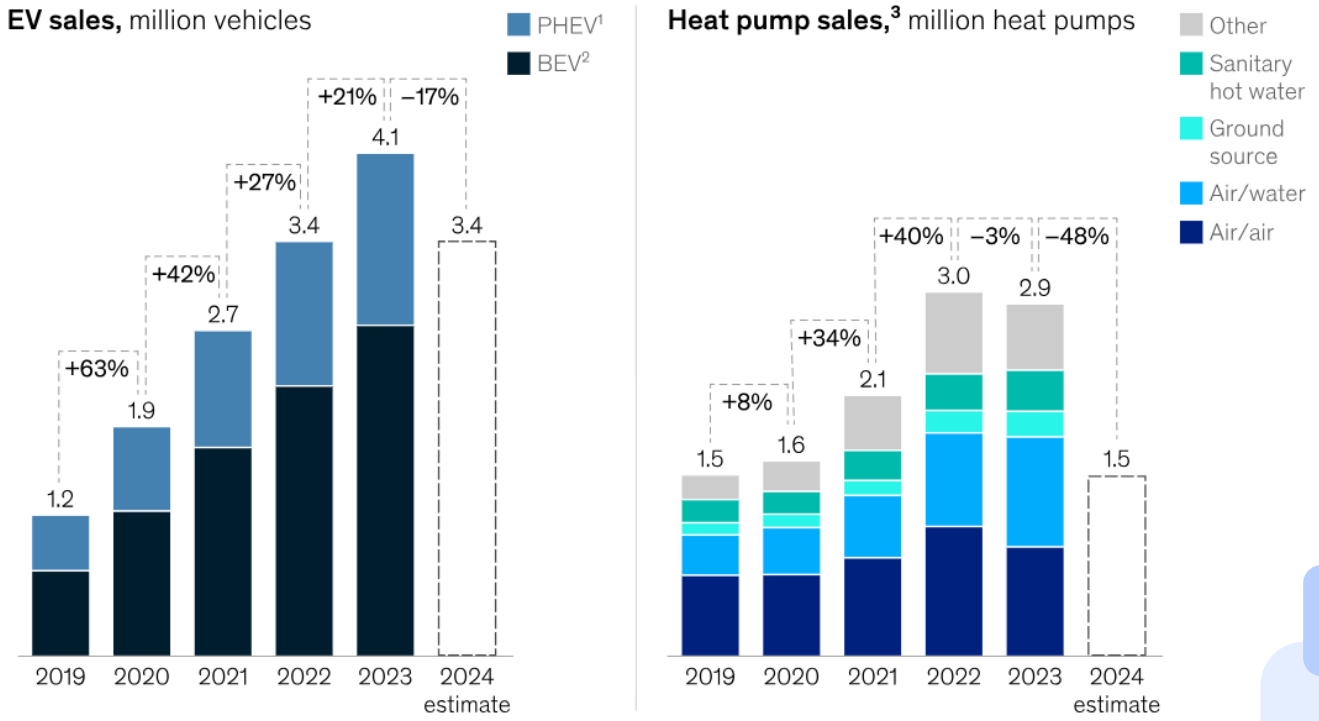
EU-demand dynamics: 2024 saw slower rollouts



Source: McKinsey, Electricity demand in Europe

One reason for McKinsey's reduced demand projection is the decrease in EV and heat pump sales.

Indeed, sales dropped in 2024, broadly in line with McKinsey's estimates. Last year, approx. 2.2 million heat pumps and 3 million electric vehicles were sold.

This slowdown is partly caused by the changes or removal of support schemes and the overall economic situation.

Well-informed projections

ACER considers that ENTSO-E should properly account for these evolutions in their demand forecast for ERAA 2025.

Example: Sharp increase in the German peak demand

As overall demand is expected to grow, peak demand – primarily driven by inflexible consumers – may also rise. The peak demand assumptions are critical to ERAA because they directly affect system adequacy.

