

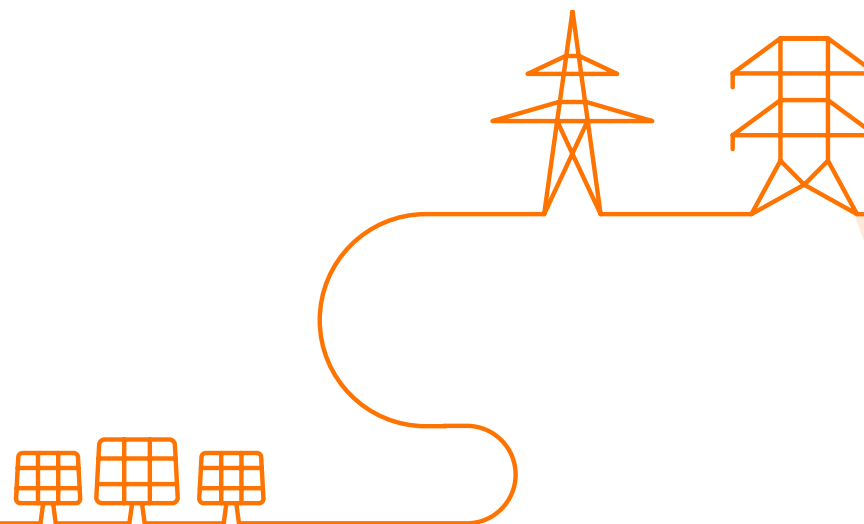
WG Adequacy #31

14/06/2024



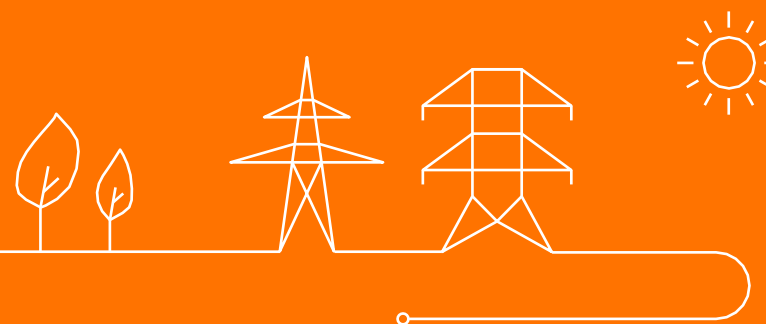
Agenda

- Welcome
- Approval of meeting minutes
- Reactions to the Public Consultation on the CRM calibration
- IPC/IPC derogation: Revenues calculation methodology
- Roadmap towards design changes
- AOB
- Next meetings



Minutes WG Adequacy #29

12/04/2024

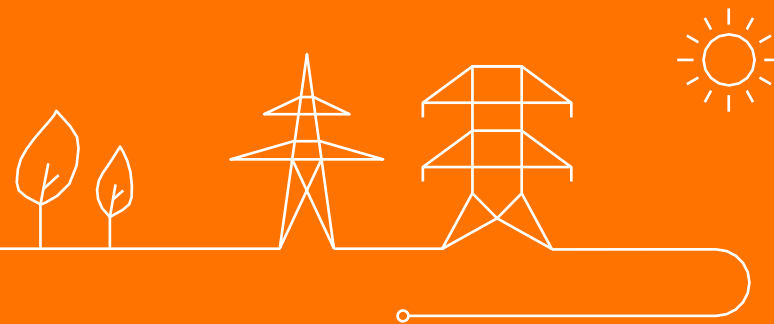


Minutes – WG Adequacy #29 – 12/04/2024

- No further comments received



Reactions to the Public Consultation on the CRM calibration



Agenda

1. Summary of received stakeholder feedback on the public consultation and Elia's answer regarding:

- General remarks and methodology
- Scenario dataset
- Proposed sensitivities

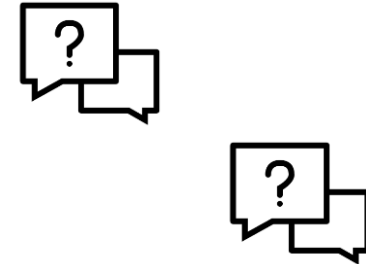
2. Elia's recommendation

3. Other parameters

Public consultation on the scenarios, sensitivities and data for the CRM parameter calculation for the Y-1 Auction for Delivery Period 2026-2027, the Y-2 auction with Delivery Period 2027-28 and the Y-4 Auction for Delivery Period 2028-2029

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

This presentation will provide a summary of the received feedbacks and Elia's answers. For a full view of the comments and answers, please consult the public consultation report that will be posted on the Elia website beginning of next week.



Feedback received to public consultation

4 stakeholders with non-confidential feedback

- Febeliec
- FEBEG
- CREG
- SPF Economy

+ 2 stakeholder with confidential feedback

The confidential feedback will be sent confidentially and shared with the FPS Economy and CREG

Public consultation on data & methodology: How was it organised ?



From 12/04 until 13/05/2023 6 PM

WHAT ?

- **Input data scenario for Belgium and other countries**
 - Any feedback was welcome on the proposed values for the reference scenario
- **Sensitivities**
- **Other parameters**



General feedback

General remarks

- **Febeliec** regrets that the methodology is not included in the public consultation and does not agree with the applied methodology. **Febeliec** would like Elia to conduct calculations on multiple scenarios.
- **Febeliec** indicates a lack of much actual data provided by Elia especially regarding methodology and sources.
- **FEBEG** would welcome that the data from previous CRM auction and the actual values are also included in the Assumption workbook.

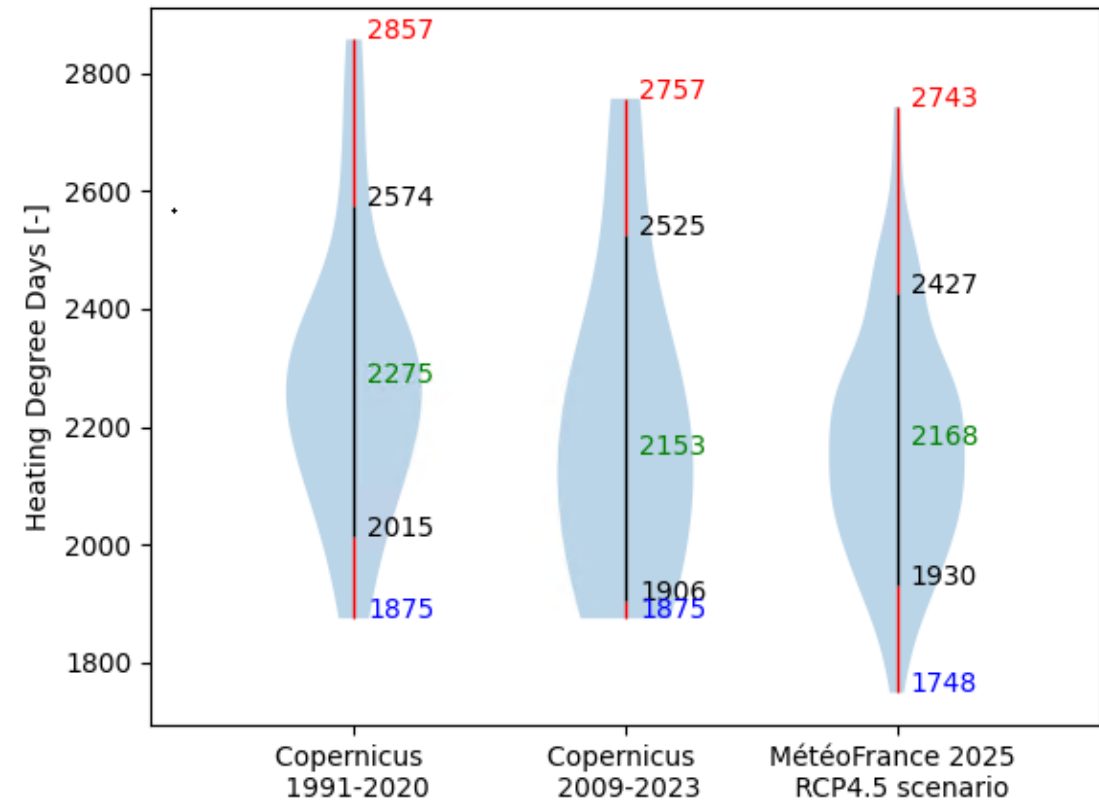
- Methodology is described in article 12 of the Royal Decree on the determination of volume and parameters, approved by the European Commission. The methodology is aligned with AdeqFlex'23 where the methodology was part of the public consultation and which is compliant with the latest European methodologies approved in 2020.
- Elia provided an assumption workbook with the detailed assumptions and an explanatory note detailing how each of the scenario components were determined. Elia also included sources for each parameter and an explanation of the methodology.
- On top of the published data, Elia will also share information regarding the 2023 values by technology in the framework of this presentation as in the public consultation report. Elia will also publish an updated assumptions workbook with the currently installed capacities included. Elia will in a later stage also publish a document summarizing the reference scenarios from the different past CRM auctions.



General remarks

- **Febeliec** has concerns regarding the use of forward-looking climate database by Elia and wants to include a scenario with the historic climate years.
- **CREG** has concerns regarding the use of forward-looking climate by Elia and wants to see how the recent years could be integrated into the climate database.

- The use of the forward-looking model of Météo France is compliant with the ERAA methodology.
- Elia uses a climate database generated for the target year 2025 which incorporates greenhouse gas concentration based on the RCP 4.5 scenario.
- The Figure compares the Heating Degree Days (HDD) calculated based on the MétéoFrance dataset for 2025 with the HDD from other sources:
 - The historical HDD for the period 1991-2020,
 - The historical HDD for the period 2009-2023.
- The comparison clearly shows that the MétéoFrance database considers less HDD than would be found in historical climate databases.
- Therefore, Elia still relies on the Météo France climate database as its best available forward-looking climate database and will further follow up on the topic if better forward-looking databases are made available.





Feedback on input data

Overview of input data



Renewables



Storage



Thermal generation



Electricity demand



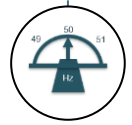
Data for other countries



Economic parameters



Forced Outages



Balancing capacity



Overview of input data



Renewables



Storage



Thermal generation



Electricity demand (EV, HP, industry electrification & DSR)



Data for other countries



Economic parameters



Outages



Balancing capacity



General comment

- **CREG** asks Elia to provide current installed capacities (latest available data or at least installed capacities as at December 31, 2023) for all the technologies listed in the table, in particular for large and small-scale batteries and for renewables.

- Elia agrees with the CREG, adding the currently installed capacity to the excel dataset would indeed provide a more comprehensive overview for the reader. Elia will indeed include them, as presented in the Table below. This information will be integrated in the assumptions workbook for the public consultation as from next year.

	2023* [MW]	2026-27/Y-1 [MW]	2027-28/Y-2 [MW]	2029-30/Y-4 [MW]
Wind onshore	3 246	4 258	4 588	5 248
Wind offshore	2 261	2 261	2 261	2 961
Photovoltaics	9 123	12 723	13 923	16 323
Small scale storage	516	620	662	756
Large scale storage	152	331	955	955



Renewables energy sources

- **FEBEG** insists on the importance that Elia and the federal authorities double-check (political) ambition with technical and economical feasibility and the NIMBY-effect.
- **FEBEG** and **CREG** mention that the recent surge in solar panel installations, influenced by external factors such as the energy price crisis and advantageous policies, may result in an overestimation of future installation rate.
- **FEBEG** notifies that the realization of offshore wind growth ambitions hinges on the timely completion of crucial infrastructure projects, as large-scale initiatives often encounter significant challenges.

