

CRM Design Note: Pre-delivery Monitoring

July 2024

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1 Introduction

1.1 Context and goal of this design note

This Design Note is provided for explanatory purposes only and does not confer any rights or permissions to the reader. The implementation and detailed design of the design concepts outlined in this document may vary based on specific constraints, or evolving design considerations. This document does not serve as a strict instruction manual.

This document does not constitute a legal or binding commitment by Elia Transmission Belgium to undertake any specific design or development activities. For the most accurate and up-to-date information, it is recommended that the reader always relies on the latest available information, such as the CRM Functioning Rules.

By reading and using this Design Note, you acknowledge and accept the terms of this disclaimer. This design note was last updated in July 2024 based on the Functioning Rules as established by the CREG and published on Elia's website on May 14 2024.

The goal of this present note is to further clarify the current design of the Pre-delivery Monitoring in the Belgian CRM. It provides the background for design decisions and elaborates how certain elements of the Pre-delivery Monitoring have evolved over time.

1.2 Scope and structure of the present design note

1.2.1 Legal framework

This design note serves to explain the design concepts proposed for the Belgian CRM concerning Pre-delivery Monitoring aspects. Article 7undecies §12 of the Belgian Electricity Law¹ states the following on this aspect (own translation from the law):

“After consultation of the grid users, the transmission system operator submits the market rules of the capacity remuneration mechanism for approval to the Regulator...

The market rules of the Capacity Remuneration Mechanism entail in particular:

(...)

5° the obligations preceding the delivery period (...) for capacity providers, and the penalties for violation of these obligations;

(...)”

The details for Pre-delivery Monitoring will as such mainly be governed by the CRM

¹ (NL) [Wet van 29 april 1999 betreffende de organisatie van de elektriciteitsmarkt](#)
(FR) [Loi du 29 avril 1999 relative à l'organisation du marché de l'électricité](#)

Functioning Rules and further described in the Capacity Contract. Article 7undecies § 11 also gives a framework for this contract:

“The transmission system operator closes a Capacity Contract with the Capacity Provider. The Capacity Contract describes the rights and obligations of the Capacity Provider, in particular the obligations preceding the delivery period,

(...)

The Capacity Contract is in accordance with the market rules of the Capacity Remuneration Mechanism intended in paragraph 12. The standard Capacity Contract is approved by the Regulator, upon proposal of the transmission system operator, and published on the website of the transmission system operator (...).”

1.2.2 Pre-delivery Monitoring in the broader framework of the CRM

The Pre-delivery effectively forms the link between the Prequalification and Auction on the one hand and the actual Delivery Period with the Availability Obligation and Payback Obligation on the other. In parallel with the Pre-delivery Monitoring, a CMU can in anticipation of the Delivery Period already participate in the Secondary Market. Altogether this is summarized on the figure below:

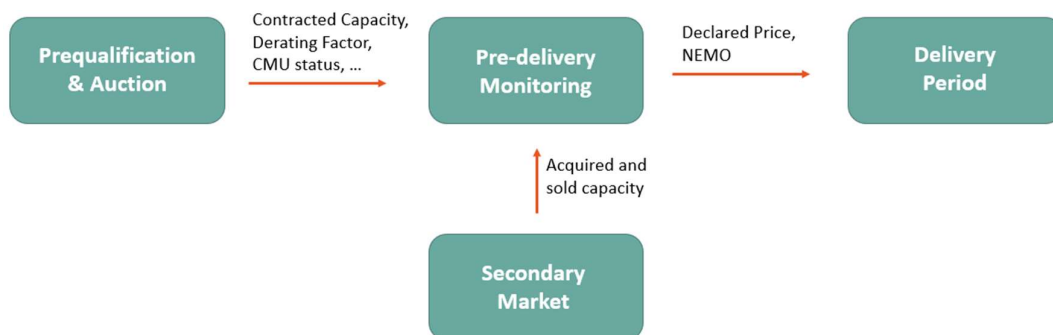


Figure 1: Pre-delivery Monitoring and links to other CRM topics

As a result, the Pre-delivery Monitoring makes use of information CMUs that are prequalified and were selected in the Auction. In the framework of the former, among other things a Derating Factor and CMU status (Existing, Additional or Virtual) is determined. The latter results in a certain amount of Contracted Capacity which directly serves as input for the actual amount of capacity that needs to be monitored during the Pre-delivery Monitoring.

This Contracted Capacity is directly impacted if, in the course of the Pre-delivery Period, the Capacity Provider decides to acquire more or sell part of its capacity. In that case, the amount of capacity verified through the Pre-delivery Monitoring is adapted accordingly.

Lastly, the Pre-delivery Monitoring requires the Capacity Provider to provide certain data that serve as input to start the Delivery Period processes, i.e., the Availability Obligation

and Payback Obligation. These include the Declared Price and the initial choice of NEMO.

1.2.3 Principles of the Pre-delivery Obligation

The Pre-delivery Monitoring serves a simple goal, namely, to ensure that capacity that was contracted in the Auction (whether it's a Y-4, Y-2 or Y-1 Auction) will effectively be available during period for which it is contracted, and for that matter provide the adequate incentives for market parties.

To that extent, the Pre-delivery Monitoring is built on two core principles that are reflected throughout the entire design:

Principle 1: incentives for Capacity Providers vary in function of the perceived risk of their CMU.

Elia contracts multiple types of CMUs in the Auction. In the course of the Prequalification, they are classified as either Existing, Additional (New Build) or Virtual. Even though this can differ on a case-by-case basis, one can say that due to the project works associated with Additional or Virtual CMUs – and the possible delays that might come with them – these CMUs run a higher risk of not getting ready in time for the Delivery Period. Correspondingly, Elia will apply stronger incentives for Capacity Providers to ensure maximal effort is made to be ready in time.

Principle 2: incentives increase over time to reflect the increased risk for security of supply.

In case of the Y-4 Auction, the Pre-delivery Monitoring takes place over the 4-year period until the start of the Delivery Period. In case a Capacity Provider becomes aware early on that their project will be delayed (e.g., Infrastructure Works), it is more beneficial for Elia to be notified in time so that, if possible, mitigating measures can be taken. Correspondingly, Elia will apply stronger incentives for Capacity Providers who only notify Elia of delays very late in the course of the Pre-delivery Monitoring.

2 Definition of the Pre-delivery Period

Every single Delivery Period Y has its associated Pre-delivery Period, which starts after the conclusion of its respective Y-4 Auction and ends with the start of the actual Delivery Period. Correspondingly, the Pre-delivery Period starts at November 1, Y-4 and ends October 31, Y. This is also illustrated below:



Figure 2: Definition of the Pre-delivery Period

Even though the Pre-delivery Period starts in November Y-4, this does not mean that all units contracted for Delivery Period Y are subject to controls over that entire period. For example, units that are first contracted in the Y-2 or Y-1 Auction will only be subject to the Pre-delivery Monitoring process from the moment they sign their contract. This is also reflected in the definition of the moments of control for each type of auction, as explained in the next section.

Design Recap:

The Pre-delivery Period linked to any Delivery Period starts after the Y-4 Auction for that Delivery Period. CMUs are subject to the Pre-delivery Monitoring from the moment they sign a contract (whether it's a Y-4, Y-2, Y-1 or via the Secondary Market) for that respective Delivery Period.

2.1 Moments of control

The key moments of each Pre-delivery Period are the so-called moments of control. At these moments, Elia will effectively verify whether there are indications that a CMU that has contracted capacity for the Delivery Period will not be able to meet its obligations during the Delivery Period.

Elia distinguishes two types of moments of control, moment of control 1 (hereafter $t_{control\ 1}$) and moment of control 2 (hereafter $t_{control\ 2}$).

The amount and timing of the moment of control depend on the Auction during which the unit was contracted.

