Prequalification Use Case 4

New Project with two possible configurations

CCGT or 2 OCGT on a site



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>prequalification 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 *Prequalification Processes* 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.









1. The customer and his asset(s)



- EnergyProducer.SA/NA is owner of a site on which three projects located in Belgium, are currently investigated
- The three projects will be connected to the Fluxys grid for the gas connection and the ELIA Grid for the electrical connection
 - Project 1 (CCGT 2on1): 2GT of **350MW** each and one ST of **300MW** connected to both GT → Total: 1000MW Installed Capacity

Operational efficiency expected 60% at normal temperature



- Project 2 (OCGT): 1GT of **350MW** → Total: 350 MWW Installed Capacity

Operational efficiency expected 40% at normal temperature



- Project 3 (OCGT): 1GT of **350MW** → Total: 350 MWW Installed Capacity

Operational efficiency expected 40% at normal temperature



• The 3 different projects represent 3 different business plans in terms of CAPEX and OPEX

1. The customer and his asset(s)



- 3 EOS studies have been received and 3 EDS studies have been requested (Purely electricity production oriented & a TSO connection required)
- No existing Access Point is related to the project yet
- The owner of the site is likely to be the Capacity Holder (no Grid User Declaration)
- The (future) electricity offtake Access Point is expected to consume up 5MW and to inject up to 1000MW on the ELIA Grid
- The installation of a metering devices on each turbine is an obligation for both configuration because each turbine excesses the threshold related to the Daily Schedule obligation
- A production license for the site has been requested to FPS Economy for both projects
- A firm gas connection has been requested to Fluxys for both projects
- All required permits are under the customer's responsibility and these processes started already
- The customer has the intention to submit two **investment files** to CREG to request Capacity Category higher than 1 year





2. Terminology applicable to the customer's case



Definitions from the Functioning Rules:

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- Additional Capacity: The Capacity for which, at the time of Prequalification File submission, no Nominal Reference Power can be calculated based on 15 minutes measurements or which requires a signed technical agreement with ELIA as per the connection process in the Federal Grid Code.
- Additional CMU: A Capacity Market Unit which includes at least one Additional Delivery Point.
- Additional Delivery Point: A Delivery Point associated to an Additional Capacity.
- Capacity Holder: Any natural or legal person likely to offer capacity, individually or in an aggregated manner
- Capacity Market Unit (CMU): A Capacity (« individual CMU ») or several associated Capacities (« aggregated CMU») with the objective to pass through the consecutive phases of the Capacity Remuneration Mechanism ("CRM"), being the Prequalification Process, followed by a Transaction and to deliver the Service.
- Capacity Provider: any capacity holder, selected at the end of an auction, making capacity available during the capacity provision period, in exchange for the capacity remuneration
- **CRM Candidate**: The Capacity Holder whose application form has been accepted by ELIA.
- Delivery Point: A (future) point on an electricity grid or within electrical installations of a Grid User where the Service is or will be delivered. This point is or will be associated with one or several metering device(s) in conformity with standards set by ELIA.
- Existing Capacity: The Capacity for which, at the time of Prequalification File submission, the Nominal Reference Power can be calculated based on 15 minutes measurements.
- Existing CMU: A Capacity Market Unit that only includes Existing Delivery Points.
- **Existing Delivery Point**: A Delivery Point associated to an Existing Capacity.
- Prequalification File: All documents and data that the CRM Candidate has prepared, updated (when required) and provided to ELIA and which are necessary for the proper and complete execution of the Prequalification Process.
- **Prequalification Process**: The procedure for determining the ability of Capacity Holders to participate in an Auction (or in the Secondary Market)
- Prequalified CRM Candidate: A Capacity Market Unit which has succeeded the standard Prequalification Process or a Virtual Capacity Market Unit which has succeeded the specific Prequalification Process.

