

WG Adequacy #14 - Meeting report

Friday 16th December 2022

Meeting

Date	16.12.2022
Organiser	Voet Jan

Participants

		Attended
Catrycke Mathilde	ENGIE Benelux	<input checked="" type="checkbox"/>
Célis Chris	ODE	<input checked="" type="checkbox"/>
Coppin Xavier	ENGIE	<input checked="" type="checkbox"/>
Debrigode Patricia	CREG	<input checked="" type="checkbox"/>
Delferiere Alan	FOD	<input checked="" type="checkbox"/>
De Waele Bart	CREG	<input checked="" type="checkbox"/>
Gerkens Benoît	CREG	<input checked="" type="checkbox"/>
Harlem Steven	LUMINUS	<input checked="" type="checkbox"/>
Strosse Tom	ENECO	<input checked="" type="checkbox"/>
Van Bossuyt Michaël	FEBELIEC	<input checked="" type="checkbox"/>
Van den Waeyenberg Sofie	CREG	<input checked="" type="checkbox"/>
Van der Biest Piet	SIEMENS	<input checked="" type="checkbox"/>
Vandersyppe Hans	COGEN Vlaanderen	<input checked="" type="checkbox"/>
Verrydt Eric	BASF	<input checked="" type="checkbox"/>
Waignier Jean-François	FEBEG	<input checked="" type="checkbox"/>
Mariana Adao da Fonseca	Energy Expert, KU Leuven	<input checked="" type="checkbox"/>

Report

Author	Pauline Munten	
Function	PMO Adequacy	
Date report	20.01.2023	
Status	<input type="checkbox"/> Draft	<input checked="" type="checkbox"/> Final version

1. Agenda

- Welcome
- Minutes of Meeting WG Adequacy #12 & #13 (28.10.2022 & 17.11.2022)
- CRM: Calibration Report Elia 27-28
- CRM: Capacity contract planning
- CRM/LCT: Changes & Eligibility
- Final results for a CO2 threshold trajectory recommendation in the Belgian CRM
- Next meetings

2. Minutes of Meetings

Disclaimer: The slides used as a support of the presentation are available [online](#). The minutes of meetings only cover the discussions that took place during the Working Group.

Approval Minutes of Meeting previous WG Adequacy

No comments were received on the Minutes of Meeting of previous WG (12 and 13), which then are considered as approved.

CRM: Calibration Report Elia 27-28

Introduction

FEBELIEC asks what will be proposed in terms of strike price formula and asks if the discussion on the strike price indexation will already be included in the proposed report. Elia is following the Royal Decree, and consequently proposes a single strike price. Elia also notes that the indexation mechanism is a separate process from that. FEBELIEC asks whether it is legal to propose a strike price and then adopt a different value based on the discussion regarding the indexation mechanism. Elia specifies that the strike price will be used as an input parameter for the indexation mechanism that will happen ex-post. Besides, Elia agrees that there is still need of an amendment of the legal framework in the context of the indexation mechanism, but in any situation, Elia has the obligation to make a first proposal.

Regulatory Context & Ministerial Decrees

No question raised on this part.

Part 1: Reference scenario and intermediate values selected by the Minister

FEBELIEC asks when the calibration report will be published. Elia says that it was published on November 29th as presented in the following link: https://www.elia.be/-/media/project/elia/elia-site/users-group/ug/wg-adequacy/2022/20221128_dy2027---y-4-auction---calibration-report.pdf.

FEBELIEC raises a question on the third sensitivity (i.e., which assesses the impact of high prices on electricity consumption, as presented by Climact during the WG Adequacy #9 from the 25th of August) and the data (price and impact on electricity consumption) considered/ not considered by Elia for that sensitivity, given the fact that Elia based

itself on the presentation by Climact (made on August 25th) while the really high peak prices were shown in August. For the prices, Elia sticks to the decision of the minister, which is a yearly consumption of 90.9TWh for DY-2027-28. For the impact on electricity consumption, the decision of the Minister includes the data provided by Climact in the WG of August 25th, that are based on the higher prices consulted upon. FEBELIEC requests some insights into the volume of explicit and implicit demand response, of demand reduction, and of destruction, resulting from the high prices that are currently observed. FEBELIEC has some issues with the data proposed by Climact and wants to see the value of E-Cube; FEBELIEC misses this information. Elia recalls that it based itself on the decision of the minister taken beginning of September, as a consideration of the baseline scenario. As a result, everything that happened afterward cannot be considered – at least, in this context. Elia highlights however that it is something that can be analyzed further after the winter, since E-Cube is doing this study on a yearly basis.

