

Subject: FEBEG's reaction to FPS's consultation regarding the adaptation of the royal decree methodology of 28/04/2021

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FEBEG would like to thank FPS Economy for the public consultation on the changes it proposes to adopt on the methodology for obtaining an individual derogation from the intermediate price cap<sup>1</sup>.

## Executive Summary

FEBEG condemns the introduction of last minute changes to such a structuring parameter as the determination of the missing money for the submission of an IPC derogation when all the market parties are finalizing their files. Such changes are not acceptable.

FEBEG is also concerned by the inconsistency caused by having the missing money for the determination of the IPC calculated in one way and using another methodology for the calculation of the missing money in the frame of the IPC derogation assessment

As mentioned in the previous contributions, FEBEG considers that the determination of the expected market revenues should be based on realistic hypothesis and on a sound approach. FEBEG therefore considers that using average market revenues is not adequate due to its very high sensitivity to extreme values. The expectation of increasing merchant revenues with an increasing renewable penetration and the assumptions put forward regarding the CO2 prices do not seem coherent with market reality.

Finally, the derogation process should provide clarity on the outcome of the request prior the start of the bidding process.

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<sup>1</sup> [https://economie.fgov.be/fr/themes/energie/securite-dapprovisionnement/mecanisme-de-remuneration-de#toc\\_heading\\_19](https://economie.fgov.be/fr/themes/energie/securite-dapprovisionnement/mecanisme-de-remuneration-de#toc_heading_19)  
The documents submitted for comments are a draft Royal Decree amending the Royal Decree of 28 April 2021 (<https://economie.fgov.be/sites/default/files/Files/Energy/Ontwerp-wijziging-KB-Volume-capaciteit-27052021-NLFR.pdf>) & the work of Professor K. Boudt regarding the additional required return ("hurdle premium") that has to be taken into account for the calculation of the missing money ([https://www.elia.be/-/media/project/elia/elia-site/public-consultations/2020/20201030\\_200\\_report\\_professorboudt.pdf](https://www.elia.be/-/media/project/elia/elia-site/public-consultations/2020/20201030_200_report_professorboudt.pdf))

## Context

First of all, FEBEG deplores the very limited time given to market parties to react on such important topic. But, more importantly, FEBEG deplores the introduction of last minute 'design' changes negatively impacting investment decisions at this stage of the preparation for the first upcoming auction.

FEBEG would like to remind that its members like many other stakeholders are working very hard for the preparation of the first auction and finds completely unacceptable that, a few days before the end of the prequalification, unexpected consultations are being held with proposals that will certainly affect the outcome of their CRM files. Even though FEBEG appreciates all the efforts Belgian Authorities are making to make this first CRM auction a success, this type of practice deteriorates the needed stable investment climate

The consultation concerns the adaptation of the Royal Decree for the calculation of the missing money where the "median income (P50)" will be replaced by the "average income" and which would take into account an additional required return ("hurdle premium") developed in the work of Professor K. Boudt in the framework of the next adequacy & flexibility study for the period 2022–32.

FEBEG will nevertheless also reiterate its general concerns regarding the IPC individual derogation procedure that has been put in place by the Belgian Authorities at the request of DG Comp and for which FEBEG considers the process and modalities are not suitable and not addressing the concerns DG COMP raised in its opening decision<sup>2</sup>. This new proposal being consulted upon only reinforces the non–appropriateness of the individual derogation procedure.

## Comments on the computation of revenues

While FEBEG supports the need for economic viability assessment in the framework of adequacy studies based on a common methodology at European level and a relevant set of reference scenarios, it does not agree that such methodology and set of reference scenario are also used in the decision making process for granting an individual derogation.

