

## **Febeliec answer to the Elia public consultation on the scenarios, sensitivities and data for the CRM parameter calculation for the Y-4 Auction for Delivery Period 2027-2028**

Febeliec would like to thank Elia for this consultation on the scenarios, sensitivities and data for the CRM parameter calculation for the Y-4 Auction for Delivery Period 2027-2028.

Febeliec continues to strongly regret that Elia still, as for all other adequacy related studies and analyses, only conducts a consultation on the input data, sensitivities and scenarios, and does not conduct a consultation on the methodology itself. Febeliec equally strongly regrets that Elia still does not involve the stakeholders in the development of this methodology, other than the stakeholders imposed by the law (FPS Economy plus coordination with CREG). Even though no such legal obligation exists, Elia could (and according to Febeliec, should) have opted for a much larger involvement from all stakeholders, in order to obtain a much stronger buy-in from stakeholders in the methodology, the study and its results. Febeliec will provide its comments on the consultation but this does not mean that Febeliec agrees with the applied methodology and should in no case be interpreted as such. Amongst others, Febeliec still has a wide range of comments and questions that it considers not (sufficiently) answered or resolved on the bi-annual Adequacy and Flexibility Study, which is the basis for the methodology and model for this study as well as the previous consultations on the scenarios, sensitivities and data for the CRM parameter calculations.

On the general scope of this input for the CRM parameter calculation for the Y-4 Auction for Delivery Period 2027-2028, Febeliec was very strongly surprised by the lack of consistency and coherence between certain elements, most notably the (non/at most partial) inclusion of the impact of the Ukrainian war and its massive impact on energy (and related) markets and prices. In some instances, this war and its impact are mentioned and (to a certain extent) taking into account, but for other elements this is not done, in particular for the energy prices and economic growth and the related electricity demand forecasts. While according to Febeliec, Elia has already not always been consistent nor coherent in its choices for inclusion or not of certain elements, a major war on the European continent with massive direct and indirect effects on the European economy and specifically the energy sector with important short, medium and longer term effects should be central to any adequacy study for the period 2027-2028 and as such the approach chosen by Elia concerning the (non/at most partial) treatment of this impact is beyond questionable and most severely erodes the relevance, usefulness and validity of the studies by Elia.

On the data and assumptions, and related to the above comment, it is not always clear for Febeliec which data is taken into account, most importantly till which point in time. As major elements for Elia's analysis seem to be based on the Adequacy and Flexibility Study 2022-2032 and the ERAA 2021 analysis, but also the WEO 2021 and updates of the Federal Planning Bureau of June 2021, which were all published in 2021 using data in many cases only till 2020 or at best beginning 2021, Febeliec wonders to which extent the underlying data and thus the resulting analyses are still to be considered relevant in light of the recent evolutions. This comment is even more relevant (and has been made many times in the past) concerning the Energy Pact and NEPC, which have been published even earlier based on data that in the mean time is extremely outdated. While Febeliec understands that it is impossible to include all recent data and information and that at some point a data freeze is necessary, Febeliec is extremely surprised that on a qualitative basis no more analyses are provided nor additional sensitivities and scenarios included to cater to these very relevant elements. Febeliec also very strongly regrets that in the end only one single final scenario will be calculated and insists that it would be wise and prudent to run at least some alternative scenarios, even though there is no legal obligation, in order to provide the necessary relevant input for any governmental decisions.

In general, Febeliec already wants to indicate the lack of much actual data provided by Elia. Most spreadsheets provide hardly any data, almost no sources and in fact provide hardly any basis to provide input on. It is impossible to discern whether the values are based on external sources, internal estimates, or a mix of both, making it also nearly impossible to validate the data. On the different tab sheets, Febeliec has following comments:

- 1.2 Individually modelled thermal generation
  - Febeliec has no comments on the specific units presented, but reiterates a longstanding comment on the lack of transparency on the announced (temporary) closure of power plants in Belgium. Moreover,

