

WG Adequacy #16 - Meeting report

Friday 17th February 2023

Meeting

Date	17.02.2023
Organiser	Voet Jan

Participants		Attended
Bertrand Gilles	CREG	<input checked="" type="checkbox"/>
Boustani Zackaria	FOD Economie	<input checked="" type="checkbox"/>
Catrycke Mathilde	ENGIE Benelux	<input checked="" type="checkbox"/>
Célis Chris	ODE	<input checked="" type="checkbox"/>
Chafaqi Laïla	LUMINUS	<input checked="" type="checkbox"/>
Collilieux Mathieu	Total Energies	<input checked="" type="checkbox"/>
Debrigode Patricia	CREG	<input checked="" type="checkbox"/>
De Changy Maxime	FLUXYS	<input checked="" type="checkbox"/>
Delferiere Alan	FOD	<input checked="" type="checkbox"/>
De Waele Bart	CREG	<input checked="" type="checkbox"/>
Dupont Alain	SNCB	<input checked="" type="checkbox"/>
Dupont Benjamin	Essenscia	<input checked="" type="checkbox"/>
Gerkens Benoît	CREG	<input checked="" type="checkbox"/>
Harlem Steven	LUMINUS	<input checked="" type="checkbox"/>
Herman Sofie	STORM	<input checked="" type="checkbox"/>
Herbreteau Sarah	CREG	<input checked="" type="checkbox"/>
Labar Christophe	Plan Bureau	<input checked="" type="checkbox"/>
Reyniers Stefan	VBO FEB	<input checked="" type="checkbox"/>
Strosse Tom	ENECO	<input checked="" type="checkbox"/>
Taverniers Hans	Tessengerlo Group	<input checked="" type="checkbox"/>
Thijs Dennis	Nala Renewables	<input checked="" type="checkbox"/>
Van Bossuyt Michaël	FEBELIEC	<input checked="" type="checkbox"/>
Van der Biest Piet	SIEMENS ENERGY	<input checked="" type="checkbox"/>
Van De Keer Lieven	BSTOR	<input checked="" type="checkbox"/>
Vandersyppe Hans	COGEN Vlaanderen	<input checked="" type="checkbox"/>
Van Gijzeghem Francies	ABDE	<input checked="" type="checkbox"/>
Verrydt Eric	BASF	<input checked="" type="checkbox"/>
Wagnier Jean-François	FEBEG	<input checked="" type="checkbox"/>
Willemot Guy	Tessengerlo Group	<input checked="" type="checkbox"/>

Report

Author	Pauline Munten
Function	PMO Adequacy
Date report	13.03.2023
Status	<input type="checkbox"/> Draft <input checked="" type="checkbox"/> Final version

1. Agenda

- Welcome
- AdeqFlex: Public Consultation Report
- Design Info Sessions
- Go-to-Market Implementation Timeline
- PQ CMU evolution in time philosophy
- Updates from Cabinet
- 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.

AdeqFlex: Public Consultation Report

Context of the Adequacy & Flexibility study (timeline, process, regulatory framework)

No question was raised on this part.

Feedback received on input data and updated scenario

Renewables

FEPEG is asking Elia to specify if the impact of the availability of / shortage of critical raw materials required for many technologies on RES development but also storage means (EV, small- and large-scale batteries) will or won't be studied. Elia answers that sensitivities will be performed with other RES trajectories (lower or higher).

FLUXYS does not understand the decision regarding the impact of delays on Ventilus and Boucle du Hainaut. FLUXYS asks if it be a sensitivity analysis on the potential delays for Ventilus/BDH or for MOG II (slide 20). Elia answers that the planning of MOG II & wind farms associated was recently updated by FOD Economie. Additional delay of MOGII will be studied within RES sensitivities (e.g. with higher or lower RES capacities).

Storage

No question was raised on this part.

