

Subject: FEBEG comments on CREG's public consultation on Gross CoNE and X-factor
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FEBEG thanks the CREG for having the opportunity to react on its "Public consultation on the draft proposal 2267 on the gross new entrant cost and correction factor X for the T-4 auction with delivery period 2026-2027"¹.

The comments and suggestions of FEBEG are not confidential.

Overall remarks

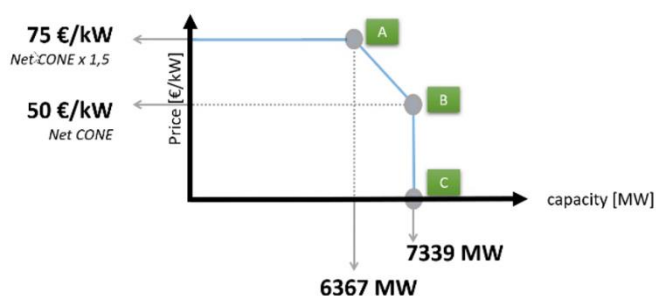
FEBEG recommends to set the uncertainty margin (X-Factor) for the determination of the net-CoNE at 1.5. Because the determination of the net-CoNE is based on a large number of uncertainties and hypothesis with regards to the cost of CAPEX, WACC and economic lifetime of the reference technology but also the risk between to different technologies. The X-factor should be increased to take into consideration the uncertainty after the 1st contract period. Another extremely important uncertainty is without any doubt the difficult exercise of the estimation of the market revenues over the lifetime of an asset. This should be reflected in an appropriate X-Factor. Moreover, a factor of 1.5 is in line with the correction factors applied in other European capacity markets. Deviating a lot from this current practice in other member states is needlessly risky. The uncertainty with regards to the economic parameters is particularly important in the context of the energy transition and the integrated European electricity market which bring – by definition – a lot of volatility and unpredictability in the Belgian electricity system.

Regarding the CONE, FEBEG deplores that the figures proposed by the CREG are coming from a document which was not public at the time of consultation. The unavailability of the source document greatly reduces the possibility to provide inputs in the frame of this consultation. Nevertheless, FEBEG considers the reference technology must be carefully chosen. Selecting the technology with the lowest cost (net-CoNE) which does not have the full potential to solve the adequacy issue given its constraints would put the security of supply of Belgium at risk and go against the overall goals of the CRM. FEBEG considers that DSM does not fulfills the requirements and should be removed of list of reference technology.

¹ <https://www.creg.be/fr/consultations-publiques/consultation-publique-relative-au-projet-de-proposition-2267-relative-au>
<https://www.creg.be/nl/openbare-raadplegingen/openbare-raadpleging-betreffende-ontwerpvoorstel-2267-van-de-brutokost-van>

Context & CREG proposal

The CREG consults on the gross CoNE values of a list of technologies for which Elia will compute the revenues, in a second stage, in order to obtain the net-CoNE values. The technology with the lowest net CoNE (if its potential is sufficient to fill in the gap) will be used to determine the point A (applying a correction factor called X-factor) and B/C of the demand curve. This correction factor is also under consultation by the CREG.



Source: Demand Curve Y-4 for delivery year 2025-26

The CREG proposes following values in its document under consultation:

- CoNE

The CREG proposes to use the calculation of the CoNE made by the FPS Economy – DG Energy in its note of 07/05/2021 in the frame of the determination of a new reliability standard. It should be noted that this note was not available during the consultation period and that thus limited information on how these values were determined was available for comment.

FEBEG regrets that the information used to determine such important parameters in the frame of a CRM such as the WACC and the CoNE is not available.