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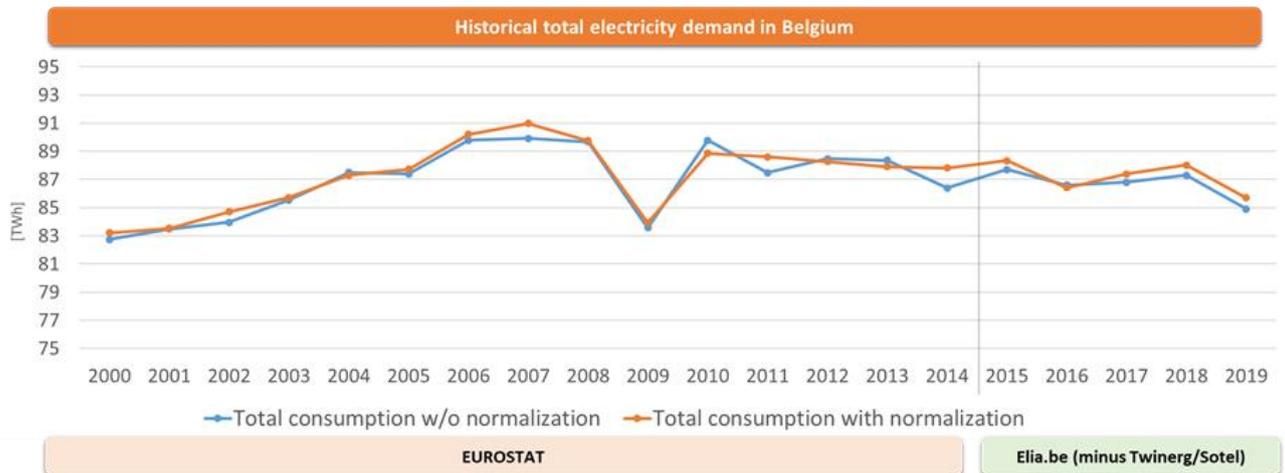
*Febeliec represents industrial energy consumers in Belgium. It strives for competitive prices for electricity and natural gas for industrial activities in Belgium, and for an increased security of energy supply. Febeliec has as members 5 business associations (Chemistry and life sciences, Glass, pulp & paper and cardboard, Mining, Textiles and wood processing, Brick) and 40 companies (Air Liquide, Air Products, Aperam, ArcelorMittal, Arlanxeo Belgium, Aurubis Belgium, BASF Antwerpen, Bayer Agriculture, Bekaert, Borealis, Brussels Airport Company, Covestro, Dow Belgium, Evonik Antwerpen, Glaxosmithkline Biologicals, Google, Ineos, Infrabel, Inovyn Belgium, Janssen Pharmaceutica, Kaneka Belgium, Kronos, Lanxess, Nippon Gases Belgium, Nippon Shokubai Europe, NLMK Belgium, Nyrstar Belgium, Oleon, Pfizer, Proxiums, Recticel, Sol, Tessengerlo Group, Thy-Marcinelle, Total Petrochemicals & Refining, UCB Pharma, Umicore, Unilin, Vynova and Yara). Together they represent over 80% of industrial electricity and natural gas consumption in Belgium and some 230.000 industrial jobs.*

Febeliec also notices that Elia does not seem to consider any additional units in Belgium in the period till 2028 beyond two CCGTs contracted already in CRM auctions and wonders whether this is a realistic assumption.