Thermal Generation

LUMINUS reacts on Elia comment that "A sensitivity on gas capacity can be included, although for the moment, given that those stricter CO2 emissions limits in the CRM are not yet known, Elia will need to make assumptions on the level to be applied.", by asking clarifications on the limits that are unknown. Elia responds that it is not linked to the current limit (for the next auction) but the upcoming limits. Accordingly, LUMINUS asks if Elia will base itself on Compass Lexecon as a source of information to estimate these limits. Elia won't simulate the CRM auction but look at the profitability of units with or without CRM. Main assumption is that everything stays within the market but if the Economy Viability Assessment proves the units not to be viable, it is removed from the market. Considering that there is a CRM and that some units are not viable without it, it is possible that by applying a stricter CO2 emission, these units won't be able to participate and also leave the market. A good approach would be to conduct one or several sensitivities with different limits and as a result see how many units will leave or not the market; similarly, to the work done by Compass Lexecon with the 4-5 trajectories. LUMINUS specifies that in case of a conversion, an investment is needed right away,

or alternatively the unit will leave the market. Elia considers for the EVA that units older than 25 years always need an investment to keep running (smaller investment of 100 or 120€/kW as it was consulted upon). For younger units, Elia does not consider that additional investments are needed.

FEBELIEC asks questions regarding the sensitivities that will be included regarding nuclear unit on long-term period. Elia indeed mentions that a sensitivity could consider a short (e.g. 1-year) extension of some units during winter 2025-26, thanks to fuel savings during the summer. According to FEBELIEC, the decision taken in other countries (as Finland who is extending 2 oldest nuclear plants to 70 years of lifetime instead of 50 years) and the discussions ongoing at political level (incl. Parties of the majority), it would be interesting to include sensitivities with longer-term extensions and of more units. Elia answers that study is up to 2034 so if the extension is above 10 years (10 or 20 years) does not really matter or at least does not impact the results. Elia proposes to wait for the next milestones between the nuclear operator and the government to take the decision into account in the assessment. In the base scenario, Elia currently considers Doel 4 and Tihange 3 as from November 2026, but could consider delay on them. Yet, Elia has no more information at that stage to what is in the press or the information that was made available. FEBELIEC understands that sensitivities are not just what is decided but also include what is not decided. Elia notably includes sensitivities on nuclear availability in France, while there is no decision on this topic yet, up to FEBELIEC's knowledge. Elia agrees to explore the possibility for more sensitivities. FEBELIEC asks to include sensitivities with additional nuclear availability in Belgium (i.e., more plans being extended).

ENGIE reacts on this comment by stating that on nuclear first an agreement between ENGIE and BEGOV on 10y LTO D4 and T3 must be finalized. ENGIE reminds that there is no firm commitment to be available in Nov '26, but the commitment is based on best effort.

Elia also states that an analysis and some discussions need to happen (amongst other) at Comité de Collaboration level to assess what the possibilities are, and to determine the sensitivities based on the feasibility of the different options (running any sensitivities is not possible neither).

Electricity demand – Electric vehicles and heat pumps

No question was raised on this topic.

Electricity demand – Electric demands

FEBELIEC comments that it is not just the overall electricity demand, it is also about the impact upon. FEBELIEC refers to the WG Belgian Grid where it was mentioned that some companies adapted their ways of working to be much more flexible. According to FEBELIEC, the reference scenario should consider the impact of Demand Side response on the flexibility of demand. Elia answers that the impact on peak is taken into account in Demand Side response. E-cube calculates it based on the current structure of the demand (i.e., industry stays as such), on which a growth rate is applied, that includes a potential (i.e., 25% of the peak load in Belgium, only for industry, that is very optimistic), an electrification factor (i.e., new technologies, new ways to operate) and tertiary and residential flexibility. These three elements will be taken into account in term of demand response, which is an important update compared to last study. FEBELIEC also refers to other ongoing discussions where for new industrial demand a target of 45% immediate disconnection in case of frequency issue is proposed. In that proposal, industry is retained by the SPF Economy and

the Government to be prepared for all additional demand to have 45% disconnected in millisecond; which consists of much more ambitious volumes than what Elia is considering as ambitious in this context. Elia answers that additional flexibility will also be considered for new electrified processes as it will be presented later.

