Consultation report of the Public consultation on the scenario's, sensitivities and data for the CRM parameter calculation for the Y-4 Auction with Delivery Period 2025-26

Focus on Intermediate Price Cap & Fichtner study

July 2020

Table of contents

Introduction

Elia organized a public consultation on the scenarios, sensitivities and data for the CRM parameter calculation for the Y-4 Auction with Delivery Period 2025-26. This public consultation took place in the framework of the proposal of Royal Decree laying down the method for calculating the required capacity volume and the parameters necessary for the organization of the auctions within the framework of the capacity remuneration mechanism, proposed and published by FPS Economy[1].

Article 6, §2 of the proposed Royal Decree sets out the subjects to be submitted for public consultation, namely:

- the update of data and assumptions regarding the scenario(s), as well as any potentially selected sensitivities to be included in the reference scenario;
- the relevance of the sensitivities, including the data and assumptions on the basis of which they were established;
- the type of additional capacity;
- the public sources of the scenarios for the years subsequent to the year of delivery from which the input data are used to calculate inframarginal rents;
- the shortlist of existing technologies that will be reasonably available and which are eligible for the determination of the intermediate price cap.

The public consultation material consisted of an Excel file, containing all the data and assumptions regarding scenarios, sensitivities and parameters required by the proposed Royal Decree, an explanatory nota in PDF format and the study carried out by the external consultant Fichtner, to support the determination of the parameters. Moreover, the slides presented during the Task Force CRM meeting from Tuesday 5 May 2020[2] can also be considered as support.

The consultation period was set from Tuesday 5 May to Friday 5 June 2020, 6:00pm, was publicly announced on the Elia website and during the Task Force CRM meeting from Tuesday 5 May 2020. The overall calendar for this public consultation and the consecutive steps was equally presented by the FPS Economy on the TF CRM meeting of May 5th 2020[3].

In total 4 confidential reactions and 6 public reactions (CBS, Febeg, Febeliec, ODE-EDORA-BOP, Ecolo-Groen and IEW-Greenpeace) were received.

[1] https://economie.fgov.be/sites/default/files/Files/Energy/AR-methode-de-calcul-volume-de-capacite-parametres-encheres-mecanisme-de-remuneration-de-capacite-Annexe-4-avant-projet-AR-clean.pdf
[2] https://www.elia.be/en/users-group/crm-implementation/20200505-tf-crm-11
[3] https://www.elia.be/nl/users-group/implementatie-crm/20200505-tf-crm-11

This document comprises just one chapter, in which an overview is provided of received questions, with a justified answer from Elia and how the remarks on the aspects of the intermediate price cap and the Fichtner study will be taken into account for the CRM calibration. These inputs will be used later this year for the calibration of the intermediate price cap, for which a proposal is to be made by Elia in the autumn of this year. Given this less strict planning in comparison with the scenario-aspects, it has been decided to include the intermediate price cap parameters in a second, separate public consultation report. For all other aspects (e.g. legal and regulatory context), we refer to the consultation report of June 2020 published on Elia's website[4].

This public consultation report will be published on Elia's website as well as all the non-confidential feedback received.

Elia would like to thank all the market parties for their contributions and for providing written feedback during the public consultation.

[4] https://www.elia.be/en/public-consultation/20200505_public-consultation-on-the-scenarios-sensitivities-and-data-for-the-crm

1. Received feedback and Elia's answer

This chapter of the public consultation report provides the overview of received feedback, a justified answer from Elia and how these will be taken into account for the CRM calibration.

Regarding the received feedback from stakeholders, and before answering in details to all the comments, Elia would like to clarify 2 points in general which are related to the framework of this public consultation and particularly to the parameters related to the calibration of the intermediate price cap and the Fichtner study.

Firstly, it is to be noted that for the precise scope for which Elia is responsible in the calibration of the CRM, **not the entire scope of the Fichtner study is relevant**. For instance, related to the costs of new capacity it is rather a matter to be covered by CREG. Also for WACC the CREG has a proposing role following the proposed Royal Decree. However, in this public consultation report, Elia does provide a reply also to the feedback received regarding the Fichtner study that are – stricto sensu - out of Elia's direct scope. Elia has nevertheless chosen to do so in order to be complete and consistent, but also since cost estimations in the Fichtner study for the various elements are to be seen as a complete package and underlying hypotheses are often – at least indirectly - related.

Secondly, **in Elia's view there is generally no reason to consider the Fichtner results as unreliable**, despite having received some general criticism from various stakeholders regarding the cost estimations included in the Fichtner study. In this respect, Elia would like to point out that Fichtner has been selected to perform the cost of capacity study as an independent external third party expert consultant with proven experience. Besides, no alternative numbers from publicly referenced other sources have been provided by stakeholders in response to this public consultation. Also, to the extent (partial) alternatives have been provided, reasonable explanations are available to explain differences or to argue that in general the Fichtner results can be deemed reasonably reliable. However, in order to further ensure robustness of the obtained results in the Fichtner study, Elia is considering launching a limited peer review of a number of aspects of the Fichtner study.

1.1 Intermediate Price Cap – Calibration methodology

In general, Elia follows the methodology as set out in the proposed Royal Decree and the current process upon which aspects have been consulted upon is one of calibration. Therefore, questions related to adaptations to the methodology are considered out of scope in the context of this public consultation.

Centrica Business Solutions	CBS however believes that at least two categories of market response should be considered in the short list: • one that can and will earn revenues on ancillary services (FCR, aFRR, or mFRR); • and one that cannot and therefore won't earn any revenues on those markets, and is also likely to earn little to no money on the energy market. While as of today most of market response MWs (especially demand response) are active on the market through participation to the mFRR, where they can capture an availability fee that constitutes if not all at least the vast majority of their revenues, the untapped potential of market response that remains in Belgium will likely not be eligible to participation in the ancillary services (typically with reaction times that are too slow), and will only be offered on the energy market. With activation prices that are likely to position those MWs at the right side of the merit order, as extreme peakers to cover the very last hours of the demand curve, the revenues such MWs will obtain from activations on the energy markets are likely to be very low, if not zero during most of the years. Therefore, it is key that for such market response MWs, the calculation of their missing money in the process of identifying the worst performer in the market and calibrating the intermediate price cap takes into consideration little to no revenues from the energy markets as well as from ancillary services.

The purpose of the intermediate price cap is to set an upper limit on the bid price and capacity remuneration for projects eligible to apply for one-year contracts only, i.e. typically with no to limited missing-money, to avoid any inappropriate inframarginal CRM rents.