2.1.1 Moments of control for Y-4

For CMUs that were first contracted in the Y-4 Auction, $t_{control\ 1}$ takes place on August 31 Y-2 and $t_{control\ 2}$ takes place on October 31 Y. These timings are illustrated below:



Figure 3: Moments of control for Y-4

2.1.2 Moments of control for Y-2

For CMUs that were first contracted in the Y-2 Auction, $t_{control\ 1}$ takes place on August 31 Y-1 and $t_{control\ 2}$ takes place on October 31 Y. These timings are illustrated below:

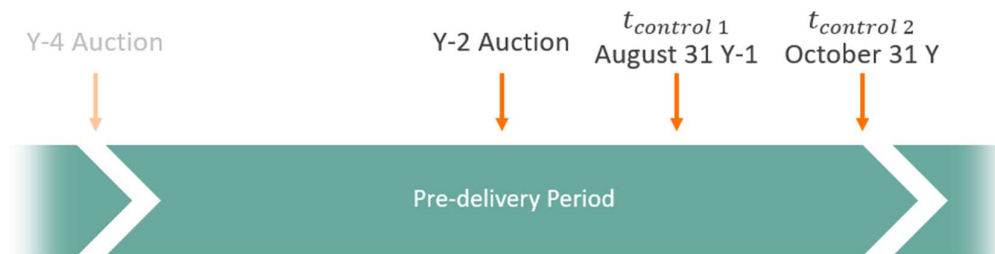


Figure 4: Moments of control for Y-2

2.1.3 Moments of control for Y-1

For CMUs that were first contracted in the Y-1 Auction, there is a single $t_{control\ 2}$ that takes place on October 31 Y. This is illustrated in the figure below:



Figure 5: Moments of control for Y-1

It might seem counterintuitive that the only moment of control for CMUs contracted in a Y-1 Auction is considered as a $t_{control\ 2}$. However, as it will be explained later, potential penalties arising at these moments of control are tied to the type of moment. Correspondingly, in order to align with the second principle highlighted in section 1.2.3 Elia defines this moment as a $t_{control\ 2}$.

Design Recap:

Moments of control signify the occasions where Elia will verify all contracted capacities. The timing and number of moments of control vary in function of the Auction during which the CMU is first contracted.

2.2 Total Contracted Capacity

The attentive reader will have realized that Elia organizes Auctions for different Delivery Periods, and that each of these as a result has its unique Pre-delivery Period that run in parallel. Consequently, a Capacity Provider might be involved in commitments for different Delivery Periods, each with a different Contracted Capacity.

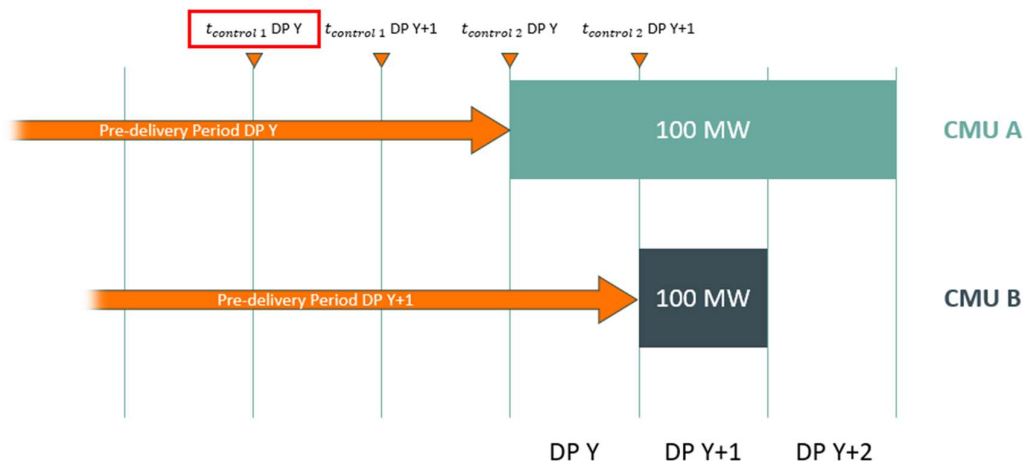
The Pre-delivery Monitoring aims to verify whether a CMU is on track to deliver the volume he is contracted for. Taking into account the different Delivery Periods and obligations, Elia needs to establish the amount of capacity that is checked at the respective moment of control. This is done via the Total Contracted Capacity.

For every moment of control, the Total Contracted Capacity is determined as the highest simultaneous sum of the CMU's Contracted Capacities for which:

- The Transaction Period covers partially or totally the Delivery Period; and
- The Transaction period has not started yet at the moment of control.

The Total Contracted Capacity takes into account Secondary Market Transactions, on the condition that they have been fully approved.

To illustrate the determination of the Total Contracted Capacity, Elia includes a stepwise example.

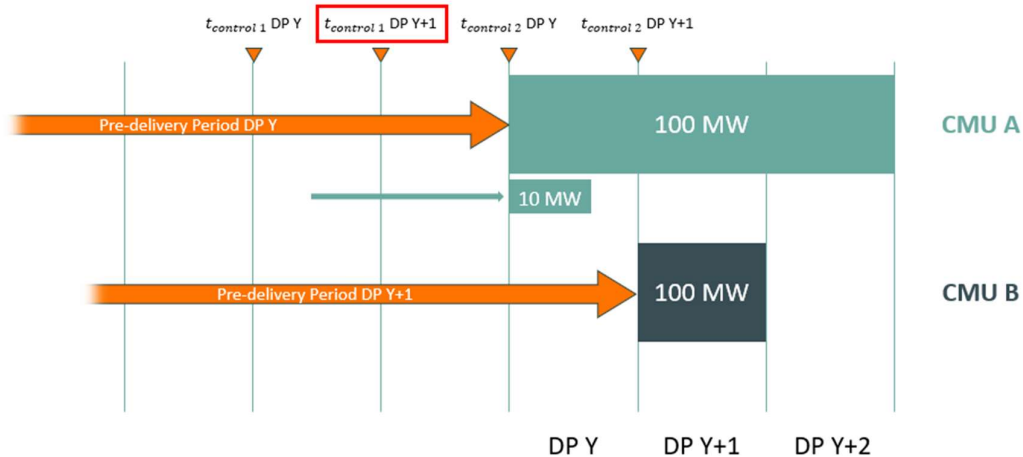


Consider two CMUs, CMU A and CMU B, that both participate in Y-4 Auctions. In the Y-4 Auction for Delivery Period Y, CMU A obtained a three-year contract for 100 MW. CMU B on the other hand obtained a one-year contract for Delivery Period Y+1.

At the first moment of control $t_{control\ 1}$ linked to Delivery Period Y, both CMUs are

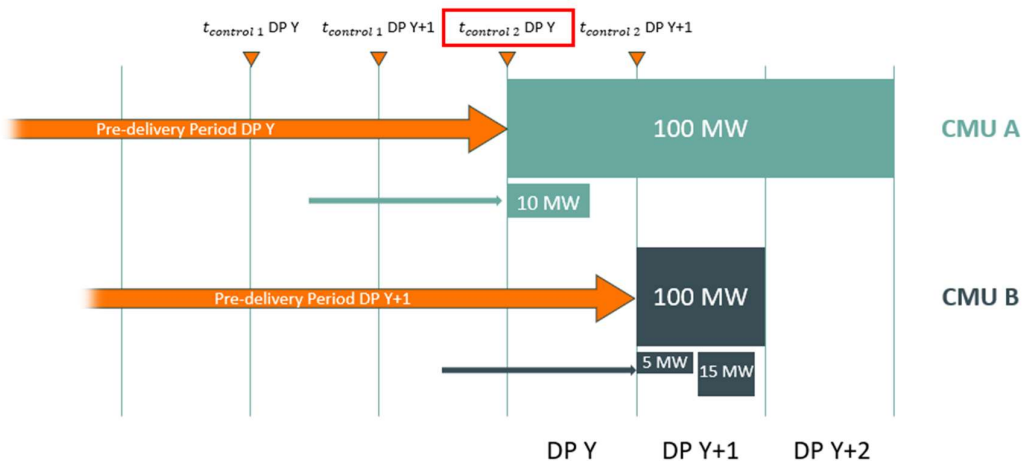
already contracted. The contract of CMU B only covers Delivery Period Y+1 though and does not satisfy the first criterion mentioned earlier. As a result, it does not count towards the Total Contracted Capacity. CMU A's contract on the other hand satisfies both criteria.

The Total Contracted Capacity is 100 MW for CMU A, and 0 MW for CMU B.



The next moment of control is $t_{control\ 1}$ linked to Delivery Period Y+1. The same contracts from the Primary Market still stand, but on top of that CMU A has acquired some additional capacity on the Secondary Market equal to 10 MW. However, the Transaction Period linked to this Transaction is during Delivery Period Y, and not Delivery Period Y+1 to which this moment of control is related.

The Total Contracted Capacity is 0 MW for CMU A and 100 MW for CMU B.