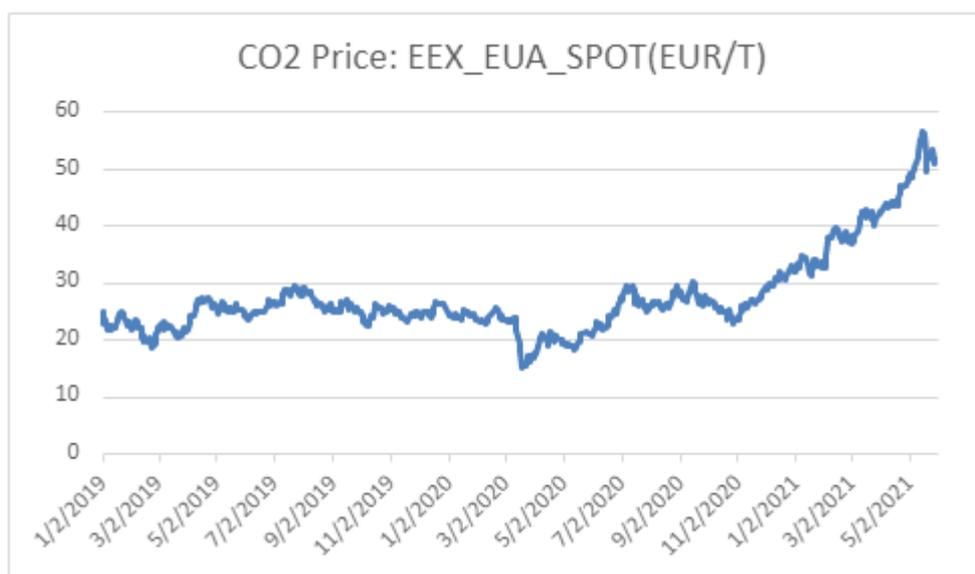
In particular, FEBEG had already expressed its concerns on the fact that Elia is in charge of computing the expected inframarginal rent of capacity providers during the delivery year based on numerous assumptions and approximations, that may be far from the reality (cf. CO2 price as explained below) and not shared by the CRM Candidate. FEBEG is convinced that it is not within the competence of Elia to make such a calculation, but it is up to the market players to correctly assess, with reasonable assumptions and in line with their risk management policy and own reference scenarios, their expected revenues during the delivery period.

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<sup>2</sup> We also refer to *FEBEG's reaction on FPS Economy consultation on the IPC derogation methodology* of 12/02/2021

In practice, market parties will have different expectations on the future and might work with a series of scenarios and sensitivities to define its most appropriate bid. On one hand, Player A may estimate in one of its scenarios for 2025, low CO<sub>2</sub> price, low gas price and a strong RES development by then, meaning low inframarginal rent and thus high missing money. On the other hand, Player B may estimate in one of its scenarios, for the same year, high CO<sub>2</sub> price, high gas price.

A concrete proof between the mismatch of Elia’s view on certain parameters and a CRM Candidate’s view relates to the CO<sub>2</sub> price. In this respect, Elia has recently published the hypothesis to be taken in the calculation of yearly inframarginal rent in the framework of the concerned derogation procedure<sup>3</sup>. In this publication, Elia proposes to use a CO<sub>2</sub> price of 27 €/tCO<sub>2</sub>, based on W.E.O. 2019<sup>4</sup>, which are no longer in line with the levels that have been observed since early 2021.



This concrete example clearly shows that using some hypothesis that may be rapidly outdated and most likely not in line with the vision of the CRM Candidate at the moment of the bidding, is clearly not appropriate and may conduct to the exclusion of some CRM Candidates from the capacity market if its evaluation of the missing money is not in line with Elia and CREG’s assessment. In practice, this particular CRM candidate, not eligible for a LT contract and not covering its expected missing money, will be either forced to exit the market or take the risk to encounter losses during the delivery period.