FEBELIEC criticizes the fact that E-Cube has not done this study this year, since no result were presented due to some methodological issues. Elia specifies that this statement is not correct since there was a presentation of the results, yet Elia said that the methodology will be evaluated next year. FEBELIEC still highlights that Elia was not 100% confident in the results presented. Elia agrees that the methodology of E-Cube needs to be reviewed, as specified at the time by Elia and proposed in a previous WG but cannot be taken into account for the scenario within this calibration report. FEBELIEC insists that some elements might not be representative of the market situation as today (due to E-Cube methodology or high prices), and consequently do not reflect the Adequacy situation (i.e., overestimating the Adequacy need). Elia answers that the calibration report is for 27-28 and for the Y-4 Auction (not Y-1 Auction), for which the hypotheses are as accurate as possible. Elia again explains that Elia is following the scenario selected by the Minister (after several steps of public consultation, FOD advise, etc.); assumptions that were selected cannot be changed.

LUMINUS asks which de-rating factor is used when Elia is making the small changes summarized on slide 17 (i.e. Main changes compared to previous TSO's CRM Calibration Report in the Belgian Area). Elia answers that those are summarizing the changes in installed capacities based on the scenario selected by the Minister.

CREG is asking for an explanation about the fact that OCGT have the lowest missing money, while there is in reality no new OCGT project in the CRM-auctions. Elia answers that this economic loop is an important step in the CRM calibration process as defined in the Royal Decree Methodology. It is based on the cost parameters and revenues for both balancing services and energy markets. Elia also specifies that the CAPEX data can be reviewed for the next exercise to rule out potential underestimation for some technologies.

FEBELIEC is questioning the interpretation of Elia of "small" changes, with regards to slide 17 and the delta in the values presented and questions the need to consider changes that are considered as small. Elia has removed the term "small" to qualify the changes presented and explain that the goal is to convey the message that the changes in Belgium compared to the changes in the European perimeters are more limited.

FEBELIEC also questions the choice to select OCGT as preselected capacity type compared to Low Carbon Tender, where there are completely other capacity types. FEBELIEC does not understand why Elia is using different technologies in different mechanisms. Elia answers that the preselected capacity types include DSM, batteries, OCGT, CCGT, and IC gas engine; therefore, the choice to fill in the capacity in the Belgian area is broader; which is not the

case of LCT where there are more limited choices of technologies. FEBELIEC does not agree with the point related to LCT because the mechanism should be technology-neutral, to comply with the European legislation. An OCGT that is running low carbon should also be aligned.

FEBELIEC also has problem with the following sentence formulation “In this auction, a volume of 1200 MW of OCGT was needed in order to reach a 3h-LOLE for Belgium” since an auction did not happen yet, so this sentence is wrong. Elia agrees that the formulation is not correct, which has been corrected in the slides provided on Elia website (i.e., “In this TSO’s CRM Calibration Report, a volume of 1200 MW of OCGT was needed in order to reach a 3h-LOLE for Belgium on top of the reference scenario selected by the Minister.”)

Focus on scarcity situation

FEBELIEC asks why a higher share of offshore wind causes problems in terms of scarcity situation –i.e., scarcity situations that are a bit longer than in the previous TSO’s CRM calibration report. The reference scenario considers a larger quantity of offshore wind in the system that responds to the latest business ambition concerning offshore wind in Europe. The consequence is that in a period of limited availability of offshore wind, the probability of facing scarcity situations increases; impacting the evening peak over a long period (i.e., the scarcity situation starts a bit earlier and ends a bit later). FEBELIEC is surprised regarding previous studies and reports of Elia saying that a lot of offshore wind connected all over Europe would resolve the adequacy issue, which seems to counteract the present results. Elia specifies that it was never stated in the previous reports that offshore parks will resolve all adequacy issues. However, Elia has specified, in the “Roadmap to Net zero” report that it would cause – compared to solar generation, for instance – less seasonality in the residual profile but also that despite a more adequate system, it still requires additional back up, dispatchable capacities in these systems, yet for a more limited period of time.

