

To PLEF TSOs
From Market Parties Platform
Date January 8th, 2018

Subject MPP questions on the PLEF Generation Adequacy Assessment 2.0

The MPP very much welcomes the work conducted by TSOs in the PLEF region in order to perform this second Generation Adequacy Assessment. Content wise, MPP members indeed find that the study provides interesting insights and useful findings on the implementation of a flow-based approach in a generation adequacy assessment. Furthermore, the MPP welcomes the fact that the TSOs presented the methodology and the results to market participants in an open and transparent way.

With the present paper, MPP members would like to highlight several topics that could be further clarified in the final report, and make suggestions on potential methodological improvements.

Flow-based domains

In general, the MPP welcomes the introduction of a new methodology based on flow-based domains.

We understand that the assessment is based on simulations of day ahead flow-based (DA FB) domains. However, in practice, between day-ahead and real-time, security margins can be relaxed resulting in more cross-zonal capacity being available (when the "LTA" patch is not defining the DA FB domain), or on the contrary countertrading might occur, leading to less cross-zonal capacity being available.

MPP would welcome more details with respect to these two dimensions, in particular on the extent to which they could influence the results. We would also appreciate a comparison of two modelling choices, with and without the LTA patch.

Granularity of the study

The MPP notes that the current approach only models congestion between zones. However, bottlenecks within a zone are also relevant when assessing adequacy. In the future, it could therefore be relevant to model the system with a smaller granularity than the national level.

Weather scenarios

The MPP understands historic climate years 1982 – 2015 were used, and were included with equal weights.

In terms of potential future improvements, the MPP would recommend to evaluate the likelihood of extreme events over the period 2020-2030 to better understand how they could affect the results.

Assumptions used country by country

The MPP would appreciate to have a full disclosure in the final report of the hypotheses used country by country.

A special focus on the assumptions in terms of interconnection capacities (notably the maximum import capacity per country, but also the combined import capacity for a given set of countries, e.g. for France and Belgium, detailed assumptions in terms of grid reinforcements...) would be welcome. Such hypotheses can indeed have a significant impact on the results for countries that are dependent on imports. Details on the assumptions used for the countries outside the PLEF region (e.g. the UK, Spain and Italy) would also be necessary to allow for a full understanding of the results.

Transparency would also be appreciated on the outage rate and maintenance time series (maintenance profile) per country used across the 20 configurations.

Generally speaking, if some assumptions, such as for instance the non-availability risk, are not harmonized, the MPP would like to have further explanations on the reasons behind the differences and would suggest evaluating whether such hypotheses can be harmonized in the future.

Demand-side flexibility

The MPP would welcome additional details and explanations on the study hypotheses in terms of demand-side response flexibility, especially as not all countries were modelled in the same way and/or the inputs were provided exogenously. MPP members would appreciate if a thorough explanation of the different approaches used country by country could be provided. In particular, the MPP would appreciate to have clarity on the future volumes of DSF assumed per country, as well as an approximation of the existing volumes as of today (to get an idea of the expected evolution).

MPP members would also like to have more explanations on whether hypotheses in terms of batteries development potential are included. If batteries are considered part of demand-side response flexibility, MPP members wonder whether the 4 hours / 8 hours limits are appropriate to model the whole demand-side response potential.

Furthermore, while the MPP understands that voluntary load shedding (i.e. consumers reducing load when prices reach a certain high value) is taken into account, we would appreciate more details on the volumes concerned.

In addition, besides ensuring the consistency of the modelling approach used for each country, the MPP would like to suggest possible ways of improvement for future assessments:

- Modelling price elasticity of demand-side response flexibility (considering a fixed demand-side response potential at a given point in time, i.e. without new investments)
- Modelling demand-side response investment cost not as a single value, but as a curve: marginal deployment/operation prices might for example be low for the first MW to be installed and increase significantly when the “low hanging fruit” potential is already included.

Results country by country

To make a fair assessment of the results, indication on the nationally desired LOLE values country by country would be welcome. The partial publication in the last adequacy report was appreciated in this context.

The MPP would also appreciate more details and explanations on why the LOLE in Belgium is decreasing from 2018-2019 to 2023-2024 in the Base case.

Sensitivity analyses

The MPP appreciates the inclusion of sensitivity analyses, and considers that it would be relevant to include additional cases reflecting potential political developments, for instance a coal phase-out in countries such as the Netherlands or Germany.

Regarding Belgium, the Minister of Energy has confirmed towards the EU commission that it would run the next adequacy assessments on the basis of the low probability high impact scenario - where 1GW of nuclear capacity would be unavailable in BE and 4.5GW in France for the entire winter (in addition to historically standard forced-outage rates). If such scenario is not used as the base case for the PLEF analysis, it should be at least one of the sensitivities performed for both horizons.

Combinations of sensitivities that are deemed realistic could also be interesting.