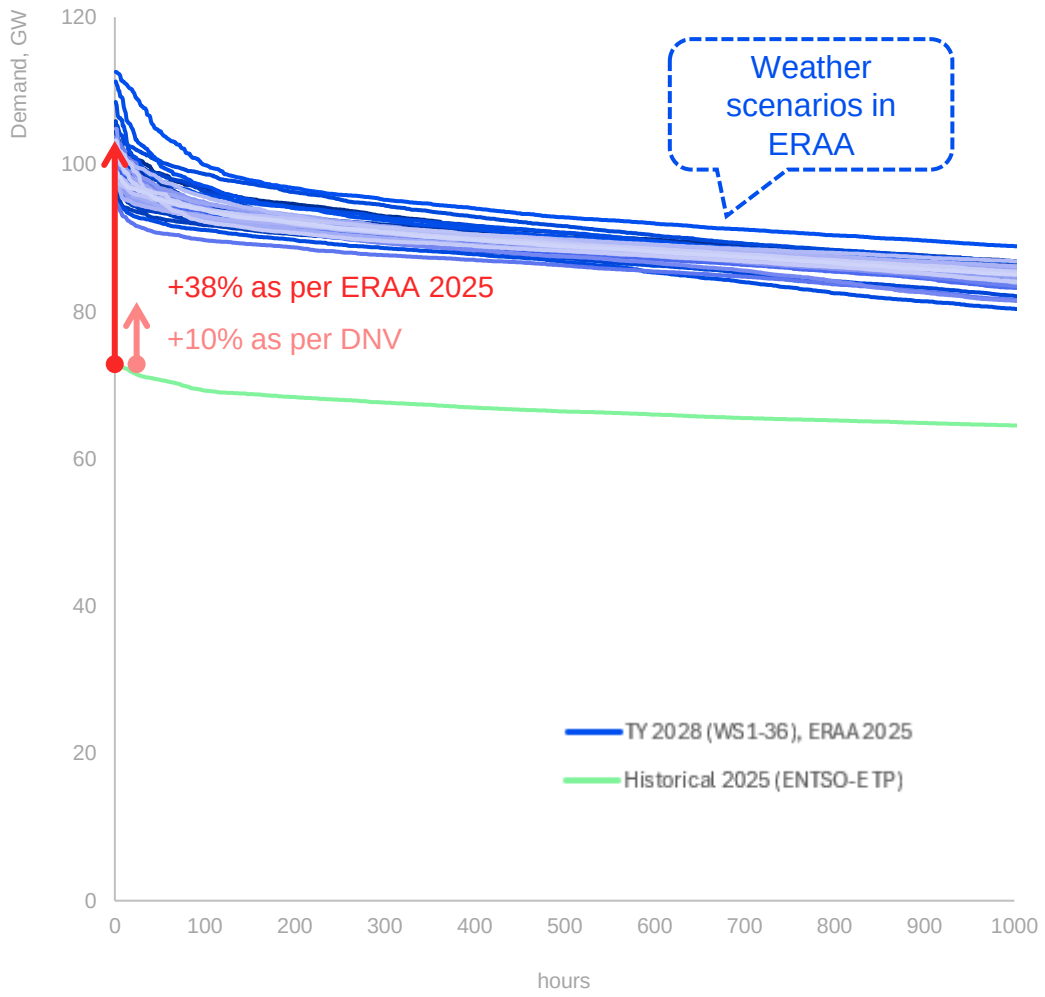
The significant increases in ERAA 2025 demand projections translate into an unprecedented surge in peak demand.

For instance, the ERAA 2025 data indicate that Germany's projected peak could grow by almost **40%** over the next four years. ERAA estimation is also much higher compared with the DNV projection of only **+10%** increase.

Such an increase appears overestimated.

Solid input data

Assumptions around implicit demand response should be reviewed in line with ACER's ERAA decisions.