- Formally, the intermediate price cap applies only to those CMUs that are associated to the (default) capacity category of one-year, i.e. corresponding to those projects with no to limited missing-money. Each project is, however, free to submit an investment file to CREG and thereby apply for a multi-year capacity category. When successfully categorized by CREG in a multi-year capacity category, the intermediate price cap does not apply. Note that in any case, the global auction price cap continues to apply to *all* CMUs.

- It is essential that the intermediate price cap is not too high in order to be effective and to be able to limit inappropriate inframarginal CRM rents for projects with no to limited missing-money.
- The intermediate price cap is calibrated to the highest missing-money estimated for a short-list of technologies. This short-list, in accordance with the proposed Royal Decree includes only technologies that can reasonably be expected to be available during the delivery period to which the auction relates. The market response technology is very diverse. Observing the technologies currently in the market, Elia concludes that regarding the market response technology, only the market response category that currently provides ancillary service can reasonably be expected to be in the market also during the delivery period 2025-2026 and make a contribution in terms of adequacy. Of course, the fact that this market response category currently relies on ancillary services revenues does not mean that this market response category in the future cannot shift to making revenues on the energy 'commodity' market. Only the characteristics (e.g. activation time) of this market response category are fixed in the calibration process. When determining the revenues to arrive at the missing-money, the most interesting market will be considered (i.e. ancillary service vs. energy market).

Centrica Business Solutions	CBS finally renews its concerns regarding the risk of exclusion of certain market response MWs. Although being competitive in the CRM merit order, market response MWs presenting the following characteristics risk to be unduly excluded from the CRM: • little CAPEX, i.e. not eligible to the absolute price cap for multi-year contracts; • high fixed O&M, i.e. much higher than the 20 or 40k€/MW/y of the table. In order to solve these issues and remove the blind spot, CBS believes at least two options are available. Importantly, none of these options requires to increase the intermediate cap: this would indeed defeat the purpose of this cap, bringing it too close to the absolute price cap and creating a risk of unjustified cost increase of the CRM for the Belgian consumer: Option 1: include the fixed O&M costs in the list of costs that are eligible for the multi-year contract threshold, and therefore avoid MWs with high fixed O&M costs to be limited by the intermediate price cap. As these costs are recurrent and occur each year, they can be compared to CAPEX, and therefore could justify application to multi-year contracts. This is however not CBS' preferred option, as it would require heavy changes to the documents framing the eligibility to multi-year contracts. Also, CBS understands the concerns around the need to limit multi-year contracts and believes that most market

	response MWs could be developed with one-year contracts, based each year on the needs. Option 2 (preferred option): exempt capacities from the intermediate price cap, if they are able to justify that their level of expected missing money (based on documented fixed O&M) is higher than the proposed intermediate cap, therefore making it impossible for them to compete on a level playing field with other technology classes in the CRM auctions, and creating a risk to increase the cost for end consumers. CBS believes Option 2 is best suited to solve the issue without leading to an unmanageable burden for the regulator to analyze the derogations to the intermediate price cap applications that will be submitted by CRM participants. Indeed, the case identified should remain non-structural, as most of the technologies will be properly covered by the intermediate price cap calculation. However, CBS believes a solution is absolutely required, since the market response MWs at risk are key to close the capacity gap and to provide reliable MWs to ensure security of supply in Belgium, at the lowest cost.

Elia takes note of this viewpoint from CBS which as such goes beyond the scope of the public consultation as it touches upon the overall principles and methodology of the intermediate price cap. Indeed, Elia follows the methodology in the proposed Royal Decree for the calibration.

In any case, Elia has informed the members of the Comité de Suivi, i.e. representatives of FPS, CREG and Elia, about all answers received for this public consultation.

Febeliec	On the intermediate price cap parameters, Febeliec refers to its comments on the expert study by Fichtner , but with respect to the comment by Elia on decentralised CHP technology that these are not considered to be characterized by high levels of missing money because they derive a significant part of their revenues from other sources than selling energy, this aspect should also definitely be incorporated in Elia's economic viability analysis. For market response technology with a high short-run marginal cost, Febeliec takes note that Elia refers to the SDR average activation price for winter period 2015-2016, but wonders whether these results are representative, as such and even more specific in light of market and other evolutions. With respect to the net revenues from the provision of balancing services, Febeliec continues to be surprised that Elia does not yet include these, as at the very least the reservation cost of balancing reserves, well-known by Elia as it is Elia who is paying this and invoicing it to consumers, is not taken into account. Moreover, in case scarcity situations would occur, it can be expected that these revenues for providers would increase. Indeed, in winter 2018-2019

	where several nuclear power plants were unexpectedly unavailable, even the potential risk for adequacy (which never materialized, that winter at any point in time always have substantially reserve margin as identified by the CREG) resulted in a substantial increase in the reservation cost of balancing reserves for Elia, clearly implying that when 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). In any case, Febeliec is surprised that Elia does not at all take into account these revenues, on which Elia has almost perfect view.

Elia takes note of Febeliec's comment regarding the decentralized CHP technology and the economic viability analysis.

Elia remains convinced of the representability of the SDR average activation price for winter period 2015-2016 as a reasonable proxy for the cost of an activation test. It is the most recent available cost estimation regarding SDR activations that is available. Also, these cost figures have benefitted from the regulator's scrutiny in assessing whether or not they are manifestly unreasonable. Furthermore, being derived from the Strategic Reserve mechanism, the SDR average activation price represents costs during adequacy relevant moments, for demand response capacities that are able to contribute to adequacy. Elia remains nevertheless open for concrete and referenced alternatives.

Further, Elia would like to point out that net revenues from the provision of balancing services are taken into account. As indicated in the Explanatory note for the Public consultation on the scenario's, sensitivities and data for the CRM parameter calculation for the Y-4 Auction with Delivery Period 2025-2026 , and specifically regarding the market response technology, the revenues derived from the provision of mFRR are taken into account:

> *"Indeed, both the Turbojet and Market response technologies – both included in the shortlist of technologies – are believed to rely structurally on the mFRR reservation fees as primary source of income, seemingly unable to derive equivalent revenues from the energy market. Besides, for other technologies that are capable to provide mFRR, the prospective incomes that can be derived from the mFRR market may not be sufficiently attractive, such that they do not replace the technologies that currently provide mFRR. Therefore, net revenues from the provision of mFRR are deemed relevant for the Turbojet and Market response technologies included in the shortlist. For both technologies, the projected inframarginal rents from the energy market are weighed against a percentage of the weighted average mFRR reservation fee. Revenues shall be considered from the service, i.e. selling energy or providing mFRR, which leads to the highest value.*"

Note that in the context of the public consultation, the rationale regarding the consideration of net revenues from balancing services has been included in scope, although not strictly required following the proposed Royal Decree Article 6, §2, regarding the elements to be publicly consulted upon.