- 1.3 Storage
  - For storage no full methodology is available describing volume determination for e.g. small scale storage, making it impossible to provide any meaningful comments to the proposed data. The same applies for the lack of reasoning explaining the proposed growth paths.
- 1.4 Renewable and profiled
  - For renewables, as only aggregated numbers are given without any explanation, it is impossible to provide any meaningful information (e.g. applied annual growth rates by Elia are missing as well as the starting points on which to apply such growth rates). It is also very unclear which are the “latest developments” that are taken into account (and which cut-off date for updates was chosen).
  - Febeliec regrets that it is not completely clear which power plants are included here, in particular diesel generators<sup>1</sup>, emergency generators (all considered market response?) and process generators. Febeliec has made this comment on previous versions of this consultation and regrets that yet again this comment has not been treated and no additional information is provided. Because of a lack of breakdown (only aggregated data is shown), it is impossible to identify which periods these categories are available/producing and to have a view on their contribution to system adequacy.
- 1.5 Forced outage rates
  - Febeliec regrets that no methodology for the calculation has been provided, making it difficult to assess the information (e.g. are forced outages uniformly spread over the year or are there periods with higher/lower forced outage rates, e.g. due to preventive maintenance before winter period with on average higher prices). Febeliec also wants to reiterate a comment it has voiced in the past on the calculation of outage rates taking into account only the remaining elements in the system (e.g. not taking into account the performance with respect to outages of units in the past that are no longer maintained in the system, a.o. related to CCGTs, OCGTs and nuclear plants), which should be modified to filter out specific effects related to plants or technologies that are no longer applicable.
  - On nuclear outages, Febeliec wants to refer to the above comment, and insists that while it has no specific preference for any of the proposed derating factors, it should be clear that for the two most recent nuclear reactors without micro-fissures only those elements are taken into account that are relevant for these reactors and not elements relative to specific situations or other technological configurations (e.g. Doel 1 and 2), while also a part of the historic investment program (e.g. non-availability because of upgrades of bunkers, which should then not occur in the future anymore) is taken into account. In any case, the outage rates should not be cumulated and pancaked as this would lead to a too conservative approach according to Febeliec, which would thus overestimate any potential adequacy concern.
- 2.1 Demand
  - Febeliec is surprised to see that only one absolute value is provided, without any curve before and after 2027, making it very difficult to provide comments by lack of data.
  - On demand, Febeliec most strongly opposes the number provided by Elia as it is based on the projections of the Federal Planning Bureau of June 2021, predating the price increases which started after the summer of 2021 as well as the massive impact of the Ukrainian war on both the starting point (total demand for 2022 will be lower than 2021) as well as the growth path, which already has been impacted by the on-going war and on which the further impact could also be very significant in a negative way if this war and its impact on energy prices will be exerting its impact for a longer period, potentially up to years.
  - Febeliec in this context wants to refer again to data that was provided by Elia on Belgian overall electricity demand in the period 2000-2019 (both non-normalised and normalised data), which was provided by Elia in 2020.

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<sup>1</sup> Diesel generators (and similar technologies) seem despite previous comment on this topic by Febeliec still completely missing in the file from Elia. CREG studies have shown that for example only the (aggregated) Belgian hospitals already have up to 200MW of diesel generators and this is not taking into account all the other emergency generators (accounting for several hundreds of MWs of installed capacity, from industrial sites over public services, office buildings to even residential consumers) that are operational in Belgium. Moreover, winter 2018-2019 shows that large BRPs have installed more than substantial volumes of diesel generators to cover their positions (diesel generators which cannot be formally accounted for as “emergency” generators as they are not connected to specific consumption processes). Febeliec reiterates its request to Elia to introduce this category of diesel generators (and similar technologies) to the analysis.



The historical data sources are indicated on the chart. For the normalization, Elia applies a simple linear method based on the equivalent HDD, 'jours ouvrés' and amount of days in the year (correction for leap years).

The normalization methodology is currently under review at Elia and could lead to slight differences in the historical normalization values. It is also important to note that the data above were never normalized before 2010 and that the same impact is used for the whole horizon.

In past studies other sources have been also used for historical data (ENTSOE.net for instance) where the same definition of consumption was used across all countries. Since the introduction of a common tool at ENTSO-E (since MAF2019), the consumption source for future studies will be the one published on the Elia.be website which represents an estimation of the 'total electricity consumption' of Belgium.

Figure 1: Belgian electricity demand 2000-2019 (source: Elia, received 27/05/2020)

The value provided for 2020 (with a very significant impact from the sanitary crisis and the lockdowns) is at 81,0 TWh (82,1 TWh normalised) demand more than substantially under the value for 2019. Even 2021, at 84,2 TWh (84,4 TWh normalised) is below the total demand in 2019. As mentioned above, the current economic turmoil due to the Ukrainian war will presumably also have a more than significant negative impact on Belgian total demand for 2022, yet Elia forecasts a total demand in 2027-2028 of 94,6 TWh or more than 12% increase compared to the 2021 value, based on assumptions pred-dating the Ukrainian war. Febeliec finds the approach by Elia non-representative of reality, resulting in a probably severe overestimate of total Belgian demand and thus an overestimate of adequacy needs, which will then result in potentially unnecessary higher costs for consumers (if needs are unnecessarily and artificially increased) who are currently already facing the very negative impact of higher energy bills.