2. Terminology applicable to the customer's case



Candidate's information

- The Capacity Holder is EnergyProducer
- EnergyProducer becomes a CRM Candidate from the moment his application form is approved by ELIA
- EnergyProducer is the legal entity willing to participate to the CRM (No willingness to transfer or create another company for the CRM and no willingness to mandate another entity to offer its assets into the CRM)
- If at least one of his CMUs is prequalified, the CRM Candidate becomes a Prequalified CRM Candidate

CMU's information

- Each CMU is composed of only 1 Delivery Point (individual CMUs) because each Delivery Point is subject to the Daily Schedule obligation (DP1 for CMU1 / DP2 for CMU2 / DP3 for CMU3)
- As the Delivery Points cannot be measured yet with a certified metering device, they are Additional Delivery Points
- As the CMUs are only composed of Additional Delivery Points, the CMU is an Additional CMU
- As ELIA requires one Prequalification File per CMU of configuration (CCGT and OCGT), EnergyProducer will introduce 5 Prequalification Files (CMU1 for GT1 of CCGT / CMU2 for GT2 of CCGT / CMU 3 for ST3 of CCGT / CMU4 for GT1 of OCGT / CMU5 for GT2 of OCGT)

In order to be able to participate to the Primary Market with his Additional CMU, EnergyProducer will go through the standard Prequalification Process





3. Application form & CRM IT Interface access



To get the possibility to submit a Prequalification File and therefore become a CRM Candidate, EnergyProducer must first fill in the application form (following 17.1.4.ANNEX A.4 in the Functioning Rules)

The application form is submitted to ELIA on May 15, 2021

The application form is approved by ELIA on May 20, 2021

→ The CRM Candidate receives access to the CRM IT Interface



3. Application form & CRM IT Interface access



- Once the application form is approved by ELIA, each user (provided by EnergyProducer in his application form) of the CRM IT Interface receives an ID and is asked by e-mail to create a password
- At first connection in the CRM IT Interface, EnergyProducer ensures compliancy by marking dedicated boxes, namely:
 - 1. His acknowledgment of the Functioning Rules for the Capacity Remuneration Mechanism; and
 - 2. His acknowledgment of the Capacity Contract conditions in case of Contracted Capacity for the forthcoming Auction; and
 - The compliance of each Delivery Point with eligibility criteria, as defined in the Electricity Act (cf. Art. 7undecies. §4, 1°, 2° and 3°) and dedicated Royal Decree referred to in Article 7undecies §4 of the Electricity Act; and
 - 4. The compliance of each Existing Delivery Point with the production license requirements as defined in article 4 of the Electricity Act; and
 - 5. The compliance of each Existing Delivery Point with the maximal CO2 emission thresholds set by the Regulation (EU) 2019/943; and
 - 6. The compliance of each Delivery Point with any other relevant legal and regulatory framework.
- EnergyProducer verifies his compliance with the above information <u>before</u> marking the boxes







The following information shall be provided by the CRM Candidate in his five Prequalification Files:

	Data provided by the CRM Candidate					
Requirements		CCGT	OCGT			
	DP1 (GT1) Additional	DP2 (GT2) Additional	DP3 (ST) Additional	DP4 (GT1) Additional	DP5 (GT2) Additional	
Type of Delivery Point	TSO	TSO	TSO	TSO	TSO	
Delivery Point's name	projectY – GT1	projectY – GT2	projectY – ST			
Single line diagram	SLD_CCGT.pdf	SLD_CCGT.pdf	SLD_CCGT.pdf	SLD_OCGT.pdf	SLD_OCGT.pdf	
Technology	CCGT	CCGT	CCGT	OCGT	OCGT	
Linked Capacities	/	/	DP1 & DP2	/	/	
CDSO Declaration	/	/	/	/	/	
EAN code of the Access Point	/	/	/	/	/ 14	



The following information are provided by the CRM Candidate in his five Prequalification Files:

	Data provided by the CRM Candidate					
Requirements		CCGT	OCGT			
	DP1 (GT1) Additional	DP2 (GT2) Additional	DP3 (ST) Additional	DP4 (GT1) Additional	DP5 (GT2) Additional	
Agreement between Belgian member State and Adjacent Member State	/	/	/	/	/	
Declaration by the Eligible Direct Foreign Capacity Holder	/	/	/	/	/	
Declaration by the Adjacent Member State	/	/	/	/	/	
EAN code(s) of the Delivery Point	/	/	/	/	/	
Expected Nominal Reference Power	/	/	/	/	/	
CO ₂ emission attestation	/	/	/	/	/	
CO ₂ emission	/	/	/	/	/	



The following information shall be provided by the CRM Candidate in his five Prequalification Files:

	Data provided by the CRM Candidate					
Requirements		CCGT	OCGT			
	DP1 (GT1) Additional	DP2 (GT2) Additional	DP3 (ST) Additional	DP4 (GT1) Additional	DP5 (GT2) Additional	
Preferred Nominal Reference Power methodology	/	/	/	/	/	
Prequalification test profile for method 3	/	/	/	/	/	
Baseline adjustment	/	/	/	/	/	
Unsheddable Margin	/	/	/	/	/	
Nameplate capacity of generation	/	/	/	/	/	
Net offtake/net injection	/	/	/	1	/	
Full technical injection Capacity	/	/	/	/	/ 1	