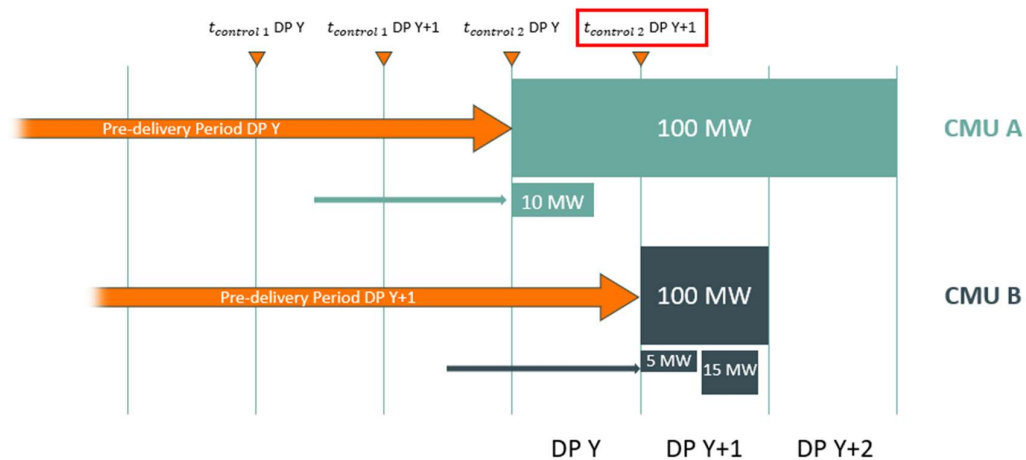


The next moment of control is $t_{control\ 2}$ linked to Delivery Period Y. On top of the already mentioned contracts on the Primary Market of CMU A and CMU B as well CMU A's acquisitions on the Secondary Market, CMU B has acquired two new obligations on the Secondary Market: one counting 5 MW in the beginning of Delivery Period Y+1, and one counting 15 MW after that.

The Secondary Market Transaction of CMU A now counts towards the Total Contracted

Capacity on top of its Primary Market Transaction, seeing as they both cover the Delivery Period. In contrast, in spite of its new obligations CMU B still does not have any Transactions covering Delivery Period Y, so that none of them count towards the Total Contracted Capacity.

The Total Contracted Capacity is 110 MW for CMU A and 0 MW for CMU B.



The next moment of control is $t_{control\ 2}$ linked to Delivery Period Y+1. In the meantime, the Transaction Period for both Transactions of CMU A has started. As a result, none of them still count towards the Total Contracted Capacity.

As for CMU B, all its Transactions count towards the Total Contracted Capacity. This is calculated as the highest simultaneous sum of its Transactions, which is reached when the second Secondary Market Transaction counting 15 MW is added to the Primary Market Transaction.

The Total Contracted Capacity is 0 MW for CMU A and 115 MW for CMU B.

Design Recap:

The Total Contracted Capacity determines the amount of capacity that will be verified at a moment of control. It serves as input for the determination of the Pre-delivery Obligation.

2.3 Permit reports

In the course of the Prequalification ahead of the Auction, CMUs need to provide information to satisfy the permitting requirements. However, it could occur that permits expire and need to be renewed in the course of the Pre-delivery Period.

To enable CMUs to provide an update on their permitting status, Elia requires **Existing CMUs** to submit a permit report ahead of $t_{control\ 1}$. The submission of this report happens via the CRM IT Interface.

The permit report contains information on all relevant permits and whether or not they

have been obtained in last administrative instance. The CRM Functioning Rules include, in annex 18.2.4, a template that can be used by the Capacity Provider.

In case some permits are missing or need to be renewed, the Capacity Provider includes a mitigation plan explaining how he intends to obtain all necessary permits in time.

Design Recap:

Existing CMUs provide Elia with permit report at the moment of control $t_{control 1}$. The permit report allows Elia to verify whether the CMU has all necessary permits for the Delivery Period.

2.4 Quarterly reports

Both **Additional and Virtual CMUs** need to provide Elia with quarterly reports throughout the Delivery Period. These need to be submitted via the CRM IT Interface during the following periods:

- From January 30 to February 14;
- From April 30 to May 14;
- From July 30 to August 14;
- From October 30 to November 14.

The quarterly report is a document that evolves over time along with the project works of the CMU and is based on the initial Project Execution Plan the Capacity Provider had to submit in the framework of the Prequalification.

The information provided via the quarterly report enables Elia to verify whether the CMU is still on track to become Existing in time for the Delivery Period for which it has been contracted. To that extent, it consists of three major parts. An overview of the **key milestones** provides information on the major steps in the project works, and whether or not any delays have materialized. A **key risk analysis** sheds some light on the different risks that could still occur in the course of the project, thereby including their likelihood, impact and the mitigation measures the Capacity Providers will take in case happen. Lastly, the **permit overview** serves the same function as the aforementioned permit report for Existing CMUs.

Additional – New Build CMUs and Virtual CMUs are required to use the template provided in annex 18.1.4.3 of the CRM Functioning Rules. Additional – Other CMUs are invited to follow the same template but are not obligated to do so.

Through the key milestone overview in the quarterly report, the Capacity Provider can notify Elia of any **delays** that occur in the course of the project. In particular, a delay needs to be identified when it concerns a volume larger than 1 MW and would lead to an unavailability for at least two months. This notification of delays includes any delay caused by Infrastructure Works, in line with section 4.

From the moment such a delay is identified, the Capacity Provider includes a mitigation plan with the steps he aims to take to resolve said delay. The **residual delay** is any delay

that remains after the measures included in the mitigation plan. This residual delay is used to determine the Missing Volume as per section 3.2.2.

Submission of the quarterly report is mandatory until the CMU becomes Existing as per section 5. In case the Capacity Provider fails to submit a quarterly report in time, Elia will in first instance send a reminder to the Capacity Provider. In extremis, Elia will apply financial penalties per day the quarterly report is late.

Design Recap:

Additional CMUs need to submit quarterly reports every 3 months. They include an overview of the key milestones, a key risk analysis and an overview of the permits.

3 Pre-delivery Monitoring Process

At every moment of control Elia will make an assessment whether there are indications that (part of) the capacity that has been contracted will not be present during the Delivery Period.

This process consists of three steps. At first, Elia will determine the Pre-delivery Obligation (section 3.1), i.e., the amount of capacity that Elia expects to observe in order to ensure that the Delivery Period is not put at risk. Secondly, in case incomplete Pre-delivery Obligation is observed, Elia determines a Missing Volume (section 3.2). Lastly, in case of a Missing Volume, Elia will apply penalties on the Capacity Provider (section 3.3).

3.1 Pre-delivery Obligation

The Pre-delivery Obligation is the amount of capacity that the Capacity Provider is expected to demonstrate in the course of the Pre-delivery Period.

The Pre-delivery Obligation depends on the type of CMU. In either of the cases, the Pre-delivery Obligation is based on the Total Contracted Capacity as per section 2.2.

3.1.1 Pre-delivery Obligation for Existing and Additional CMUs

The determination of the Pre-delivery Obligation is identical for Existing and Additional CMUs and does not change in function of the moment of control. For both types, the Pre-delivery Obligation then depends on whether the CMU is Energy Constrained or Non-energy Constrained.

For **Non-energy Constrained CMUs**, the Pre-delivery Obligation is equal to the Total Contracted Capacity:

$$Pre - delivery Obligation = Total Contracted Capacity$$

For **Energy Constrained CMUs**, the Pre-delivery Obligation is equal to the Total Contracted Capacity divided by the Derating Factor.

$$Pre - delivery Obligation = \frac{Total Contracted Capacity}{Derating Factor}$$

This division is carried out to account for the amount of capacity that will actually be monitored in the framework of the Availability Obligation. Seeing as the non-derated capacity will be checked there, it makes sense to already verify the non-derated capacity in the course of the Pre-delivery Monitoring as well. The reader is invited to refer to the

Availability Obligation design note² for more details.

As discussed before, the Total Contracted Capacity can consist of the sum of multiple Transactions, which by definition each have their unique Derating Factor. In that case, the Derating Factor in the denominator above is the weighted average over the different Transactions involved, in correspondence with the definition of the Derating Factor in chapter 3 of the CRM Functioning Rules.

3.1.2 Pre-delivery Obligation for Virtual CMUs

The Pre-delivery Obligation for Virtual CMUs varies in function of the moment of control.

At **moment of control** $t_{control1}$ the Pre-delivery Obligation is equal to 75 percent of the Total Contracted Capacity.