Febeg	Febeg is surprised that the activation cost for availability testing is only considered for technologies with a high short-run marginal cost. In the proposed Royal Decree (art. 18, §2, 6°), the requirements for the availability testing are not specified contrary to what is mentioned by Elia in the explanatory note joined to this consultation: " 6° les coûts d'activation liés aux tests de disponibilité (en €/MWh) prévus dans les règles de fonctionnement visées par l'article 7undecies, § 8 de la loi du 29 avril 1999 ". In the current functioning rules, it is not explicit that only these unproven technologies, for which Elia has no continuous mean to verify the availability, would be subject to this availability testing. If all technologies are subject to the availability test (even at a lower risk), the estimated associated cost for each technology should also be considered in the determination of the intermediate price cap.

In line with the proposed Royal Decree Art. 20, §1, 3°, activation costs for availability tests are only considered for technologies with high short-run marginal costs. Elia translates this stipulation from the Royal Decree by its proposal submitted for public consultation to only consider activation costs different from zero for the market response technology. Hence, the activation costs for availability testing is proposed to be zero for all other technologies included in the short-list of technologies towards the calibration of the intermediate price cap.

Elia also considers this viewpoint in line with the philosophy put forward for the proposed functioning rules where it is made clear that testing is proposed as a last resort measure for checking on availability, particularly targeting capacities whose 'visibility' in the market is less. This visibility is obviously highly correlated to the activation price. The higher the activation price, the fewer activations, the more limited the visibility.

1.2 Fichtner study

1.2.1 General remarks

Febeg	Febeg welcomes the Fichtner study attached to the consultation. However, the study – the set-up as well as the presented data - still leaves many ambiguities and questions unanswered. The figures are not always consistent (sometimes reference is made to external data, sometimes to own computations/estimations) which, in our opinion, results in unreliable outcomes. The underlying elements and assumptions for the different estimates and calculations are not clear. Some data seem outdated (cf. capex for new CCGTs and OCGTs) or just not correct (e.g. installed MW or running hours).

Elia welcomes the feedback from Febeg on the study on Cost of Capacity. Elia wishes to underline that the study has been carried out by an independent expert company with experience on the matter. Whereas Febeg's reservations have been duly noted, Elia wishes to clarify some aspects on the approach that may explain the usage of certain data and references in the study.

Section 3.1 indeed cites numbers on LCOE, but the reader should keep in mind – as explained in the introduction of this section – that the LCOE numbers are only first estimates to serve as input for the short-listing process. This step was introduced to limit the amount of technologies subject to a detailed cost study. They in no way are recommended as final values for parameters such as Gross CONE.

Since a detailed cost study was not yet envisaged in this first step to go from long- to short-list, Fichtner proposed to quote costs from readily public sources. Elia appreciates the usage of public sources as they allow the reader to challenge and better understand the numbers by looking at the source material. They further, for the comfort of the reader, specify the underlying assumptions used in those studies to arrive at the quoted number (e.g. figure 13 in Fraunhofer 2018 for running hours/LCOE). These figures should therefore not be regarded as numbers produced by Fichtner and under their assumptions, but rather directly taken from other sources as duly referenced in the study.

In sections following 3.1, Fichtner presents more detailed cost studies for technologies (either new for the remainder of section 3 or existing for sections 4 and 5). Also here Fichtner was encouraged to use public sources where possible and cross-check with similar studies in other countries (e.g. Pöyry Management Consulting, 2018; Newell, S. A. et al., 2018;…). Elia's understanding is that the Fichtner study results generally align with the cost components, approach and level of detail of these studies and does not deviate drastically in end values. Of course, it remains Fichtner's judgement as independent expert consultant which exact number they recommend in their study.

Notwithstanding the above, Elia is considering launching a limited peer review of a number of aspects of the Fichtner study by an external third party expert consultant.

Febeg	Such a study, which contains a lot of possible input data for the further determination of the various parameters of the CRM, must be able to

	be examined in detail and discussed. In addition, it initially requires a thorough presentation and explanation of the source data and assumptions and valuations applied. Febeg therefore advocates setting up a specific session to take a closer look at this study and discuss it
Febeg	Febeg considers that an ad-hoc meeting with the authors of the study should be organized in order to have an exchange on these elements and to provide sufficient understanding of the different elements of the report. In absence of such a dialogue, Febeg expresses its strong reservations with regard to the study and only points to some preliminary ambiguities and questions.

Elia takes note of the request from Febeg and will further investigate whether a stakeholder workshop can be organized regarding the Fichtner study.

To this end and to further ensure robustness of the obtained results in the Fichtner study, Elia is considering to launch a limited peer review of a number of aspects of the Fichtner study by an external third party expert consultant.

Febeg	At this stage, Febeg would like to express strong reservations with regard to the set-up as well as the content of the Fichtner study. Febeg also wants to preserve its right to submit its comments and suggestions after when a proper dialogue with the stakeholders will be organized.

Whereas Elia remains at all times open to receiving concrete feedback from stakeholders, it is key to note that the public consultation is already a clear and formal moment at which stakeholders are requested to provide their input regarding input data such as the Fichtner study.

It has been launched in a timeframe that allows to process comments, discuss with stakeholders and potentially integrate their feedback for the submission of the report of parameters for the CRM. Elia encourages Febeg to convey further feedback in a timely fashion.

Febeliec	On the Fichtner study in general, Febeliec is negatively surprised that in the whole calculation always very conservative estimations are used, which always result in a negative effect from the point of view from consumers who will have to pay for the CRM. Moreover, in light of the covid-19 crisis, it would according to Febeliec be very advisable to update the calculations, as in many case the input data will have changed considerably (see below for more detailed comments), which could lead to an entirely different overall outcome. In case the Belgian

	CRM would be activated, this will be the largest modification of the Belgian electricity market since the liberalisation and the calibration of the CRM will be a crucial cornerstone to limit the overall cost of the CRM, which is a legal obligation. As such, all elements of this calibration, including the cost of capacity, should extensively be scrutinised and updated in light of evolutions during the current phase in order to avoid an undue cost for consumers.