<sup>3</sup> Main hypotheses related to marginal costs taken into account for calculation of inframarginal rents in the framework of the Intermediate Price Cap (IPC) derogation, Elia, 15<sup>th</sup> of May 2021 ([https://www.elia.be/-/media/project/elia/elia-site/users-group/crm-implementation/documents/20210512\\_ipc-derogation\\_en.pdf](https://www.elia.be/-/media/project/elia/elia-site/users-group/crm-implementation/documents/20210512_ipc-derogation_en.pdf))

<sup>4</sup> <https://www.iea.org/reports/world-energy-outlook-2019>

## Comments on the choice for the average revenues vs. P50 revenues

### General considerations on investment decisions

FEBEG would like to underline the complexity of the assessment of economic viability and of investment decisions. Given the costs and time-horizons involved in the development of new assets or refurbishment of existing assets in electricity markets, investment decisions are complex and taken with extreme care. They are usually relying on a broad range of models, scenarios and criteria. However, a common thread in economic and financial valuation is that the more uncertain a revenue is, the more heavily it is discounted in any assessment of future revenues.

For instance, the development of new assets in electricity markets require large upfront costs and cover long payback periods (>20 years) beyond the liquidity horizon of forward markets, which is < 3 years). Investors clearly need a solid business case to approve such a financial commitment.

The standard industry practice is to consider a set of market scenarios and to evaluate the distribution of revenues and costs over the economic lifetime of the asset considered (e.g. CCGT covers approximately 20–25 years). Such an analysis aims to compute a distribution of expected gross margins over this lifetime. Depending on whether these margins are covering the fixed and investment costs, a new investment can be approved. This is also the case for investments to be performed on existing assets.

Integral parts of such an analysis are

- (i) expected prices and revenues on the electricity markets, based on market fundamentals;
- (ii) the likely consequences of policy decisions (e.g. the energy transition); and
- (iii) the impact of the market design.

**Such analysis also includes the possibility of price spikes. However, given the uncertainty and infrequency of such price spikes, they are heavily discounted in any such assessment.**

When deciding on the bid, investors will rely on a ‘most likely’ scenario rather than averaging results of many scenarios, many of which are extreme and unlikely. The median value will therefore reflect market player decisions better than an average and is more appropriate for the purpose of this exercise.

The whole point of the CRM is to give investors a stable revenue because the market has proven across Europe that market participants will not be investing in centralized power generation without a certain degree of certainty related to the revenues given the long lifetime of the assets and high degree of risks due to the fast evolution of the market.

Moving from a median to an average is negating the fact that the investors in the energy sector have a need for certain or likely revenues more than less likely, higher revenues.

Moreover, given the asymmetric nature of price scenarios, an average will always overestimate the revenues, the more extreme the scenarios considered, the higher the impact. The reason is best explained with a simplified example. If one considers it a likely case to have a margin of 5 EUR/MWh on average, and then make sensitivities decreasing and increasing this value with 5, 10 and 15 euro per MWh, this will result in a median of 5, which is considered the reasonable value. However, when considering the average, the revenues in the -5, -10 and -15 cases will be capped at zero, as one will simply not run the power plant when one would lose money, meanwhile, one would foresee scenarios at 10, 15 and 20 euro on the positive end. When making an average of these 7 scenarios, one will end up at 7,1 EUR/MWh even if one estimate it as likely to make no money at all than to make more than 5 EUR/MWh. The more scenarios are considered and the more extreme they are, the more this will mechanically increase the average, while any reasonable investor will be expecting revenues around 5 EUR/MWh, maybe a bit more or a bit less.

Using a median value will allow ELIA to define a in their eyes ‘base case’ scenario, which can be explained and defended and where different units with different characteristics can be tested individually in the same storyline, enabling a level playing field, which will be necessary to properly assess the request of each plant, given that units can be quite different, even within the same technology (amongst others due to efficiency differences).

This will not be the case with an average, which will be a value based on a mix of possibilities which cannot be explained, assessed, audited or controlled anymore (an end product which no-one understands comparable to the derivatives causing the financial crisis of 2008).

The ongoing work regarding the methodology and proof concept economic viability assessment<sup>5</sup> seems to indicate that the notion of risk on revenues clearly needs to be considered. Referring to the example of the number of climate years, it is stated that “the revenues of a resource unit primarily come from relatively few climatic years, the average of these revenues is not a good proxy to estimate profitability. Risk aversion needs to be considered”. This fact can certainly be extrapolated outside of the discussion on climate years.