- On peak demand, Febeliec also most strongly opposes the number provided by Elia as it is based on the same outdated projections as above, while Elia also mentions that it does not take into account additional flexibility, e.g. from an increased share of V1G, higher level of out-of-market batters which will level out the peak load. Peak load being in many ways an even more important metric for system adequacy, Febeliec does not understand at all why Elia artificially wants to increase this value, by omitting potentially more than substantial dampening elements (on top of using much outdated and irrelevant data for its calculations).
- 2.2 Demand Side response
  - Febeliec continues as in previous years to voice important questions and comments towards the values used for demand side response, as Elia until 2023 uses a detailed analysis with a 7% growth rate, resulting from extensive discussions, yet for the future merely uses an interpolation to the in the mean time very much outdated values from the 2019 Energy Pact (but upscaled for higher electrification assumptions). As Febeliec has made comments on Elia's methodological approach for this topic for many years now and requested a detailed analysis and quantitative modelling, it most strongly regrets that Elia still has not developed a quantitative approach and continues to use outdated data with some quantitative tricks to overcome the lack of modifications of the applied targets based on the (quantitatively non-substantiated) Energy Pact.

- On demand side response, Febeliec most strongly urges Elia to take into account not only voluntary direct and indirect demand response based on peak prices but also voluntary demand side response to longer periods with high energy prices (below peak price levels but for extended periods) as can be observed at this moment. The impact on overall demand of such higher (but not peak) prices on overall demand are becoming visible due to the many hours of prices (significantly) above 150 €/MWh (which Elia applied as a proxy for high prices for its analysis with E-Cube) and should according to Febeliec in any case be included in any serious adequacy analysis. Febeliec even hopes that the current high prices will not lead to demand destruction instead of (temporary) demand response if they persist for a significant longer period.
- Febeliec continues to wonder, after already having made this comment in several previous consultations, how emergency generators (see also above) are treated, as it remains unclear if and how such generators are taken into account, and if so, for which volumes. Febeliec wants to stress that in Belgium literally 100s of MWs of emergency generators are installed, with its own members already having massive volumes of emergency generators (in at least one case even 100s of MWs for certain grid users), not even taking into account the 100s of MWs installed at a.o. hospitals, where a CREG study indicated an installed capacity of at least 200 MW.
- 3. Balancing capacity
  - Febeliec regrets that Elia takes every year higher volumes of balancing capacity to be reserved, while at the same time watering down certain balancing obligations for BRPs (e.g. Day Ahead balancing obligation). If Elia considers needs for balancing capacity to rise over time (not even yet taking into account the possible impact of the second wave of offshore wind), it should rather strengthen balancing obligations, in order to ensure that not evermore capacity needs to be contracted and paid for by consumers.
  - Febeliec has questions on the inclusion of the impact of cross-border balancing capacity, as by 2027-2028 all European balancing platforms should be functional and thus should impact the balancing capacity reservation needs, while at the same time also inter-TSO capacity must be taken into account. Moreover, Febeliec also wants to point to studies conducted by Elia which could result in less or no reservation of balancing capacity, while this impact is not at all taken into account in this report.
  - Febeliec does not understand why Elia makes a distinction between the volumes for balancing capacity from demand response and other sources of flexibility, as it is the overall capacity need which is the parameter that should be taken into account, without a split between technologies.
  - Febeliec is also surprised to see that Elia does seem to take into account the net revenues from the provision of balancing services as a revenue stream. Especially in case of scarcity situations, it can be expected that these revenues would increase (if adequacy concerns would start to appear, market parties could expect to see an increase in their revenues from balancing services and alternatively, if no scarcity situations occur, this revenue stream would not occur, but would also indicate ample capacity in the market and thus no need for a CRM).
- 4. Flow-based domains
  - Febeliec agrees that for the minimum minRAM 70% is chosen (although Febeliec insists that this value is a legal minimum and TSOs should strive to do better as consumers pay for 100% of the (cross-border) infrastructure). Febeliec wonders why in the table Belgium comes with an asterisk, as no explanation is provided (the same applies to PSTs with double asterisks). Febeliec also opposes any value below 70% as his 70% is a strict legal requirement already before the period 2027-2028.
  - On cross-border capacities, Febeliec does not see any information on which future grid (based also on investments) is taken into account, which is a.o. very relevant in light of many recent announcements (e.g. on hybrid offshore grids) and which cut-off point in time is used to include such announcements.
- 5. Other countries data
  - Febeliec takes note that Elia proposes to apply linear interpolation for the data for the period 2027-2028 based on ERAA 2021 but wonders whether this is the best approach. Moreover, Elia proposes some updates on ERAA 2021 for Germany, France, the Netherlands and the UK (where it is unclear which were the initial values and what is the reasoning behind the updates proposed by Elia, nor the coherence between the different choices that are made), but none for other countries (e.g. Poland on a delay of the coal phase-out) which could have a significant impact on the energy mix and cross-border flows in Europe. Febeliec also refers to its comments on the impact of the Ukrainian war, where it is unclear to which extent announcements made after the start of this war are taken into account and to which extent. Febeliec thus reiterates its fundamental question on the consistency and coherence of the choices made by Elia.