CREG is asking if the blue block related to “>15 hours” on graph slide 22 (representing the scarcity situations length increase on average) is correct. Elia answers that in the previous calibration report there were some longer scarcity situations; the result is correct.

CREG is also asking for more explanation regarding the impact of an increase in consecutive days in which scarcity situation occurs on the recharging of batteries. The duration of scarcity is less than 10 hours each day, leaving 14 hours left to recharge. Elia answers that there are indeed some periods available for loading, but it does not mean that there will be energy available to fill the batteries and reservoir of pumped storage; the surplus of energy available might then be quite limited.

COGEN Vlaanderen is asking whether it is correct to assume that the scarcity moments are calculated with the assumption that no additional capacity is added to the system by November 2027. Elia answers that the scenario taken into account assumes growth in certain capacity types. In particular, the simulated scarcity moments are calculated with the assumption that additional capacity is added to the market, so the system is made adequate to 3 hours on average. The proposed capacities per type are presented in the assumption's workbook.

FEBELIEC makes a general comment with regards to the results of the different calibration reports that seem very different every time; which raises FEBELIEC’s concern with regards to the model and calculations. Elia states that the two main impacts on the results from: (1) the input data – i.e., climate data base; between the first and second auction,

and (2) the context big changes – i.e., assumption taken abroad – in terms of policy ambitions (in Germany for instance, in Europe for the offshore ambitions...); between the second and third calibration reports.

ENGIE is sharing the concern of FEBELIEC on the de-rating factors and is surprised by the significant decrease on the de-rating factor for pumped storage.

ENGIE is also highlighting that the big differences and variations in individual model compared to last year are confusing (despite the corrections that will be applied). ENGIE suggests standardizing the definition and keeping it stable for the upcoming calibration reports, despite some changes (e.g., CHP that are not eligible anymore). Elia specifies that the goal was to align with the CREG on the definition and took the assumption that it was clearer to consider that all eligible capacities are the ones that won't receive subsidies based on the input from the regions. In case of doubt, the capacity is considered as non-eligible. This definition will be used for this calibration report as well as for the next one.

ENGIE also asks for more clarification on the rules for prequalification. Elia takes the points to clarify the rules.

Part II: Information and input for the establishment of the demand curve

FEBELIEC is surprised of the results presented on slide 46 regarding the total cross-border contribution (e.g., 2 MW for Germany while there is no country with more reserves products, EDF will not be able to resolve their current issue within 5 years in France, etc.). Elia answers that it is the results of the scenario selected by the minister: a strong decrease of installed capacity in coal in Germany, combined with a strong electrification. These two effects result in the fact that Germany can't export when Belgium is in scarcity situations. FEBELIEC is criticizing the fact that Elia includes phase out plans in their simulations while they have included many phase-out situations in previous studies that have not materialized. Elia answers that Elia cannot deviate from the decision of the minister on the reference scenario.

CREG asks if all countries are adequate. Elia answers that the expected impact of CRM mechanisms, for countries where such a mechanism exists and is approved, is taken into account. CREG is particularly asking about Germany which has no CRM. Elia answers that for Germany some volume was added up to the volume that was economically viable in the system. CREG wants to know what the LOLE result for Germany is. Elia answers that it was about 7 hours when additional capacity was added to Germany. CREG understands that Elia is following the scenario defined by the minister but at the same time argues that Elia cannot consider that Germany will not adapt the adequacy measures given the situation foreseen. Elia states that as of now Germany has no capacity/adequacy capacity mechanism in the market. Germany has reserve mechanisms that are outside the market, but up to Elia knowledge there is no cross-border agreements to rely on this out-of-market capacities when other countries face scarcity. FEBELIEC comments about the result Elia gives in ERAA 2022 with regards to Germany. Elia notes that FEBELIEC needs to reconsider the disclaimer with regards to the ERAA studies and the assumptions that are taken, in order to compare the results presented.