Elia notes Febeliec's concerns and recognizes the legal obligation to limit the cost of the CRM. However, it should be taken into account that the study on cost of capacity was launched before COVID 19 measures were ever in place and a COVID 19 impact on each aspect is not necessarily material. Additionally, one should not underestimate the extent of this type of research and the time it would take to repeat the entire exercise. It seems an implausibility to achieve this and still have sufficient time for the remaining steps in the calibration process to be accomplished in a timely manner.

It is furthermore important to note that the objectives imposed in the law is to attain the reliability standard in Belgium, by introducing a CRM at the lowest cost possible. The economic parameters should therefore not be regarded as a limitation on cost only, but a truthful calibration that allows attaining the complete objective of the law. For example: an excessively low intermediate price cap can exclude certain low-cost technologies or push certain capacities out of the market and give an undue edge to more capital-intensive technologies (which could be significantly more expensive) to attain the reliability standard. Rather than deliberately applying numbers in a cost range towards one extreme or another, Fichtner was tasked to provide realistic estimates of the cost of capacity and their recommendations as experts on the subject is presented in the study.

Febeliec	On the methodology (point 2.1), Febeliec takes note that Fichtner assumes an investment period of 20 years, for which Fichtner includes both the "economic lifetime of an asset and its construction period"; Febeliec wonders whether 20 years is not an underestimate in that case, as in the case of the CRM with some new assets (such as a.o. CCGT) might be subsidized for 15 years after a construction period, yet in the example of CCGTs it is clear that most if not all of these assets have an economic lifetime that extends well beyond 15 years (especially with lifetime extension programs). By this only looking at 20 years, it should at the very least be noted that the results of the analysis give a lower range for revenues for the assets types investigated, yet could well be much above the result.

Elia takes note of Febeliec's reservations towards this point, but sees at this stage no conclusive argument to refute the 20 years economic lifetime proposed by Fichtner as 'a common number which is used for many different power generating technologies'. A

lifetime of 20 years is for instance also taken into account for CCGT and OCGT in Elia's Adequacy and Flexibility Study for Belgium 2020-2030 published in 2019.[5]

It is important to note that it concerns the economic and not technical lifetime. This means that programs such as lifetime extensions are justifiably not considered. Indeed, the investment cost necessary for such extension is elaborated in section 5 of the study and is not included and thus not annualized in the overall Gross-CONE (contrary to routine major overhauls that do not necessarily take place on a yearly basis, which are annualized in the overall Gross-CONE).

Febeliec	On the section on the intermediate price cap for existing capacities, Febeliec is a.o. most surprised of the comments on decentralized CHPs, for which is mentioned that the "profitability of such CHPs depends very much on the fuels they use", while in reality many of those CHPs receive subsidies to ensure a viable business case, as well as the fact that for DSM only reference is made to 2018, but not to 2019 values which should have been available and presumably indicate a further increase in DSM (even not-withstanding certain distortions to the participation of demand side flexibility to the system, a.o. smart meter roll-out, which should enable even further participation in the future).

Elia takes note of Febeliec's comments. Firstly, Elia would like to repeat the underlying principle that the CRM only serves to cover for the residual missing-money, i.e. after consideration of revenues. Moreover, projects that receive other subsidies during the same delivery period are generally not allowed to participate to the CRM (cf. the proposed Royal Decree[6] on this matter).

Regarding Febeliec's comments on the profitability of CHPs, the Fichtner study and Elia do recognize that they often derive a viable business case from subsidies. Therefore also, the CHP technology is not considered towards the calibration of the intermediate price cap.

Regarding demand response, Elia has decided not to follow the Fichtner study that excludes demand response from the short-list of technologies to consider for the calibration of the intermediate price cap. Indeed, towards the public consultation, Elia has proposed to add a market response category to the short-list of existing technologies for the calibration of the intermediate price cap, i.e. market response that is capable to provide ancillary services (activation time of 4 hours).

[5] Cf. figure 2-63 on p83. The study can be found on the Elia website: https://www.elia.be/-/media/project/elia/elia-site/company/publication/studies-and-reports/studies/13082019adequacy-and-flexibility-study_en.pdf

[6] https://economie.fgov.be/sites/default/files/Files/Energy/Draft-ontwerp-KB-criteria-regels-prekwalificatieprocedure-minimumdrempel-combinatie-steunmaatregelen.pdf

1.2.2 Intermediate Price Cap – Fixed O&M costs

Febeg	First of all, Febeg wonders the added value to have a table in the report listing the existing assets with the -by Fichtner- estimated O&M cost: on one side, the estimated costs do not correspond with the effective O&M costs of these assets and, on the other side, should Fichtner have the real O&M costs of the existing assets -quod non-, such table with commercial sensitive information would not be acceptable. Secondly, the figures of fixed O&M for the CCGTs seem slightly high at first sight but could be explained by underlying elements. However, as mentioned in the Fichtner study, the fixed O&M costs of the existing fleet will vary from one asset to another and from one operator to another. It is currently not clear in the Fichtner study which hypothesis are considered for the major overhauls for existing assets and how these are then annualized. Febeg also wonders how does the definition of 'major overhaul' in the Fichtner study relates to the definition in in the previous Elia adequacy and flexibility study and to the definition in the Royal Decree on 'Investment thresholds and eligibility criteria'? Are these exactly the same concepts? What are the differences? The figures of fixed O&M for OCGTs are on the other hand underestimated.

Elia takes note of Febeg's comment regarding the publication of unit-specific estimates and will consider adding a disclaimer.

Elia is considering to launch a limited peer review of a number of aspects of the Fichtner study to provide further comfort regarding some cost estimations presented in the Fichtner study. However, absent alternative numbers supported by publicly referenced sources, Elia considers the cost estimations put forward by Fichtner as independent expert consultant in its cost of capacity study as a reliable source.

Regarding major overhauls, Elia can confirm that its definition is consistent with other associated parameters used in the context of the CRM. For instance, towards the calibration of the intermediate price cap, major overhauls are considered as relevant going-forward costs and are therefore included in the Fixed O&M costs. However, major overhauls should not be considered as eligible costs towards the evaluation of investment files in the context of the investment thresholds, as these should only consist of initial and one-time investment costs relevant for the provision of additional electric capacity. Hence, major overhauls are distinguished from the costs of lifetime extension, without overlap. While major overhauls are considered towards the calibration of the intermediate price cap, costs of lifetime extension are considered towards investment thresholds.