At **moment of control** $t_{control2}$ the Pre-delivery Obligation is equal to 100 percent of the Total Contracted Capacity.

Design Recap:

The Pre-delivery Obligation is the amount of capacity that the CMU needs to demonstrate at the moment of control. It varies depending on the moment of control and type of CMU.

3.2 Missing Volume

At any moment of control, Elia will determine the Missing Volume as the amount of capacity of the Pre-delivery Obligation that, based on Elia's evaluation, will not be present for the Delivery Period.

The determination of the Missing Volume varies depending on the type of CMU. From the moment a CMU changes status following either procedure explained in section 5, the CMU is evaluated according to its new type.

The Missing Volume is always expressed in MW.

3.2.1 Missing Volume for Existing CMUs

For Existing CMUs, Elia assesses the Missing Volume (if any) based on the submitted permit reports (as per section 2.3) as well as historical measurement data.

If the Capacity Provider notifies Elia that he has not obtained all necessary permits and will not be able to obtain them in time for the Delivery Period, Elia considers the Missing Volume as equal to the Pre-delivery Obligation.

² See also section 4.2.3 of the [Availability Obligation design note](#)

In all other cases, Elia determines the **Pre-delivery Measured Power** based on historical measurements.

It could be that the Prequalification File of the CMU was recently (re-)submitted. In the framework of such Prequalification, Elia will already have calculated the Nominal Reference Power (NRP) of the CMU. In such case, the resulting NRP is used for the Pre-delivery Measured Power in order to not needlessly perform the same calculation again. For more information on the Nominal Reference Power determination, Elia refers to the Prequalification design note³.

Likewise, a CMU might have recently changed from Additional to Existing (cfr. section 5). In the course of that process a NRP is calculated as well, and this result is then also automatically used as the Pre-delivery Measured Power.

When no NRP has been recently calculated, the Pre-delivery Measured Power can be calculated following two different methods, either based on historical data or after the organization of a dedicated pre-delivery test. In either case, the calculation method and modalities are identical to those for the NRP determination or prequalification test in the framework of the Prequalification. The reader who is interested to learn more about the specific details of these two processes can refer to the Prequalification Design Note.

The Missing Volume is then calculated as the positive difference between the Pre-delivery Obligation and the Pre-delivery Measured Power.

$$\text{Missing Volume} = \max(\text{Pre-delivery Obligation} - \text{Pre-delivery Measured Power}; 0)$$

Design Recap:

The Pre-delivery Measured Power is calculated for Existing CMUs based on historical measurement data and is compared to the Pre-delivery Obligation to determine the Missing Volume.

³ See also section 7.4.1 of the [Prequalification design note](#)

The determination of the Missing Volume for Existing CMUs is also illustrated in the figure below.

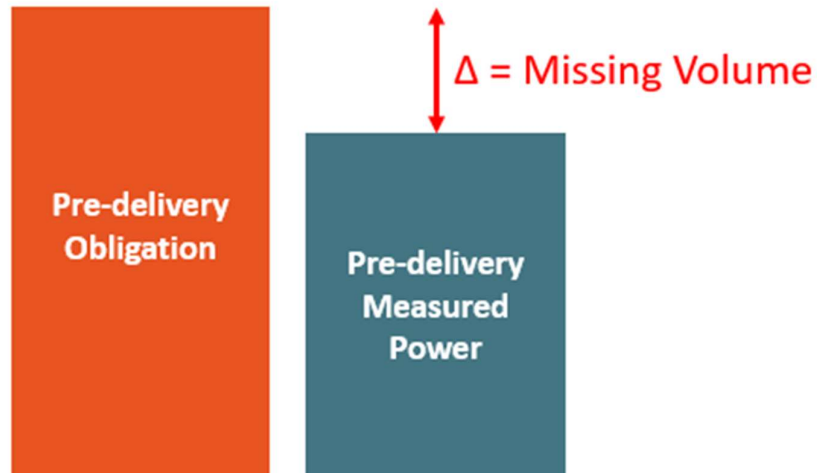


Figure 6: Missing Volume for Existing CMUs

3.2.2 Missing Volume for Additional CMUs

The determination of Missing Volume for Additional CMUs varies depending on the moment of control.

At **moment of control** $t_{control\ 1}$, Elia carries out an assessment of the most recent quarterly report of the CMU. In particular, Elia verifies whether the Capacity Provider indicated that (part of) its contracted capacity is subject to a residual delay as per section 2.4. When Elia did not receive a quarterly report prior to $t_{control\ 1}$ the entire Pre-delivery Obligation is considered as Missing Volume.

Moreover, Elia has the possibility to ask questions for clarifications in case the content of the quarterly report does not allow Elia to verify the CMU's progress. When the Capacity Provider fails to respond to these questions, the Pre-delivery Obligation is also considered as Missing Volume.

At **moment of control** $t_{control\ 2}$ the CMU is expected to have become Existing and as such be able to prove its capacity via measurement data. However, in the case of aggregated CMUs it could be the case that some Delivery Points part of the CMU have successfully become Existing, whereas others have some delay and are still Additional. As a result, Elia determines the Pre-delivery Power identical to the process explained in section 3.2.1 above, which allows CMUs to prove (part of) their Pre-delivery Obligation even though not the entire CMU is Existing yet.

3.2.3 Missing Volume for Virtual CMUs

As explained in section 5.2 Virtual CMUs are expected to transfer their Contracted Capacity to an Existing CMU. Elia calculates the Missing Volume as the proportion of capacity that has not successfully been transferred, i.e., the positive difference between

the Pre-delivery Obligation and the Contracted Capacity on the Existing CMU.

$$\text{Missing Volume} = \max (\text{Predelivery Obligation} - \text{Contracted Capacity}_{\text{Existing CMU}}; 0)$$

Design Recap:

The Missing Volume is the positive difference between the Pre-delivery Obligation and the amount of capacity that was demonstrated by the Capacity Provider. The way to demonstrate this capacity varies depending on the moment of control and the type of CMU.

3.3 Pre-delivery penalties

When a Missing Volume greater than zero is determined by Elia, penalties are applied. There are two types of penalties – on the one hand, financial penalties (as per section 3.3.1), and on the other hand, contract penalties (section 3.3.2). The latter, however, is only applicable for Additional and Virtual CMUs.

Finally, the CRM also foresees some escalation measures in case of subsequent penalties. These are explained in section 3.3.3.

3.3.1 Financial penalties

Financial penalties are applied by multiplying a penalty factor with the Missing Volume determined as per section 3.2.

The penalty factor varies in function of the moment of control and type of CMU.

3.3.1.1 Financial penalties for Existing CMUs

At either moment of control, the financial penalty for Existing CMUs is equal to:

$$\alpha \times \text{Missing Volume}$$

Where the penalty factor α is expressed in €/MW. The value of α depends on the exact situation of the CMU, as explained in the flowchart below.