- Regarding the wind capacity and NIMBY effect, the trajectory is based on targets from the regions. It is therefore assumed that the necessary measures can be put in place. Moreover, the 2023 installation rate did not demonstrate reasons to deviate from it.
- Elia agrees with FEBEG and CREG that the recent surge in solar panel installations was influenced by external factors such as the energy price crisis and the installation rush in Wallonia for the meters that run backwards. However, other parameters can keep the installation rate high for the coming years, a.o.:
 - over-supply of photovoltaics, which will continue to depress panel prices;
 - in 2023 approximately 1200 MW of photovoltaics were installed in Flanders only, although this region did not have the advantages of counters that run backwards;
 - the legislation in Flanders states that industrial actors' and public authorities' implantations which reach a certain electricity consumption must be equipped with solar PV as of 2025.
- Elia will therefore recommend to keep an installation rate of 1200 MW per year for the photovoltaics.
- Elia agrees with FEBEG that such large-scale projects can inevitably encounter various challenges prior to their actual realization, however, Elia proposes to follow the official announcements.

Overview of input data



Renewables



Storage



Thermal generation



Electricity demand (EV, HP, industry electrification & DSR)



Data for other countries



Economic parameters



Outages



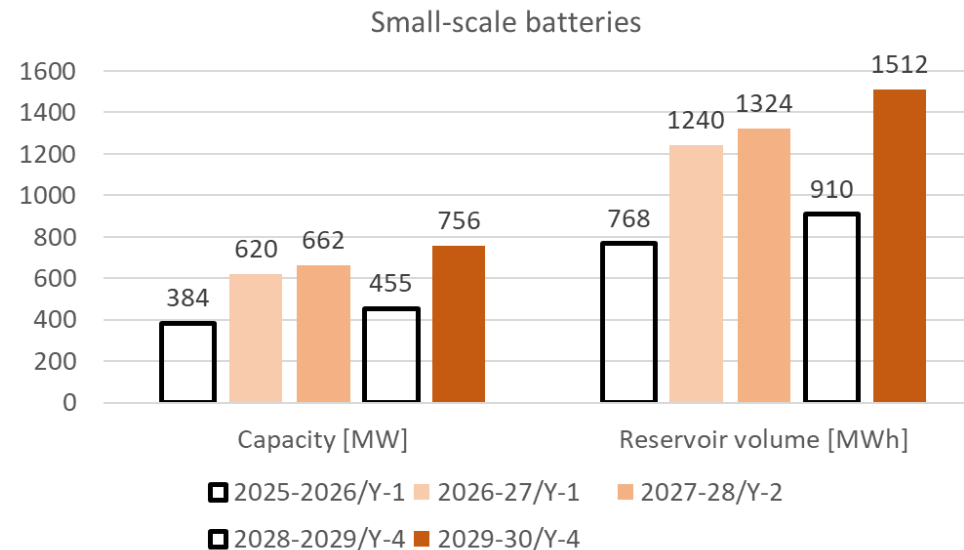
Balancing capacity



Storage (1/3)

- **CREG** notes that the values given for installed capacity for large-scale and small-scale batteries differ from those given in the Excel table and in figures 4 and 5. CREG considers that the correct values are those given in the Excel table and in figures 4 and 5.
- Elia confirms that the interpretation of the CREG is correct. The Table 1 was incorrect. The capacity of small-scale batteries published in the assumptions workbook excel was incorrect. The correct capacity of small-scale batteries was correct in the slides presented in the WG Adequacy.

Batteries - Capacity in reference scenario	Capacity [MW]		
	2026-27/Y-1	2027-28/Y-2	2029-30/Y-4
Total	951	1617	1711
Small-scale storage	620	662	756
Large-scale storage ("in-the-market")	331	955	955



Storage (2/3) – Large-scale batteries

- **CREG** asks Elia to check the commissioning date of these batteries. In particular, it is important to know whether these batteries can be commissioned before the start date of the first supply period for which they were contracted.
 - **CREG** also asked information on the energy content of the different project, whether or not these projects will have a daily schedule, on the methodology to calculate the large-scale batteries volume and how to consider projects that might happen without CRM support
 - **Febeliec** mentioned that no full methodology describing volume determination was available.
 - **FEBEG** asked to crosscheck the likeliness of the announced timings.
- On large-scale batteries, all battery projects are closely followed-up, including the (expected) in service date. However, without clear information from the projects, Elia takes a conservative approach, which does not prevent these projects to take part in an auction for an earlier delivery period. Moreover, information available on REMIT will be followed-up, as it is performed for individually-modelled thermal generation.
 - The methodology associated to the determination of the large-scale batteries is similar to AdeqFlex'23. The large-scale batteries are separated in an existing + contracted volume and a potential volume. In both case, the central scenario only includes the first category. In the AdeqFlex'23 study, the potential was used to perform sensitivities with higher amount of batteries while in the CRM process, additional volume is included in the preselected capacity types and can be added in the economic optimization loop. The applied methodology aims to not overestimate the amount of batteries in the reference scenario, as it might also impact their derating factors.
 - Regarding the energy content of large-scale batteries, the repartition is based on the available information regarding existing projects and on the selection of derating factors for units contracted in a CRM auction.
 - Elia is not able to provide a detailed list by project as everything is not publicly available.
 - All the storage capacity with a capacity higher than 25 MW have the obligation to follow the Scheduling Process.

Storage (3/3) – small-scale batteries

- **CREG** asks Elia to clarify the reason behind the increase in additional capacity of small-scale batteries, which is now equivalent to 0.3% of the additional photovoltaics capacity, compared to the 0.2% considered in AdeqFlex'23
- **FEBEG** wonders to which extend the hypothesis regarding the split of in-market and out-of-market for small scale batteries are realistic and questions the amount of in-market small-scale batteries.
- **Febeliec** is surprised by the proposal of Elia for small-scale batteries, as currently many new and existing players are active in this domain and the business cases for such batteries, even without CRM, have become very positive. Febeliec considers the proposal from Elia for small-scale batteries an underestimate and thus not in line with the legal lowest cost criterion.

- Elia updated the percentage of installed small-scale batteries, because the observed installation rates of small-scale batteries in 2022 and 2023 were much higher than expected. High installation rates due to government support were expected but surpassed in 2022 and 2023. This leads Elia to believe it underestimated the adoption rate of small-scale batteries, even without subsidies. In addition, battery prices have fallen sharply over the past years and are expected to continue getting cheaper.
- Concerning the overestimation of the share of in-the-market small-scale batteries, these values were estimated in the context of AdeqFlex'23 based on findings from the DELTA-EE study on residential and tertiary flexibility. Elia as of yet sees no reason to update this assumption but proposes to perform an in-depth reassessment in the context of the next AdeqFlex study.
- Elia believes the 0.3% adoption rate considered in the scenario reflects the lower cost of batteries while taking into account the ending of the support mechanism for small-scale batteries in Flanders. Elia will of course closely follow-up the installation rate of residential batteries without support and adapt the assumptions if needed.

Overview of input data



Renewables



Storage



Thermal generation



Electricity demand (EV, HP, industry electrification & DSR)



Data for other countries



Economic parameters



Outages



Balancing capacity



Individually modelled thermal generation (1/2)

- **CREG** and **Febeliec** want to know how Elia plans to consider the decommissioning of industrial sites in its hypothesis for the energy consumption.
 - **CREG** notes the installed capacity considered for Seraing ST is 170 MW, whereas on the SPF website, the installed capacity is 158 MW.
 - **CREG** notes that despite the reported permanent shutdown of the 360 MW Vilvoorde power plant, Elia considers a 255 MW availability from 01/10/2025
- Regarding the impact of the decommissioning of certain units on the load. Elia agrees with the comments of CREG and Febeliec and will take these decommissionings into account when assessing the organic load as well as new electrification.
 - The installed capacity for Seraing ST is based on the information published on the transparency platform of EDF. The installed capacity on the transparency platform for Seraing ST is 170 MW.
 - Vilvoorde power plant is composed by two units : Vilvoorde ST, which has an installed capacity of 105 MW, and Vilvoorde GT, which has an installed capacity of 255 MW. Vilvoorde ST was definitively closed in April 2023. Based on REMIT, the unit Vilvoorde GT will be available as of November 2025.



Individually modelled thermal generation (2/2)

- **FELEG** would like to underline that there is a need to maintain long-term visibility on the CO2 emission's limits to participate in the CRM in order to allow the asset owners to make possible investment decisions in time.
- **Febeliec** reiterates a longstanding comment on the lack of transparency on the announced closure of power plants in Belgium.

- The CO2 emissions limits are not the responsibility of Elia and are not part of this public consultation. Elia will share this consultation report along with the public responses to the public consultation with the relevant authorities.
- Elia can only refer to the legal procedure related to the closure announcement of power plants in Belgium (article 4bis of the Electricity Law). Elia will share this consultation report along with the public responses to the public consultation with the relevant authorities.



Profiled thermal capacities

- **CREG** points out that it is not possible to verify the values presented without a detailed list of individual units. CREG asks Elia to provide a detailed list of individual units.

- Elia already communicates the Elia's internal database to the CREG on a quarterly basis in order to provide more transparency and provides a specific list in the auction process to assess the participation of non-eligible units.
- This database is highly evolutive and Elia is dependent on many players and Elia does not have the reasons behind the changes affecting more than a thousand units.



Overview of input data



Renewables



Storage



Thermal generation



Electricity demand (EV, HP, industry electrification & DSR)



Data for other countries



Economic parameters



Outages



Balancing capacity



Electricity demand (1/4)

- **CREG** and **Febeliec** regret that the demand for electricity is not submitted to public consultation. **FEBEG** also points to the importance of stakeholder feedback in this process.

- Elia is still assessing the future demand from its customers and waiting on the economic forecasts from the Federal Planning Bureau so it could not be submitted to public consultation.
- In parallel, Elia is working on the PRICED study to analyse historical data and get further insights on elasticity, demand destruction and energy efficiency. Elia is working with tight deadline in order to be able to integrate those results as best as possible in the CRM process.
- For future auctions, the timing of the load determination could be changed but this may cause the latest data to not be available on time.
- It is impossible to still organize a full public consultation on this scenario component given the timing of the reference scenario decision by the Minister. After the WG Adequacy of August there is still a month in which stakeholders can provide feedback before the decision by the Minister, to support CREG's proposal and FPS advice.



Electricity demand (2/4)

- **CREG** voices concerns about the methodology and assumptions used by Climact
- **Febeliec** points to announced closures of industrial sites and points to investment decisions being postponed which should be taken into account in the determination of the electricity demand
- **Febeliec** would also like to see the peak consumption during moments of scarcity.
- **Febeliec** asks for a comparison between historical consumption and past consumption trajectories assumed by Elia

- Elia points to the PRICED study which will assess the impact of energy efficiency, price sensitivity and demand destruction following a bottom-up approach in which stakeholders are also invited to provide input. Elia will aim to include the results of the study as much as possible.
- Elia takes note of the remark from Febeliec related to demand destruction and delays in investment decisions and will take this into account in the determination of the load trajectories.
- Elia can not provide the peak consumption during moments of scarcity because this is a result of the simulations and flexibility impacts significantly the peak consumption.
- Elia would like to stress the constantly changing environment in which it has to take assumptions. Policies, consumer behaviour, technologies and the geopolitical/economic context are constantly evolving and make it difficult to take accurate assumptions, especially several years in advance.



Electricity demand (3/4) - Additional electrification from industry

- In view of the current announcements of production capacity cuts and the risk of company closures, **CREG** suggests that several scenarios are considered for the electrification of industry. This would allow CREG and the Minister to opt for the scenario that best correspond to the latest outlook.
- **CREG** is of the opinion that only part of the current plans for electrification of the industry will ultimately be implemented. CREG therefore asks Elia to specify what ratio it intends to use as an assumption for the electrification of this sector.
- **FEBEG** remains very skeptical regarding the considered amount of flexibility for new the capacity needed by the electrification from industry and invite ELIA to crosscheck these elements with its customers as well.

- Elia will aim to take these uncertainties into account and provide as much clarity on the assumptions that will be taken in the estimation of the demand from additional electrification from industry. In addition, Elia proposes to include sensitivities on the additional electrification in industry. The Minister can then decide on the trajectory to be applied in the reference scenario or not.
- Elia will indeed look at the flexibility potential from this additional electrification. However, due to the complexity of this analysis and the short amount of time available before the decision by the Minister, Elia proposes to evaluate a potential update of these assumptions in the framework of the next Adequacy and Flexibility study.



