June **2023**

UFE Response to ENTSOE's Consultation on the Methodology for performing the probabilistic dimensioning of FCR in CE synchronous area

4. What is your view on Article 1 on Subject matter and scope?

UFE welcomes this ENTSO-E consultation on the methodology for performing the probabilistic dimensioning of FCR in the Continental Europe synchronous area. UFE understands that the probabilistic approach is being mandated by ACER, notably in its Request for Amendments relating to the decision on Tmin LER.

Regarding Article 1, UFE suggests reminding the definition of the FCR dimensioning for the CE synchronous area, which is the maximum value between the 3000 MW of the reference incident and the results of the probabilistic dimensioning approach, in accordance with Article 153(2)(a).

UFE also suggests introducing in Article 1 that the objective of the proposal is to provide a probabilistic FCR dimensioning using a Probabilistic Simulation Model, to make a clear link with Article 4(1).

5. What is your view on Article 2 on Definitions and interpretation?

The "LER" definition given in Article 2(a) is not consistent with the definition given in the document "Additional properties of FCR". The proposal states "*time frame contracted by the TSO*" whereas the currently existing definition in Article 3(5) states "*FCR providing units or FCR providing groups are deemed as LER FCR Providing Units or LER FCR Providing Groups in case a full continuous activation for a period of 2 hours in either positive or negative direction*". For instance, the provision timeframe is 4 hours for the FCR Cooperation. In addition, in the proposal the "LER" definition is used for units/groups and not only stock as stated in the current definition.

The "M*arket induced imbalances*" term, defined in Article 2(c), is used only once in the proposal in Article 4 so UFE suggests removing the definition from Article 2 and including it directly in Article 4.

The "*Equivalent reservoir energy capacity*" definition given in Article 2(k) needs to be clarified. There is no explanation regarding the factor 2 mentioned in the proposal "[...] shall amount to twice the energy [...]". UFE understands that the implied requirement to have twice the energy provided by the full activation of LER for the Time Period is related to a FCR provision both in positive and negative directions simultaneously. This hypothesis should be reminded in Article 7.6, as the FCR could also be provided in one direction only by the FCR providing units/groups.

The "*Initial RoCoF*" definition given in Article 2(n) is not precise as it does not mention the need for measurement windows to be calculated.

6. **What is your view on Article 3 on Outcome of the probabilistic methodology for FCR dimensioning?**

UFE regrets the lack of explanation associated with the choice to define a symmetrical value in MW as outcome of the probabilistic methodology for FCR dimensioning. For example, the proposal and the explanatory document do not consider the possibility of a grid split that could explain the definition of a symmetrical value, as it would lead to an excess of generation in one split area and a symmetrical lack of generation in another split area. UFE considers such an event as significant as the loss of the 2 most powerful units in the CE area, but it is not mentioned in the examples of imbalances.

7. **What is your view on Article 4 on Probabilistic Simulation Model?**

As a preliminary statement, UFE notes that the proposal does not give much detail on the modelling compared to the explanatory document. Perhaps some choices should be detailed in the proposal. For instance, it should at least be clarified that the generated imbalances of DFD, LLFD or outage types can be additive.

UFE reminds the improvement of the frequency stability since 2008. UFE therefore supports the information given in the explanatory document regarding the increased weight given in the model to the most recent years. However, UFE regrets that there is no complete explanation available for the selection of the years.

UFE reminds the TSOs position already expressed in the 2020 ENTSO-E report on

deterministic frequency deviations (DFD). In the chapter 4.4.1 related to additional FCR as a solution to improve the frequency quality, it is clearly stated that the significant increase of the FCR to limit DFD occurrence is not a sufficient mitigation and that the root cause of the problem is not properly addressed. FCR increase cannot be the main driver to tackle the DFDs.

UFE believes that the introduction of 15 minutes dispatch will have a visible effect on the reduction of DFDs. Moreover, TSOs have identified several levers to mitigate the occurrences of DFD, so one can expect the situation to be improved in the coming years.

Therefore, the role of the simulated market induced imbalances in the dimensioning should be carefully assessed. In any case, some precisions given in the explanatory document should be included in the proposal as they are impactful, such as the choice to consider only the minutes [55, 05] in the historic data and the generation of imbalances considering only the similar days/hours patterns.