Elia wishes to assure FEBEG that when executing the study Elia, together with CREG, discussed extensively with Fichtner the subtleties linked to the design of the CRM,

including the necessary coherence of the treatment of major overhauls and life-time extension throughout the study.

Regarding the figures of fixed O&M for OCGTs said to be underestimated according to FEBEG, Elia takes note of the comment. However, it would help if concrete and publically referenced alternative figures could be provided as generally Elia has no reason to consider the provided figures by the independent expert consultant as unreliable. Nevertheless, as pointed out, Elia considers launching a limited peer review to improve the robustness of a number of aspects of the Fichtner study.

1.2.3 Investment thresholds – Lifetime extension costs

Febeg	The costs for lifetime extension seem to be far stretched and Febeg is of the opinion that the cost could be substantially decreased. How does the definition of 'lifetime extension' in the Fichtner study relates to the definition in in the previous Elia adequacy and flexibility study and to the definition in the Royal Decree on 'Investment thresholds and eligibility criteria'? Are these the same concepts? What are the differences?

Regarding the definition of the lifetime extension costs, Elia would like to re-iterate its explanation regarding the definition of major overhauls. Both concepts are highly linked and are used consistently throughout the determination of the relevant CRM-parameters.

Elia wishes to assure FEBEG that when executing the study Elia, together with CREG, discussed extensively with Fichtner the subtleties linked to the design of the CRM, including the necessary coherence of the treatment of major overhauls and life-time extension throughout the study.

As indicated above already, major overhauls are considered as relevant going-forward costs and are therefore included in the Fixed O&M costs. However, major overhauls should not be considered as eligible costs towards the evaluation of investment files in the context of the investment thresholds, as these should only consist of initial and one-time investment costs relevant for the provision of additional electric capacity. Hence, major overhauls are distinguished from the costs of lifetime extension, without overlap. While major overhauls are considered towards the calibration of the intermediate price cap, costs of lifetime extension are considered towards investment thresholds.

Febeliec	On the investment on existing capacities (section 5), Febeliec is surprised to see that unavoidable costs may include "the connection costs to the power grid and the gas, water and district heat networks", as for existing capacities these connections have already been realised. Any operational costs related to these connections are not to be considered investment costs.

Elia agrees with Febeliec that in general costs that have already been made should not be considered as eligible cost for the investment thresholds, as these should include initial and one-time investment costs for relevant for the provision of additional electric capacity. However, depending on the definition of existing capacity, it may be that an installation already exists, but is not yet ready to provide the services required by the CRM. For instance because the installation has been working in island mode, or because no correct metering device is currently installed. In this case, and it is in this sense that the connection costs should be interpreted, those investment costs could appear relevant towards the eligible costs for investment thresholds. Of course, it remains up to the methodology set out in the relevant proposed Royal Decree on investment thresholds and the CREG tasked with an important role in its execution to fully appreciate this aspect.

1.2.4 WACC

Related to the WACC it is important to keep in mind that following the proposed Royal Decree the CREG is particularly tasked with developing a proposal for the WACC. The Fichtner study was launched already prior to these roles and responsibilities getting clearer. The views of Elia expressed on this matter are in the first place provided for sake of completeness following the public consultation.

Febeliec	On the nominal long-term interest rate (10 years), Febeliec takes note of figure 4, yet wonders whether the proposed rates are realistic, in the pre-covid-19 but also and especially in the post-covid-19 financial climate, with virtually unlimited financing via central banks in the foreseeable future (as per their official communications), making Febeliec wonder whether a 3,2% nominal rate in 2024 is not a clear overestimate (and thus greatly influencing the outcome of the study). As the conclusion of 2.2.1.1 clearly refers to the Belgian Federal Planning Bureau expectations, maybe the results should be updated based on the new expectations that the FPB will publish in the very near future.

First, Elia would like to emphasize that figure 4, presenting an overview of the expected long term nominal interest rates as published by the Federal Planning Bureau between 2019 and 2024, has been included as a benchmark. The forecasts of the Federal Planning Bureau have been used as a benchmark against the calculations based on historic data of the last 2.5 years, so the nominal long-term interest rate for 2024 of 3.2% has not been directly used to estimate the value of the risk-free rate.

It is correct that the Federal Planning Bureau in the meanwhile has published an update of the expected nominal long-term risk free rate, resulting in decreased values (for 2021 a decrease from 1.2% to 0.1%, for 2024 a decrease from 3.2% to 1.1%). To take into account a forward-looking value and to recognize that there is room for a decrease of the risk-free rate, it could be considered to lower the values calculated based on the historical data.

Febeliec	On the equity risk premium (2.2.1.2), Febeliec wonders why a risk premium of 6,1% is taken into account. Such premium seems very steep for an asset that is covered by a CRM, which should reduce the risk exposure (or for which owners of the assets in the CRM can create financial operations that would reflect this; if not done so, that would be by the own volition of the asset owner). Febeliec in any case does not agree that the equity risk premium for an asset covered by a CRM should be on the same level as the equity risk premium of the asset owner as a whole, as totally different risk have to be covered. By

	applying such a high risk premium for an asset with a much lower risk exposure, and taking that into account in the calculations, the end result will be an undue increase of costs for consumers for covering a non-existing or at least much lower risk.

Elia understands Febeliec's comment given that the CRM will provide for an additional revenue stream for capacity providers. However, Elia underlines that CRM-covered assets remain subject to important risks. The CRM aims to cover the missing money that an investor in the Belgian energy market faces, but it does not serve to fully de-risk assets. More specifically, the CRM does for instance not eliminate the volatility of revenues in the electricity market or risks linked to the operation of an asset. Moreover, depending on the level of the missing money, the capacity remuneration received under the CRM can be limited compared to the total project revenues. In addition, participation to the CRM implies risks on its own in terms of respecting a.o. availability obligations, which can result in penalties in case of non-compliance.

Febeliec	On the corporate tax rate, Febeliec has no comments to a value of 25%, were it not that many companies (including several of the potential candidates for the CRM) have effective corporate tax rate levels that are (substantially) lower than the normal tax rate level. This again has a negative effect on the outcome from the point of view of the consumers who will have to bear the cost of the CRM.

Elia takes note of Febeliec's concern about the fact that the effective corporate tax rate levels could be lower than the general corporate tax rate for Belgium of 25% that is applied in the WACC calculation. First, Elia agrees that the WACC is a company-, technology- and country-dependent parameter as also indicated in the study (see section 2.1). However, as a general estimate on the WACC (and its underlying components) is to be provided for the purpose of the CRM calibration, it is an obvious choice to select the general value of the Belgian corporate tax rate (25%).