Electricity demand (4/4) - Additional electrification from EV and HP

- **CREG** asks Elia to provide the assumptions used for the evolution of the number of electric and hybrid vehicles in circulation for the various target years.
- **CREG** asks Elia to detail the assumptions used to determine the impact of electric vehicles V2G on demand for the various target years.
- **CREG** notes that only the estimated trend in the number of heat pumps installed is subject to public consultation. Given that a proportion of heat pumps sold in recent years are used for air conditioning or pool heating in summer, CREG believes that only the consumption of heat pumps that are economically relevant for heating in winter should be taken into account.
- **CREG** asks Elia to provide a comparison between Febiac data and the latest Statbel data.
- **Febeliec** wonders to what extent the proposed increases for HP and Evs are not an overestimate.

- The scenario for EV is based on the same assumptions as Adequacy and Flexibility study 2024-2034 (chapter 3.3.3) but updated for the latest sales data of 2023 from Febiac. For passenger cars it is assumed that 415,000 new units will be sold per year during the period 2024-2035. Electrification will mainly be driven by company cars. Further details on the assumptions are provided in the consultation report.
- Table 1 in the consultation report provides an overview of consumptions assumptions for EV. Further details can be found in the Adequacy and Flexibility study 2024-2034.
- Elia takes into account lower consumption of air-air HP during winter to account for air conditioning. Elia did not account for swimming pool heat-pumps because it found no sales data on these types of heat-pumps
- Elia provided a comparison with STATBEL data in the explanatory note. STATBEL considers higher amounts of EV compared to Febiac.
- Elia is of the opinion that the latest sales data of HP and EV confirm the trajectories of Elia.

- **CREG and Febeliec** regret that the updated market response study is not part of the public consultation
- **FEPEG** believes that DSR will play an increasingly important role in the security of supply but is of the opinion that the value of existing DSR is very high.
- **Febeliec** wonders how emergency and other diesel generators are taken into account.

- Elia will aim to provide the results of the updated Demand Side Response study before the WG Adequacy of August. This way stakeholders can still provide feedback on the methodology and results.
- Elia agrees that the DSR capacity for Belgium is relatively high. Belgium has a high level of industrialization and several initiatives have been taken to encourage the development of DSR capacity in Belgium. The CRM mechanism in particular provides incentives for the development of DSR capacities in Belgium. Elia wants to add that the methodology for the DSR volume calculation is currently being refined by N-Side.
- Regarding Febeliec's comment, the diesel generators and emergency generators are only taken into account if they actively participate in the day-to-day market. If so, their contribution is considered in the market response volume calculated by N-Side. Those volumes are therefore not part of the profiled thermal volume, calculated based on information from Elia's internal database, in order to avoid double counting.
- In the context of the CRM auction, these capacities are eligible if they meet the specific criteria outlined in the functioning rules and can participate either via SLA or aggregated thermal. Additionally, Elia would like to point out that in case the installed capacity of the grid user's emergency generators exceeds 1MW, these units have the obligation to prequalify and as a result are taken into account accordingly into the CRM.



- **FEPEG** is convinced that end-user flexibility will have a pivotal role for the security of supply in the future, however unlocking the end-user flexibility will require adaptations and implementations of new platforms and tools which will take time. We fear that ELIA is too optimistic on availability of end-user flexibility in short time.

- Elia shares the view of FEPEG that the flexibility assumptions from additional electrification can be further detailed with a more fundamental view. However, as this is a very complex process requiring detailed inputs, Elia proposes to update these assumptions in the context of the next Adequacy and Flexibility study but to keep using the current assumptions in this years CRM scenarios.



DSR volumes from newly electrified industry or new usages

- **FEBEG** wonders to which extent the percentages of flexibility of each of the different technologies are realistic and will materialize as the core business of industry is to produce and not to provide flexibility.

• Elia agrees with FEBEG, the end-user flexibility will play a key-role for the security of supply in the future. Unlocking this flexibility is one of the main priorities of Elia. In order to reach this objective, Elia puts a lot of efforts by organizing workshops, working groups or hackathon on this topic. In the upcoming Adequacy and Flexibility study, the flexibility will be again one of the main concerns of the study, and Elia will make its best to improve the current methodology. However, currently the DELTA-EE study that Elia uses as reference for the modelling of the flexibility is the best study available.



Overview of input data



Renewables



Storage



Thermal generation



Electricity demand (EV, HP, industry electrification & DSR)



Data for other countries



Economic parameters



Outages



Balancing capacity



Data for other countries (1/3)

- **CREG** asks Elia to also provide the current installed capacity for the other countries
 - **CREG** asks additional information on how Elia accounts for the flexibility associated with French nuclear power plants.
- Elia is not able to provide the installed capacity for a given date. Elia uses several sources to obtain the most realistic data for the other countries, considering ERAA as reference, but also more recent national studies. These different sources do not provide the “current” installed capacity for the same date. By consequent, determining the installed capacity for a specific year could be difficult and even more difficult to align the same date for all the countries. However, this exercise could be performed in the framework of the next AdeqFlex study which allows more time to collect the required data.
 - Elia takes into account the flexibility of the French nuclear units in the calculation of the number of unavailable units. This flexibility is taken into account by the application of the coefficient of utilisation K_u , which is equal to 93 %. RTE considers the same approach in the Bilan Prévisionel.



Data for other countries (2/3)

- **SPF** asks for more information about the coal unit Emile Huchet.
- **Febeliec** mentions that it is not clear the cut-off point is taken by Elia to include or not updates or new ambitions.

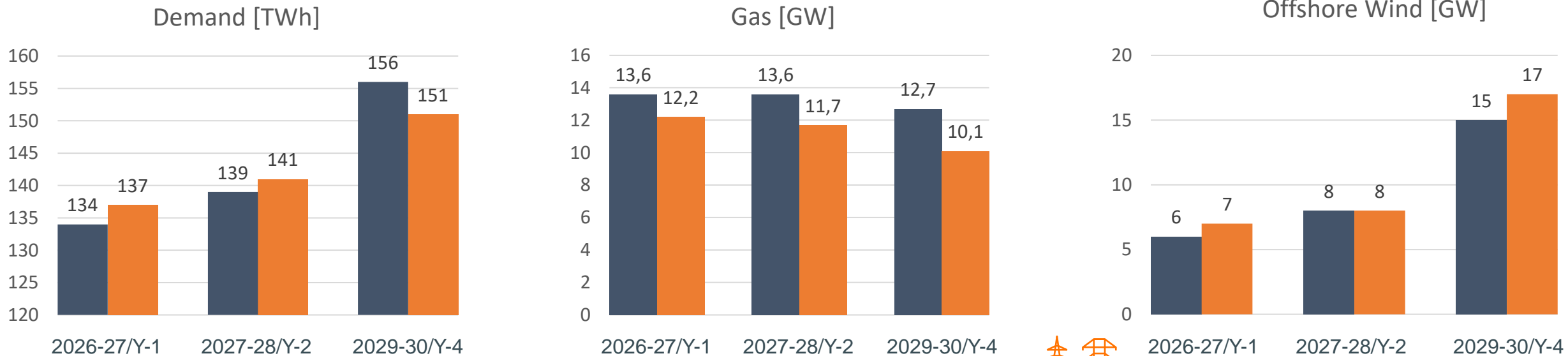
- Regarding the SPF's comment on the Emile Huchet coal-fired power plant, the plant's conversion project still appears to be vague. Consequently, Elia recommends considering the Cordemais unit as available, but does not recommend considering the Emile Huchet coal-fired power plant as available.
- Elia tries to include in its studies as much as possible up-to-date information. Ideally, the required information is gathered from national studies. Unfortunately, recent official publications for every scenario aspect for every country are not available, especially in the current fast changing context. Therefore, Elia also uses press articles in order to create the most relevant datasets for other countries.



Data for other countries (3/3)

- Elia proposed to update the dataset for Netherlands after the publication of the Monitoring Leveringszekerheid by Tennet.
- This report was published the 8th of May 2024. The public consultation report therefore also integrates updates for Netherlands assumptions.
- No evolution for coal, nuclear, solar and onshore wind.

■ ERAA 2023 ■ Monitoring Leveringszekerheid 2024



Flow-based domain

- **CREG** asks Elia to motivate the choice to build the network based on TYNDP 2022 instead of TYNDP 2024.
 - **Febeliec** agrees that for the minimum minRAM 70% is chosen. Febeliec insists that this value is a legal minimum.
 - **Febeliec** does not see any information on which future grid is taken into account.
 - **FEBEG** considers that the consideration of the minRAM 70% for all EU countries is overly optimistic for several reasons.
- Elia uses TYNDP 2022, because the detailed grid for TYNDP2024 with the cross-border network reinforcements as well as the translation of the different market scenarios to this model are still being worked on and will not be ready in time for constructing the FB domains for the different time horizons.
 - Regarding FEBEG's comment on the uncertainty of reaching a minRAM of 70%, from 31/12/2026 onwards, still following the current legal framework, the 70% minRAM requirement has to be applied to all CNECs. Elia agrees that there might be a risk that this requirement is not met by some countries, but Elia will recommend to consider the legal framework for the reference scenario. Furthermore, sensitivities are proposed recognizing the uncertainties and risks mentioned before. Finally, the Minister decides the scenario.
 - Elia takes note of the feedback from both FEBEG and Febeliec on the ambition of min RAM70% for each delivery period.
 - Elia considers as reference the future grid proposed in the Federal Development Plan and in the Adequacy and Flexibility study 2024-34

Overview of input data



Renewables



Storage



Thermal generation



Electricity demand (EV, HP, industry electrification & DSR)



Data for other countries



Economic parameters



Outages



Balancing capacity



Fuel & CO₂ prices

- **CREG** asks Elia to add an upward and downward sensitivity on fuel and CO₂ prices in order to take into account any significant change in future fuel and CO₂ prices occurring before the ministerial order is adopted.
- **CREG** asks Elia clarification on the calculation of the CO₂ prices.
- **FEPEG** recommends to carefully choose the best new entrant technology in order to calibrate the CRM demand curve. Selecting the technology with the lowest cost which does not have the full potential which does not have the full potential to solve the adequacy issue given its constraints would put the security of supply of Belgium at risk by excluding all other valuable technologies.

- Elia proposes to update the fuel prices based on the last futures shortly before the decision by the Minister in order to use the most up-to-date prices. As such a sensitivity on fuel prices is not necessary in Elia's opinion.
- On the determination of fuel prices, Elia would like to state that the prices are expressed in €2023/MWh. This requires multiple conversions taking into account inflation rates, monetary exchange rates and energy unit conversions. Without further details Elia cannot explain which difference is the result of which conversion.
- Elia agrees with the comment of FEPEG on which technologies to consider and did take into account that only technologies able to improve the security of supply in Belgium are considered.



Overview of input data



Renewables



Storage



Thermal fleet



Electricity demand (EV, HP, industry electrification & DSR)



Data for other countries



Fuel & CO2 prices



Forced Outages



Investment costs



Forced outage rates

- **Febeliec** and **CREG** consider that a maximum forced outage rate of 10 % should be considered for Tihange 3 and Doel 4
- **CREG** points out that the forced outage rates used are the same as those from the Adequacy & Flexibility study 2024-2034. Consequently, these rates are not updated based on the most recent data.
- **CREG** asks Elia to indicate how the days of forced interruption are distributed over the year.

- The forced outage rate of 20,5 % for the nuclear plants was obtained taking into account the technical and long-lasting forced outages. Elia still consider the 20,5 % forced outage rate calculated on all nuclear units as the relevant value to consider to ensure the security of supply in Belgium. Nonetheless, based on the feedback of stakeholders, **Elia will recommend to consider the sensitivity considering a forced outage rate of 10 % for Belgian nuclear plants.**
- The forced outage rates were calculated following a methodology developed by N-SIDE and Elia. This methodology considers units from a group of countries. An update of this study was not foreseen for this CRM calibration. Elia proposes to not update the forced outage rates each year to ensure a certain stability in the parameters.
- The forced outage rates are uniformly distributed throughout the year, following a geometric distribution. An overview of the characteristics of the forced outage is given in the adjacent Table.