With regards to the comment made on electrification, FEBELIEC highlights that he was not speaking about a lower electrification rate but a delayed electrification, meaning that the timing won't be respected but not that the projects won't be done. Elia will adapt the wording and ensure this is clearly reflected in the study. FEBELIEC highlights that the timing used by Elia might be wrong. Elia can foresee a delay in the uptake. However, if the projects and projects timelines are known, Elia will stick to them.

COGEN Vlaanderen is asking a question with regards to the way Elia calculates the flexibility potential expressed in TWh provided in slide 34, as well as to the way Elia works on the peak capacity demand for the Adequacy. COGEN Vlaanderen is afraid that if some potential flexibility participates to the tender, Elia may count them twice? COGEN Vlaanderen thus asks clarification on how Elia copes with this type of escalation on peak demand. Elia clarifies that the goal of Adequacy is to account for the gap (so only count them one), either at the demand or offer sides. Elia constructs the profiles based on organic demand on which several elements are added (electrification of mobility and heat, as well as additional industry electrification). This is done by profile, so taking P2H as an example, it will be considered as not consuming at peak hours because e-boilers are installed to consume when electricity prices are low (I.e., Elia thus considers that when the prices are high, there is a full back up for it). Elia specifies that, given the number of elements, it is not possible to give only one peak value; some preliminary simulations are necessary.

COGEN Vlaanderen then asks if the de-rating factors include how much activation of flexibility will contribute to adequacy. Elia answers that the flexibility is optimised within the simulation, the derating factors are not defined ex-ante. And Elia agrees that it is not the goal to double count them (if counted in the demand then not in the offer). Elia also agrees it is a very important attention point for upcoming CRM calibration.

FEBELIEC reiterates a comment made in the past not to only consider new and extra electrification (new volumes or processes not existing in the past), but also consider what is currently electric and might become also more flexible. A lot of investments are being done to (electrolysers as an example). These should be taken into account. FEBELIEC also notes much more variability in industrial demand (less based load and more flexibility). Elia is not considering electrolyser in the total electricity demand (as mentioned in the legend of the chart) but they are part of the models, and they are considered as fully flexible (only consuming when electricity prices are low). Elia refers to the note page "*Note that this total electricity demand is an estimate, as part of the consumption linked to the 'Power-to-heat' will be determined when performing the market simulations as those are used when electricity prices are below a certain level.*" and explains that P2H and electrolysers will also be dispatched by the model depending on the number of hours where the prices are below a certain limit.

FLUXYS is asking if electricity used for P2G is already included in one of the categories on the slide 35 (steel?) or if it will result of the simulation. Elia answers that it is not included (as mentioned in the legend of the chart). It will come on top of as it is optimized by the model, but only consuming at low prices.

FEBELIEC reiterates a past comment by pointing the very steep increase between now and 2027 of 17 TWh. According to FEBELIEC some sensitivities should also take into account what happens if there are other potential negative impacts (other crisis, delocalization of industry, etc) on demand. Elia answers that in the short time some signs of rebound effects can be seen (see recent publication by IEA). Sensitivities should thus be performed in the 2 directions in the short term.

FEBELIEC is asking what the status of the revamp of the E-Cube study is. Elia answers that it is still foreseen for this year. Elia will bring the topic in a next WG to discuss the studies that will be launched this year.

Other countries

ENGIE asks what the base case is for the French nuclear. Elia considers the availability suggested in ERAA 22 and will apply the sensitivities as in the past (2 – 4 – 6 or 8 additional nuclear reactors unavailable, or more). Elia will also include the REMIT data and EDF forecasts when they are available.

FEBELIEC comments that with regards to coal it is also about Poland. Elia answers to also follow the value suggested in the ERAA 22 for Poland with few phase-out included, although there are still discussions ongoing.

Fuel & CO2 prices

FEBELIEC asks Elia to specify the ranges that are going to be used for the sensitivities regarding fuel and CO2 emissions prices, as in this case it is easier to predict the long term than the short term. Elia has not yet quantified that, but Elia thinks of a low scenario (but with prices probably not coming back to past value)) and a high scenario (but with prices probably not as high as the prices seen in August). For CO2 this is more complex since it is policy driven but it could make sense to have a range around 150 €/t CO2.