In addition, Elia would like to clarify that based on the general WACC formula (see figure 2 in the study) a lower tax rate implies a lower impact of the interest deductibility, resulting in a higher WACC. Febeliec's concern of an overestimated tax rate therefore implies that the WACC would be underestimated (which would result in a lower cost of the CRM).

Febeliec	On the inflation rate (2.2.1.4) Febeliec also asks to update the study based on new inflation expectations in the post-covid-19 climate, as already the FPB has lowered (substantially) its inflation forecasts for at least the near future.

Elia notes that the inflation rate only affects the conversion of the nominal WACC to the real WACC based on the Fisher equation (see section 2.1 of the report). Based on the Fisher equation, a lower inflation rate would result in a higher real WACC and reduce the difference between the nominal WACC and the real WACC (as the impact of inflation would be lowered). Also, a higher/lower inflation rate is applied consistently to both the cost component calculation (higher/lower inflated costs) and the WACC calculation (lower/higher WACC). Therefore, a lower inflation rate would result in lower estimated costs components, which would be offset by a higher real WACC percentage and vice versa.

The study takes into account an inflation rate of 1.58% based on the estimate published by the International Monetary Fund (2019). In the meanwhile, the latest World Economic Outlook of the IMF (April 2020) includes a decreased inflation percentage of 0.3% in 2020, which increases again to 1.1% in 2021. This value of 1.1% does not differ significantly from the 1.58% in the study.

Febeliec	On the equity beta Febeliec wants to refer to its previous comment on the equity risk premium. For the assets in the CRM (as opposed to the asset owners overall assets portfolio), the beta should be much lower, as the assets in the CRM have a much lower risk exposure than the overall assets in the market. Something very similar can be observed with the assets (and thus beta) of regulated monopolies such as system operators, where such lower risk exposure leads to safe haven effect in case of turmoil on financial markets. The share price of Elia in this covid-19 crisis is a very good example and shows the much lower beta for assets with limited (or hardly any) risk exposure. Febeliec thus wonders whether the proposed value, which covers the power industry as a whole, is reflective for CRM covered assets.

Elia refers to its answer to Febeliec's earlier comment on the equity premium.

Febeliec	On the cost of debt (2.2.2.3), Febeliec takes note of the proposed values but wonders whether again these are reflective for CRM-covered assets in a post-covid-19 period with a virtually unlimited flooding of cash by central banks.

Elia notes that the selected value for the cost of debt levels are based on the most recent source (Damodaran, 2019) and represent values for the power industry. As to the risk-profile of CRM-covered assets Elia refers to its answer to Febeliec's earlier comment on the equity premium.

According to Elia the impact of covid-19 does not necessarily imply a decrease of the value for the cost of debt. As also indicated in the study (section 2.2.2.3), the cost of

debt is composed of both a risk-free rate and a debt premium. The latter is a premium that is calculated in function of the risk profile and business risks of the underlying investments. In view of the uncertainties on the Belgian economy caused by covid-19, it is not excluded that this debt premium will increase.

Febeliec	As a result of the above, Febeliec strongly doubts that the proposed WACC values reflect the reality for a specific class of assets with limited risk exposure in a post-covid-19 period, and is concerned that this will not lead to a minimisation of the CRM cost, a legal obligation.

In line with the answers to the questions above, Elia is of the opinion that most of the proposed values for the WACC components can remain applicable in the post-covid-19 approach. Although the nominal risk-free rate has been calculated based on historical average values, the risk-free rate could be slightly lowered to take into account a forward-looking value. As to the risk profile of CRM-covered assets, Elia understands Febeliec's feedback in view of the additional revenues that a capacity provider receives under the CRM, but also underlines that the CRM does not serve to fully de-risk assets.

1.2.5 Gross CONE – Shortlist of technologies

Febeliec	On 3.2.2.2, Febeliec is very surprised to see that for the shortlist, "the technology should not strongly depend on changes in the current National Energy Policy". While Febeliec firstly already wonders which such "National Energy Policy" that is referred to is, Febeliec is even more surprised to see that innovation is excluded from the scope, while the Belgian and European energy landscape has been and still is undergoing an unprecedented transition in the recent decade(s), with many new technologies. It is thus surprising that for the next two decades (the building phase and the up to 15 year duration of subsidies under the CRM) no innovation and new technologies are considered.

Firstly, it is very important that the choice of reference technology does not inhibit other technologies from participating to the CRM. Innovative technologies can still offer into the CRM and get selected if they are indeed sufficiently cost-competitive. Furthermore, the reference technology choice should in fact be made in such a way that sufficient technologies can participate to the CRM such that the reliability standard can be met at the lowest possible overall cost of the CRM.

Secondly, Fichtner proposes that the choice of reference should not be a technology that is conditional on Belgium to implement a certain support scheme or policy that is currently not in place. The entire validity of the choice of reference then stands or falls with the actual adaptation of such a policy. The scope of the study is not to urge the stimulation of a certain technology, but to estimate costs. Elia agrees that this indeed leads to a better choice of reference.

Also, it should be noted that only nuclear and pumped hydro-storage are excluded because of absence of 'potential in Belgium'. Indeed in the case of nuclear, the validity of this technology as a reference would be conditional on Belgium adapting current legislation to continue (with CRM, otherwise no reference technology is needed) nuclear production and even consider new plants. Elia nevertheless follows the prevailing legal framework.

Finally, it is not to be overlooked that the initial calibration of the CRM has to address the first delivery period 2025-26. From that respect it is important to target technologies whose maturity-to-market is deemed sufficiently realistic for this time period.

Febeliec	On 3.2.15, Febeliec is very negatively surprised to see that Fichtner concludes that "since it is impossible to identity a "reference" DSM technology […], DSM is not suited to be the "Best New Entrant Reference Technology". It is therefore not considered in the shortlist". Instead of completely removing demand side response from the shortlist for this reason, Fichtner (and Elia) should have conducted a more thorough segmentation effort. This approach does arbitrarily exclude demand side response, for which Febeliec wonders whether this would be in line with the non-discrimination stipulations of the

	CEP.

Elia would like to reiterate that the choice of reference technology does not inhibit other technologies from participating to the CRM. To the contrary, demand side response can still offer into the CRM at competitive prices even if they are not the reference technology.