Category	Number of FO per year	Average FO rate [%]	Average duration of FO rate [hours]
Nuclear	1.3*	20.5%**	199 hours* [around 8 days]
CCGT	9.4	5.5%	110 hours [around 5 days]
OCGT	9.2	8.2%	221 hours [around 9 days]
TJ	3.2	9.8%	130 hours [around 5 days]
CHP, waste, biomass	2.9	6.4%	111 hours [around 5 days]
Pumped Storage	5.8	2.9%	46 hours [around 2 days]
Batteries	/	2.0%***	/
DC links	1.9	6.7%	158 hours [around 7 days]

* Only considering technical forced outages.

** Also considering long-lasting forced outages

*** Regarding batteries, the forced outage rate is considered in the models by applying a derating factor on the installed capacity

Overview of input data



Renewables



Storage



Thermal generation



Electricity demand (EV, HP, industry electrification & DSR)



Data for other countries



Economic parameters



Outages



Balancing capacity



Balancing capacity

- **Febeliec** regrets that every year, Elia takes higher volumes of balancing capacity to be reserved, while at the same time watering down certain balancing obligations for BRPs.
- **Febeliec** insists that the impact of cross-border balancing capacity should be taken into account as reduction factor for balancing needs.

- While Elia's average reserve needs are expected to increase towards 2030, driven by increasing capacity of renewable generation, as indicated in the projections in the Adequacy and Flexibility study 2024-34 and the report on the public consultation regarding the Princess Elisabeth Zone, the upward FRR needs taken into account in simulations for the CRM is limited to the needs during scarcity risk periods. This is explained by the fact that renewable generation prediction risks are typically low during scarcity prone periods. The FCR capacity is expected to slightly increase in the next years as the expected value for 2026-27/Y-1, 2027-28/Y-2 and 2029-30/Y-4 is 97 MW but these requirements are not substantially impacted by the BRP balancing performance over periods of 15 minutes.
- Elia refers to the explanations given in earlier consultations (e.g. the consultation on the adequacy and flexibility study 2021) that, in line with the ERAA guidelines, the full FRR needs need to be deducted from the modelled assets. Indeed, even if Elia is able to count on reserve sharing or non-contracted balancing energy bids to reduce its balancing capacity to be procured, this capacity still needs to be considered 'firm'.





Feedback on sensitivities

General remark (1/2)

- **CREG** wishes to emphasize that the proposed sensitivities have been presented to the SPF and CREG, but are not the result of discussion or agreement with the parties concerned.
- **Febeliec** strongly regrets that Elia only calculates one single configuration of the base scenario and a combination (or one single) sensitivities.

- Elia presented proposals for the scenario and some sensitivities to the CREG and the SPF Economy during a CdS on the 26th of March and responded by mail on the comments it received on the 10th of April. The members of the CdS can react to the public consultation and Elia addresses these reactions in this public consultation report.
- Elia follows the Royal Decree on this matter, which consider only one reference scenario to be selected by the Minister after a clear process including a collaboration and concertation phase with the FPS and the CREG, this public consultation, including a complete consultation report integrating Elia's recommendations, a reference scenario proposal from the CREG and an advice from the FPS on this latest proposal.

General remark (2/2)

- **Febeliec** regrets that there is not even any mention of any possible sensitivities regarding lower demand in Belgium, due amongst other due to lower investments in industrial consumption.
- **Febeliec** remains surprised that sensitivities on UK and French nuclear availability are even included, as UK and France already have a CRM in place, guaranteeing the adequacy of the UK and France and according to the ERAA methodology, NRAAs can only take into account national impacts and not those cross border.

- Elia will present different scenarios on the electricity consumption in Belgium during the WG Adequacy of August.
- The sensitivities on the nuclear availability in France are proposed in order to integrate the risk of lower nuclear availabilities compared to the expected availability in REMIT or in ERAA 2023. Such reasoning is compliant as it is justified and quantified as described in the explanatory note, in line with article 3, §4 of the Royal Decree. The sensitivities on the nuclear capacity in Great Britain was proposed to account for additional capacity in the scenario

Overview of sensitivities



Nuclear capacity Great-Britain 1



Nuclear capacity Great-Britain 2



French nuclear availability



Flow-based CEP rules



Uncertainties on Belgium thermal units



Nuclear forced outage rate in Belgium



Overview of sensitivities



Nuclear capacity Great-Britain 1



Nuclear capacity Great-Britain 2



French nuclear availability



Flow-based CEP rules



Uncertainties on Belgium thermal units



Nuclear forced outage rate in Belgium



Nuclear capacity Great-Britain 1

- **CREG** asks Elia to explain its reasons for considering a two-year extension period for AGR nuclear power plants.
- **CREG** proposes to add four sensitivities with one, two, three or four nuclear power plants that are extended.
- **FEBEG** fully supports that the AGR plants are not considered in the base scenario.

- Elia proposed a nuclear extension period of 2 years because no specific timing was communicated as of yet but the last extensions of Hysham 1 and Harlepool were for a duration of 2 years
- Elia that the sensitivity on nuclear extensions of AGR plants could be split according to the amount of units. However, as no additional announcements have been made around these extensions, Elia deems the base scenario without any AGR extensions the most likely.

Overview of sensitivities



Nuclear capacity Great-Britain 1



Nuclear capacity Great-Britain 2



French nuclear availability



Flow-based CEP rules



Uncertainties on Belgium thermal units



Nuclear forced outage rate in Belgium



Nuclear capacity Great-Britain 2

- **FEPEG** consider that the possible realization of the optimistic scenario where Hinkley Point C would be available 1 year earlier as very unlikely. By consequent, this sensitivity should not be retained.
-
- Elia agrees with FEPEG that this scenario is very unlikely following the history of delays that have already taken place. Elia will therefore not include the sensitivity with an earlier availability of Hinkley Point C in its recommendation.

Overview of sensitivities



Nuclear capacity Great-Britain 1



Nuclear capacity Great-Britain 2



French nuclear availability



Flow-based CEP rules



Uncertainties on Belgium thermal units



Nuclear forced outage rate in Belgium



French nuclear availability

- **SPF Economy** would like to know if a more quantitative methodology would be available to correctly estimate the necessary reduction (or not) in the number of available nuclear units compared to the availability profiles used in the ERAA 2023.
- **FEBEG** firmly supports the need to include a sensitivity regarding the French nuclear availability in the reference scenario: in fact, based on past unavailability of the French nuclear these last years, it is clear that for SoS reasons a precaution approach should be taken. FEBEG believes that the French nuclear availability 3 sensitivity should be used.

- The ERAA profiles enable the calculation of an hourly unavailability for French nuclear units. Therefore the same methodology currently used for the REMIT data can be applied to both cases. If the same approach is to be used for Y-2 and Y-4 auctions, the forecast would have to be based on an assumption. This assumption can be based on the predictions made by RTE in the Bilan Prévisionnel, where RTE considers a range from 320 TWh to 400 TWh, with a reference value of 350 TWh, excluding the generation from Flamanville. It should be noted that RTE also implemented a stress test scenario with 280 TWh which reflects the nuclear availability from 2022, in order to be representative of a major risk on nuclear power plants.
- The profile from ERAA 2023 is closer to the high sensitivity from RTE as presented in the 'Bilan Prévisionnel'. Therefore, Elia believes that the French nuclear sensitivity, as proposed in the recommendation (at least 4 units unavailable on top of the availability foreseen in the published ERAA 2023), is relevant in order to reach a nuclear generation in line with the reference value from RTE.
- Elia takes note of FEBEG's comments concerning the choice of a sensitivity considering a lower availability by 6 units on average during winter compared to ERAA regarding the French nuclear availability.

Overview of sensitivities



Nuclear capacity Great-Britain 1



Nuclear capacity Great-Britain 2



French nuclear availability



Flow-based CEP rules



Uncertainties on Belgium thermal units



Nuclear forced outage rate in Belgium



Flow-based CEP rules

- **FELEG** considers that the ambition of minRAM 70% is unlikely to be by 2025 in all countries. For delivery year 2026-27, we highly consider this improbable. We therefore consider it justified to embed this risk in the reference scenario for delivery 2026-27 and 2027-28 together with a prudent approach for delivery year 2029-30.
- **FELEG** reiterates his view that a country-per-country approach could be applied to better capture the uncertainty. If this is not possible, a prudent approach should be considered and therefore the minRAM70% hypothesis should not be included in the reference scenario.
- **Febeliec** opposes the inclusion of any sensitivity which would reduce the minRAM below 70% as this is the minimum threshold. Febeliec already considers the fixed RAM 70% a very conservative approach by Elia. Febeliec also wants to refer explicitly to the ACER Opinion on this topic which has recently been released, calling for more action for Commission and Parliament to ensure that the targets are met.

- Elia refers to its previous answer on the Flow-based CEP rules.
- Elia proposes to keep the central scenario in each auction, considering a 70%min RAM for all countries in order to be compliant with European regulation however Elia acknowledges that the risk that some countries do not always comply with it exists.

Overview of sensitivities



Nuclear capacity Great-Britain 1



Nuclear capacity Great-Britain 2



French nuclear availability



Flow-based CEP rules



Uncertainties on Belgium thermal units



Nuclear forced outage rate in Belgium



Uncertainties on Belgian thermal units

- **CREG** asks Elia to justify his choice to consider the closing of the turbojets.
- **FEBEG** suggests Elia to integrate, in the reference scenario, a reduction of the MW compared to table 1.2 (excel sheet) to account for some Belgian thermal plants (TJs, CHPs, ...) leaving the market for various reasons: no access to CRM, obsolescence, reduced steam need within the industry, ...

- The CO2 thresholds are fixed for a period of 5 years, Elia is of the opinion that CO2-thresholds will not be further relaxed after this period given the EU climate targets for 2030 and 2050.
- Elia takes note of FEBEG's feedback regarding the sensitivities to be integrated in the reference scenario. Elia agrees that the TJ units are at risk of closure due to the CO2 thresholds applicable in the CRM and will recommend to integrate this sensitivity in the reference scenarios for the CRM calibration.

Overview of sensitivities



Nuclear capacity Great-Britain 1



Nuclear capacity Great-Britain 2



French nuclear availability



Flow-based CEP rules



Uncertainties on Belgium thermal units



Nuclear forced outage rate in Belgium



Nuclear forced outage rate in Belgium

- **Febeliec** insists that the sensitivity on nuclear forced outage rates is taken into account and refers to the comments above.

- Elia takes notes of Febeliec comment. The forced outage rate of 20,5 % for the nuclear plants was obtained taking into account the technical forced outage, but also the long-lasting forced outage. Elia still considers the 20,5 % forced rate calculated on all nuclear units in the context of the Adequacy and Flexibility study 2024-2034 as the relevant value to consider to ensure the security of supply in Belgium. Nonetheless, based on the feedback of the stakeholders, Elia will recommend to consider the sensitivity considering a forced outage rate of 10 % for the nuclear plants.



Elia's recommendation

Elia's recommendation

- Elia proposes to take into account the scenario dataset presented in the public consultation as a starting point for 2026-27/Y-1, 2027-28/Y-2 and 2029-30/Y-4
- Compared to the assumption workbook provided in the public consultation, Elia proposes:
 - to update the dataset for the Netherlands, following the recent publication of the Monitoring Leveringszekerheid by Tennet
 - to consider in the reference scenario any further national announcement or relevant studies to be published before the decision of the Minister;
 - to integrate the correction for small-scale batteries.
- Regarding fuel and CO2 prices, Elia also recommends considering the latest forward prices available before the decision of the Minister.
- It should be noted that Elia's recommendation **doesn't include**:
 - the electricity consumption, as Climact is currently updating the trajectories, which will be presented during the WG Adequacy of the 27th of August and which will include:
 - the latest macro-economic trajectories per sector that will be published by the Federal Planning Bureau in June 2024;
 - the update of the assumptions regarding additional electrification from industry in close collaboration with Elia's customers;
 - Additional insights (energy efficiency, elasticity, demand destruction) gained through the PRICED study will be included in the presented curves as best as possible and if available by then; and
 - Demand-side response from existing usage (also called 'market response'), for which an update will be presented in the WG Adequacy of the 27th of August, following the study being performed by N-Side for winter 2023-24.