The following information shall be provided by the CRM Candidate in his five Prequalification Files:

	Data provided by the CRM Candidate					
Requirements		CCGT	OCGT			
	DP1 (GT1) Additional	DP2 (GT2) Additional	DP3 (ST) Additional	DP4 (GT1) Additional	DP5 (GT2) Additional	
Full technical offtake Capacity	/	/	/	/	/	
Grid User Declaration	/	/	/	/	/	
Renouncing the operating aid	/	/	/	/	/	
Declared Nominal Reference Power	350 MW	350 MW	300 MW	350 MW	350 MW	
Existing connection capacity	0 MW	0 MW	0 MW	0 MW	0 MW	
Information related to production permit	/	/	/	/	1	

4. Prequalification File(s) 4.2. Requirements at the CMU level



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The following information are provided by the CRM Candidate in his five Prequalification Files:

	Data provided by the CRM Candidate					
Requirements		CCGT		OC	GT	
	CMU1 (GT1) Additional	CMU2 (GT2) Additional	CMU3 (ST) Additional	CMU4 (GT1) Additional	CMU5 (GT2) Additional	
Information linked to Financial Security	Bank guarantee of 7.000.000€ with ABC	Bank guarantee of 7.000.000€ with ABC	Bank guarantee of 6.000.000€ with ABC	/1	/1	
Opt-Out Volume	OMW	OMW	OMW	OMW	OMW	
Project ID ¹	ProjectID0004	ProjectID0004	ProjectID0004	ProjectID0005	ProjectID0005	
Choice of a Derating Factor ¹	0,9	0,9	0,9	0,92	0,92	
Link(s) (an)other CMU(s) in case of multiple use of a same Delivery Point	CMU4	CMU5	/	CMU1	CMU2	
Project execution plan	PEP CCGT.pdf	PEP CCGT.pdf	PEP CCGT.pdf	PEP OCGT.pdf	PEP OCGT.pdf	
Expected start date of the project	20/11/2021	20/11/2021	20/11/2021	20/11/2021	20/11/2021	
Information for method 2 (Nominal Reference Power determination)	/	/	/	/	/	
Link with a VCMU	/	/	/	/	/	
Participation to the Primary Market or the Secondary Market	Primary Market	Primary Market	Primary Market	Primary Market	Primary Market	
ID of the technical agreement ¹	EDS in process	EDS in process	EDS in process	EDS in process	EDS in process	

1: More information can be found in the next slide.

4. Prequalification File(s) 4.2. Requirements at the CMU level



Project ID

As EnergyProducer decided to submit two investment files (one for the CCGT and one for the OCGT) to CREG, from the moment his application form has been approved by ELIA:

- → EnergyProducer asks ELIA to generate two project IDs on May 26, 2021:
 - One when working on the Prequalification File of CMU1;
 - One when working on the Prequalification File of CMU4;
- → EnergyProducer saves his Prequalification Files including the project IDs
- → The project ID is automatically sent to CREG by ELIA
- > From that moment, EnergyProducer can provide his investment files to CREG (he does it on May 28, 2021)

→ When filling in his Prequalification Files for CMU2, CMU3 and CMU5, EnergyProducer does not ask for an project ID anymore but provides himself the project ID of CMU1 for CMU2 and CMU3 and the project ID of CMU4 for CMU5

Derating Factor

As the CMUs are individual CMUs and as there are subject to a Daily Schedule obligation, they are only eligible to a derating category

4. Prequalification File(s) 4.2. Requirements at the CMU level



Financial Security

As the configuration for the OCGT is mutually exclusive with the configuration of the CCGT, only one Financial Security needs to be provided per asset:

- One Bank guarantee for GT1;
- One Bank guarantee for GT1;
- One Bank guarantee for ST;

Technical agreement

To reflect the two possible configurations (CCGT and OCGT), two technical agreements are linked to these Prequalification files.