The thesis of the study is that Demand Side Response is inherently a diverse product (as Fichtner illustrates by the quoted source). To define a reference would mean to make a choice between all of the existing demand response products and then considering that every demand side response product is the same as the chosen reference. This is what is also done for the other technologies, but the case that Fichtner makes is that due to the diversity, it is much more inaccurate to consider all demand side response product as similar in costs to the reference. This is amplified by the fact that the study should consider potential for 2025. Demand response as a technology does not appear to have sufficient potential to cover the identified adequacy gap, particularly when taking into account a reasonable derating factor several GW of demand response would be required.

It is very important to note the alternative risks excluding certain technologies, but also demand side response projects. To illustrate this, consider the following two mutually exclusive outcomes, where a demand side response unit reference is included in the short list:

1) The demand response reference is in the end not the best new entrant => no impact

2) The demand response reference is in the end the best new entrant => Net CONE is lowered

It is clear that in case (2) some technologies that are nevertheless deemed as realistic technologies may no longer be able to recover their costs in the CRM compared to case (1). This includes DSR projects that would have been competitive under the selected reference technology without considering DSR. Elia reiterates that the objective of the law is not purely lowest cost, but attaining the reliability standard at the lowest cost.

In the end, the study gives Fichtner's recommendation and it remains a CREG competence to propose technologies and cost parameters used to calibrate Net CONE. However, it is hard to refute Fichtner's point that any choice of DSR reference technology, absent full knowledge of the 2025 market for DSR and the complete outcome of both CRM auctions, would be arbitrary and risks excluding technologies including DSR and thereby risks jeopardizing security of supply and the goal of the CRM.

Febeliec	On the section of gross CONE, Febeliec has attentively read the results for the different technologies considered in the longlist, with some remarkable results for the LCOE. The only element that is not clear to Febeliec is which CO2 prices were taken into account, as these will clearly have a substantial impact on low/no carbon technologies versus other technologies. On demand side management, Febeliec cannot agree with the proposition that the "key idea behind DSM is that power usage "follows" the supply of power e.g. from fluctuation renewable energy generation". Demand side response is a voluntary and remunerated action by a consumer (any

	non-voluntary action would be curtailment and not DSM or DSR). Moreover, Febeliec also strongly wants to stress that for most DSR there is only a small or limited investment cost, as DSR in most cases concerns secondary use of assets that have been built for other primary reasons and thus (the largest part of) their investment cost is already assigned for different reasons. A large part of DSR is thus characterized by small investment (and reservation) costs and high activation costs (to cover their opportunity costs for not consuming electricity). For a.o. the residential and commercial sector, the on-going (and in some cases even accelerated) roll-out of smart meters (which is socialised) will enable the participation of these segments to DSR, with relatively minimal additional investment costs. The CONE for such assets will thus be low, as activation costs are not directly used in CONE and in any case the Belgian system adequacy under the CEP is not to be construed to limit market prices but rather to solve a residual system adequacy risk of which it has been proven that it cannot be solved by the market, after removal of all existing market distortions and the consideration of a strategic reserve in case the removal of those distortions would not be sufficient. Only in last resort a CRM can be envisaged under a strict framework, yet price levels on the electricity market are not element in these criteria.

Elia takes note of Febeliec's objections on the choice of wording in the Fichtner report.

Fichtner has provided publically available references which provide these estimates for LCOE, which can be further consulted by the reader. Elia would like to clarify that the LCOE numbers are only used for a preliminary estimation preceding a full cost study. Detailed cost components such as CO2 prices are indeed included in the detailed cost calculation. Furthermore only waste incineration is in the end excluded solely based on high LCOE. Otherwise it concerns rather similar LCOE and low derating in other CRM's. Fichtner argues that this makes these technologies likely to not be the best new entrant.

1.2.6 Gross CONE – CAPEX costs

Febeg	Febeg believes that the figures mentioned in the PWC document "Observations relatives au document de consultation publique de la CREG (19/11/2019)" ordered by the FPS Economy are a better representation of the market realities. Febeg considers that these figures should be used for the determination of the investment thresholds as well as in the frame of the current study.

Elia appreciates Febeg's feedback including a source. However, Elia would like to convey the following observations regarding the PWC document:

Like Fichtner, PWC refers to the Gas Turbine Handbook for the EPC cost for both OCGT and CCGT. This source thus seems to be recognized as representative in both studies.

PWC attempts to calculate the 'eligible' parts of the investments, as the scope of the document is to provide feedback on the investment thresholds. The specific capital costs for new technologies given by Fichtner includes all costs to serve as input for Gross CONE. It is therefore logical that the numbers in section 4 in the Fichtner study are elevated compared to PWC's document. In Elia's view, the Gross-CONE values in figure 12 should not as such be taken as input for the investment thresholds. Rather the values could be used after deduction of non-eligible costs (as Fichtner provides in Table 17).

In the end Elia notes that the proposals related to aspects of Gross CONE values and investment thresholds is a competence assigned to CREG, not Elia.

1.2.7 Gross CONE – Capital costs

Febeliec	On the land purchase costs (3.3.2.2), Febeliec is surprised that this is included for the reference projects with an arbitrarily chosen value, while for at least several candidate projects no additional land has to be acquired (in some cases it concerns a replacement of an existing or already dismantled facility). Febeliec is concerned that this artificially and arbitrarily increases the cost, to the detriment of total cost for consumers.

The study provides cost data for a new entrant. Elia finds it hard to argue that the calibration of this parameter should be biased towards parties already owning viable property where to construct the power plant. This seems inherently discriminatory.

Furthermore, the cost is quoted from a reputable source. Elia thus wonders whether the choice is really arbitrary. It should be noted that agricultural land is on the low-cost end in the provided source.

Febeliec	On the initial connection costs to the grids (3.3.2.3) for gas, Febeliec is surprised to read that “a contingency of 25% is added as it is usual for gas networks to cover potential reinforcements or upgrade costs”, without any further justification. Is this based on actual costs in Belgium or is another perimeter (“usual”) used? In any case, such contingency of 25% seems fairly steep.

The 25% value is proposed by Fichtner, being considered an expert in the subject, as commonplace for such a cost in a new gas-fired asset. Elia welcomes documented counterproposals.

Febeliec	On the owner’s contingency (3.3.2.4) Febeliec is very surprised that after all the extra safety margins already taken (see all the above comments), an additional margin is granted, to the detriment of the cost for consumers. Febeliec considers this additional contingency a windfall profit for the owners; the only condition under which such arbitrary additional contingency would even be the slightest bit acceptable would be if on all aspects there would not have been extra margin built in (quod non).

