

## ACER call for contributions on the draft Network Code on Load-Frequency Control and Reserves

### EDF Response

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2013, August 8th

#### Introduction

EDF welcomes this ACER call for contributions on ENTSO-E's draft Network Code on Load-Frequency Control and Reserves.

The "system operation" network codes should aim at tackling those challenges the operation of the grid is faced with. It should ensure coherence, applicability and enforcement to all TSOs and relevant system users in order to reach increased interoperability within and between synchronous systems. Indeed, **the aim of this specific network code should be to achieve and maintain a satisfactory level of frequency quality**, by ensuring a coherent and coordinated behavior between both TSOs and Reserve providers' resources inside each synchronous area.

As general comments, we would like to underline the following:

- ***Relevant and reliable criteria and target parameters are essential to assess and control the quality of the frequency.*** Even though the code has positively evolved since the initial drafts, some issues remain. Indeed, both network operators and significant grid users have a common interest in a safe and secure operation of the system and both contribute to it. Common technical requirements and principles for FCR, FRR and RR reserves must be defined to ensure operational security and cost-efficiency in the operation of the grid.
- ***There is a strong and crucial interaction between this code and many others (NC Balancing, RfG, CACM, OS, Emergency, ...)***, therefore coherence and consistency should prevail and be ensured in the long run.
- ***Regulatory oversight (whether NRA or ACER) should be introduced on many decisions sent back at national or TSO level.*** The new article 4 on 'regulatory approvals' is not satisfying enough since it sends back to individual and not to joint NRAs' approval for topics impacting an entire Synchronous Area or an LFC Block ; moreover, regulatory oversight over important points (for instance, imbalance netting processes, set points for manual or automatic FRR...) is still missing. On the contrary, ENTSO-E presents in a new chapter 2 a comprehensive list of points that will have to be part of operational

agreements between TSOs at different levels: such agreements shall be submitted to the relevant NRAs for joint approval.

- *There is a lack of transparency regarding some data, which even if technical, is of importance to market participants.* The request here is not to have all the data available but to have that data which could have significant impact on the market: for instance, TSOs should publish an outlook of FCR and FRR activations and their individual contribution to reduce residual frequency deviations.

EDF wishes to point out the major following concerns:

## 1. Frequency quality target criteria and parameters

EDF acknowledges the importance of setting criteria and target parameters to monitor frequency quality. The aim of preserving the frequency quality should be clearly stated and the aim should be to prevent from any degradation of this quality.

EDF supports ENTSO-E proposal (Article 21) to define frequency quality evaluation criteria for the Synchronous Area and the LFC Block, that are required to trigger adequate actions to comply with frequency deviations that may occur.

Formerly to this evaluation process, EDF underlines also the need to prevent from extreme and/or frequent deviations by defining relevant criteria and related target parameters, but also by providing adequate actions to eliminate deterministic deviations (mitigation procedures in Article 29 should be written in this way). Indeed, the degradation of the frequency quality will have major technical, economical and operational impacts for network users and may consequently deter significantly the operational security. Besides, some of the criteria proposed will be used when carrying out the studies to define the dimensioning of reserves. Their accuracy is all the more important if we want to have the most cost adequate and efficient dimensioning.

**This code on Load Frequency Control aims at maintaining, and even improving, frequency quality, consequently the minimum requirements for frequency quality target should explicitly include requirements on TSOs.** In this view, EDF considers that ENTSO-E proposals related to "quality frequency criteria" still need to be completed and improved.

EDF recognizes that some improvements, which we asked for while responding to the public consultation, have been introduced in the last version of the code. These are namely the following:

- The indicators to be calculated will take into account the records at a 1 second interval (Article 2 - Definition « Instantaneous Frequency Data »). Indeed, the loss of a generation unit results in a rapid drop of the frequency whose minimum level is reached about 10 s after the transient. Resorting to a 1mn interval for the measurement, as initially proposed, would have not revealed these dynamics.

- The list of indicators for frequency quality monitoring has been enriched (particularly with a reference to the standard deviation usually used for measurements) and the process defined will allow for a more precise monthly monitoring (Article 21 – Criteria application process and Frequency quality evaluation criteria).

However these improvements only address a part of our concerns:

- ENTSO-E's proposal to introduce among the monitoring indicators (article 21.2.vi) a measurement of the occurrence for deviations of twice (200%) the standard deviation (which is about ±40 mHz for Continental Europe) is a step in the right direction. However while setting the standard deviation at ±50 mHz in the code, a measurement of occurrences for deviations of ±75 mHz would prove more relevant to identify a significant degradation of frequency, due to undesirable events that would occur regularly.
- Besides, we consider that a target in terms of occurrences and durations should be associated to this measurement. The definition of the target should not base on the present situation which takes into account the effects of deterministic frequency deviations, as these should be addressed and resolved in the shorter run.