- 6. Economic parameters
  - Febeliec refers to its previous comments on outdated data (WEO 2021 predates the Ukrainian war) and hopes Elia will at least conduct some meaningful sensitivity analyses on these parameters, as they will have an enormous impact on the outcome. Febeliec would like to see how Elia justifies its proposed price levels for oil, gas and coal for 2027-2028, as Febeliec has many questions related to the proposed calculation approach in the explanatory note, including a.o. the applied inflation rate forecasts, while more generally having a lot of questions about the proposed methodology as it is not sure that inflation is the driver for high energy prices but rather the result and as thus in the current situation not a good precursor for determining energy prices.
- 7. Sensitivities menu
  - On sensitivities, Febeliec strongly regrets that Elia only calculates one single configuration of the base scenario and a combination (or one single) sensitivities. This approach does not provide for additional meaningful insights by comparing different constellations, which would however be very useful.
  - On the sensitivities on French nuclear availability 2, as already discussed in the past, Febeliec is surprised that this is even included, as France already has a CRM in place, guaranteeing the adequacy of France and according to the ERAA methodology, NRAAs can only take into account national impacts and not those cross border. Febeliec is also surprised that Elia now includes lower availability of even 8 nuclear units in France.
  - On the flow-based CEP rules sensitivity, Febeliec opposes the inclusion of any sensitivity which would reduce the minRAM below 70% as this the minimum threshold. Febeliec already considers the fixed RAM 70% a very conservative approach by Elia.
  - On the uncertainties for turbojets and OCGTs, Febeliec insists that under the current discussions on the crisis related to the Ukrainian war, a lot of realism and pragmatism has been shown to ensure that European adequacy is maintained under crisis conditions and as such Febeliec finds the sensitivity proposed by Elia which would remove more than 500MW of very flexible assets (increasingly needed for balancing intermittent renewable energy) seems extremely conservative and an overshoot.
  - On the sensitivity on the uncertainty on prices of gas and coal (and oil?), while Febeliec supports such sensitivities (and regrets, as mentioned above that only one single scenario will be modelled and calculated by Elia, thus not providing additional insights from these sensitivities), it does not understand the relevance of the methodology proposed by Elia to calculate the high prices and thus cannot understand the validity of the proposed price levels by Elia.
  - On the lower demand due to high prices, Febeliec supports, as mentioned above, such approach yet the explanatory note lacks any content to evaluate what Elia is actually proposing as methodology to determine such lower demand (and peak demand?) levels.
- 9. Scenarios post DY
  - Febeliec regrets that Elia has not foreseen data or an analysis for every year in scope, specifically for 2029 and 2031 but more importantly for none of the years between 2032 and 2040, where merely an interpolation seems to be used although this according to Febeliec does not provide a sound enough basis for the needs for the CRM, as an auction for the period 2027-2028 could lead to a very high and unnecessary overprocurement of capacity if only a very limited number of years would be identified with potential adequacy concerns (e.g. also due to the impact of all announcements for additional investments, which could greatly limit the need for assets with long subsidy cycles, which would then erode the business cases of other asset and technology classes).
- 10.2 Activation cost and net revenues from balancing
  - Febeliec, as already mentioned before, wonders whether the referred value, coming from the totally different context of the Strategic Reserve, is the correct reference in this context. For net revenues from the provision of balancing services, Febeliec considers Elia's approach too conservative.

### General Conclusion

Febeliec as always remains available to discuss its comments to this consultation and the input data, but also still remains available to discuss the methodology. Febeliec is looking forward to the qualitative and especially quantitative results of the adequacy study from Elia and hopes that these will be presented and discussed.