Elia's recommendation – Y-1 auction with delivery period 2026-27

All updates to the scenario dataset



Central

Sensitivities

FO Belgian nuclear

20,5 %

10 %

TJ/OCGT closure

No

TJ closure (140 MW)

FB CEP rules

70% minRAM

Fixed RAM 70%

Mixed 70%

FR Nuclear

High EDF forecast winter only

Average EDF forecast winter only

Minimum EDF forecast (winter only)

Minimum EDF forecast whole year

Other foreign risks

Central

UK nuclear availability

Cordemais unavailability

Legend:

Central scenario

Initial proposed sensitivity

Additional Based on stakeholder's proposal

Elia's recommendation



Elia's recommendation – Y-2 auction with delivery period 2027-28

All updates to the scenario dataset



Central

Sensitivities

FO Belgian nuclear

20,5 %

10 %

TJ/OCGT closure

No

TJ closure (140 MW)

FB CEP rules

70% minRAM

Fixed RAM 70%

Mixed 70%

FR Nuclear (additional amount of units unavailable)

0

2

4

6

8

Other foreign risks

Central

UK nuclear availability

Cordemais unavailability

Legend:

Central scenario

Initial proposed sensitivity

Additional Based on stakeholder's proposal

Elia's recommendation



Elia's recommendation – Y-4 auction with delivery period 2029-30

All updates to the scenario dataset



Central

Sensitivities

FO Belgian nuclear

20,5 %

10 %

TJ/OCGT closure

No

TJ closure (140 MW)

FB CEP rules

70% minRAM

Fixed RAM 70%

Mixed 70%

FR Nuclear (additional amount of units unavailable)

0

2

4

6

8

Other foreign risks

Central

UK nuclear availability

Cordemais unavailability

Legend:

Central scenario

Initial proposed sensitivity

Additional Based on stakeholder's proposal

Elia's recommendation





**Feedback on other
parameters**

Preselected capacity types

- **CREG** asks on what basis Elia proposes the ‘mid’ value from the range provided by Entras for the FOM cost
- **CREG** is of the opinion that the sizes of the units of the preselected capacity types, and the FOM cost linked to them, should correspond to those used for the CAPEX
- **FEBEG** highlights that the CAPEX and FOM costs should be reviewed in line with the ongoing Entras study
- **Febeliec** inquires why technologies such as OCGTs and diesel engines are excluded for 2025-26, and is puzzled why only DSM with a SLA of 4 hours is considered

- Elia highlights that Entras assumes that all plant owners operate their plant so as to keep it in best condition. The range in FOM is primarily driven by differences in types of turbines etc. In order to most accurately capture these variations, Elia proposes the ‘mid’ value.
- Elia agrees with the CREG that the unit sizes should be aligned for the FOM and the CAPEX. However, since the Entras study on the CAPEX is not available yet, Elia used AdeqFlex’23. Elia proposes to align with the intermediate values selected by the Minister.
- The CAPEX study from Entras is being finalized and will be used once published.
- Elia proposes to include OCGT’s in the preselected capacity types for the Y-2 auction as its construction time is indeed 2 years. As for diesel engines, they do not satisfy the CO2 requirements for Prequalification. Based on Febeliec’s feedback from last year, Elia has proposed DSM with a SLA of 24 hours rather than 4 hours.



- **Febeliec** regrets that Elia has not foreseen data or an analysis for every year in scope, specifically for 2028 but more importantly for none of the years between 2034 and 2040, where merely an intrapolation seems to be used although this according to Febeliec does not provide a sound enough basis for the needs for the CRM, as any auction could lead to a very high and unnecessary overprocurement of capacity if only a very limited number of years would be identified with potential adequacy concerns

- It is not foreseen in the CRM calibration framework to perform a multi-year assessment and Elia therefore proposes to use AdeqFlex 2023 post-delivery year revenues.
- The post delivery years are only used to get market revenues for those years. They do not affect the volume to be auctioned and can therefore not lead to over-procurement.



- **CREG** argues that Elia should use the 'low' value from the range proposed by Entras, seeing as plant owners are assumed to aim to keep their plant in best condition
- **Febeliec** argues that the set of technologies proposed for the Intermediate Price Cap is too limited and insists that its scope is extended to lower the cost of the CRM

- Elia reiterates that Entras indeed assumes that all plant owners operate their plant so as to keep it in best condition, but that the range in FOM is primarily driven by differences in types of turbines etc. In order to most accurately capture these variations, Elia proposes the 'mid' value.
- Elia wishes to highlight that as per the Royal Decree Methodology Elia is obliged to select IPC technologies from the list proposed by Entras. Considering the fact that only technologies can be included and that Entras proposed large-scale batteries and DSM with a SLA of 4 hours, this does not allow to further enumerate the vast heterogeneity within for example DSM. DSM with a SLA of 4 hours is deemed to be the most representative.
- It is worth mentioning again that the final value of the IPC is based on the worst-performing technology from the shortlist. Adding more cost-efficient technologies as such do not impact the proposed IPC nor the resulting cost of the CRM. On that note, Elia highlights that it included DSM with a SLA of 24 hours to capture a wider range of DSM units



- **Febeliec** questions again the way net balancing revenues are assessed by Elia. Moreover, Febeliec deems the technology list considered for IPC purposes too restrictive, also arguing that some revenues are not accounted for storage leading to an underestimated business case compared to the reality.

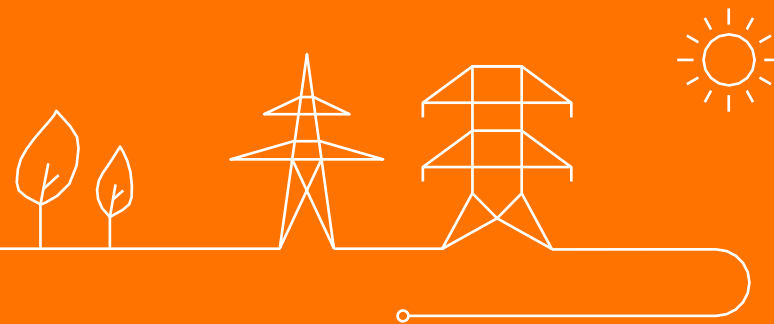
- Elia would like to refer to the improvements brought to the methodology last year thanks to the study realized by Compass Lexecon, which was applied for the calibration reports.
- Elia wants to highlight that this new methodology delivered higher estimated net balancing revenues for several technologies, including storage relying on FCR & aFRR.
- On the shortlist of technologies, Elia refers to the answer provided before in the IPC framework.
- Finally, Elia is working together with Compass on bringing additional refinements for the study being currently updated.



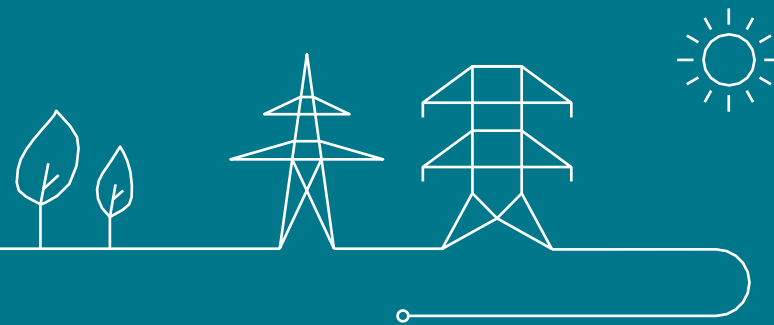
Thank you.