In the same way, EDF considers that the threshold of 15 000 for the Maximum number of minutes outside the Frequency Range in CE would lead to an accepted, and non justified, degradation of frequency quality (Article 19 §4). The generally acknowledged reference for UCTE is a Standard Frequency Range of 20 mHz (corresponding to 9 450 minutes outside the Frequency Range) that should be maintained.

## 2. Frequency Reserves requirements

EDF supports strong scrutiny upon the strict distinction between a reserve (FCR, FRR or RR) service (product, capacity) and a reserve providing unit. Requirements should apply to the service, which should be contractually agreed, and not automatically or directly to the unit or units that, in some cases partially, provide the service.

In addition, systemic risks, such as deterministic deviations, should not be transferred to the reserve providers, but managed by the TSO.

### *FCR Dimensioning: Deterministic Frequency Variations (Articles 43 & 29)*

According to Article 27 §5, FCR dimensioning relies on two criteria : the Reference Incident and a probabilistic approach on admissible events over a 20 year' period. These two criteria, both combined, should, define a minimum but also a maximum for the total amount of FCR required for the Synchronous Area. Indeed, any increase of the total amount of FCR should be justified to affected stakeholders (FCR providers in particular) and should be strictly limited to respecting system security criteria.

Besides, ENTSO-E concludes in its recently published report on deterministic frequency deviations that the prevention, or correction, of those deviations shall not justify an increase of FCR total amount in the long run. It therefore should not be implicitly included in the probabilistic approach for FCR dimensioning. The issue of deterministic frequency deviations should be tackled at the roots by actions from TSOs, such as an adaptation of the generation scheduling and of the related market rules. Such a requirement for TSOs should be explicitly mentioned as an obligation in the NC LFC&R (Article 29 §1 b).

#### *FCR Provision (Article 45):*

The code includes a number of requirements for FCR providers that appear inconsistent or not technically feasible such as providing 'droop of the governor' that will not be possible for all currently FCR Providing Units.

In particular, EDF supports that FCR providing Units or Groups shall be able to fully activate their reserve until the activation of FRR, i.e. for a period of not less than the Time to Restore Frequency (**15 minutes for CE**). Such a proposal is consistent with the fact that the FRR shall be designed to progressively replace the activated FCR and with the requirements defined in NC RfG (Article 10.2.c.6). ENTSO-E's proposal (Article 45 §6) to extend this requirement to a 30 minutes' threshold would imply extra-costs without any justification on the one hand for FCR providers, and, on the other hand, for all the system by restricting the pool of potential FCR providing units.

#### *FRR Dimensioning: Ratio of automatic and manual FRR capacity (Article 46)*

Transparency on FRR dimensioning rules implies that historical records of LFC Block Imbalances are made available to affected parties, in particular FRR providers. Moreover, the two criteria for FRR dimensioning, i.e. covering at least the dimensioning incident and 99% of historical imbalances, should put together a minimum and also a maximum for FRR total amount in an LFC block.

Besides, EDF asks for requirements, applying to all TSOs of an LFC block, to provide ACER and NRAs with technical justifications when determining the ratio of automatic and manual FRR capacity (Article 34 §5).

#### *Requirements for exchange of FRR and RR*

The cross-border exchange of FRR/RR implies securing before real-time the availability of sufficient transmission capacity in a TSO multi-party agreement, while no capacity allocation process has been foreseen in NC CACM. EDF underlines, consequently, the need to complement the requirements in the Balancing (or LFC&R) network code to address the issue. Indeed, such processes of exchanges and sharing shall be supported by effective opportunities for TSOs in order to prove their efficiency.

### 3. Time control process (Article 67)

EDF considers that synchronous time control exhibits a limited value compared to the increased costs involved due to higher operational complexity and lower security and should be, consequently, abandoned. Why maintain this requirement only for Continental Europe, as the support document shows? If this requirement is maintained, the values should at least be subject to regulatory oversight. Furthermore, the synchronous deviation in the long run should remain monitored. Indeed, it serves as a good indicator to evaluate the quality of FRR control.

### 4. Transparency: Monitoring contribution of each block to the quality of the frequency within a synchronous area (articles 74 & 75)

EDF supports an additional requirement for TSOs of an LFC block: TSOs should publish an outlook of FCR and FRR activations and their individual contribution to reduce residual frequency deviations. This requirement will reinforce the level of confidence between all parties (TSOs themselves, FCR and FRR providers) involved into the exchange and sharing reserves process and, thereby, ensure the efficiency of the process.

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