



**Actility Benelux NV**  
F. Demetskaai 52  
1070 Brussels

**Elia System Operator**  
Boulevard de l'Empereur 20  
1000 Brussels – Belgium

Brussels, 30<sup>th</sup> October 2019

**Subject: Actility's view on the Formal public consultation on Terms and Conditions for balancing service providers for manual Frequency Restoration Reserve (mFRR)**

Dear Sir or Madam

Actility would like to thank Elia for giving us the opportunity on participating in the formal consultation. We would be happy to clarify in person any of the following points.

**1) Penalties Related to mFRR made available**

Actility is in favour of a fair penalty system which gives all market parties the correct financial and contractual incentive to deliver a correct and reliable service.

Actility is however of the opinion that the proposed non-linear penalty system does not meet the above requirements.

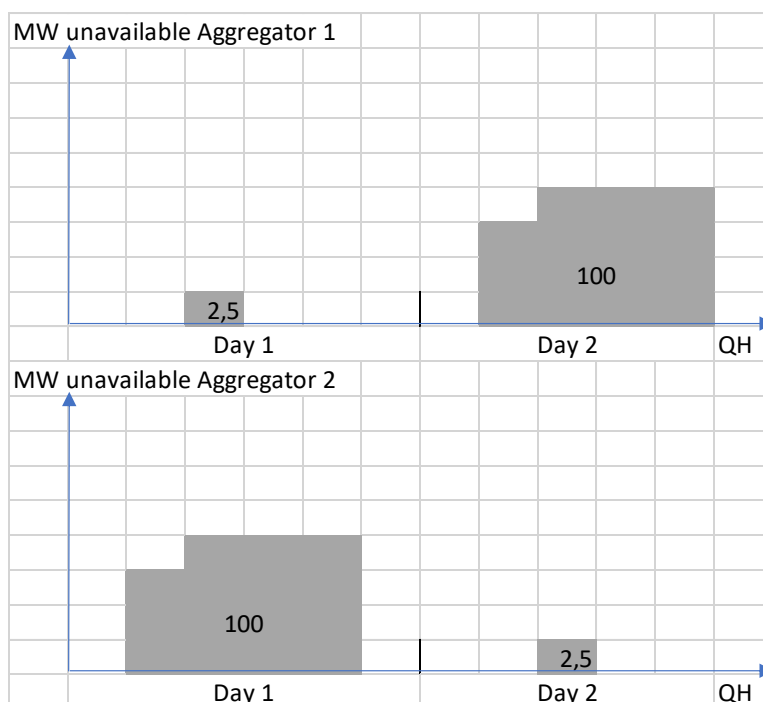
***The system is not fair***

The non-linearity introduced in the penalty by the factor  $\#CCTU_{non-compliant}$  leads to penalties which are regarded as unfair.

Suppose two aggregators which have reported the outages as indicated in the figure to the right. Both reported two non-compliant CCTU's on two consecutive days. Both aggregators reported exactly the same "MW<sub>not made available</sub>" for those CCTU's: 2.5MW/h and 100MW/h however in the opposite order for both aggregators.

If we now calculate the penalty for both aggregators (PmFRR Made Available) with  $CP_{WA}$  of 3.5€/MW/h (see table below) we find that the aggregator 1 needs to pay almost double of aggregator 2 despite having an identical unavailable volume and an identical number of non-compliant CCTU's.

The difference caused by the non-linearity cannot be interpreted as fair to Aggregator 1.



PmFRR Made Available			
Aggregator	CCTU 1	CCTU 2	SUM
1	8,75 €	700,00 €	<b>708,75 €</b>
2	350,00 €	17,50 €	<b>367,50 €</b>

### ***Market parties don't have correct incentive***

The non-linearity introduced by having the factor #CCTU<sub>non-compliant</sub> is not only unfair, it is also counterproductive in providing a penalty system which gives all market parties the correct financial and contractual incentive to deliver a correct and reliable service.

The reporting of small (only few MW's) and temporary (few quarter-hours) is disproportionately penalized as, when followed by a second outage, it would automatically double the second penalty. This makes this scheme largely unpredictable, potentially reducing the interest in participation into the service.

This in turn might lead to gaming behaviour as the potentially disproportionate cost of reporting might be offset against the probability of an activation test and the consequence of failing this. This in turn leads to unfair competition between parties must be avoided.

Actility would like to stretch the importance of this proportionality concept by referring to the Dutch TSO TenneT. TenneT's disproportionate "mFRR made Available" penalty lead to such issues that TenneT has recently made the radical proposal to just drop the "mFRR Made Available" penalty. Actility would immediately like to state that it is firmly opposed to just dropping this penalty but would like to use this case to illustrate the potential consequences of a lacking penalty design.

The most important learning point Actility had from the experience in the Netherlands **is that the penalties for "mFRR made Available" need to be proportional to the "penalties for mFRR missing MW"**.

- It needs to be high to avoid a financial benefit of market parties that put mFRR volumes on unavailable in anticipation of an activation or an activation test.  
→Statistical link
- It needs to be low enough in order for the penalty to remain proportional with the unavailability

In the workshop of 23/09/2019 ELIA also stretched the importance of a link or proportionality between the penalty related to mFRR made available and penalties for missing MW. Actility fully agreed and is therefore also surprised that such link completely disappeared in the new proposal.

