

LOW CARBON TENDER 2024-25

Public consultation on the scenario

This public consultation lasts from 28/10/2022 until 28/11/2022 6 PM

Stakeholders are free to provide their comments on the content of this document keeping in mind that this document provides an overview of the assumptions for 2024-25 as part of the broader public consultation on the next Adequacy & Flexibility study.



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1. Context and regulatory framework

The aim of this document is to provide an overview of the data for Delivery Period¹ 2024-25 as part of the Adequacy & Flexibility study 2024-34 which will be used in the calibration of the parameters for the Low Carbon Tender (“LCT”). This document will only provide a short overview of the data, and the additional parameters specific to the LCT. For further details on how the data were estimated and the methodology, Elia refers to the relevant sections of the full public consultation document for the Adequacy & Flexibility study 2024-34 available on the Elia website.

As part of the long-term measures included in the Winter Plan introduced by the federal government on 15 July 2022, and as presented by the Cabinet during the Working Group Adequacy of 25 August 2022, the Minister of Energy has instructed Elia to prepare a targeted tender for low carbon technologies as one of the measures to ensure security of supply in 2024-25².

The public consultation of this document falls within Elia’s preparatory works to organize the targeted tender in October 2023 to ensure security of supply during Delivery Period 2024-25 as requested by the federal government.

2. General design principles LCT

The design of the Low Carbon Tender is aligned with the market-wide CRM principles as far as possible. Note that in the next sections of this note, the market-wide CRM will be referred to as “CRM” while the low carbon tender as “LCT”.

Whereas both the LCT and the CRM are capacity mechanisms, the LCT differs from the market-wide CRM in terms of scope and purpose. Whereas the CRM requires all eligible Belgian generation capacity to at least prequalify, the Low

¹ The Delivery Period refers to the period from the 1st of November 2024 to the 30th of October 2025

² <https://www.elia.be/-/media/project/elia/elia-site/users-group/ug/wg-adequacy/2022/20220825/20220825working-group9slidespresentation.pdf>

Carbon Tender is solely focused on new capacities that would allow to bridge a potential adequacy gap (volume will be decided by the Belgian Authorities based on input from Elia's 2023 Adequacy & Flexibility Study), by incentivizing new capacities to join the market. To achieve said purpose, capacities that are already accounted for in the adequacy assessment are not allowed to participate in the LCT. This also implies that, in contrast to the CRM's mandatory participation³, market parties have no obligation to prequalify to the mechanism. Furthermore, as its name suggests, the Low Carbon Tender is focused on technologies with a low carbon footprint, such as battery, energy storage and demand side response⁴.

The capacity to be contracted in the LCT only consists of required additional capacity needed to close the gap between the expected capacity assumed to be in the market and the capacity needed to reach the legal adequacy criteria (reliability standard) for Belgium. This is a fundamental difference between the LCT and the market-wide CRM and implies a different approach for the volume determination as proposed in the design of the LCT submitted to public consultation⁵. . Similarly to the market-wide CRM, derating factors, a global auction price cap and intermediate price cap will be applicable. The determination of the derating factors, global auction price cap and IPC will follow the same approach as defined in the Royal Decree Methodology⁶ of the market-wide CRM.

The design of the LCT is not in scope of this public consultation. For remarks regarding the design Elia refers to the public consultation on the design notes of the LCT⁵.

³ At least for all eligible generation capacities.

⁴ The exact eligibility criteria in this regard will be set by the Belgian Authorities.

⁵ [Public consultation on the Low Carbon Tender design note \(elia.be\)](#)

⁶ [LOI - WET \(fgov.be\)](#)



3. LCT need determination

The LCT is a mechanism designed specifically to cover a possible need for additional new capacity for the Delivery Period 2024-25. However, as stated in the Winter Plan from the Federal government, the need for the LCT is dependent on the results of the Adequacy & Flexibility study 2024-34 for the Delivery Period of 2024-25.

In order to determine whether a need for new capacities will be identified for that Delivery Period (also called a “gap”), the scenario on which the gap will be calculated has to be defined. The goal of this public consultation is to get feedback on the proposed values for the scenario to be used for the Delivery Period 2024-25.

In addition to the gap, an economic viability assessment (on one year only) will also be performed on new and existing units:

- to identify whether the market will fill the identified gap by itself (if any); or
- if existing capacities are at risk of leaving the market.

The gap and economic viability assessments will follow the same methodology as proposed for the Adequacy & Flexibility study 2024-34. This consists in performing an Adequacy study (Monte-Carlo simulations) and an Economic Viability Assessment (EVA). Those methodologies, as well as other aspects of the model are described in the appendixes provided with the public consultation of the Adequacy & Flexibility study 2024-2034.

The results of those assessments on the chosen scenario will be provided to the competent authorities in order to take a decision on the launch of the LCT tender.



4. Assumptions proposed for Delivery Period 2024-25

The following sections detail the parameters that need to be consulted upon in the case that the LCT tender would need to be launched and hence the associated parameters, as proposed in the “LCT design note”, be calculated. It also makes a reference to the documents containing the other elements of the scenario for the Delivery Period 2024-25.

Installed capacities in Belgium and abroad, prices, interconnections

The different values and parameters for Delivery Period 2024-25 are detailed in the other parts of this public consultation. It is important to note that all data from the documents refer to installed capacities at the end of the mentioned year, meaning that data for Delivery Period 2024-25 are presented under the year “2024”.

For the convenience of stakeholders, an overview of the data for delivery year 2024-25 is also provided under the sheet LCT overview of the Excel file provided for the public consultation for the Adequacy & Flexibility study 2024-2034.