FEBELIEC raises the point that for high gas sensitivity, there is high likelihood to see an impact on demand destruction; Elia will have to correlate it with a lot of demand destruction (gas and electricity included), in the industry, but also residential. Elia says that it can be taken into account in the demand. Elia precises however that for residential the correlation is not as easy as it might depend on lots of other measures. Besides, in the longer term, electricity prices will be less and less correlated to the gas prices as well due to less marginality of gas units.

FEBELIEC also highlights that historical analysis cannot be taken into account because the behaviour as changed on the market. Elia fully agrees with FEBELIEC arguments for the short term but would make a distinction on the time perspective.

Outages

No question was raised on this topic.

Investment costs

SIEMENS Energy expresses its surprise that initial proposed values are being lowered for CCGT; this in contrast to what's observed in the EPC contracts signed today (in Poland, Italy...) . Furthermore, the EPC price is not the complete CAPEX of the project. SIEMENS Energy explains that the reason for those increases can be found in inflation, the

confrontation with disrupted supply chain, lack of components, etc. From today's perspective SIEMENS Energy does not see that these lower values are possible. Elia thanks SIEMENS Energy for the feedback and highlights that “more or less” opposite comments were received from other market parties. Elia suggests it might then be relevant to consider sensitivities on that point, especially for CCGTs. SIEMENS Energy’s reflection concerns combined cycles only (power plants above 800MW); based on 2022 observations, there is an increase of 20-30%. It is not expected that the prices go down in the coming years. Elia will look at it in the sensitivities.

Feedback received on methodology

Adequacy-related

FEBELIEC reiterates the comment made in the past about the 100MW threshold, viewing as issue that Elia considers all volume between 0 and 100MW as 100MW. And, according to FEBELIEC organizing an auction for less than 100MW is nonsense. Elia answers that the 100MW granularity is not used to determine the parameters of the auction (but well to determine the necessity of the CRM). Elia agrees that if a small need of 100 MW is to be found, a finer granularity could be used to crosscheck the need of a CRM.

Cross-border capacities

No question was raised on this topic.

Climates years

No question was raised on this topic.

Economic Viability Assessment

FEBELIEC questions Elia's decision not to include a higher market price cap because of ACER's decision. ACER shows that there will be an increase in price but not as many event as in the past. Elia will take into account the latest decision by ACER, so the price cap will increase following the new rules from ACER, starting at 4000€/MW. Elia thus means that making a sensitivity at higher price cap around 20000€/MW does not seem justifiable with regards to ACER decision.

FEBELIEC reiterates its comment on the risk averseness considered for investors & high hurdle rates. FEBELIEC is happy to see that Elia considers risk aversion as hypothesis for investors but criticizes that in the model BRPs are completely considered as risk takers. BRPs are uncovered in the market. They are completely exposed to the balancing if they do not have sufficient assets to cover what the suppliers have sold. Therefore, according to FEBELIEC, BRPs should be considered risk averse. Elia refers to the discussion on the topic in previous WG Adequacy. From a system perspective, Elia is not in opinion to take FEBELIEC's comment into account. Besides by taking the assumption that an investor can only hedge one's risk by building new capacities, the approach is changed. FEBELIEC does not agree with Elia and maintains this is a fundamental point.

Elia understands that FEBELIEC's point on BRP is a matter of transfer of welfare between BRPs, which therefore is not to be discussed in the Adequacy and Flexibility study context, in Elia's opinion. FEBELIEC argues that it should because if BRPs are not being covered as a whole, Elia has to cover the rest, which is an adequacy issue. FEBELIEC agrees that the volume should theoretically be 0 because BRPs should be balanced among themselves. Yet, since Elia considers BRPs as not risk averse, a gap needs to be filled; an increase is seen in balancing volume reservation.

FEBELIEC is reacting to Elia's comment on the balancing service topic in the context of the EVA (slide 59) and considers that Elia is being too conservative in its approach to estimate these revenues.