In conclusion, using the average will result in a revenue which is not defensible and possibly does not match any reasonable storyline of expected market evolution.

Additionally, it is not clear from the proposal, how the limitations to capture spike prices in the market by the payback obligation will be modelled to determine the average revenues. Even worse, the use of the average revenues will most likely not consider the cases where a payback obligation (for which the reference is the DA price) would be applied on the entire

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<sup>5</sup> ENTSO-E Mid-term Adequacy Forecast 2020: Appendix 2 - Methodology (entsoe.eu)

contracted capacity while (a large) part of it might have been sold on the forward markets at lower prices. This example is particularly interesting to demonstrate that the CRM Candidate is best placed to assess its future revenues (based on its risk policy, hedging strategy, defined scenarios, ...) and to make a bid in the CRM that will ensure its competitiveness in the auction.

### Comments regarding the work of Professor K. Boudt

First of all, FEBEG does not read in the document and recommendation of Professor K. Boudt that the average revenues should be chosen over the median ones (P50).

As mentioned above, FEBEG is of the opinion that the expected revenues will vary in function of many parameters to the risk appetite from an investor's perspective. For example, as a new capacity – or a major overhaul – is a very significant investment (which may also be co-financed by a financial partner), a market operator/investor will most likely take a prudent approach to reduce the risk profile of its investment.

FEBEG therefore welcome the proposal of a methodology in which considers the complexity due to the complexity of energy markets, the impact of policy/regulatory changes, the high variability and non-normal shape of the investment return distribution and the model uncertainty in the investor's behaviour. This clearly demonstrates the complexity in establishing future revenues.

From the consultation document, it is also not clear which hurdle rate would be used in the calculation of the inframarginal rents. Would the following values proposed by Professor K. Boudt be used?

- Keeping an existing CCGT in the market without refurbishment: Hurdle premium of 1.5%
- Keeping an existing CCGT in the market with refurbishment: Hurdle premium of 4%
- Investment in a new wind installation: 4.5%
- Investment in a new CCGT: Hurdle premium of 6.5%
- Investment in a new OCGT: Hurdle premium of 8.5%
- Investment in a new DSM 300: Hurdle premium of 8.5%
- Investment in a new DSM 2000: Hurdle premium of 9.8%

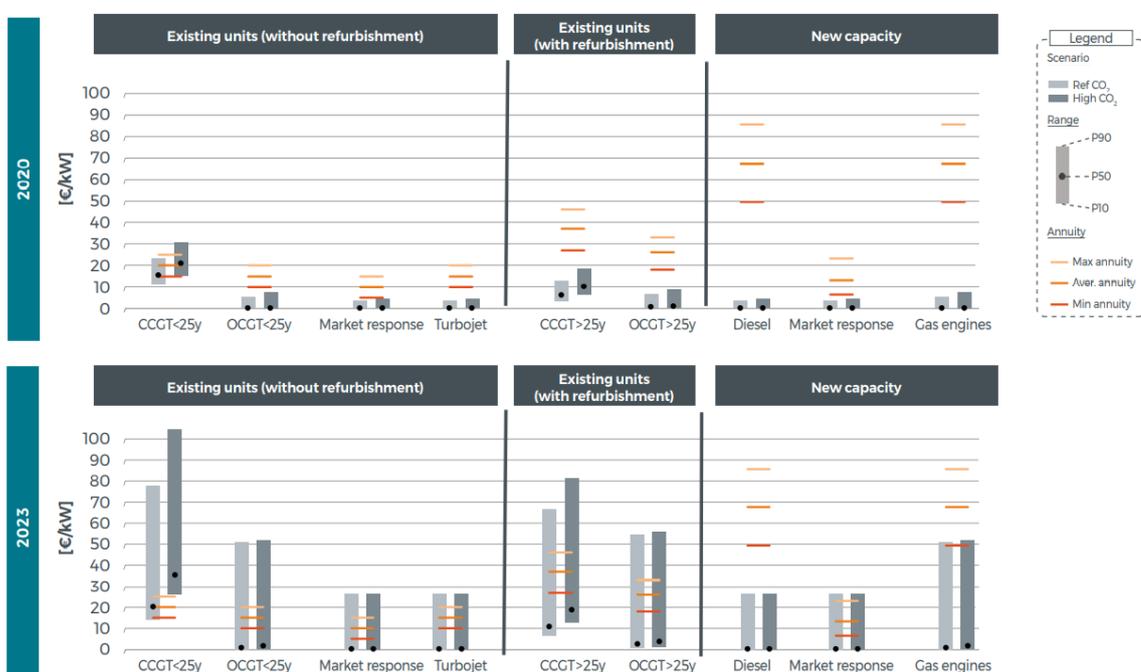
FEBEG has numerous questions regarding this proposal:

- How is the possible change of technology mix following the CRM auction be considered? E.g. less running hours on existing due to more efficient technologies.
- How is the integration of RES technologies modelled?
- What if the CRM Candidate does not have the same vision of Elia on the important penetration of DSM? We suppose that, with this vision, implies important spikes that would be integrated in the average revenues.
- How are the evolutions on the ancillary markets' design be considered?
- What is the definition of refurbishment? We suppose a major overhaul would be integrated in this category as well.

In any case, we consider that the values to be used should be publicly consulted.

The following graph, extracted from the last 2020–30 adequacy study shows that choosing the average compared to the P50 revenues will have a significant impact on the assessment by Elia and the CREG about the ability to cover its missing money and thus the granting of the individual derogation. Again, this assessment, as we have proven above, may strongly vary from the reality (cf. recent evolutions on CO2 prices) and the expected reality that the investors takes into account. If an investor is able to choose its own reference scenario, he can also take concrete actions to cover part of its risks due to new evolutions.

**INFRAMARGINAL RENT FOR EXISTING AND NEW CAPACITY IN 'CENTRAL' SCENARIO FOR 2020 AND 2023 - EU-BASE [FIGURE 4-13]**



Source: Figure 4.13 p 133 of Elia’s report: “Adequacy and flexibility study for Belgium 2020 – 2030” ([https://www.elia.be/-/media/project/elia/elia-site/company/publication/studies-and-reports/studies/13082019adequacy-and-flexibility-study\\_en.pdf](https://www.elia.be/-/media/project/elia/elia-site/company/publication/studies-and-reports/studies/13082019adequacy-and-flexibility-study_en.pdf))

## Concerns about the proposed derogation mechanism

As mentioned previously, FEBEG is greatly concerned by the fact that the attribution of the derogation by the CREG will occur a few months after the auctions’ results and thus after the bidding. Also the fact that if the derogation is not granted the Capacity Provider who had requested a derogation for justified reasons, is being imposed the IPC without having the possibility to appeal on this decision and ultimately exit the contract is not acceptable.

FEBEG is of the opinion that this proposal is leading to a highly regulated electricity market, close to the imposition of a price after a third-party judgement on the reasonableness of certain assumptions.

In addition, FEBEG is very concerned by the level of details that have to be given in order to obtain the possibility to have its derogation file assessed (a.o. . historic cost, break-down per Delivery Point, detailed start costs,...). First of all, this will certainly create barriers of entry in the CRM for some investors. Secondly, this is absolutely not in line with the “high level” estimates of infra-marginal rents that will be computed. On one side, the CRM candidate is expected to give every little detail in terms of costs but the inframarginal rents will be grossly computed, using averages of revenues and old-dated hypothesis.

Finally, we underline again that because the mechanism as proposed will probably never be used by market participants given the huge uncertainty that it brings, FEBEG is convinced that it does not address the concerns expressed by the EC on its opening decision regarding existing capacities, being *“having an intermediate price cap as a permanent feature without any possible individual derogation to it is novel could preventing existing capacity from bidding their true costs, while not being able to apply for multi-year contracts, as stated by some stakeholders This may lead to their exclusion from the CRM and even their exit from the electricity market, as pointed out by some market information received by the Commission during its preliminary examination”*.