IPC/IPC derogation: Revenues calculation methodology

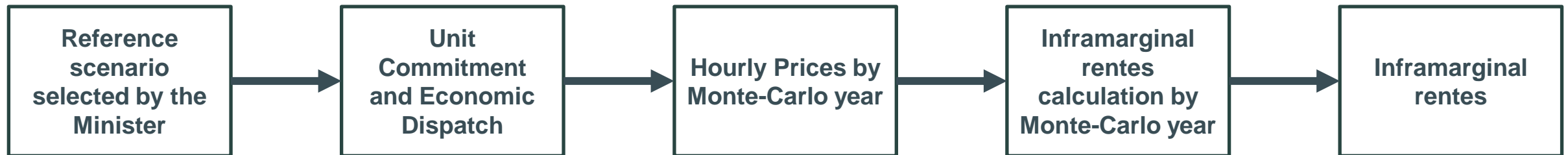


Inframarginal rentes

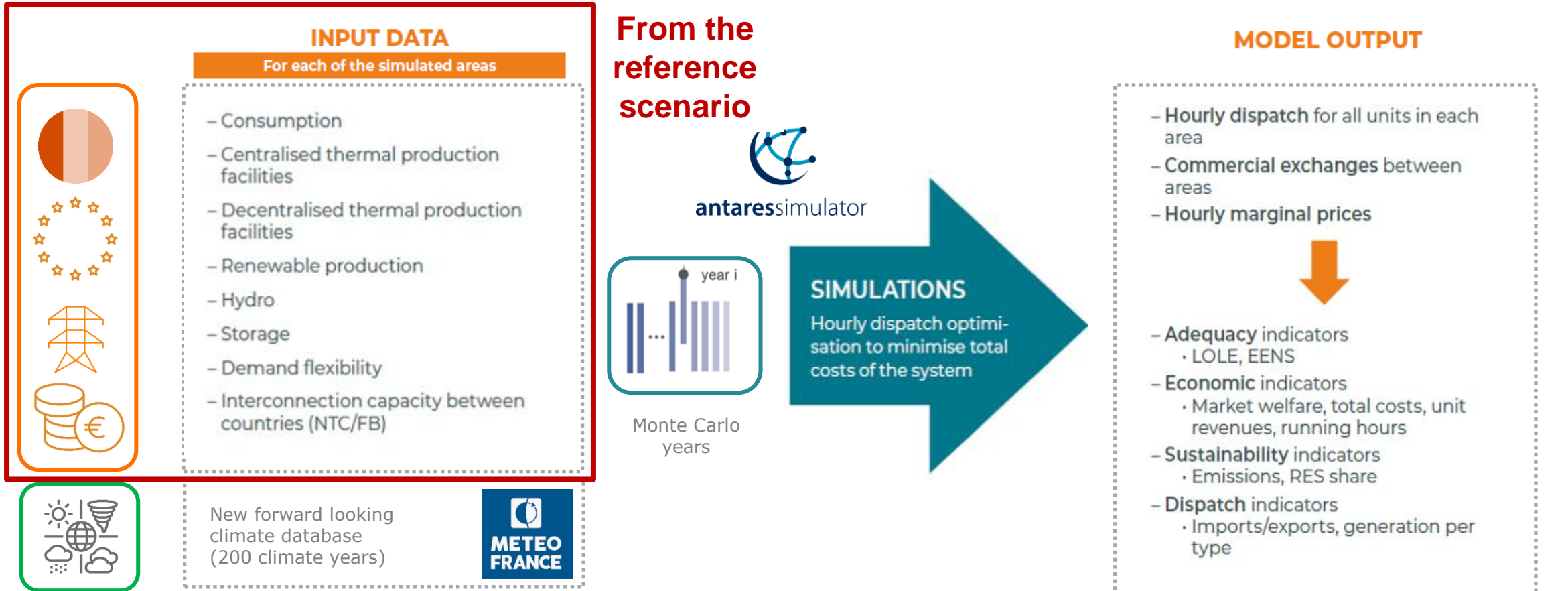


Methodology overview

IPC



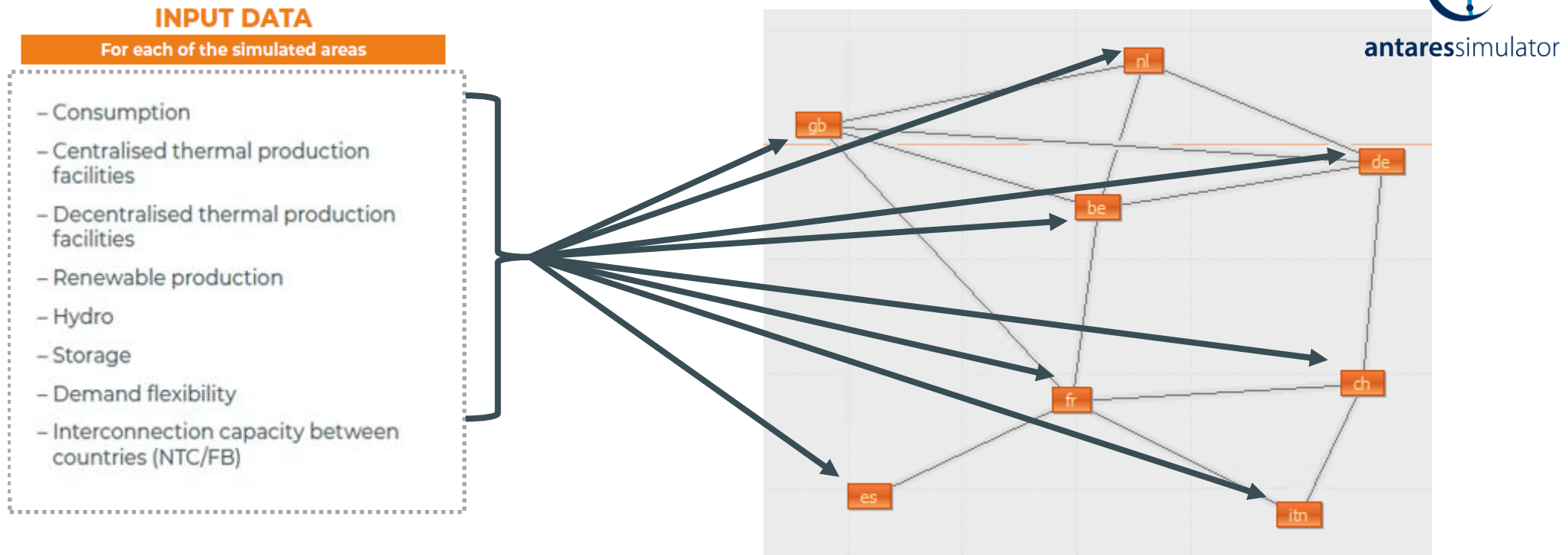
The adequacy methodology used is in line with the ERAA methodology. Hourly simulations are performed on several hundreds of 'Monte-Carlo' years.



- The **adequacy methodology** is fully compliant with the **ERAA methodology**
- The **amount of Monte Carlo** years simulated is based on a **convergence criterion**
- The currently **set reliability standard** for Belgium is used = **3 hours of Loss of Load Expectation (LOLE) on average**

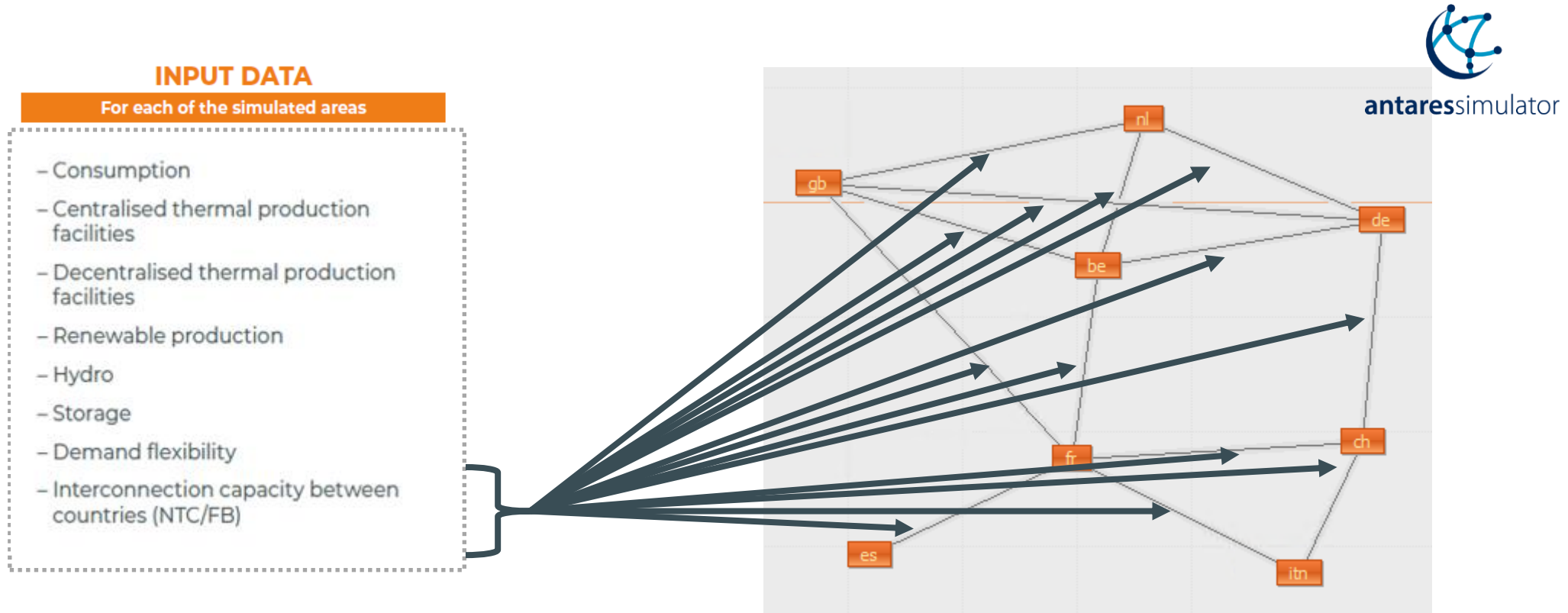
Definition of the problem

The problem is defined as a grid with different areas and links. Each area is defined as a bidding zone. In these, the demand curve is extracted from the consumption profiles and the supply merit order is determined based on the hourly marginal cost of each unit.

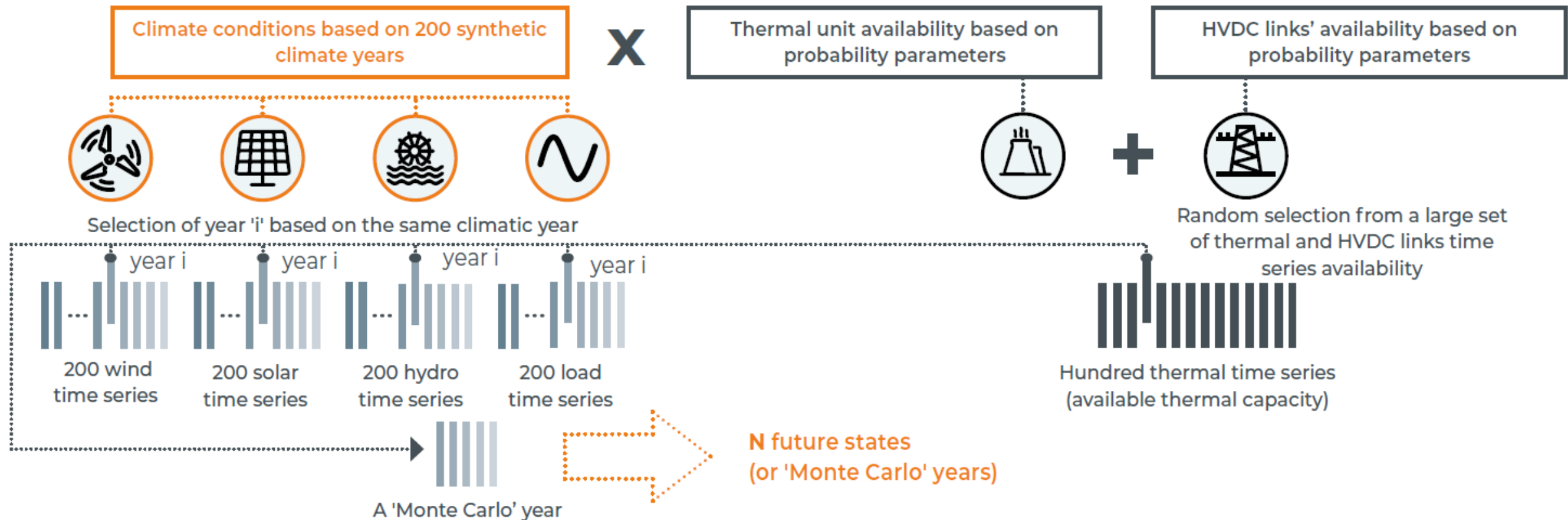


Definition of the problem

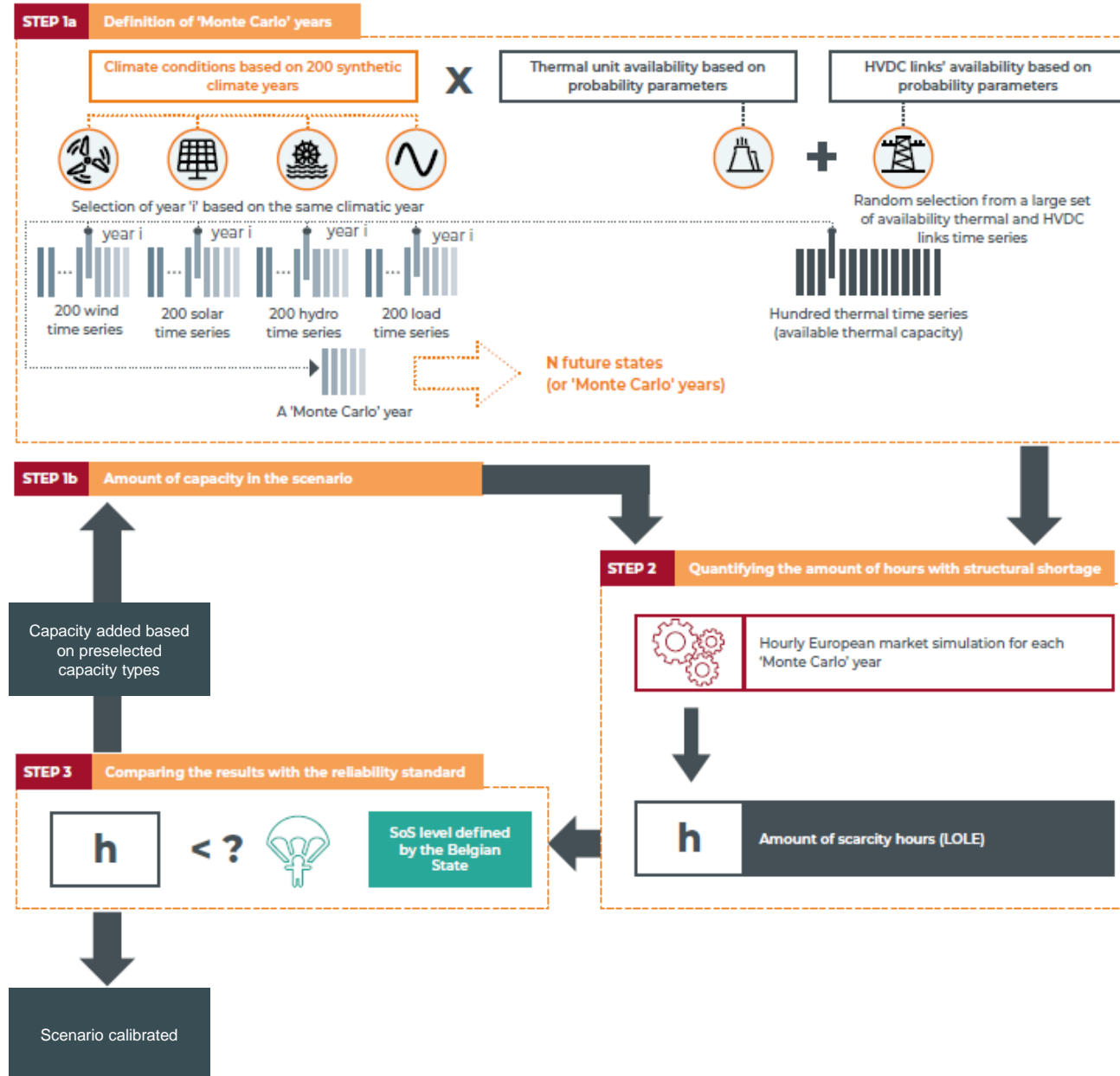
The interconnections (represented either with a Net Transfer Capacity (NTC) or with Flow-Based constraints) are also key constraints of the problem.