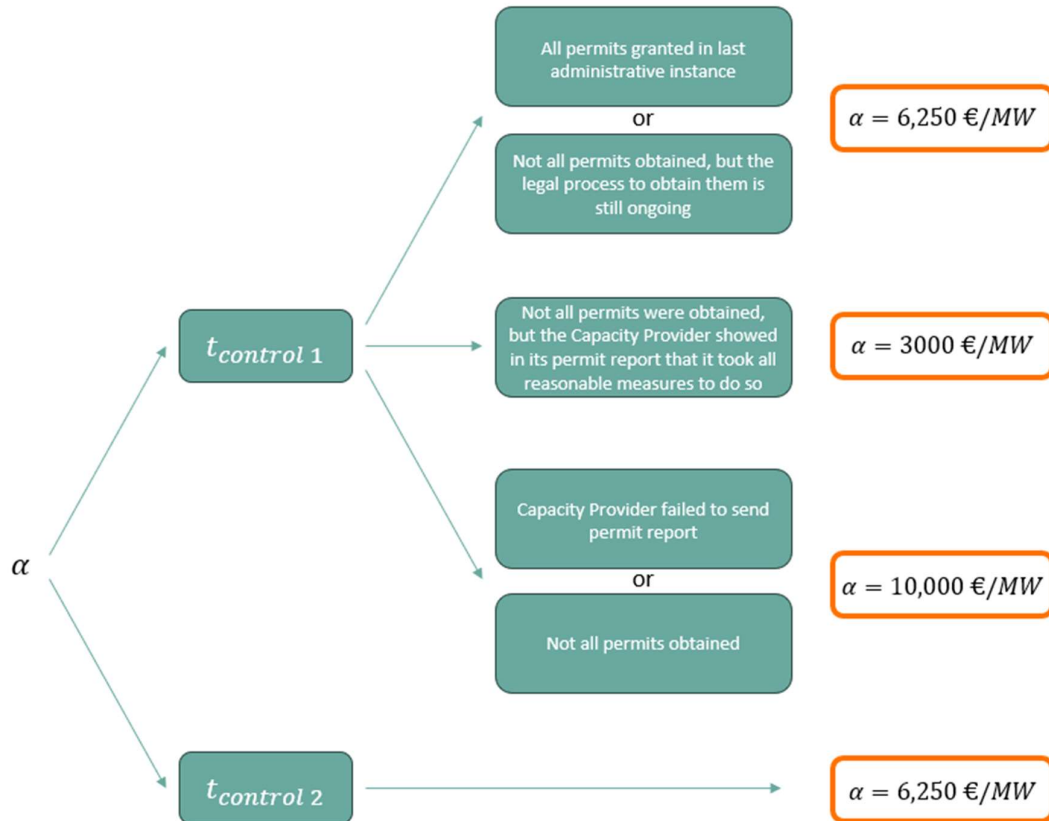


Figure 7: Value of penalty factor α

3.3.1.2 Financial penalties for Additional CMUs

At moment of control $t_{control 1}$, the financial penalty for Additional CMUs is equal to:

$$\frac{1}{2}\beta \times \text{Missing Volume}$$

Where the penalty factor β is expressed in €/MW. Conversely, at moment of control $t_{control 2}$ the financial penalty is equal to:

$$\beta \times \text{Missing Volume}$$

These different formulas reflect the second principle highlighted in section 1.2.3.

The value of β varies in function of the situation of the CMU, as explained in the flowchart below.

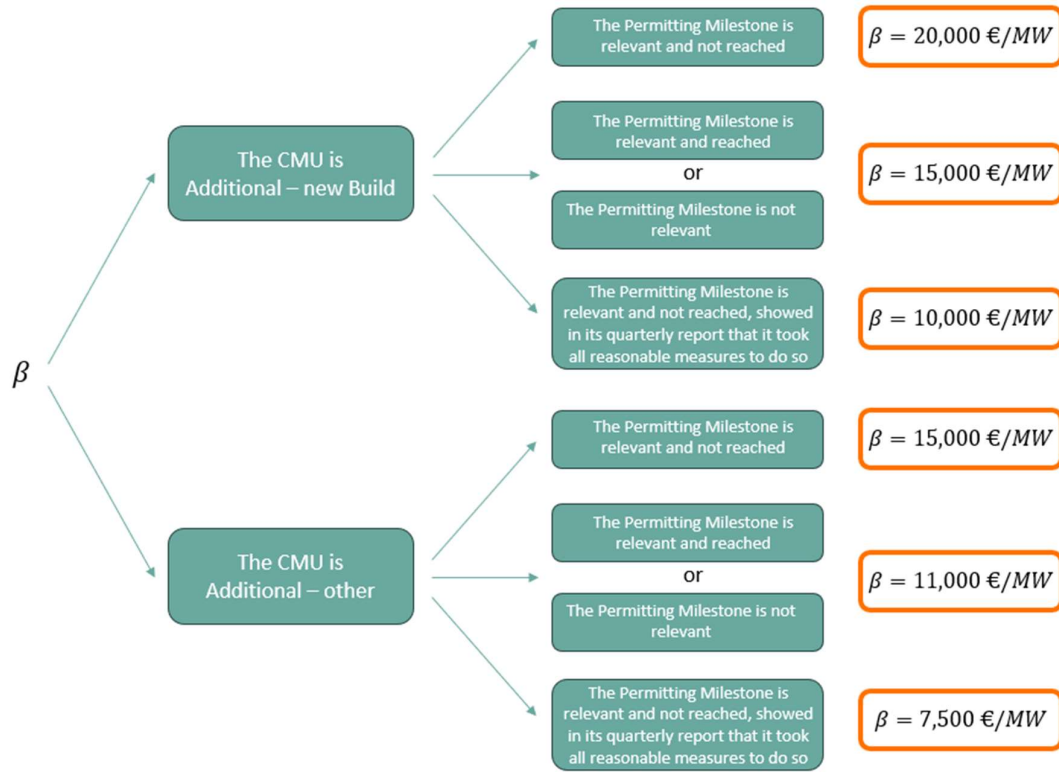


Figure 8: value of penalty factor β

3.3.1.3 Financial penalties for Virtual CMUs

In case a Missing Volume is determined for Virtual CMUs, at either moment of control the penalty is equal to:

$$20,000 \text{ €/MW} \times \text{Missing Volume}$$

Design Recap:

Elia applies financial penalties in case of Missing Volumes. The penalties vary depending on the type of CMU, the amount of Missing Volume and the perceived risk of the CMU.

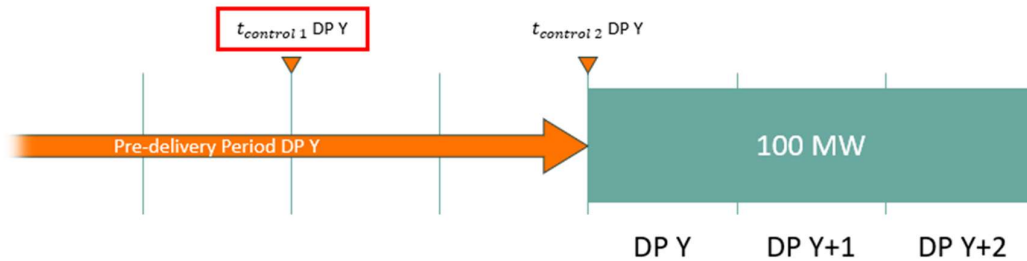
3.3.2 Contract penalties

For Additional and Virtual CMUs only, when a Missing Volume is determined at the moment of control $t_{control\ 1}$, Elia will also adapt the Capacity Contract. In particular, Elia will reduce the Contracted Capacity by the determined Missing Volume for the entire duration of the first Delivery Period covered by the Contract. Subsequently, the Missing Volume that was removed is added to the volume that needs to be procured in the upcoming auctions for the same Delivery Period.

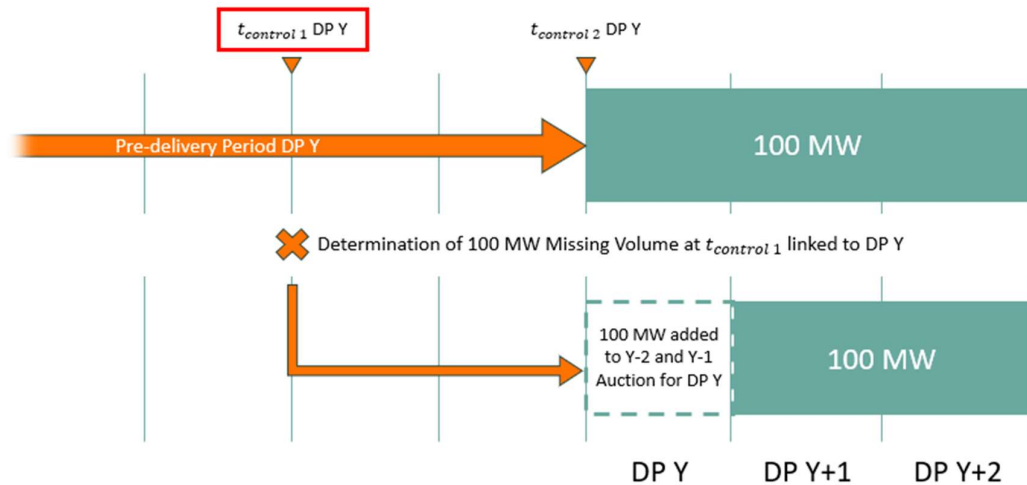
Such reduction of the Contracted Capacity is not applicable at the moment of control $t_{control\ 2}$.

To illustrate the impact of such a reduction, Elia presents some examples.