Elia repeats that the focus in this analysis should be on the concept of net revenues arising from the reservation costs of such services. Therefore, Elia wants to highlight the difference in the tariff which can be considered as the gross reservation costs paid out to the service providers in opposition to the net part of the revenues which has to be considered for this exercise. In this context, Elia argues that for certain elements and due to the arbitrage opportunities, compared to potential revenues from the energy market, there is no additional revenues for certain technologies for certain balancing products. It does not mean that there is no revenue, but that under some circumstances – e.g., for certain technologies and for certain balancing products - and on top of the arbitrage opportunities actors have on the market, Elia considers that there is 0 net revenue for the actors compared to what they would get from their availability for dispatching in the day ahead market.

FEBELIEC does not agree with Elia because the tariff proposal includes the revenues for the reservation of capacity. For energy, every unit is allowed in the current and future market to offer its marginal price. In that logic, Elia covers the costs with the energy bids. Hence, FEBELIEC is of the opinion that net revenues should be considered from the activation of such products as well. FEBELIEC does not agree either with Elia's argumentation on the switch from Paid-as-Bid to Paid-as-Cleared applicable to such products, but even not taking that into account, what Elia pays for reservation should be considered in a less conservative way. Elia argues that in case of reservations, units cannot participate into the day ahead nor in the intraday market, which should be included in the translation of gross to net revenues. Besides, there is no guarantee that the unit will be activated and will receive that money. The interaction effect between activation and reservation was also addressed in WG balancing, and Elia is aware this point requires further attention from Elia. FEBELIEC raises that the question is not new. Elia will investigate- potential improvements for net balancing revenue estimations (for new upcoming studies) and come back on this topic in an upcoming WG Adequacy.

CREG makes some comments with regards to Elia's statement that it is nearly impossible to achieve an estimation of future net balancing revenues coming from activation with any degree of accuracy. Looking at the internal rate of return, batteries are an asset generating profits, and there are a lot of investments in batteries expected for the future. According to CREG, it does not make sense to just try making a profit by transferring energy in the day-ahead market because the volatility in the intraday market is bigger. CREG criticizes the accuracy of the revenue estimation. Elia takes the point and answers that feedback received by market parties show that further support from the CRM in batteries is welcome and is needed to guarantee an investment. This has been debated as well together with the topic of activation of balancing revenue. As stated before, Elia will investigate how to potentially improve the methodology.

CREG also highlights that based on the internal rate of return calculated in Professor Boudt study, OCGTs are better candidate for investment than batteries. According to CREG, the main reason for which there is less interest in investments in OCGTs than for batteries is explained by the fact that balancing revenues are not computed appropriately. Elia answers that it is also due to the fact that the CAPEX was underestimated for OCGT in the past and has been reviewed based on comments received and thanks to a more extensive review of literature. Furthermore,

Elia¹ clarifies that the determination of the hurdle rate in Professor Boudt study looks mainly at the distribution of the revenue across the different scenarios, not the average IRR.

FEBELIEC agrees with CREG's argument and criticizes the fact that Elia does not take into account a sufficient revenue stream, which renders batteries more interesting. Elia answers that the study of Professor Boudt did not take into account extra revenues to calculate the hurdle premium which is why the study seems to provide a better incentive to invest in OCGT than in batteries. The study of professor Boudt focusses on the variability of inframarginal rents in the electricity market to calibrate the hurdle rate, but the results cannot be strictly interpreted in the EVA, since balancing revenues are excluded from the analysis. FEBELIEC highlights again that balancing revenues are an important driver, although Elia states there is sometimes no impact from a net balancing revenues perspective. It is argued that reality shows differently since batteries are being built. Elia is not saying that there are no revenues from balancing services but exactly the opposite. Elia calculates an estimation of the revenues, especially for reservation costs. Elia specifies that the study of Professor Boudt is not looking at the absolute value of the internal rate of return but at the distribution of the expected revenues, which are related to prices in the day-ahead market, etc. Elia thus believes that the arguments given by FEBELIEC/CREG and Elia are not conflicting: Elia is considering balancing revenues, but the study of professor Boudt does not consider them (which also does not impact the results) because the study is about setting the hurdle rate based on the distribution and not the absolute rate of return. Elia concludes by saying that bilateral discussions on the improvement of the methodology are welcomed (incl. Improvement of the inclusion of balancing revenue activation). Elia also mentions that the performed EVA is also totally in line with the ERAA methodology.