Elia recognizes that such a contingency seems to be the norm in similar studies (The Brattle Group, 2018, Pöyry Management Consulting, 2018) and sees at this stage no reason why it shouldn’t be included in a total cost assessment of a new entrant. This cost component is introduced because it is considered a real cost, not to introduce an upward margin on the cost. Furthermore, Elia refers to their previously highlighted reservations to consider a higher Gross CONE strictly as an increase in cost of CRM.

Febeliec	On the initial filling of fuel tanks (3.3.2.8), Febeliec does not agree with this approach, as any CONE calculation should not take into account such costs of fuel (which are to be considered part of the operating costs, not the capital costs). Febeliec considers this yet again 1,5% additional costs absolutely unwarranted, to the detriment of the total cost of the CRM for consumers. The fuel costs are already included in the operating costs (3.3.3.1), Febeliec is concerned about double counting, to the detriment of costs for consumers.

This component also seems to be the norm in similar studies (The Brattle Group, 2018, Pöyry Management Consulting, 2018). It is indeed a cost even if the plant has zero running hours and is therefore fixed.

Furthermore, Elia refers to their previously highlighted reservations to consider a higher Gross CONE strictly as an increase in cost of CRM.

Febeliec	On the commissioning costs (3.3.2.10), Febeliec reads that “they include costs of fuel and electricity”, which for Febeliec are covered under operating costs and not capital expenditures. The 2% to 2,5% that is added for commissioning costs by Fichtner is thus unacceptable as a capital expenditure by Febeliec.

Commissioning is a process occurring before the actual entering into operation of the plant. Also the fuel and electricity costs during commissioning are fixed and not necessarily or not entirely monetized and therefore considered a fixed costs, as is also the case in similar studies (The Brattle Group, 2018, Pöyry Management Consulting, 2018).

Febeliec	On the operating spare parts (3.3.2.11), Febeliec does not oppose the reasoning behind the need for spare parts in an industrial installation. However, these costs are part of the O&M costs, not the capital expenditures. Febeliec thus opposes the 1% to 1,25% that is added to the overall cost. Febeliec is, just as with some of the other categories, concerned that certain costs are counted twice (see also maintenance in section 3.3.3.3), thus artificially and unduly increasing the overall cost for consumers.

Elia recognizes that such a cost seems to be the norm in similar studies (The Brattle Group, 2018, Pöyry Management Consulting, 2018) and sees at this stage no reason why it shouldn’t be included in a total cost assessment of a new entrant. Furthermore, Elia refers to their previously highlighted reservations to consider a higher Gross CONE strictly as an increase in cost of CRM.

Febeliec	On the (additional) miscellaneous costs (3.3.2.12) of yet again another 0,5% (for landscaping or disposal of construction waste and unforeseen costs not yet covered in all the other built-in margins), Febeliec can only voice its strongest concerns, taking into account all the above comments. This addition is in flagrant opposition to the least cost criterion.

Fichtner explains potential costs that would need to be covered by such a component. The goal of this component does not seem to be adding an additional margin, but rather covering (plausible) costs which do not suit any other categories.

Elia refers to their previously highlighted reservations to consider a higher Gross CONE strictly as an increase in cost of CRM.

1.2.8 Gross CONE – Fixed O&M costs

Febeg	Fixed O&M OCGT (table 10). The fixed operations costs seem to be underestimated for large units and should be substantially increased. The maintenance cost seems to be rather low and could be considerably higher.

Elia notes Febeg's reservations. Fichtner bases the cost on percentages applied to EPC. Elia would welcome further specification by Febeg on whether the EPC or applied percentage seems too high and provide a documented counterproposal, keeping in mind that a change of the EPC also affects Gross CONE.

Febeg	Fixed O&M CCGT (table 10) On the other hand, the operations cost for large CGGT units seems to be overestimated and should be substantially decreased. At first sight, the benefit of scale does not seem to materialize.

Elia would welcome if Febeg could clarify whether the EPC or applied percentages seem unrealistic and provide a documented counterproposal, particularly taking into account the former reservations expressed regarding the CCGT capital costs as well.

Lastly, the advantage of scale in the Fichtner approach is entirely determined by the EPC. Referring to the PWC document previously mentioned by Febeg, the figure from the Gas Turbine Handbook, indeed seems to indicate that the difference between 400 and 800 MW scales is not as significant compared to transitions from smaller scales.

1.2.9 Others – Short-term variable operating costs

Febeliec	On at the least the fuel (3.3.4.1) and CO2 certificates (3.3.4.2) costs, Febeliec reiterates its comments about the impact of the covid-19 crisis and asks for an update of the data used, in order to avoid unduly increasing the overall costs for consumers, which would not be in line with the legal obligations.

Elia appreciates the completeness of the Fichtner study, but proposes to continue to use (latest) CO2 price sources as for past studies, stemming from reputable sources (as listed in the information released for the public consultation).

Regarding the impact on the simulation, Elia notes that there is an absence of quantified data or scenarios providing numbers on the long run assessing the impact of covid-19 on fuel and CO2 prices until for the 2025-26 delivery period. Therefore, even if covid-19 could probably have an impact on the fuel and CO2 prices, Elia suggests to consider the numbers mentioned in the 'World Energy Outlook 2019' as reference for the CRM calibration. As mentioned in Elia's recommendation, if there are any updates on those data from official/public sources prior to the Ministerial decision on the 'reference scenario' to be used, Elia will provide this information to the Minister.

Febeliec	On 4.2.2, Febeliec wants to reiterate its comments on fuel prices, as a natural gas price of 23,6 €/MW seems steep, even in pre-covid-19 times but definitely in post-covid-19 times. The same applies for the CO2 certificate costs.

Elia appreciates the completeness of the Fichtner study, but proposes to continue to use (latest) gas price sources as for past studies, stemming from reputable sources (as listed in the information released for the public consultation).

Regarding the impact on the simulation, Elia notes that there is an absence of quantified data or scenarios providing numbers on the long run assessing the impact of covid-19 on fuel and CO2 prices until for the 2025-26 delivery period. Therefore, even if covid-19 could probably have an impact on the fuel and CO2 prices, Elia suggests to consider the numbers mentioned in the 'World Energy Outlook 2019' as reference for the CRM calibration. As mentioned in Elia's recommendation, if there are any updates on those data from official/public sources prior to the Ministerial decision on the 'reference scenario' to be used, Elia will provide this information to the Minister.