Pre-delivery Use Case 1

Offtake: Industrial process on a site – Oven & Melting



This document provides different fictive examples, so-called use cases, related to the Capacity Remuneration Mechanism being developed in Belgium. It has, as sole purpose, to explain the Functioning Rules and its annexes by means of examples.

Given that the CRM process consists of several steps, and for each of these steps, several layers of information and details are relevant, it is to be understood that this document focuses on most pertinent <u>pre-delivery aspects</u>.

By no means, the use cases replace the rules in the relevant Laws, Royal Decrees, and regulatory approved documents.

The choices in the examples are only made for illustrative purposes and do not imply any judgement. All the figures and numbers used for these use cases are purely fictive. These numbers nor the use cases presented should be interpreted as representing a concrete case or a concrete situation of the Belgian capacity market or an implied proposal for any CRM parameter.

The use cases developed in this document are based on the chapter *Pre-delivery Control* of the Functioning Rules as known at the moment of writing and shared with market parties on 28/08/2020. It also obviously follows the context set by the Electricity Law.

USE CASE STRUCTURE







1. Terminology related to pre-delivery control & Financial Security



Definitions from the Functioning Rules:

- Financial Security: The security provided to cover a CMU's obligations during one or more Validity Period(s) in the form of a bank guarantee, a parent company guarantee or a cash payment.
- Financial Security Volume: The volume (in MW) to be secured by a permissible type of Financial Security as determined pursuant to section 10.4.2 (of the Functioning Rules), associated to a CMU and at a moment t that is part of one (or more) Validity Period(s).
- **Missing Volume**: The volume of a CMU considered as non-available as a result of one of the pre-delivery controls.
- Pre-delivery Measured Power: The capacity measured during a pre-delivery control and associated to an Existing Delivery Point.
- **Pre-delivery Obligation** : The capacity for a CMU that a Capacity Provider is obliged to make available during a pre-delivery control.
- Required Level: The level (in EUR/MW) to be secured by a permissible type of Financial Security pursuant to section 10.4.1 (of the Functioning Rules) associated to a CMU and at a moment t that is part of one (or more) Validity Period(s).
- Secured Amount: The amount (in EUR) to be secured by a permissible type of Financial Security pursuant to section 10.4., associated to a CMU and at a moment t that is part of one (or more) Validity Period(s).
- Transaction: An agreement about the contractual rights and obligations resulting from the Service, closed in the form of a Capacity Contract between a Capacity Provider and the Contractual Counterparty, in the Primary Market or the Secondary Market at a Transaction Date, identified by a transaction identification number, for a Contracted Capacity and covering a Transaction Period.
- Transaction Validation Date: For a Transaction on the Primary Market, the date and time at which the results of the related Auction are published (after validation by the CREG). For a Transaction on the Secondary Market, the date and time at which it is validated by the Contractual Counterparty.
- Validity Period: The period of time for which a permissible type of Financial Security is to be provided by a (Prequalified) CRM Candidate or a Capacity Provider, as a condition to make a Transaction on the Primary Market or the Secondary Market.









- IndustryOfTheFuture.SA/NA is owner of a site on which a major oven & melting process are major consumers of electricity (located in Belgium and TSO connected)
- The CMU is purely electricity consumption oriented & TSO connected the site has no need of any major investment so that no investment file has been submitted to CREG, which means it can only apply for a one-year capacity contract duration
- The Nominal Reference Power of the CMU is equal to 10,4MW
- The CRM Candidate made an Opt-Out Volume of 0,4MW
- The CMU presents therefore a Reference Power of 10 MW, which corresponds to its Eligible Volume as it is a 24h SLA hours asset (Derating Factor = 1)
- This CMU is an Existing CMU and an individual CMU, which means no Grid Constraints are observed
- IndustryOfTheFuture prequalified his CMU to participate in the Auction Y-4 of 2021

2. Prequalified CRM Candidate and his related CMU(s)



IndustryOfTheFuture SA/NV CMU1 Oven & auxiliaries 9,4 MW Oven 0,6 MW Aux1 Elia transmission grid Submeter 0,3 MW 10,4 MW Aux2 Access point 10,5MW 0,1<u>M</u>W offtake Aux3 Offices Admin & office 0,1 MW R&D _ _

	Information related to the project	
Company	IndustryOfTheFuture.SA/NA Location: Belgium	
Technology	DP1: DSR	
Status	DP1: Existing CMU: Existing	
Connection	DP1: TSO-connected	
Nominal Reference Power	ominal Reference Power DP1: 10,4 MW	
Opt-Out Volume	ume DP1: 0,4 MW	
Reference Power	10 MW	
Derating Factor	1	
Eligible Volume	10 MW	
Energy-Constrained CMU	Energy Constrained CMU	





- The CMU has not made a Transaction yet, so no Financial Security has been submitted so far
- The Secured Amount is calculated by multiplying the Required Level (EUR/MW) by the Financial Security Volume:
 - As it is an Existing CMU, the Required Level is equal to EUR 10.000 /MW
 - The evolution of the **Financial Security Volume** is presented in the table below.