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Regulators' highlight

Peak demand shoots up, DSR lags behind

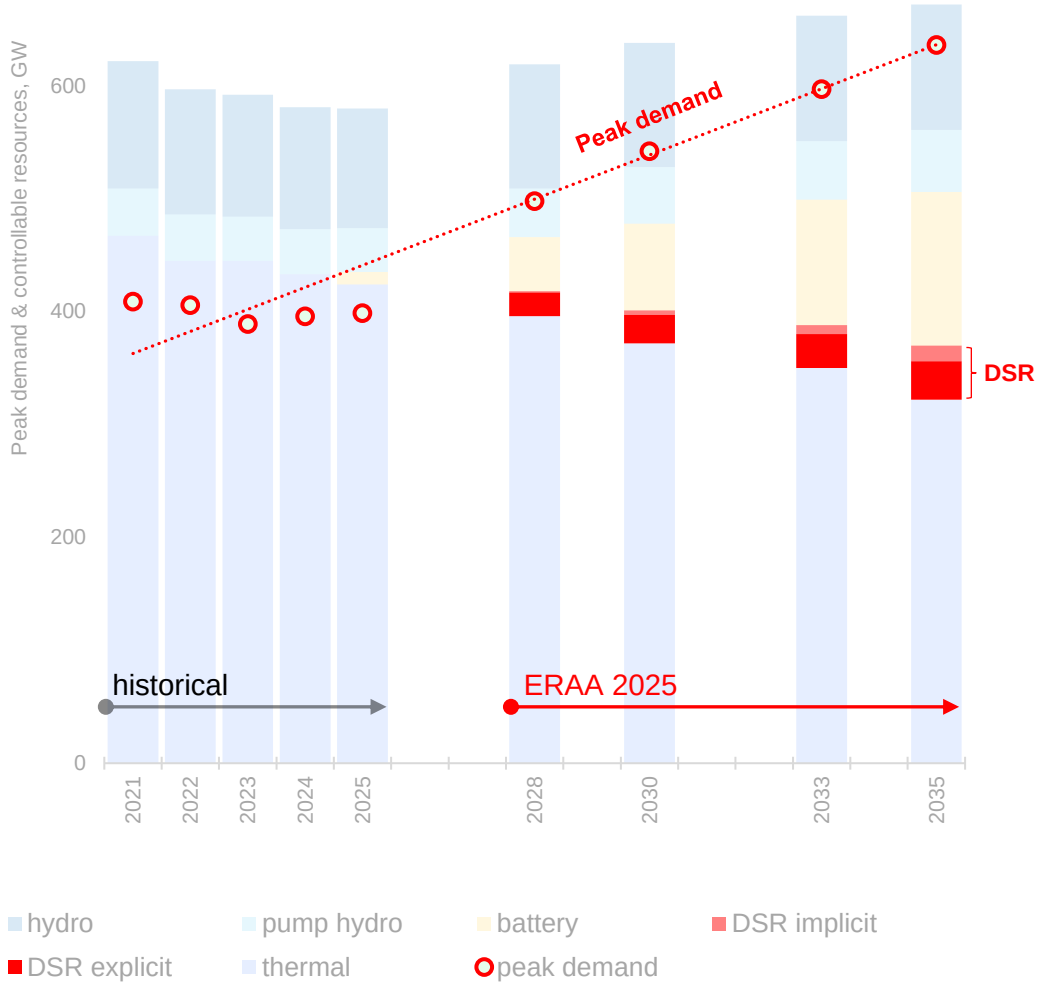
As the EU peak demand grows rapidly, **the ERAA 2025 input shows only minimal uptake of demand response.**

In 2028, the estimated demand response is equal to 4.5% of the peak demand and in 2035 it amounts only to 7.5%.

These projections are misaligned with the stakeholder estimates. SmartEn projects the downward DSR capacity at 17% of peak demand in 2030.

ERAA must consider the steep electrification rates from both perspectives:

- Increased overall demand and
- Increased flexibility of end-users.



Solid input data

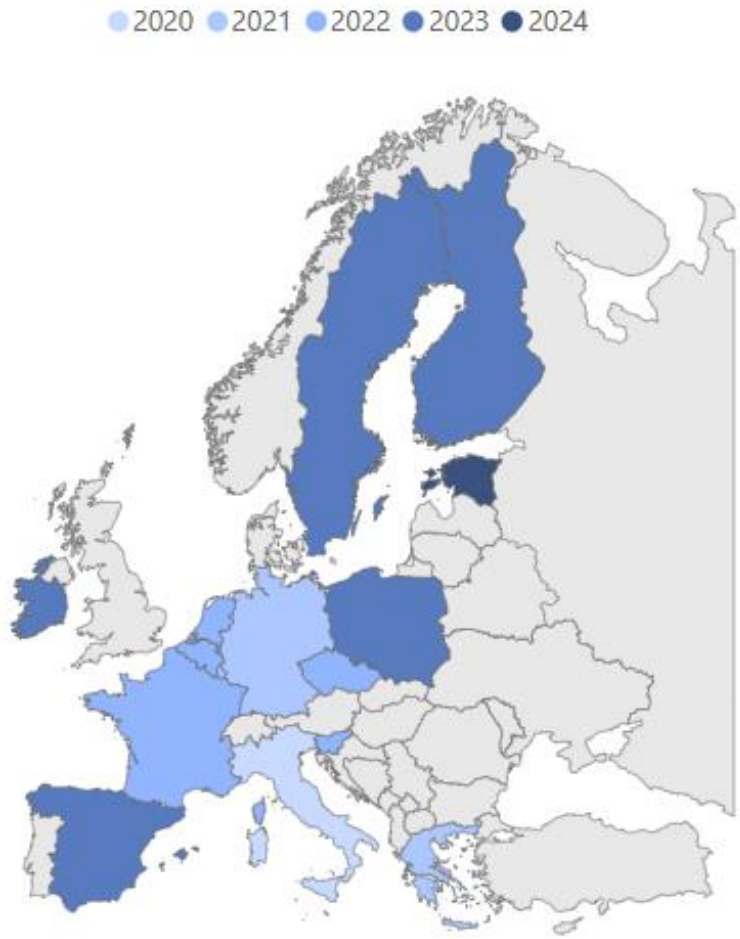
The increasing demand in ERAA should be reflected through higher both implicit and explicit DSR assumptions, as indicated by stakeholder projections and NRA comments, crucial for solid input data.