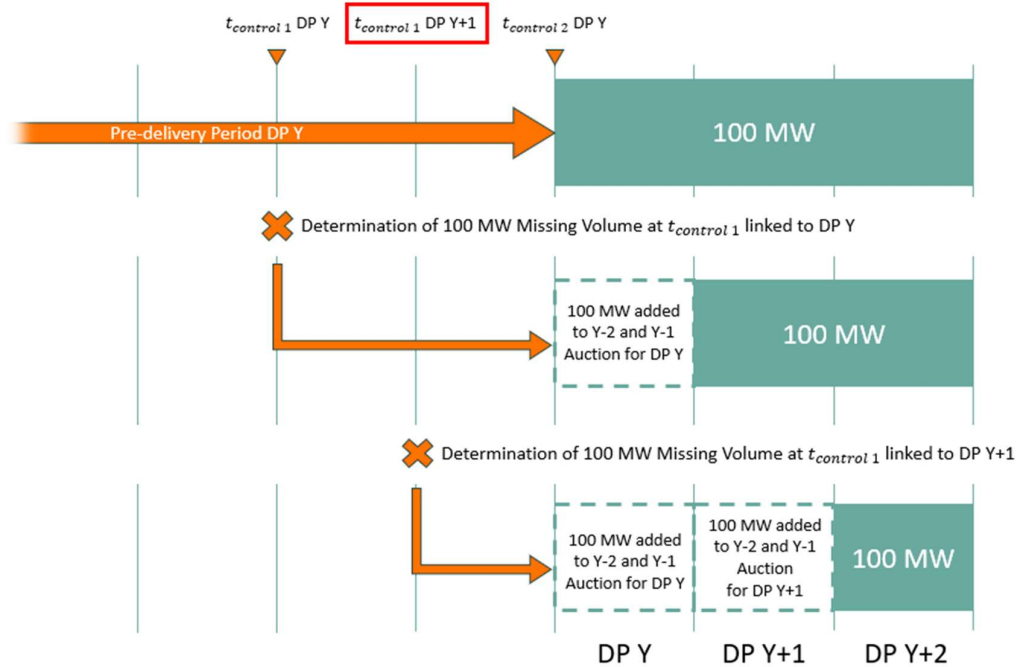
Example 1 includes an Additional CMU that contracted 100 MW for three Delivery Periods.



Upon the first moment of control, a Missing Volume equal to 100 MW was determined. A financial penalty is applied, and the Contracted Capacity is reduced by 100 MW for the first Delivery Period.

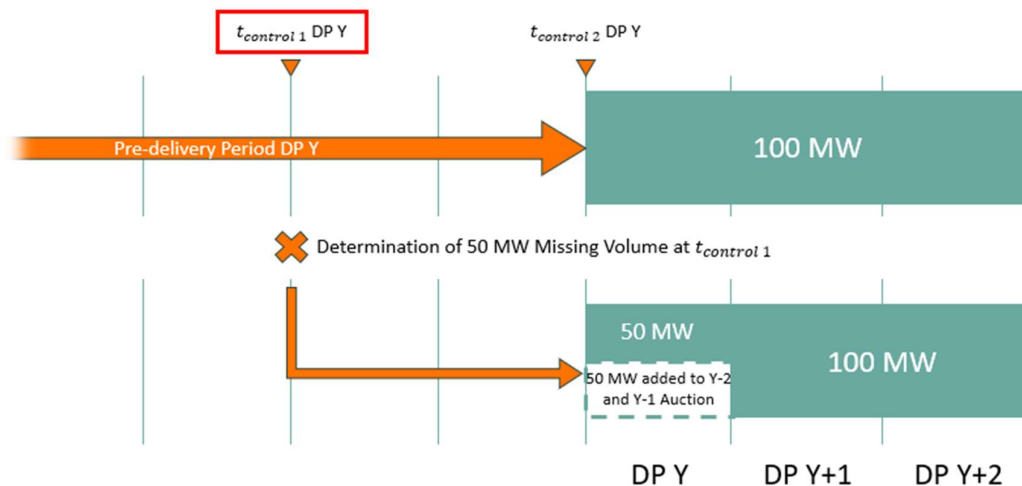


An implication often overlooked of such reduction of the Contracted Capacity is that the CMU is now effectively considered as being contracted for Delivery Period $Y + 1$. Consequently, this means that the CMU is now subject to the Pre-delivery Monitoring modalities of that Delivery Period, and the moments of control that come with it. It could then hypothetically occur that at the moment of control $t_{control\ 1}$ of Delivery Period $Y+1$ another Missing Volume is determined, and that the Contracted Capacity is reduced again.



This situation, where a Missing Volume is continuously determined and reduced, can only be repeated a limited number of times. The details with regards to this limitation are discussed in section 3.3.3.

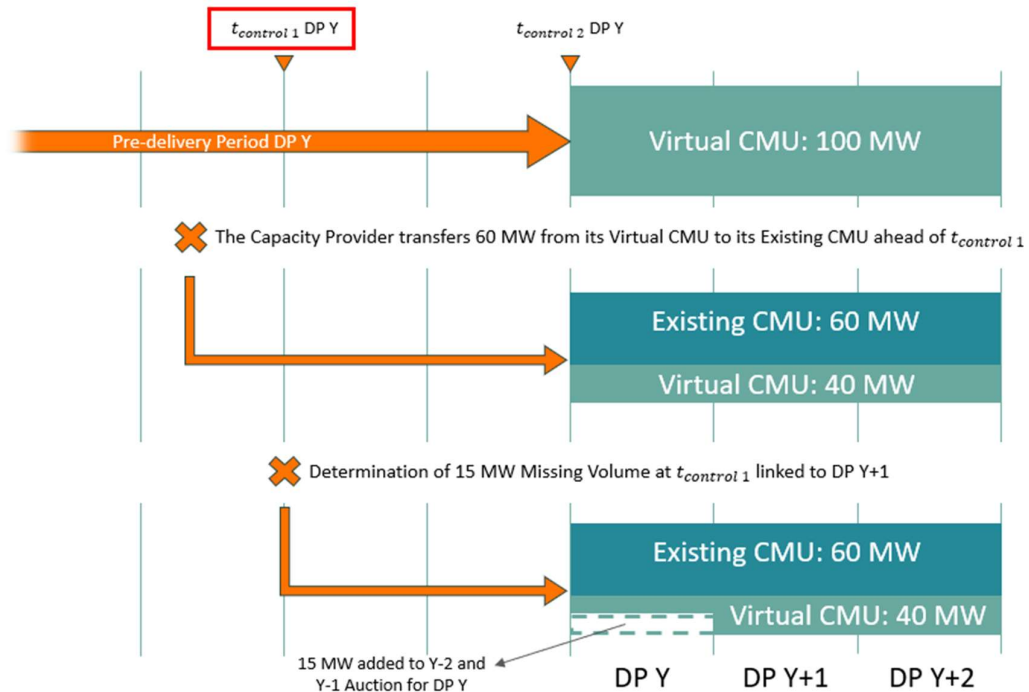
Example 2 considers the same CMU that contracted 100 MW for three Delivery Periods, but instead of the full 100 MW as Missing Volume only 50 MW is determined as Missing Volume by Elia. In that case, the Contracted Capacity is only partly reduced for the duration of the first Delivery Period.



This means that during the first Delivery Period, the Capacity Provider will still be subject to the Availability Obligation and Payback Obligation for 50 MW.

Example 3 includes a Virtual CMU that has also contracted 100 MW for three Delivery

Periods. As explained in section 3.2.3, the Missing Volume for Virtual CMUs is based on the amount of capacity that they have successfully transferred to a linked Existing CMU. At moment of control $t_{control\ 1}$, the Virtual CMU is expected to have done so with 75% of its Total Contracted Capacity, i.e., 75 MW. In this example, Elia notices that only 60 MW has been transferred, resulting in a Missing Volume of 15 MW. This 15 MW is then deducted from the Contracted Capacity that is still linked to the Virtual CMU, not the linked Existing CMU.



Design Recap:
 In case of Missing Volume on Additional or Virtual CMUs, Elia will also reduce the Transaction Period of the CMU's contract.

3.3.3 Penalty escalation

When Elia carries out a reduction of the Contracted Capacity as per section 3.3.2 but the remaining contract duration is only one year, the contract is automatically terminated.

In case of an Additional CMU, the financial penalty as per section 3.3.1.2 and the adaptation of the contract as per section 3.3.2 cannot be repeated indefinitely. When such penalties have been applied on three consecutive occasions, Elia can unilaterally terminate the Capacity Contract, regardless of the contract duration that remains after the aforementioned adaptations.