The assumptions used to determine the $CoNE_{fixed, RT}$ for each reference technology in the FPS note are as follows:

Tableau 7 : Récapitulatif des hypothèses nécessaires au calcul du $CoNE_{fixed, RT}$

Reference technology	CAPEX - [€/kW]	FOM - [€/kW/y]	Investment economic lifetime - [years]	WACC - [%]	Derating Factor - [%]	Potential for additional capacity resource - [MW]
Open cycle gas turbine (OCGT)	400	20	20	7,5	90	No limitation
Combine cycle gas turbine (CCGT)	600	25	20	7,5	91	No limitation
Internal combustion engines (IC engines)	300	15	15	7,5	62	No limitation
CHP	800	60	20	7,5	93	No limitation
Photovoltaics (PV)	600	25	15	7,5	4	No limitation
Wind onshore	1000	50	15	7,5	6	No limitation
Wind offshore	2300	80	15	7,5	15	No limitation
Battery storage	100	10	10	7,5	11	No limitation
Demand Response	0	20	1 ^(a)	7,5	44	No limitation

Source:

(a) Pour que le calcul soit cohérent, le FOM doit être considéré comme un investissement qui ne porte que sur une année.

The results, proposed in DG Energy's note, concerning the cost of a new entrant by reference technology, taking into account the derating factor, are presented in the table below.

Tableau 8 : $CONE_{fixed,RT}$

Reference technology	EAC - [€/kW/y]	Derating Factor - [%]	$CONE_{fixed,RT}$ - [€/kW/y]
Open cycle gas turbine (OCGT)	60,7	90%	67
Combine cycle gas turbine (CCGT)	88,4	91%	97
Internal combustion engines (IC engines)	49,0	62%	79
CHP	141,4	93%	152
Photovoltaics (PV)	88,2	4%	2206
Wind onshore	163,3	6%	2721
Wind offshore	360,6	15%	2404
Battery storage	24,6	11%	223
Demand Response	20	44%	45

It should be noted that considering the list of technologies used to determine a reliability standard should not lead to using the same list of technologies for the determination of a demand curve as the purpose is clearly different.

- WACC of 7,5%
- Correction factor (X-factor) to be considered on the best new entrant: 1,1

General remarks on the Price Caps in the CRM:

FEBEG particularly recommends CREG and the Belgian Authorities to carefully chose the best new entrant technology in order to calibrate the CRM demand curve. Selecting the technology with the lowest cost (net-CoNE) which does not have the full potential to solve the adequacy issue given its constraints would put the security of supply of Belgium at risk by excluding all other valuable technologies. In addition, this could make the CRM no longer technology-neutral as only very limited technologies could participate in the CRM.

The determination of the net-CoNE and the x-factor are indeed essential components of the CRM design as they will determine the maximum bidding price in the auction (“global auction price cap”).

The impact of an under-estimation of the net-CoNE is problematic as there is a number of negative impacts:

- **Lower competition in the CRM auctions** → a too low net-CoNE will inevitably exclude many technologies from the auction and thus the number of new projects being offered
- **More volume moved from Y-4 to Y-1 auction** → a too low net-CoNE may lead to a ‘gap volume’ not being completely filled in Y-4 and thus **an even more important ‘gap volume’ to fill in the Y-1 auction.**

The technologies with very short lead time (<1y) being able to fill in the gap are rather limited today. In addition, increasing the volume to be procured in Y-1 in a very interconnected country as Belgium, with limited fall-back solutions, is problematic: the recent study of Elia on the Adequacy and Flexibility needs in the 2022–2032² period clearly highlights that the GAP volume can increase significantly when combining different risks outside of Belgium’s control (e.g. outages on French nuclear units, coal phase-out in neighbouring countries, reduced reliance on UK which is no longer part of EU, objectives on minRAM not reached, etc.).

While it is important that the cost of the CRM is being kept at a low level, one should not forget that:

- 1) the primary objective of the CRM is to ensure the Security of Supply
- 2) the global system costs and the impact in the long run also needs to be considered. A ‘too low’ cap will prevent the bids from certain technologies but may also give an exit signal to some existing baseload capacities to the benefit of some technologies with lower CAPEX costs but with very high marginal/activation cost³, hence drastically impacting the total system costs and the invoices of consumers.