Concerning the proposal in Article 4(7), UFE requests additional details regarding the model defined to simulate the different LER units/groups. For example, is every LER unit simulated or is an aggregated approach used? This should be at least detailed in the explanatory document.

UFE suggests to consider as an additional imbalance the possibility of a reverse flow in HVDC line, having in mind the recent Nordlink incident currently under investigation, where the active power flow reversed from 1.4 GW to -0.3 GW. A repeat event cannot be excluded with the on-going development of HVDC lines. For example, the Gascogne project between France and Spain, with two 1 GW cables in parallel, if an incident was to occur on one cable, it could lead to a reverse flow from +1 GW to –1 GW, so a 2 GW incident. The likelihood of imbalances due to unforeseen events or situations encourages UFE to suggest including a review clause in the proposal, to ensure an improvement of the hypothesis considered in the model if needed.

Finally, UFE regrets that the losses of “local” lines within the area and the local consequences on the frequency are not taken into account by the model.

8. What is your view on Article 5 on Frequency acceptance criteria ?

UFE does not understand the definition of the critical condition given in Article 5(2)(b), which compares a frequency value (zenith or nadir) with a difference between 2 frequency

values (Maximum transient frequency deviation), according to the definitions given in Article 2(l), (m) and (o).

UFE supports the introduction of the precision in the article that the simulation is based on a calculation for every minute. It should also be clarified that the "*once in 20 years*" criterion considers the notion of an event, which is also to be defined in the proposal. In addition, the notion of an event is not clearly defined in the explanatory document, as it leaves room for interpretation regarding the meaning of "*series*" in "series of not acceptable minutes spaced each other not more than 15 minutes".

UFE does not support critical condition c) on the topic of RoCof as increasing the FCR will have no direct impact on the inertia of the system, except if it implies increasing the total amount of started synchronous machines. In that case, UFE reminds its position on the topic, if the grid requires more inertia, it should be provided via a remunerated product.

9. What is your view on Article 6 on Simulation scenario?

It is the understanding of UFE that no imbalance due to forecast errors of the demand or renewable generation is used by the model. However, it is expected that they will also have a large impact on the balance of the system in the mid to long term. Even though they are not considered in the coming years, the proposal should anticipate the opportunity to include them in the model. This could be done via a reference scenario or also via a random generation.

In addition, UFE suggests including precise requirements for the information shared by the CE TSOs as inputs to the probabilistic simulation model and the envisioned fallbacks if one or more TSOs does not share the needed data.

10. What is your view on Article 7 on Further assumptions?

The approach taken in the explanatory document for the dynamic simulation, based on an aggregated single-busbar model, is simplified. UFE promotes an approach with several areas (for example considering Spain and Portugal as a peninsula, but also Italy or Turkey). UFE understands it would require additional input data but it could also allow to model local phenomena for the frequency and the ability to represent grid splits.

Regarding the item developed in Article 7(6), UFE seeks for some clarification of the definition of the stock, to better understand its use in the model.

11. What is your view on Article 8 on Publication and implementation of the probabilistic methodology for FCR dimensioning ?

UFE seeks some clarification for Article 8(2) to understand the governance considered here. What is the organization chosen by the TSOs to perform the FCR calculation? Who decides that a recalculation is needed: at least one TSO, a majority of TSOs, NRAs? Who is responsible for collecting all useful data and running the model? If the operational procedures are to be detailed in SAFA, then it should be mentioned.

What is the frequency of this calculation or what should trigger it? The explanatory document is vague "*The periodical re-calculation will take place depending on scenarios variability (e.g., every 1-2 years), and the input to be used will be updated accordingly*." and the proposal does not tackle this subject. UFE supports a pre-established frequency of the calculation, as well as the possibility to run the calculation depending on the context. For instance, a mandatory recalculation after the shift to 15 minutes ISP, market time unit, etc should be scheduled. Additionally, it would be beneficial to clarify.

Finally, UFE suggests including in Article 8(3) the possibility for a review clause as previously mentioned. Which actors can trigger a review clause and initiate a new calculation with the model also needs to be clearly identified.

12. What is your view on Article 9 on Language ?

13. Any other feedback?