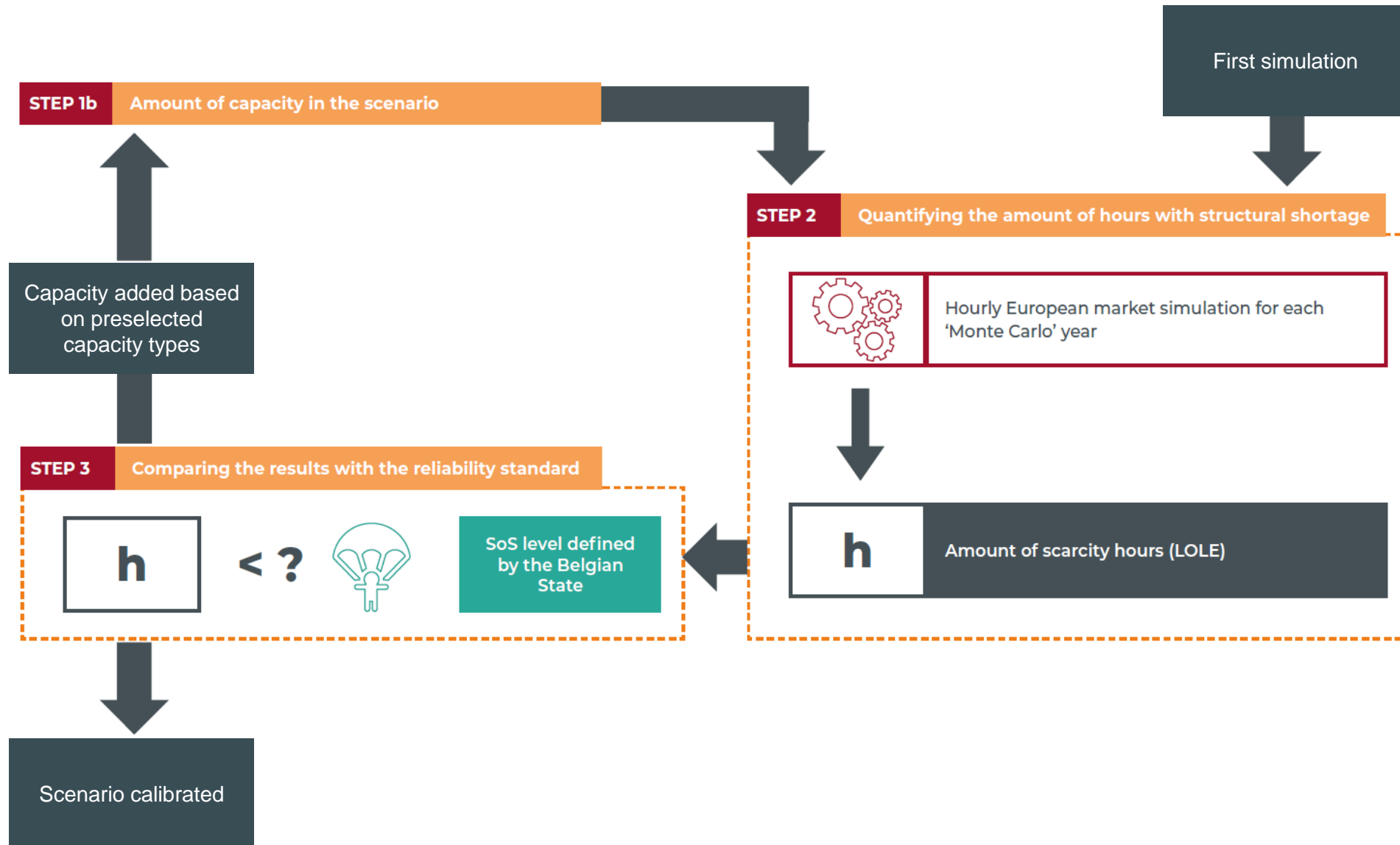
A large amount of Monte-Carlo years are simulated in order to reach convergence of the relevant indicators



Calibration of the reference scenario

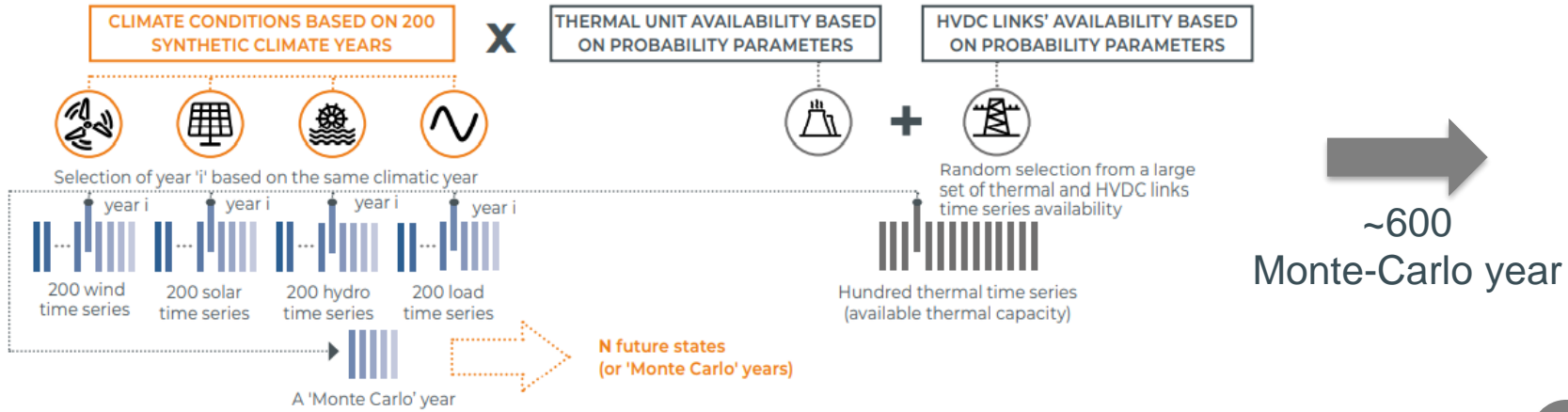


Calibration of the reference scenario

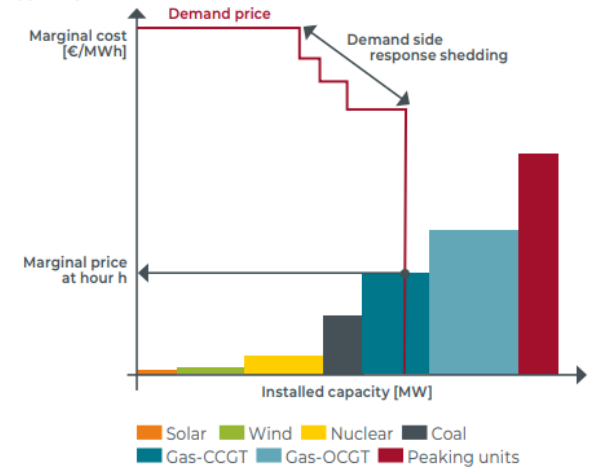


Simulating the electricity system to obtain hourly prices

1 Setting the reference scenario and Monte-Carlo years

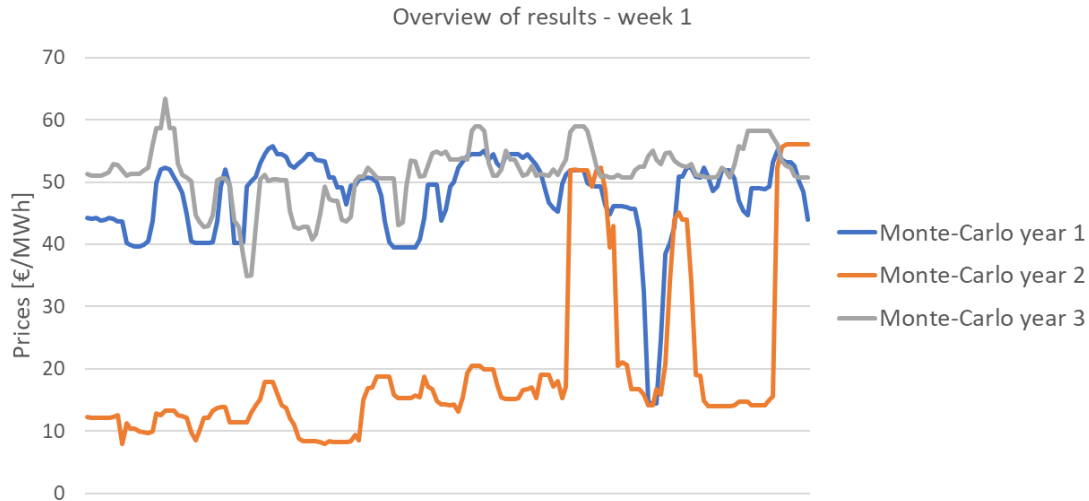


[FIGURE 4-3] — ILLUSTRATION OF THE SUPPLY AND DEMAND CURVES



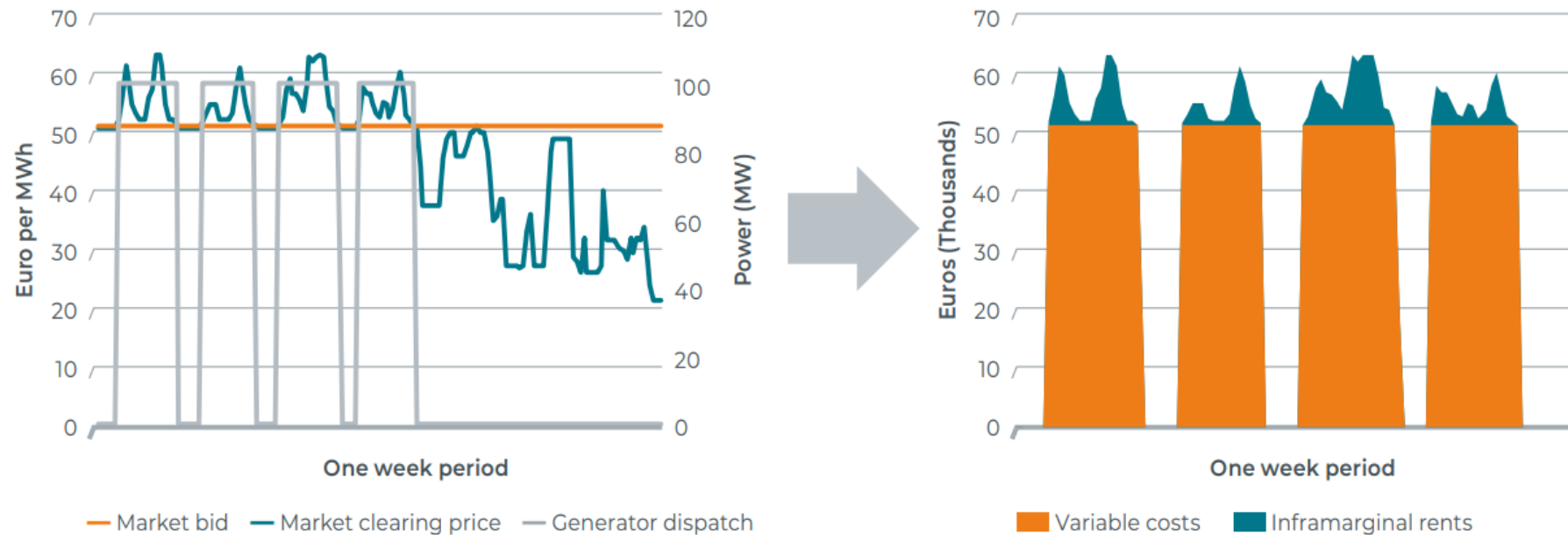
2 Unit Commitment and Economic Dispatch

3 Hourly prices for each Monte-Carlo year



Calculation of inframarginal rentes calculation

1. For each hour of a Monte-Carlo year, the revenues are calculated as the product of the market clearing price and the amount of energy delivered/consumed. Note that the market clearing price is capped at the strike price.
2. For each Monte-Carlo year, the yearly inframarginal rent is equal to the sum of the hourly inframarginal rentes on the whole delivery year.
3. The final value is obtained by taking the average on all Monte-Carlo years