² <https://www.elia.be/en/electricity-market-and-system/adequacy/adequacy-studies>

³ Additional DSR capacities will indubitably have a much higher activation costs than existing DSR as easily interruptible processes have already been identified and harvested. The remaining potentially interruptible processes will only have increased activation costs.

Comments regarding the CONE

On the economic Lifetime (or payback time)

It is not correct to consider 20 years as economic useful lifetime for the thermal technologies such as CCGT & OCGT. This would assume that new CRM payments beyond 2040 and/or sufficient merchant revenues would cover the missing money. This latter strong assumption may not be aligned with investors' expectation and behavior.

1. it is very uncertain that the CRM mechanism will be prolonged after 2040 and, if so, the design would probably vary a lot, requiring in any case a new approval by the European Commission. It is therefore not possible to assume CRM revenues from yearly (Y-1) auctions.
2. the predictability of merchant revenues for thermal assets at the 2040 horizon and beyond becomes extremely difficult in a new carbon-neutral world.

However, FEBEG agrees that the economic lifetime of DSM is very limited. Their availability in the market is linked to industrial processes, the economic situation and other parameters such as the change of equipment and processes. Experience shows that long-term commitments for such capacity is very rare.

In conclusion, one cannot assume that any investor will compute its annuity over a duration longer than the capacity contract he is eligible for. For thermal assets, the economic lifetime needs to be limited to maximum 15 years.

On the WACC:

The WACC proposed at 7,5 % for the computation of the CoNE is a post-tax WACC (as the WACC takes into account the impact of taxes). Therefore, this fact will, for the sake of consistency, have to be considered when computing the net revenues and thus the net – CoNE. Indeed, the capacity provider will be subject to a 25% corporate income tax on its taxable base as per the current tax legislation in force in Belgium.

In addition, to take into account the fact that the CRM remuneration is not indexed for inflation, a nominal WACC needs to be used, as opposed to a real WACC as currently proposed.

On the capex costs:

Thermal assets: FEBEG will not comment on the capex of thermal assets given the sensitivity of the topic, in particular as we are very close to the first auction.

Storage: FEBEG will not comment on the capex given the sensitivity of the topic in particular as we are very close to the first auction. However, there are various categories of storage that should be considered, with different hours of autonomy (at min. 1h and 4h), impacting significantly the derating factors.

Market response: When it comes to market response, there is a large range of market response's types. Therefore there should be different categories with different CAPEX cost but also different derating factors (based on their effective duration).

Moreover, the investment costs of market response will probably increase as the 'low hanging fruit' has already been made flexible to be marketed in the ancillary services or strategic reserve. As most of the easily interruptible processes have already been converted to DSR, one must be extremely vigilant about the assumed flatness/linearity of the related CAPEX costs. It is therefore wrong to assume only one category of DSM in this list of CoNE.

On the Fixed O&M

FEBEG will not comment on the FOM of thermal assets given the sensitivity of the topic, in particular as we are very close to the first auction.

However, the O&M costs proposed are determined in real terms. In reality, the latter will be indexed first up to the first delivery date 2026 and afterwards it will continue to rise with indexation from OEM manufacturers mainly for long term maintenance and parts to guarantee the availability of the plant over the entire lifetime of the asset. The COVID crisis increased drastically the cost of raw materials and of all manufactured goods. This has been translated in a stiff increase of the inflation which also needs to be accounted for.

Comments regarding the X-Factor

FEBEG does not agree with the proposed X-Factor of 1.1. According to FEBEG, the proposed value does not consider the many uncertainties around the estimation of the net-CoNE.