4 Infrastructure Works

The Pre-delivery Monitoring aims to, in part, hold Capacity Provider accountable when the Project Works – i.e., works to be realized by a system operator such as the TSO or a DSO – related to their CMU are delayed. Be that as it may, such delays might also originate from so-called Infrastructure Works, which are the works that cannot be realized by the Capacity Provider himself but by the respective system operator (for example, Fluxys, the DSOs or Elia). In that case, the Capacity Provider is not liable to the Pre-delivery penalties explained in section 3.3.

In case delays are caused by Infrastructure Works, a special procedure applies. In order to be able to call upon this procedure, multiple criteria must be met:

- The Capacity Provider of the CMU must have notified Elia that the Infrastructure Works would be taking place in the framework of its Prequalification Process; and
- The impact of the delay in Infrastructure Works delays the start of the delivery of the capacity by more than two months; and
- The CMU is an Additional CMU.

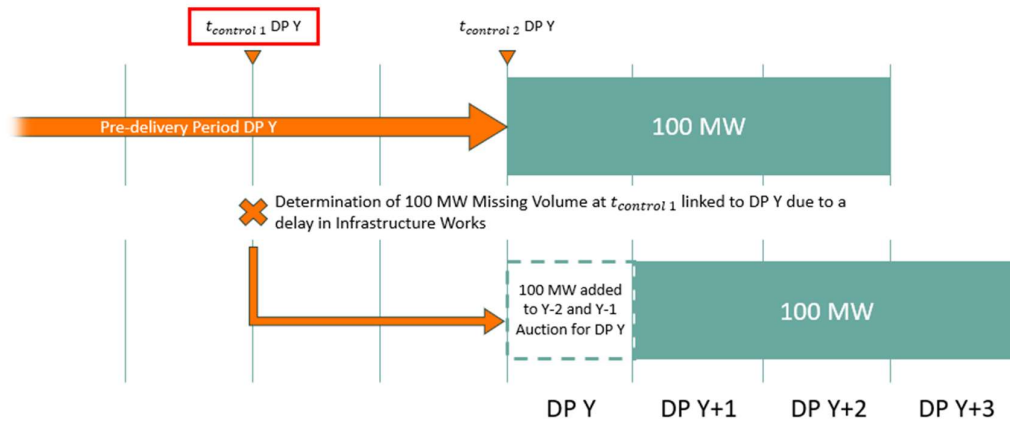
From the moment a system operator becomes aware of a delay on the Infrastructure Works that he is responsible for, he is obliged to notify the Capacity Provider as soon as possible.

In turn, the Capacity Provider notifies Elia of said delay through its quarterly report (cfr. section 2.4) and assesses its impact on the project as a whole. Among others, the assessment integrates information in case the said delay entails a delay in the commissioning date of the capacity. Following the reception of the quarterly report, Elia can ask questions to clarify the Capacity Provider's assessment of the Infrastructure Works delay's impact.

When a delay caused by Infrastructure Works is identified in a quarterly report, Elia notifies the CREG, and the Capacity Contract is adapted. **No financial penalties are applied.**

The **adaptation of the Capacity Contract** is carried out in such a way that the total remuneration that the Capacity Provider is to receive is not impacted. After all, the delay was caused on a part of the project that he was not responsible for. In particular, Elia postpones the Delivery Period(s) covered by the original contract by one year. The capacity that was contracted for the first Delivery Period is added to the Y-2 and Y-1 Auctions of that Delivery Period when the delay was notified before the final calibration of these Auctions.

An example is given on the figure below. Considering an Additional CMU that contracted 100 MW with a three-year contract, it notifies Elia of some delays caused by Infrastructure Works. Upon a correct notification, the entire Transaction Period is postponed by one year, and 100 MW is added to the volume to be procured in either the Y-1 or Y-2 Auction of the first Delivery Period.



The postponement of the Transaction ensures that the total remuneration that is to be received by the Capacity Provider does not budge.

As also illustrated in section 3.3.2 the CMU is now considered as contracted for Delivery Period $Y + 1$. It will as such undergo a new moment of control $t_{control_1}$ that is linked to that Delivery Period.

Regardless of the postponement of its Capacity Contract, when the CMU becomes Existing in the course of Delivery Period Y it is immediately allowed to purchase obligations on the Secondary Market.

5 Change of CMU status

This section explains the processes to evolve from an Additional or Virtual CMU to a full-fledged Existing CMU. The specific details vary depending on the status of the CMU and are explained in section 5.1 and 5.2, respectively.

It is worth noting that the Financial Security for Existing CMUs is significantly lower compared to Additional and/or Virtual CMUs. At the moment of a successful change, the Financial Security is as such (partially) released.

5.1 Additional to Existing

The process to change the status of a CMU from Additional to Existing is subject to the completion of the Prequalification process. In fact, for a CMU as a whole to become Existing, all of its underlying Delivery Point(s) must be Existing.

In line with the requirements of the Prequalification process, to evolve a CMU from Additional to Existing, the Capacity Provider must provide additional information and documentation for its underlying Additional Delivery Point(s) as highlighted in the table below.

Requirements	Explanation
(CDS) Grid User Declaration (if applicable)	Signed declaration to provide in case the Grid User differs from the CRM Actor.
Expected Nominal Reference Power (NRP)	In case of an Existing DP, the CRM Candidate provides the Expected Nominal Reference Power of the DP.
NRP based on injection data only	The CRM Candidate indicates to ELIA whether the NRP of his DP can be determined based on injection data only.
Non-representative days for NRP determination	If NRP is not determined based on injection only, a list of non-representative days of the past 13 months can be provided.
Unshedtable Margin	The minimal level of net active power offtake that cannot be curtailed.
EAN code of the (CDS) Delivery Point (DP) and (CDS) Access Point (AP) (if not delivered yet)	The EAN code of the (CDS) DP is a unique identification number to identify the metering device of the DP. The EAN code of the AP is the unique identification number to identify the metering device of the AP related to the DP.

To evolve from Additional CMU to Existing CMU in time, i.e., before the moment of control $t_{control 2}$, the Capacity Provider must **submit an updated Prequalification file** to ELIA through the CRM IT Interface before either:

- The Prequalification submission deadline as per article *7undecies*, §8 of the Electricity Act⁴ – i.e., the 15th of June;

⁴ (NL) [Wet van 29 april 1999 betreffende de organisatie van de elektriciteitsmarkt](#)
(FR) [Loi du 29 avril 1999 relative à l'organisation du marché d'électricité](#)

- 20 Working Days (WD) before the moment of control $t_{control 2}$.

The date on which the Capacity Provider submits its updated Prequalification File largely determines how ELIA treats the received information, and how the remainder of the process is handled.

Following the submission of the amended Prequalification file, ELIA **reviews the submitted information**, depending on the submission date, and informs the Capacity Provider of required changes:

- In line with the Prequalification process timings if the updated file was submitted by 15th of June;
- Within 15 WD after the submission of the updated Prequalification File (if the updated file was submitted after Bid submission deadline). In this case, the Capacity Provider must finalize his Prequalification File within 10 WD before the moment of control $t_{control 2}$.

On top of the check of the updated Prequalification File, a Capacity Provider also must demonstrate that he is capable of meeting his Contracted Capacity. Therefore, an NRP determination must take place. In the framework of this NRP determination, historical data can be used only if the concerned capacity was already delivered an Energization, Interim or Final Operational Notification (EON, ION or FON) in line with the European Grid Code RfG⁵. Receiving such notification is not an end in itself but only secures the fact that the capacity was allowed to inject electricity into the grid and can, therefore, be metered as expected from an Existing CMU. Moreover, it is worth adding that commissioning data can be used as well for this volume determination foreseen in the Additional to Existing Process.

The NRP determination can occur based on two different approaches, as foreseen (and explained) in the framework of the Prequalification Process (see design note on Prequalification):

- 1) Based on historical data;
- 2) Based on a prequalification test.

The **Nominal Reference Power (NRP) determination** process is realized simultaneously to the compliance checks of the updated Prequalification file. In fact, the NRP of each Delivery Point going from Additional to Existing alongside the NRP of the CMU are determined using the same methodology as in the Prequalification process with two particular exceptions.

Firstly, the concerned period for the NRP determination ends, at the latest, the WD before the WD on which the NRP determination is realized. In the framework of an

⁵ [European Commission Regulation \(EU\) 2016/631 of April 14 2016 establishing a grid code on requirements for grid connection of electricity generators](#)

evolution from Additional to Existing, the WD on which the NRP determination is realized is not taken into consideration.