FEBELIEC is asking why the revenues for DSR are set to zero. Elia answers that the market revenues from DSR are calculated assuming that the activation price is higher than the CRM strike price and therefore that revenues will come from auxiliary services. Elia nuances that the variable costs of DSR exceeds the calibrated strike price and thus the

revenues from the energy market are capped from these units at the strike price. Yet, FEBELIEC stresses that strike price is not applicable to DSR, which is nuanced by Elia (the strike price is applicable to the DSR in case it is a declared market price) and that revenues are generated by the electricity market compensated by costs elsewhere.

FEBELIEC says that DSR in the future are not DSR now. Elia says it has been counted in the calculation of the net revenues – newer capacities that enter the market cause increased competition between the different units that are suitable for the auction with regards to mFRR standards, which also decrease prices and net revenues. FEBELIEC argues that Elia increases the volume of mFRR on time, so the effect of no capacity in the market is largely undone. Elia specifies that looking at the calibration report, it can be observed that the volumes are not increasing at the same rates, and balancing revenues increase slightly while the volume of DSR is significantly increasing towards 2027. FEBELIEC thus states that Elia is considering that there will be more DSR but will be no revenue from the market and decreasing revenues from auxiliary services. Elia is not going to judge the viability of DSR in the future. Elia also explains the difference between the methodology taken in this calibration report that aims to set parameters in the CRM context and AdeqFlex, where in the second one the revenues of DSR are not capped. Elia specifies that we are speaking of the revenues from the electricity market (not CRM only) capped at the strike price. Elia specifies that this has been done for the third time and following the RD. FEBELIEC criticizes the fact that the RD is taken for granted by Elia. Elia cannot deviate from the RD.

Part 3: Proposals for the other auction parameters

De-rating Factors

ENGIE is surprised to see a big decrease in the contribution of pumped storage – from one year to another (i.e., 24%), while for an SLA of 4 hours the decrease is much lower (explanation given by Elia), and that between technologies contributing to the same hours, there are important differences. Also, to take another example, ENGIE highlights that last year, batteries with 3 hours were contributing less than pumped storage while it is now the contrary. ENGIE raises some misunderstanding with regards to those changes of direction in some elements, which is a point of concern.

Elia answers that for pumped storage compared to SLA the first fact is the Force outage rate. ENGIE understands it is an element of difference but doesn't get why there is no FOR for batteries – for instance, and why FOR is quite high for pumped storage (compared to internal values), leading to significant differences that need to be investigated. Elia agrees with ENGIE's comment and takes the point, but do not recall having received any feedback on this value upon consultation. Elia still adds that there are currently a low number of batteries, which means low data points to take a value on Forced outages for batteries, but Elia will further analyze it and see if it is possible to take it into account in future studies. Elia also adds that for storage, the difference also comes from the round-trip efficiency which is lower for pumped storage compared to batteries. ENGIE is saying that these explanations were already applicable last year, so does not understand the impact on reduction factor this year. Elia will check whether it is a mistake or if there is an extra explanation. ENGIE says that it is worth investigating. Elia takes the point and will come back towards ENGIE on this point.

FEBELIEC does not understand slide 69 ("Derating factors for energy-limited technologies are lower than in previous TSO's CRM Calibration Report"). Elia explains that the main explanation is the difference for scarcity profiles. One of

the big differences compared to previous auctions is that scarcity period happens for longer periods during the evening peaks (last year scarcity situation happened between 3 to 4 hours during evening peaks on average, while the length of the scarcity situation increases this year). So, in the case of SLA 3 hours you contribute 3 hours over a longer period compared to last year which decreases the contribution. FEBELIEC is questioning the modelling (transparency is on input data and output data), but not on the methodology.

Intermediate Price Cap

ENGIE is asking if Elia is taking into account the remarks made on the Afry study. Elia replied that the Afry study was included in the public consultation, and that the responses are still being processed. Despite this, Elia also highlights that Elia has already taken notes - in other discussions - of some market parties' concerns that the Afry study might present an underestimation of the Fixed O&M; as a result, in the calibration report, Elia switched from a Low-Mid interval to a Mid-High interval for the consideration of the costs in the calibration of the IPC.

FEBELIEC highlights that it is a really high-risk premium for a remuneration mechanism. Elia comments that it is not without risk either. Elia clarifies that these values are the result of a study done by Professor Boudt. CREG specifies not having been involved in the coordination in the study of Boudt, which Elia agrees upon and specifies that the values specified on the slide include the WACC and the hurdle rate, which according to FEBELIEC is not what is written on the slide. FEBELIEC highlights that there are several issues on Elia's slides that should not happen. Elia is taking the point, and the slides available on Elia website have been adapted accordingly to clarify the terminology as used in the RD.