AFRY study

No question was raised on this topic.

Short-term flexibility study

No question was raised on this topic.

List of sensitivities

LUMINUS is asking confirmation if Elia based itself on that AdeqFlex study to derive a decision for the LCT. LUMINUS also asks if there is an information session foreseen to detail the calculation of the volume. Elia highlights that the decision by the Minister on the scenario for the LCT is expected by mid-March, and the computation of the calculation for this scenario are expected by Elia for end of April. The organization of any further additional information sessions will depend on the following steps.

Design Info Sessions

FEBELIEC asks to have a mail that can be sent to the members of the federations, as well as to have an extra information session organized on the LCT. The two points are noted by Elia.

Go-to-Market Implementation Timeline

¹ Post meeting comment: Elia has noted a mistake in the calculation of the electricity market revenues for the storage technologies (batteries, PSP). An erratum on the calibration report will be published.

FEBELIEC is raising some concerns in terms of expectations management with regards to the feedback date proposed by Elia for the session's participation. Elia agrees some flexibility is possible.

PQ CMU evolution in time philosophy

No question was raised on this part.

Updates from Cabinet

Investment files

LUMINUS is asking if the new rule for CAPEX is applicable for each Y-1 auction. FPS Economy answers that it is an exceptional rule, limited to Y-1 auctions for delivery periods for which there is no Y-4 auction anymore.

Payback obligation – Indexation

FEBELIEC is asking if the legal text proposal is in line with what Elia proposed in the Functioning Rules. Elia confirms.

Payback obligation – DSR Exemption

FEBELIEC asks when it will be possible to have more clarity on the topic (pointing at the two disclaimersⁱ proposed with regards to the DSM exemption topic), as it will be one of the preconditions for success on the participation of DSR in the LCT and upcoming CRM auctions. FPS Economy answers that the cabinet is still investigating alternative solutions; there is no clear timing as of now with regards to the E-law modification. The approval from the EC is required before June. Elia adds that the disclaimer for EC is correct but does not imply a full approval of state aid but more discussion.

Planning

LUMINUS is thanking for the opening of the view on the planning. LUMINUS highlights that it would be unfortunate if some elements are considered out of scope because they were not part of the public consultation. FPS Economy will communicate that feedback to the cabinet.

FEBELIEC raises some attention point with regards to the start date of the process, end of April for payback obligation/IPC: the timing is really tight, implying a need for quick reactions on the topic to bring clarity and increase likelihood of receiving enough volume. FPS Economy agrees and is aware that the timing is quite tight.

Elia and FPS will give feedback to the cabinet.

ENGIE understands that there are a lot of changes to be considered with regards to the legislative works. ENGIE already had a look at CREG's proposal and finds that it is quite limited in terms of changes proposed. FEBEG reflects on the conditions in which existing assets are participating in the CRM for which they already raised several concerns in the past. FEBEG hopes there are opportunities to bring new proposals to fix the elements that are not suitable for these assets at the moment. ENGIE calls the SPF Economy and the cabinet to take the time to go through the proposals that will be done. Strict timing should not lead to putting aside too many topics.

3. Next Meetings

The next meetings are currently foreseen on:

- **Thursday 23th March 2023 am : WG**

- NEW – Thursday 23th March 2023 pm : UX Design Session Availability Monitoring (part 1)
- NEW – Friday 31st March 2023 OR Friday 7th April am : CRM Design – General Info session
- **Friday 14th April 2023 am : WG**
- NEW – Friday 14th April 2023 pm : CRM IT Interface Training
- NEW – Tuesday 18th April 2023 OR Monday 24th April whole day : CRM Design – Specific Info session
- **Tuesday 23th May 2023 am : WG**
- NEW – Tuesday 23th May 2023 pm : UX Design Session Availability Monitoring (part 2)
- **Friday 16th June 2023 am : WG**

ⁱ Disclaimer 1: Interactions with E.C will be needed to approve the measure. The final decision will be taken only if the measure is supported by the E.C.

Disclaimer 2: a change in the E-Law is needed (constraint in term of timing)