ACER Decision on ERAA 2023: Annex II.a

DECISION No 06/2024
OF THE EUROPEAN UNION AGENCY
FOR THE COOPERATION OF ENERGY REGULATORS
on the European Resource Adequacy Assessment for 2023

Amendments to ERAA 2023 Executive Report
– with track changes

2 May 2024
Scenario A (Central Reference): the climate year representation in the economic viability analysis is calibrated based on the Loss of Load Expectation (LOLE) of the ERAA 2022 adequacy results aiming at the consistency of this indicator throughout the economic viability and adequacy analyses. This scenario results in aims at exposing substantial investment reaction to a similar amount of price spikes in both modules of ERAA.

Scenario B (Sensitivity): the climate year representation in the economic viability analysis is calculated according to the ERAA 2022 methodology, aiming at the consistency of the total system costs throughout the Economic Viability Assessment. This scenario exposes results in comparably measured investment reaction to a lower amount of price spikes in the Economic Viability Assessment than in the Economic Dispatch module.

Both central reference scenario and sensitivity provide relevant information shall be read in conjunction. They are the outcome of an economic viability assessment implemented on the same three climate years but with different weights assigned to each of them. The selected weights serve the different purpose of each scenario described above. The central reference scenario provides the basis for the identification of resource adequacy concerns. The sensitivity complements the central reference scenario. In particular, it illustrates the extent to which the adequacy assessment is sensitive to the weights assigned to the climate years.

Simulating investment decisions is an inherently difficult task and the ERAA methodology is still under development in that aspect. While the central reference scenario A aims to alleviate the inherent modelisation bias between the Economic Viability and Economic Dispatch studies, it leads to creates another bias on that a single extreme climatic year becomes dominant in the investment/ decommissioning decisions importantly driven by price spikes. The results of this approach improves therefore cannot be interpreted in isolation for the identification of adequacy concerns in Europe and needs to be complemented with a sensitivity that maintains—consistency between the Economic Viability Assessment and the Economic Dispatch modules of ERAA on the investment driver (revenues) and thus relies more moderately on a single climate year. Both scenarios together can therefore provide a more robust picture of the risks.
2 Main findings of the ERAA 2023

This section presents the main findings of the assessment, whereas more detailed results are available in Annex 3. Assessing the adequacy situation in the ERAA takes place over two steps: 1) the economic viability of the capacity resources is assessed solving a long-term planning optimisation problem, and 2) the adequacy situation is evaluated on viable scenarios conducting a Monte-Carlo\textsuperscript{1} analysis of the economic dispatch problem.

Two complementary scenarios derived from the same input data have been addressed in the ERAA 2023:

\textit{Scenario A (Central Reference):} the climate year representation in the economic viability analysis is calibrated based on the Loss of Load Expectation (LOLE) of the ERAA 2022 adequacy results aiming at the consistency of this indicator throughout the economic viability and adequacy analyses. This scenario results in substantial investment reaction to price spikes.

\textit{Scenario B (Sensitivity):} the climate year representation in the economic viability analysis is calculated according to the ERAA 2022 methodology, aiming at the consistency of the total system costs throughout the Economic Viability Assessment. This scenario results in comparably measured investment reaction to price spikes.

Both central reference scenario and sensitivity shall be read in conjunction. They are the outcome of an economic viability assessment implemented on the same three climate years but with different weights assigned to each of them. The selected weights serve the different purpose of each scenario described above.

Simulating investment decisions is an inherently difficult task and the ERAA methodology is still under development in that aspect. While Scenario A aims to alleviate the inherent modellisation bias between the Economic Viability and Economic Dispatch studies, it creates another bias on that a single extreme climatic year becomes dominant in the investment/decommissioning decisions. The results of this approach therefore cannot be interpreted in isolation for the identification of adequacy concerns in Europe and needs to be complemented with a sensitivity that maintains consistency on the investment driver (revenues) and thus relies more moderately on a single climate year. Both scenarios together can therefore provide a more robust picture of the risks.

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\textsuperscript{1} Conducted over 15 scenarios of unplanned outages