FEBELIEC also requests that the people doing studies (e.g., professor) be present to show the results. Elia takes the point.

Reference Price

No question was raised on this slide.

Strike Price

CREG is asking whether it would not be more appropriate to express IPC and strike price in €2027 instead of €2020. Elia says it could be considered but considering the value in €2020 is more consistent with the other values presented today. CREG still highlights that it is not logical to express the price in €2020 while the price will be paid in 2027 and ask whether it is expected that the minister will translate the cost in €2027. Elia responds that they don't know what will be the value of € in 2027. ENGIE proposes to do a forecast (CRM remuneration is also not indexed). Elia can discuss to have the money valued in €2022 but would not suggest going further, although for CREG the whole exercise is a forecast. In that case, Elia highlights that the indexation rate needs to be agreed upon. CREG is asking whether the final results need to be inflated or whether the specific values should be adapted (as the results might not be the same and not all values necessarily evolve the same way). Elia takes the points and highlights the need for further discussions on this point to decide for the next calibration report.

ENGIE requires to have preliminary discussions on the indexation of the IPC before the next calibration report, and not only see the result in the next calibration report. Elia takes note of ENGIE's request.

CRM: Capacity contract planning

LUMINUS is asking practically how the changes of the contract will happen and asks Elia to present it in an upcoming WG Adequacy. Elia answers that it will depend on the type of changes (minor changes or impacting ones). Elia takes the request and will come back with such info.

FEBELIEC also is asking what to expect for the contract for LCT. Elia expects a large part to be equal to the CRM contract and will highlight any specifications within the scope of the public consultation.

CRM/LCT: Changes & Eligibility

FEBELIEC asks whether “in service definition” is only for generation and storage or also for Demand. Elia agrees that it is for the moment, only for generation and storage. There is a different approach for demand response. FEBELIEC asks to clarify it in the slides, that it is not the case.

FEBELIEC asks a question regarding the footnote concerning the “in service definition” for CDS-connected assets (i.e. “for CDS-connected assess information exchange with CDS operator required”), and in particular wants to know when the discussion will happen and when the stakeholders will have visibility on the operational processes, especially for the CDS assets connected at DSO level. Elia is aware and the topic is on Elia’ radar and will come back on the process for information exchange.

ENGIE is raising a question regarding the consideration of the volume of the LCT contracted with long-term contracts and how it will impact the volume to be contracted in the Y-4 Auction for 27-28. Elia answers that ENGIE’s understanding is correct, and that the volume will be corrected in the CRM auction of 27-28. Elia specifies that the volume is not considered in the calibration since that volume is not known but will be considered as a correction to the demand curve. For LCT multi-year contracts that run after 27-28, the volume will be deducted from the remaining demand in the Y-4 auction.

LUMINUS has a similar question if during pre-qualification phase and auction, batteries are becoming “in service”, will the corresponding volume be deducted from the auction volume in the LCT. Elia agrees that a kind of dummy-bid will be introduced for correction for the demand curve to consider the latest information. ENGIE is asking whether it needs to be since there is a volume that still needs to be contracted in the Y-1 Auction and that it is a new tender compared to the CRM mechanism. Elia answers that it is an obligation to correct already existing capacities independently from the fact that it is a Y-4 or a Y-1 Auction.

FEBELIEC notes that the chronological order could be reversed with regard to the graph presented on slide 97, “impact of Higher Obligated Capacity” on Payback Obligation. Indeed, existing DSR can come before the contracted capacity in the activation. Elia agrees and explains that the order of allocation will be developed in the Functioning Rules, to which FEBELIEC can react upon. FEBELIEC also argues that Elia should also consider determining the order of allocation the price (market price can be higher than the balancing price), and the testing strategy (whether the prior volume or the LCT volume is tested; in case the total volume is tested, correction should be applicable to reflect the impact on the balancing market). Elia specifies that with regards to this last point, the impact on balancing is already

developed and applied in the CRM functioning rules, and there is no intention to deviate from these existing rules. Point is taken by Elia.