	Financial Security Volume	Secured Amount
At Prequalification File submission	Provisory Eligible Volume = Expected NRP x DF = 10 x 1 = 10 MW	EUR 10.000MW x 10 MW = EUR 100.000
After the Prequalification Process	Eligible Volume = $[NRP - Opt-Out Volume] \times DF$ = (10,4 MW - 0,4 MW) = 10 MW	EUR 10.000/MW x 10 MW = EUR 100.000

The Financial Security Volume is calculated **as the maximum Total Contracted Capacity in the forthcoming Delivery Periods**. As it is the CMU's first Transaction, maximum TCC is only determined by this Transaction.



During the Prequalification Process, the maximum Total Contracted Capacity is calculated on the assumption that the full prequalified volume is selected in the Auction.

As in this use case, the Eligible Volume is equal to the provisory Eligible Volume, the Secured Amount is not updated.









The Capacity Provider participated to the Y-4 Auction in October 2021.

The results of the Auction are detailed below:

Auction results			
Volumes of the selected Bid	10 MW		
Related Price	17€/kW/year		
Capacity contract duration	1 year		
Transaction Period	Delivery Period 2025 – 2026		
Remaining Eligible Volume	0 MW ¹		
Issuance date of the 1 st quarterly report	/		

1: The entire Eligible Volume of the CMU has been selected



Impact on the Financial Security:

As the entire Eligible Volume of the CMU has been selected in the Auction, the Financial Security Volume and the Secured Amount remain unchanged.









The process to be followed by ELIA when performing a pre-delivery control for an Existing CMU is represented in the following diagram:







As a reminder of the Functioning Rules:

- The purpose of the pre-delivery control on an Existing CMU is to ensure the effective availability of the Contracted Capacities related to this CMU in a period of time closer to the start of the Delivery Period DP
- > An Existing CMU is subject to such control according to the following modalities:
 - The pre-delivery control is realized at CMU level (one CMU at a time);
 - The pre-delivery control is related to one Delivery Period *DP*;
 - ELIA is entitled to perform a pre-delivery control at any time without notifying the Capacity Provider in advance provided that at least 1 and no more than 2 successful pre-delivery controls are performed by ELIA per Delivery Period *DP*



t_{control 1} illustrates an example of moment in time when ELIA can realize a pre-delivery control (24/02/2024 is randomly chosen for this use case)

t_{TCC} illustrates an example of moment in time when ELIA can determine the maximum Total Contracted Capacity over the Delivery Period *DP* (28/01/2026 is randomly chosen for this UC)





- The Delivery Point is injecting into the grid since more than 12 months
 - \rightarrow Use of method 1 Historical data
 - → The method 1 is used over a period of 12 months
- The graph on the right illustrates the 15-minutes measurements over one of the time series of 36h over these 12 months

[PreDelivery Measured Power]_{Delivery Point}

 $= Max \left(PMP_{period 1}; PMP_{period 2}; ...; PMP_{period 365} \right)$ = 10,30MW

Period n: Metering data from 03/01 12:00 to 04/01 23:45





As the CMU includes only one Delivery Point, the Pre-delivery Measured Power of the CMU equals the Pre-delivery Measured Power of the Delivery Point:

$$[PreDelivery Measured Power]_{CMU} = \sum_{i=1}^{n} [PreDelivery Measured Power]_{Delivery Point i}$$
$$= 10.3 MW$$



 $\begin{aligned} \text{Missing Volume} &= Max \big(0 \; ; \; ([PreDelivery Obligation]_{CMU} - [PreDelivery Measured Power]_{CMU}) \big) \\ &= Max \; (0 \; ; (8 \; MW - 10,3 \; MW)) \\ &= Max \; (0 \; ; -2,3 \; MW) \\ &= 0 \end{aligned}$

- \rightarrow No penalty will apply
- \rightarrow The Financial Security is not invoked and is released at the start of the Delivery Period *DP*



termination of Pre-delivery Obligation	Determination of the DP's Pre- delivery Measured Power	Determination of the CMU's Pre- delivery Measured Power	Determination of the missing volume



Pre-delivery control results notification

Results of the pre-delivery control		
Pre-delivery Obligation of the CMU	8 MW	
Pre-delivery Measured Power _{Delivery Point}	10,3 MW	
Pre-delivery Measured Power _{CMU}	10,3 MW	
Missing Volume	0 MW	
Penalties	/	

The Capacity Provider does not contest the results of the pre-delivery control \rightarrow The results are deemed final