Actility Suggestion: Actility would suggest a penalty which is linear and linked with the penalty for missing MW.

To ensure that there is no financial benefit of reporting an unavailability to avoid the financial consequence of an activation test the maximum financial impact of declaring an outage has to be calculated. This consists of:

- **The penalty for mFRR missing MW itself**

As we calculate the maximum penalty we take 1.5 as  $\alpha$ . This gives, per MW unavailable,

$$P_{mFRR \text{ Missing MW per MW}} = 1.5 * CPWA * \#hours_{D \text{ to } D-29}$$

Where  $\#hours_{D \text{ to } D-29}$  are the number of hours for which the BSP had at least one accepted capacity bid.

- **The financial consequence of facing a decrease of your mFRR<sub>max</sub>**

We assume we lose the possibility to sell one MW for 30 days at the price CPWA and that capacity bids will be withheld for the same number of hours  $\#hours_{D \text{ to } D-29}$ . This gives therefore, per MW,  $CPWA * \#hours_{D \text{ to } D-29}$ .

In total the maximum financial consequence one would face for a failed Activation test is, per MW,  **$2.5 * CPWA * \#hours_{D \text{ to } D-29}$**

To avoid gambling the cost of declaring the outage should be higher or equal to the probability of having an activation test multiplied by the financial consequence.

This probability should be a fixed value and reflect the smart testing logic. As an example we can assume that there is an activation test each 2 months and that these activation tests are performed during business days and

business hours. When fully random, the probability that we would have an activation test for a random quarter hour is therefore  $1/(2*20*8*4)= 1/(4*320)=1/1280$ . (Where 2 is for 2months, 20 of for twenty business days per month, 8 is for the number of working hours in a day, and 4 is for the number of quarter hours in an hour)

Combined this gives:

$$P_{mFRR \text{ Made Available}}(\text{Month } M) = \sum_{\text{All quarter hours of month } M} 2.5 * \#hours_{D \text{ to } D-29} * R3 \text{ Missing } MW(i) * CP_{WA} * 1/4 * 1/320$$

Assuming that a selection happened for all 720hours we come to a formula which is very similar to the current penalties for R3 missing MW. Only with factor 5.625 as factor instead of factor 5 and  $CP_{WA}$  instead of  $P_{avg}(i)$

$$P_{mFRR \text{ Made Available}}(\text{Month } M) = \sum_{\text{All quarter hours } i \text{ of month } M} 5.625 * R3 \text{ Missing } MW(i) * CP_{WA} * 1/4$$

In order to be consistent with the new terminology and the new proposed penalties for mFRR missing MW we can also rewrite the above to

$$P_{mFRR \text{ Made Available}}(\text{Month } M) = \sum_{\text{All CCTUs of Month } M} \frac{2.5}{320} * MW_{\text{Not Made Available}} * CP_{WA} * \#CCTU * hours_{CCTU}$$

This formula meets the different criteria:

- It linked to the penalties for mFRR missing MW. (The only difference is the  $\alpha$  factor which is in this case equal to  $2.5/320$ )
- It is fair: the aggregators in the first example of this document would, in similar circumstances, pay the same amount
- The formula discourages gaming as there is no statistical gain to be made to declare an unavailability in order to avoid a test
- Temporary and small outages can't face a disproportionate penalty due to the absence of non-linearities.

## 2) Minimum mFRR standard

Actility is worried about the combined impact of LFC BOA and the minimum mFRR Standard Volumes to be procured. Especially regarding the impact this would have on the mFRR flex volumes which are to be procured in 2020. The dynamic dimensioning of FRR combined with the increasing minimum mFRR standard to-be contracted volumes might lead to **a phasing out of mFRR flex which is faster and more drastic than foreseen**. The current phasing out design implies that first a certain mFRR standard volume is contracted and only if more reserves are needed that mFRR flex is contracted. In practice this could lead to periods in which no mFRR flex can be procured. This increases the cost for society, because mFRR standard is a more expensive product, and potentially decreases the reliability as the currently available mFRR standard might not be able to cover the demand. This poses a risk for volumes which currently can only deliver mFRR flex and might disappear from the market prematurely.

Actility Suggestion: In the frame of the new mFRR design note Actility suggests expressing the minimum mFRR standard as a percentage of the mFRR need. When the need for mFRR is very low, the need for standard can also expected to be lower than the fixed minimum volume.

## 3) Implementation Complexity and ELIA support

Despite agreeing with the direction in which the mFRR product is heading, Actility would like to highlight the operational and organizational impact and the required investments which are linked to these changes.

Actility would therefore emphasise that, in order to be ready before February 2020, it is crucial that ELIA provides as much support as possible. As a positive example we would like to refer to the technical specifications which have been shared well in advance by ELIA. We would also like to ask to foresee adequate resources to answer ad-hoc technical questions which are sent by mail.

Kind regards,

Cedric Weyns  
Country Manager Belgium  
**Actility BeNeLux**  
Tel: +32 473 49 03 73  
Cedric.weyns@actility.com