- **There are important uncertainties regarding the expected revenues from the market.** Indeed, according to FEBEG, the revenues of (thermal) assets will become very uncertain in the context of the energy transition and the European Green Deal, with the massive development of PV and onshore & offshore windmills. This trend will impact the role some capacities will play in the energy system, from baseload to back-up capacities. Next to the available means of production, there are as well macro-economic trends on both global & European level – such as economic growth, oil, gas, coal and CO2 prices – that will define thermal profitability. The variability of revenues is also important in the case of an economic crisis. Therefore, FEBEG advises CREG to consider the important uncertainties on market revenues of the thermal technologies in the computation of the X-Factor.
- **This low value will not capture the uncertainties linked to the estimation of the CAPEX, WACC and the economic lifetime of a capacity.** For instance, the evolution of the cost of raw materials is clearly a source of uncertainty and will impact the cost of different technologies.

- Finally, the X-factor should also integrate a possible wrong choice of the reference technologies for the gross CoNE from the shortlist. Conform the Royal Decree, the value of the correction factor X should take into account the uncertainties associated with estimating the net cost of a new entrant, both in terms of cost of a new entrant, as in terms of differences in costs between eligible technologies. In that sense CREG's proposal seems to only consider one single technology for the determination of the X-factor. The value of 1.1 does clearly not cover above mentioned uncertainty risk.

Comparison with other countries:

FEPEG refers to the uncertainty factor applied in other CRMs in order to calibrate the point "A" of the CRM demand curve. In the UK, in Poland and Ireland, the X-factor was set at 1.5 of the net-CoNE. In Italy, it was set at 1.25 of the net-CoNE. FEPEG does not see any reason why Belgium should deviate so far from the current practice regarding the uncertainty margin applied in other countries that have implemented a CRM. We therefore propose to use the X-Factor of 1.5 for the calibration of the demand curve.

Generally speaking, it is important to ensure consistency between the various CRMs. In this respect, one can observe that the auction price cap in other countries was close or above the current global auction price cap applied for the first Y-4 auction in Belgium:

- 75 €/kW/y in Italy
- 75 £/kW/y in the UK
- 138 €/kW/y in Ireland (last T-4 auction)

In conclusion, for the above-mentioned reasons, FEPEG proposes to keep the X-Factor of 1.5 for the calibration of the demand curve.

Remarks on the list of technology for the computation of the net CoNE:

The CREG proposes to keep the demand response in the list of technologies for which the revenues need to be computed, hence including in the short list for the determination of the global auction price cap.

FEPEG would like to remind the sound principles for the determination of the net-CoNE: one should look at the technology having the lowest cost AND which can bring a solution to the adequacy issue of the country in all scenarios and which can be available at the term where it is needed for the system, WHILE keeping the technology-neutral principle into account.

For this reason, one needs to ensure the participation of a backstop technology so as to be able to achieve security of supply at the desired level. **Contrary to what the CREG proposes, FEPEG is of the opinion that market response should not be selected as technology for the determination of the net-CoNE.** Indeed, there is no certainty that the potential of market response at the 2026 horizon, also considering its constraints and its large variety, may be sufficient to ensure the security of supply of the country.

For example, FEBEG doubts that the DSM potential expected by ELIA in its study on the Adequacy and Flexibility needs in 2022–2032⁴ would become effective at the 2026 horizon: very high ambitions regarding DSM are expressed in the framework of the CRM given the significant volume that is left open for the T-1 auction but energy-limited capacities have low derating factors. In comparison, in France where a capacity market is in place, FEBEG observes that “only” 3 GW of DSR have been certified, in a market where the load is much more thermo-sensitive. Furthermore, the potential for DSR is function of the peak load. For instance, the UK Association of Decentralized Energy (ADE) assumes that about 16% of the peak could be covered by DSR⁵.

⁴ <https://www.elia.be/en/electricity-market-and-system/adequacy/adequacy-studies>

⁵ As a comparison, the Association of Decentralized Energy (ADE) estimated that 16% of the UK’s peak electricity requirement – or 9.8 gigawatts (GW) – could be provided by businesses being flexible in their energy demand (...). (<https://www.theade.co.uk/resources/what-is-demand-side-response>). One must reasonably question how Belgian DSR potential could be much higher.