Methodology overview

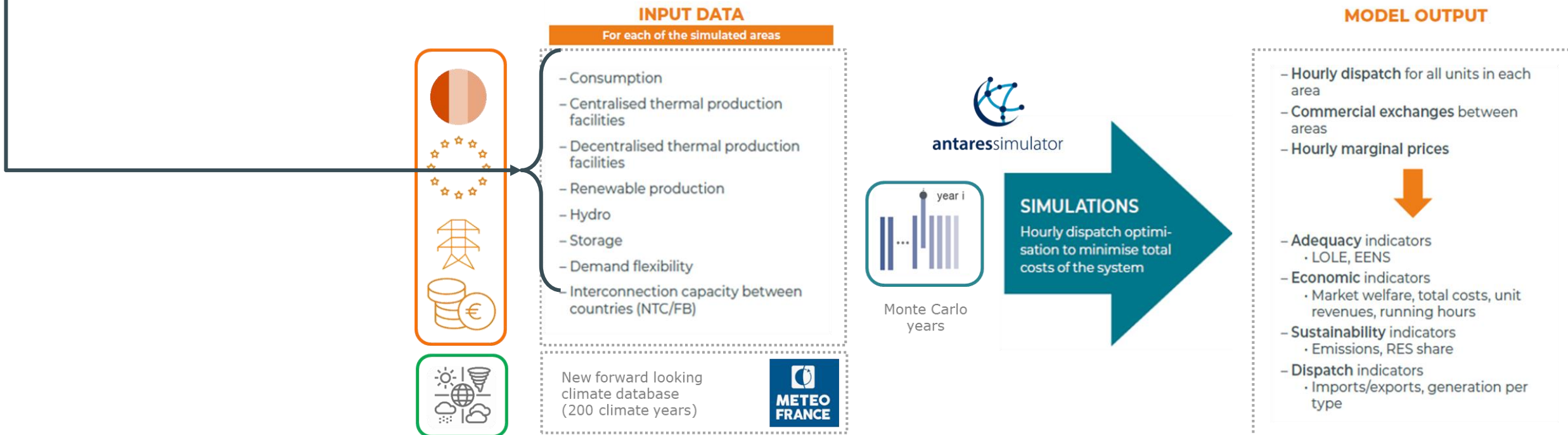
IPC Derogation



The CRM model is updated with the technical parameters received in IPC derogation files

From IPC Derogation file received from CREG, we took into account the following (confidential) parameters :

- Nominal Reference Power [MW]
- Efficiency (LHV) or Round-Trip Efficiency for Storage (%)
- Variable Operational costs + Variable Maintenance costs + Variable component of the Electricity Network Tariff + Variable component of the Gas Network Tariff (€/MWh)
- Start-up and Activation Costs - Average Start: Fuel used for start-up [GJ per start], Non-fuel start-up costs [€/start]



What is calculated in each process ?

IPC

- Calculation of inframarginal rents **for a reduced list of existing technologies***
- For each technology, a **low, mid and high estimation** is included (if relevant) to reflect the heterogeneity of the technology
- For thermal technologies, different efficiencies are considered
 - eg: OCGT = 35 – 40 – 44 %

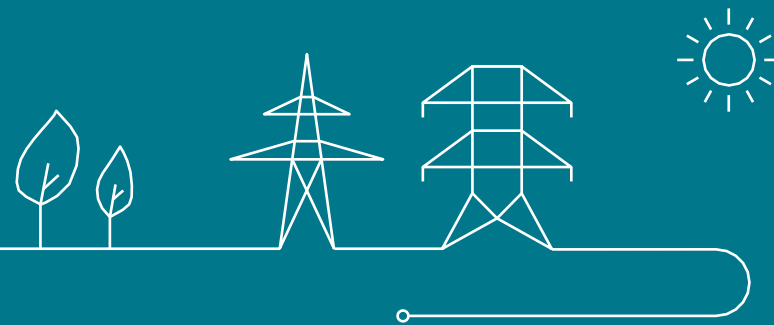
IPC Derogation

- Calculation of inframarginal rents **specific to CMUs** that apply for a derogation to IPC
- Specific parameters of the CMUs are integrated to the simulated model
- Other parameters from the reference scenario are kept constant

* Reduced list of technology from last report :

- CCGT
- OCGT
- Turbojets
- PSP
- DSR – 4h

Net balancing revenues



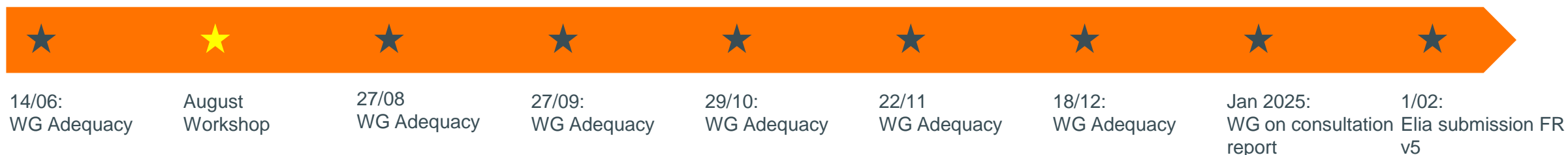
IPC derogation - Methodology for the calculation of net revenues from ancillary services

- The methodology used to assess net balancing revenues for IPC derogation is equivalent to the methodology used for the determination of net balancing revenues for the IPC.
- To be a bit more specific, the methodology used to assess net balancing revenues is based on the study realized by Compass Lexecon last year.
 - Net revenues from the provision of balancing services are calculated by looking at historical data (for the latest 36 months), based on the **reservation cost** of balancing services.
 - By looking at bidding data **on a technology basis**, Compass assessed gross revenues for each relevant technology for each balancing product (FCR, aFRR, mFRR).
 - Compass then subtracted various costs to convert gross revenues into net revenues:
 - Opportunity costs of participating to the provision of balancing services ;
 - Costs integrated to the bidding in balancing auctions **when relevant** (start-up, running at Pmin, ...)
 - Compass corrected the net revenues estimated above with 2 correction actors:
 - The effect of the energy crisis (on a product basis) given the considered period
 - The expected evolution of the installed capacity of each relevant technology and of the technology mix delivering balancing services.
- Since IPC calculations are done on a technology basis, the same logic applies for IPC derogation.
 - Worth highlighting that net balancing assessment is still done for different efficiency levels

Roadmap towards design changes



Overview of design changes



- Following the previous WG, Elia has listed the main elements which will be discussed in the WG in the upcoming months.
- The list of elements is non-exhaustive, and does not limit the scope for the public consultation of the CRM FR.
- E.g. Return of Experience of the Y-1 & XB CRM might introduce additional improvements



Overview of design changes under consideration

Prequalification

Topic	Type	Impact
Low Voltage – ToE requirements	Clarification / refinement of existing rules	Medium
Low Voltage – Multiple DSOs per LVDPG	CREG Request	TBD
Refinements / clarification in PQ process	Refinement of existing rules	Low

Auction

Topic	Type	Impact
Consideration of foreign bids	CREG Request	TBD
Consideration of flex connections	CREG Request	Medium



Overview of design changes under consideration

Availability Monitoring

Topic	Type	Impact
Penalization of over performance	Stakeholder request	Medium
Revision of AS corrections	Refinement of existing rules	Medium
Declared baseline & High X of Y baseline improvements	New design element	Medium
Simplification & clarification	Refinement of existing rules	Low
Proven Availability for Sec. Market trades	Stakeholder request	Medium



Overview of design changes under consideration

Payback obligation

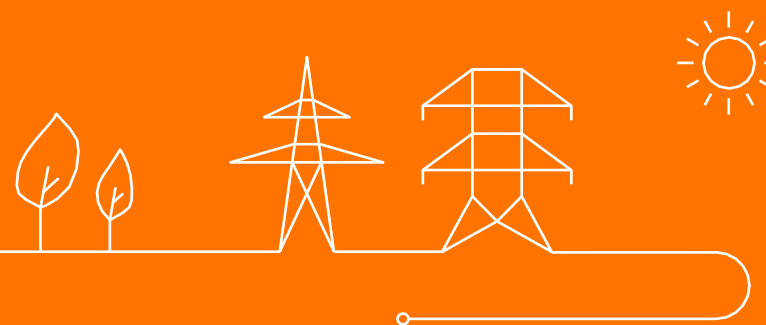
Topic	Type	Impact
Revision of payback indexation formula	Stakeholder request	Medium
Clarification on payback in case of DSM exemption	Refinement of existing rules	Medium
Activation ratio for DS	Stakeholder request	High

Pre-delivery monitoring

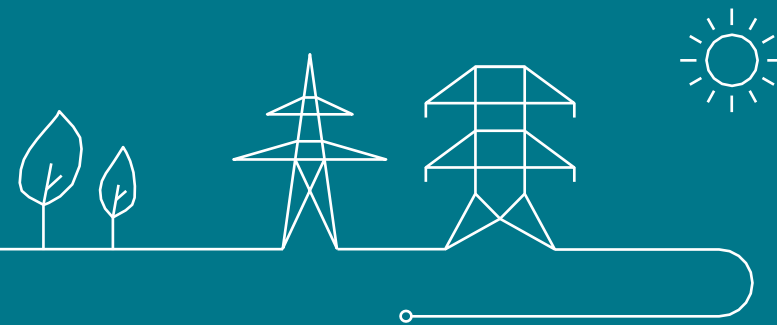
Topic	Type	Impact
Change in CMU status	Refinement of existing rules	Low
Permitting Milestone	Refinement of existing rules	Medium



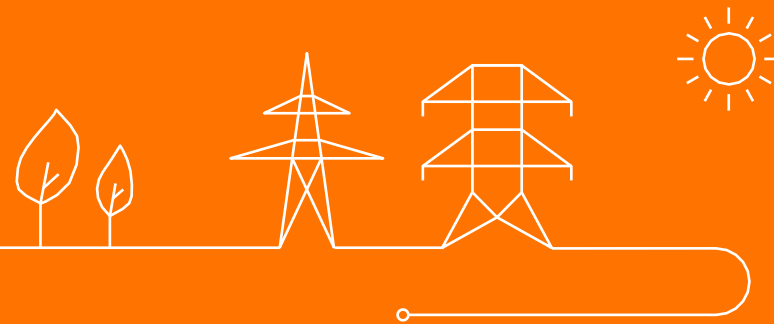
AOB



Update regulatory framework



Next meetings



Next meetings

- **August '24** : workshop to be scheduled to discuss upcoming design changes
- **Tuesday 27/08/2024 : WG Adequacy** (09:30 AM to 12:30 PM)
- **Monday 23/09/2024 (moved from June 26th)**
 - Presentation of the BluePrint study
- **Friday 27/09/2024 : WG Adequacy** (09:30 AM to 12:30 PM)
- **Tuesday 29/10/2024 : WG Adequacy** (09:30 AM to 12:30 PM)

Please find further information on the next meetings through the [WG Adequacy webpage](#)



Thank you.