FEBELIEC is asking how the derating question will be tackled between LCT and balancing where in the latest the volumes are not derated. Elia answers that the derating is taken into account similar way as for the CRM, so that the formulas will be similar.

Finally, FEBELIEC asks by whom the process for Existing DSR determination is agreed upon. Elia answers that it is agreed at CdS level. Besides Elia is looking to multiple third parties to propose in the scheme.

Final results for a CO₂ threshold trajectory recommendation in the Belgian CRM

COGEN Vlaanderen asks whether Compass Lexecon also considers the scenario where thermal capacities start to deliver useful heat, so that the CO₂ allocated to the electricity component is lowered. Compass Lexecon focusses mainly on non-CHP production fleet. First, CHP production fleet is not directly directed to the CO₂ target. Second, CHP does not align much with the CRM use alone; other mechanisms may contribute to their decisions to stay in the market. COGEN Vlaanderen was thinking that all plants might get the possibility to start to produce heat as additional revenues, which allow them to participate to the CRM if they still would have missing money. Compass Lexecon agrees it might be in the in-between scenario.

LUMINUS is raising some questions with regards to the recommendations slide for CO₂ trajectories in Belgium. Especially LUMINUS is asking for clarification about the applicability of the CO₂ threshold for new to build or being built power plants; while it was confirmed in previous WG adequacy, by someone from the public services, that it would not be applicable for those units. Compass Lexecon does not want to respond to this legal question. The FOD is completing by saying that this discussion needs to be raised with the Cabinet. LUMINUS says that it is not acceptable that the rules would be changed on such important matters. ENGIE aligns with LUMINUS's comment. It is not in line with the Capacity contract signed (i.e., actors did not sign for a specific trajectory pact in 2021). ENGIE wants to see how the SPF will handle the question.

LUMINUS is quite happy with and fully support the part of the conclusion with the existing power plants. Yet LUMINUS wants to comment the last bullet point *"It may be necessary to revisit these conclusions in the event of significant market developments, including (i) the availability of technologies to green the thermal fleet or (ii) the implementation of similar measures in several European countries"*. LUMINUS recommends, first, that if the threshold should be changed, any changes should be set by Delivery period and not by Auction, and second, to fix the CO₂ threshold for a couple of years to increase certainty and visibility in the future, otherwise the uncertainty is discouraging investments in existing power plants. Compass Lexecon understands the point. ENGIE and BASF agree on LUMINUS' comment (i.e., legal certainty is very crucial).

FEBEG is making a general comment directed to the FOD with regards to the next steps. First, FEBEG highlights the importance of having a clear visibility for the existing plants and clarifying the situation for new plants. Second, FEBEG questions the possibility for market parties to contribute and comment on the values that will be decided by the FOD, and potentially to have a public consultation on those values. FOD is commenting that the work on the trajectories

answer to an instruction by the minister, that a public consultation was made and resulted in a deeper exercise with Compass Lexecon to propose a more technical analysis. The study of Compass Lexecon will be further discussed with the Cabinet, which has the final word on the decision – in terms of values selected and timing of implementation. FOD welcomes any feedback from the market parties present, that FOD will transmit to the Cabinet. FEBEG would be favorable to give some feedback but is hesitant on what the feedback should be provided since at this stage only general recommendations were provided. FEBELIEC agrees on this last point. FOD does not want to speak for the Cabinet, but it is most likely that the trajectory will be implemented in 2023, giving more time for discussion, feedback collection and the organization of a public consultation. LUMINUS really urges the FOD to come up with a clearer vision on the CO2 trajectories by the next version of the CRM Functioning Rules. FOD has noted all the remarks and will meet with the Cabinet to come up with something clear. FEBELIEC and ENGIE share the concerns, although all the parties thank Compass Lexecon for the interesting study.

Elia also indicates that it needs clarifications in view of the upcoming adequacy and Flexibility study as it is a key input.

3. Next Meetings

The next meetings are currently foreseen on:

- Friday 27th January 2023 **am**
- Friday 17th February 2023 **am**
- NEW Thursday 23th March 2023 **am**
- NEW Friday 14th April 2023 **am**
- NEW Tuesday 23th May 2023 **am**
- NEW Friday 16th June 2023 **am**