4. Prequalification File(s)4.3. Requirements prior to any Transaction Period



As the following data are nor required to be part of the Prequalification File, EnergyProducer decides to only provide the NEMO:

Requirements	Data provided by the CRM Candidate					
	CCGT			OCGT		
	CMU1 (GT1) Additional	CMU2 (GT2) Additional	CMU3 (ST) Additional	CMU4 (GT1) Additional	CMU5 (GT2) Additional	
Declared Day-Ahead Price	/	/	/	/	/	
NEMO	EPEX	EPEX	EPEX	EPEX	EPEX	

At this stage, the CRM Candidate completed entirely and correctly his Prequalification Files → He is therefore ready to submit it to ELIA

4. Prequalification File(s)



- 4.4. Prequalification File submission
- All data provided in his Prequalification Files are considered as relevant by the CRM Candidate
- The CRM candidate submits his Prequalification Files to ELIA (= Prequalification File submission date #1):
 - On May 31, 2021 for CMU1
 - On June 1, 2021 for CMU2
 - On June 2, 2021 for CMU3
 - On June 3, 2021 for CMU4
 - On June 4, 2021 for CMU5



- The CRM Candidate is not allowed to adapt his Prequalification Files during maximum 20 Working Days starting from the Prequalification File submission date
- ELIA will check the information included in the Prequalification Files within these 20 Working Days





5. Prequalification review process



- On June 10, 2021 ELIA notifies to EnergyPRoducer that his three Prequalification Files are is considered by ELIA as "approved"
- No additional information is required







6. Volumes determination



6.1. Nominal Reference Powers

- After the Prequalification File review, ELIA starts to determine the Nominal Reference Power (NRP) of each Delivery Point part of the CMU
- However, the 5 CMUs are Additional CMUs including only Additional Delivery Points
 - → ELIA is not able to determine the Nominal Reference Power of the Delivery Points

DP1	DP2	DP3	DP4	DP5
350 MW	350 MW	300 MW	350 MW	350 MW

• The Nominal Reference Power of the CMU is equal to:

 $[Nominal Reference Power]_{CMU} = \sum_{i=1}^{n} [Declared Nominal Reference Power]_{Additional DP i} + \sum_{i=1}^{n} [Nominal Reference Power]_{Existing DP i}$

• The CMU are individual CMUs

> The Nominal Reference Power of the CMU is equal to the Declared Nominal Reference Power of the Delivery Point they include

CMU1	CMU2	CMU3	CMU4	CMU5
350 MW	350 MW	300 MW	350 MW	350 MW

• No Nominal Reference Power is communicated to the CRM Candidate by ELIA



6. Volume determination

6.2. (Secondary Market) Eligible Volume determination

Reference Power = [Nominal Reference Power]_{CMU} - OptOut Volume

CMU1	CMU2	CMU3	CMU4	CMU5
350 - 0 = 350 MW	350 - 0 = 350 MW	300 - 0 = 300 MW	350 - 0 = 350 MW	350 - 0 = 350 MW

Eligible Volume = *Reference Power* × *Derating Factor*

CMU1	CMU2	CMU3	CMU4	CMU5
350 x 0,9 = 315 MW	350 x 0,9 = 315 MW	300 x 0,9 = 270 MW	350 x 0,92 = 322 MW	350 x 0,92 = 322 MW



No Secondary Market Eligible Volume is determined at this stage as the CMU is considered as Additional and cannot take over Contracted Capacities in the Secondary Market before becoming an Existing CMU





7. Prequalification results notification



- From the moment the volumes have been determined, ELIA communicates the prequalification results to EnergyProducer
- The results are communicated on June 21, 2021 to EnergyProducer
- As the CMUs are subject to investment files, the prequalification results shall be notified by September 1, 2021 at the latest
- EnergyProducer has not adapted his Opt-Out Volume after the notification of the Eligible Volume

	Prequalification results					
	CCGT			OCGT		
	CMU1 (GT1) Additional	CMU2 (GT2) Additional	CMU3 (ST) Additional	CMU4 (GT1) Additional	CMU5 (GT2) Additional	
The Nominal Reference Power of the CMU	350 MW	350 MW	300 MW	350 MW	350 MW	
The Reference Power of the CMU	350 MW	350 MW	300 MW	350 MW	350 MW	
The Opt-Out Volume of the CMU	0 MW	0 MW	0 MW	0 MW	0 MW	
The Eligible Volume of the CMU	315 MW	315 MW	270 MW	322 MW	322 MW	
The Secondary Market Eligible Volume of the CMU	NA	NA	NA	NA	NA	
The date of the first quarterly report that shall be sent	01/04/2022	01/04/2022	01/04/2022	01/04/2022	01/04/2022	

7. Prequalification results notification