Using the nationally-defined investment parameters

ERAA uses national-specific economic and technical parameters to model investments. These values are derived from the country studies ran over the past years, ranging from 2020 to 2024. For the countries without the studies, ERAA applies default values.

Acknowledging the role of investment parameters in the ERAA, ACER emphasises the need for solid input.

To resolve the discrepancies in the study methods and ensure national-specific parameters for all countries, ACER commissioned a study to deliver coherent parameters.



National-specific data

The implementation of the economic and technical investment parameters from the upcoming ACER study on investment parameters will contribute to robust results of ERAA 2025.

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Country examples

Selected issues identified in the national input data for ERAA 2025:

- The alignment of ERAA input data with the National Energy and Climate Plans. For example, the **Portuguese NRA** highlights an inconsistency between the ERAA 2025 data and the Portuguese NECP for 2030 related to aggregated demand, especially electrolysers[1].
- Transparent descriptions of input data and higher data granularity. The **Austrian NRA** points out that, for instance, the hydro inflows data does not include daily or hourly variability. It is essential to properly account for hydropower contribution to resource adequacy. This lack of transparency and insufficient granularity do not allow efficient scrutiny of the input data.
- Realistic demand assumptions. For example, the **Dutch NRA** highlights that the yearly demand for the Netherlands[2] is higher compared to other scenarios and analyses. The NRA calls for further clarifications of the drivers and underlying assumptions behind the demand values.
- Realistic capacity assumptions. For illustration, the **Austrian NRA** explains that the significant decline of gas capacity for Austria[3] can not be confirmed as relevant discussions are still ongoing.

Reviewing national data

The inputs from the regulators call for ENTSO-E and TSOs to review the country-specific data and sufficiently explain the assumptions in line with national policies and relevant analyses. Greater data transparency is also necessary for efficient data scrutiny.

[1]The Portuguese NECP suggest that, due to the hydrogen related demand, the load in 2030 would range from around 3 TWh to 18 TWh, depending on the scenario.

[2] ERAA 2025 suggest 241 TWh in 2035 while the 2026 DNDP most likely scenario has 214 TWh in 2035 and the monitor leveringszekerheid 2025 has 190 TWh in 2035

[3] ERAA 2025 suggest a decrease of gas capacity from 3.27 GW in 2030 to 1.83 GW in 2035.

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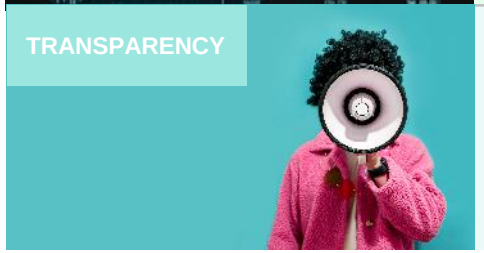
ACER suggestions

ACER suggests that the demand datasets are provided per sector together with clarifying drivers behind the significant increases. Demand projections should consider increased flexibility of end-users (and incentives from e.g. tariffs).

ERAA must account for the electrification impact consistently: additional demand is anticipated to be highly flexible. ACER suggests increasing demand response projections to better reflect the flexibility potential. This will also ensure alignment with stakeholder projections and prevent underestimating flexibility.

The upcoming ACER study on investment parameters should be used in ERAA 2025 to better reflect the national-specific conditions in the modelling.



ENTSO-E should evaluate stakeholder comments. Any later changes in input data should be transparently explained and published.

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