4.1 Preselected capacity types

The preselected capacity types correspond to the technologies that can be used in order to calibrate, if needed, the reference scenario selected by the authorities, in order to make Belgium compliant with its reliability standard. These capacity types will be added iteratively to the model as long as the adequacy criteria is not fulfilled. More details on this methodology can be found in the design note of the LCT⁵. The proposed preselected capacity types are presented on Figure 1 and Figure 2. The economic parameters are the same as the ones proposed for the overall public consultation of the Adequacy & Flexibility study 2024-2034.

| Category | Associated technology | Volume Calculation | Marginal Price Calculation | CAPEX [€ 2022/kW] | FOM [€ 2022/kW] | Economic lifetime [y] |
|-----------|-----------------------|---|---|-------------------|-----------------|-----------------------|
| Batteries | Large-scale bat. (4h) | Add new Large-scale batteries | / | 1000 | 15 | 15 |
| DSR | DSR | Add weighted average of existing DSR categories | Weighted average of existing DSR categories | | see below | |

Figure 1: Preselected capacity type parameters and associated costs



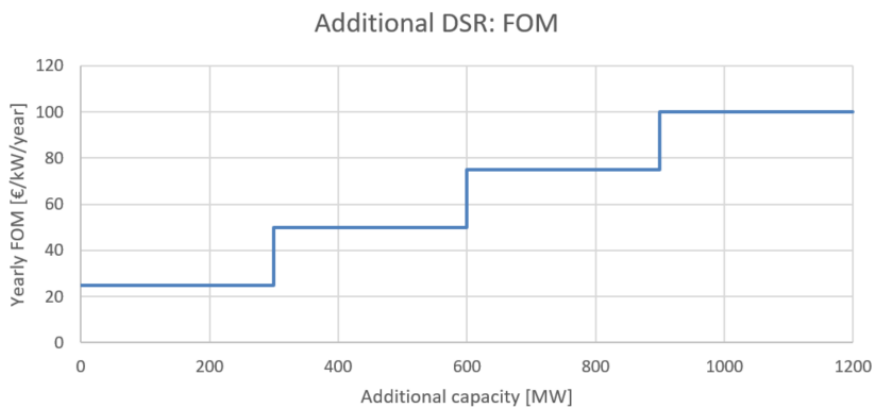


Figure 2: Considered Fixed, Operation & Maintenance costs (FOM) (including annuity costs) for new DSM in the system in Belgium

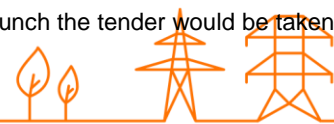
4.2 Scenarios post-delivery periods

This section details the parameters included in the scope of this public consultation towards the scenarios for the periods after the 2024-25 Delivery Period used to calculate the market revenues for the technologies with a lifetime longer than one year (i.e. batteries).

Indeed, the global auction price cap of the LCT is calibrated at the net-CONE, which is equal to the missing money of the technology with the lowest missing money. Three parameters are required to determinate it: the gross-CONE, the market revenues and the ancillary services revenues (defined in §3.3.3). Just as the gross-CONE takes into account the costs of the entire lifetime for the reference of each technology, market revenues must also be determined on this period. This requires more than the delivery period scenario to have a correct estimation. This is the reason why additional existing scenarios need to be taken into account.

If a scenario is not available for one of the years of each reference technology lifetime, an interpolation is made between the values of the years for which a scenario is available. The proposed post-Delivery Period scenarios are presented on Figure 3 . For 2028, 2030 and 2034, the proposal is to take the Adequacy and Flexibility study 2024-34 as source for the targeted year. For later years, it is also proposed to use the Adequacy and Flexibility study using the last year simulated, being 2034, as a proxy in order to keep consistency with the other time horizons and to use recent data. For each of these time horizons, a scenario as close as possible to the reference scenario for Delivery Period 2024-25 will be selected.

It is important to note that such calculation can only happen once the years after 2024-25 are also simulated and the models available. Those calculations can only happen once the decision to launch the tender would be taken and the Adequacy & Flexibility study 2023 would be finalized.



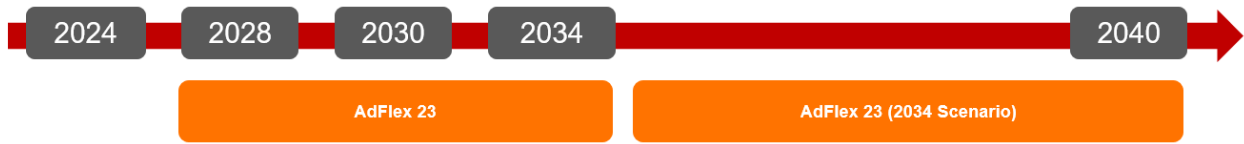


Figure 3: Scenarios post-delivery year

4.3 IPC

The LCT auction will take place 1 year before the 2024-2025 delivery period and only be open for new capacities with low CO₂ emissions. As such the calibration of the IPC is assumed to be applicable for batteries and Demand Response.

It is assumed that for batteries, only the capacities for which no CAPEX investments need to be made will apply for 1-year contracts and as such be subject to the IPC. CAPEX cost is assumed to be 0 for batteries as applying for a 1-year contract would only make sense if the necessary investments were already made.

As for demand response, if the IPC needs to be applied to new capacities, the annualized cost of the ‘first slice’ is proposed as reference. The proposed costs are summarized in table 1 below.

| Technologies | FOM [€2022/kW/year] |
|----------------------------|---------------------|
| Large scale batteries (4h) | 15 |
| Demand response | 25 |

The values proposed are the same as in the other parts of the public consultation for the Adequacy & Flexibility study 2024-2034. The activation costs for availability taken into account will be those used in the calibration of the IPC for the CRM for Delivery Period 2027-2028. Market and balancing revenues will be estimated as part of the Adequacy & Flexibility study 2024-2034.