Secondly, the organization of a Prequalification test cannot be used as a contestation of the NRP following the use of historical data to determine the NRP.

If and when applicable, the timing of the test is agreed by ELIA and the Capacity Provider to finalize the evolution from Additional to Existing before $t_{control 2}$:

- If the Delivery Point is connected to ELIA grid or to a CDS that is connected to ELIA grid, the Capacity Provider provides ELIA with the identification of the concerned Delivery Point at least 5 WD prior to the test date;
- If the Delivery Point is connected to a DSO grid or to a CDS that is connected to a DSO grid, the determination of the test date is done through a communication that is previously defined in advance by the concerned DSO and shared with the Capacity Provider.

Therefore, the date on which the Capacity Provider submits its updated Prequalification File also has an impact on the NRP determination.

ELIA determines the Secondary Market (Remaining) Eligible Volume in line with the standard Secondary Market process.

The process to change the status of a CMU from Additional to Existing will be concluded with a **notification by ELIA** to the Capacity Provider:

- In line with the Prequalification file submission deadline if an updated Prequalification file was submitted;
 - o 1st of September if an Investment File was submitted to CREG;
 - o 15th of September if no Investment File was submitted to CREG.
- At the latest by 30th of October, before the $t_{control 2}$, if the process to evolve from Additional to Existing has been launched after the Bid submission deadline.

Figure 9 below summarizes the specificities of the possible processes to evolve from Additional to Existing.

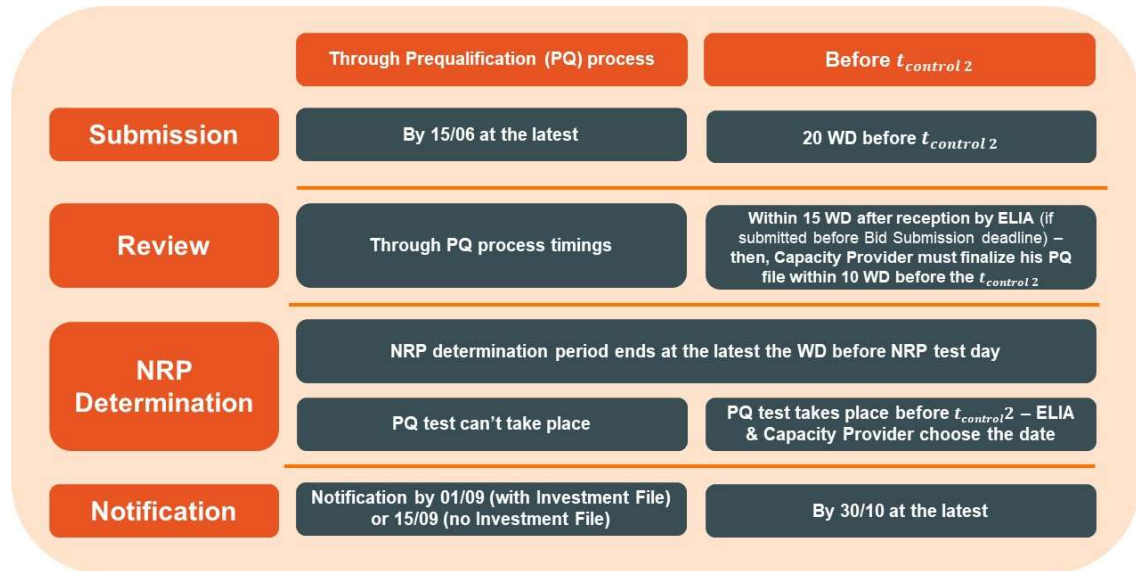


Figure 9: Process from Additional to Existing

Design Recap:

To change from Additional to Existing, a CMU completes the remaining information of its Prequalification File.

5.2 Virtual to Existing

The process to change from Virtual to Existing is not a change in the strict sense of the word. Rather, it involves a transfer of the Contracted Capacity to an Existing CMU that is 'linked' to the respective Virtual CMU.

Virtual CMUs are designed specifically to be able to participate with Unproven Capacities to the Auction, i.e., capacity that at the moment of the Auction cannot be associated to a specific Delivery Point. From the moment the capacity is developed at a Delivery Point, the Capacity Provider can create an Existing CMU in the course of the Prequalification Process, where he can indicate the Virtual CMU to which this newly created Existing CMU is linked.

The Capacity Provider then transfers the Contracted Capacity via the Secondary Market. The Capacity Provider has the freedom to do this in one single Transaction or several smaller ones. However, sufficient capacity needs to have been transferred in time for the moments of control in order to avoid Missing Volumes, as per section 3.2.3. Once the transfer has been successfully completed, the Capacity Provider can archive the Virtual CMU.

The different steps in the process from Virtual to Existing are highlighted below for an illustrative example of a Contracted Capacity of 100 MW.

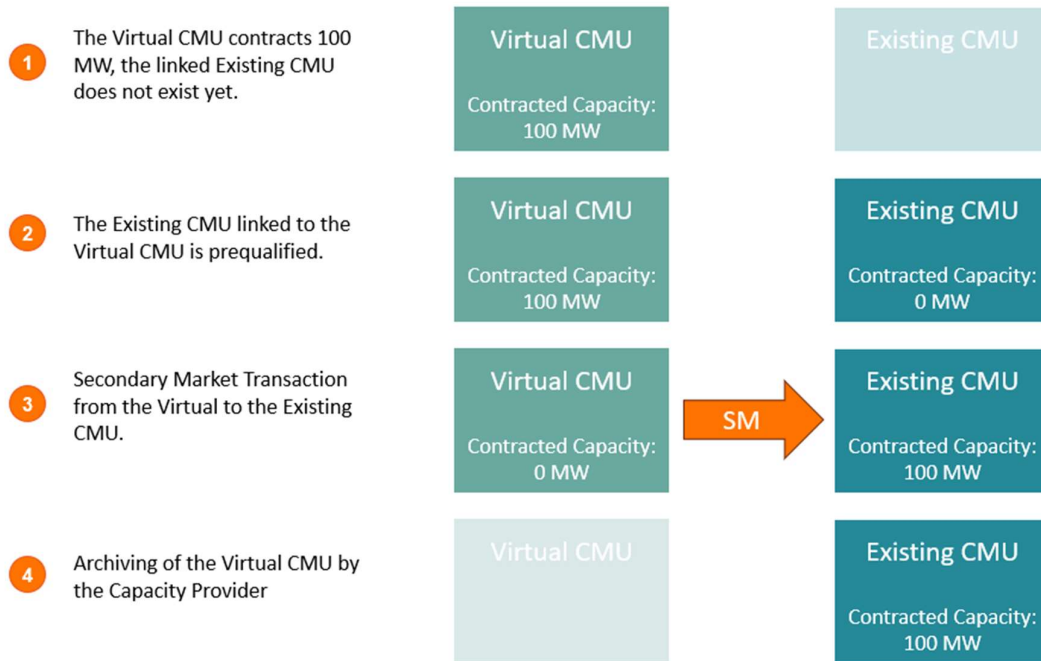


Figure 10: process from Virtual to Existing

Design Recap:

To change from Virtual to Existing, a Capacity Provider prequalifies an Existing CMU to which he transfers the Contracted Capacity via the Secondary Market.

6 Processes before the start of the Delivery Period

Before the end of the Pre-delivery Period, the Capacity Provider is required to submit some information to Elia that will be used during the Delivery Period processes. Among others, this includes:

- Identification of NEMO⁶;
- The Declared Day-ahead Price

For all CMUs, Elia requires the **NEMO** of choice where the Capacity Provider trades his energy. The prices from this NEMO are used as input for the Availability Obligation and Payback Obligation.

In case the Capacity Provider fails to submit a choice for the NEMO, Elia uses the weighted average Day-Ahead price⁷ (or the respective equivalent for Foreign CMUs).

For all Non-daily Scheduled CMUs, Elia additionally requires an initial value for the **Declared Day-ahead Price**. The Declared Price is used to determine the Required Volume, which has a large impact on the Availability Monitoring and calculation of the Payback Obligation.

In case the Capacity Provider fails to submit a choice for the NEMO, Elia will consider all the capacity of the CMU as unavailable during the Delivery Period – which might lead to penalties.

Either of these values can be freely modified throughout the Delivery Period. Elia only requires an initial value for the beginning of the delivery processes.

Due to practical considerations, the submission of this information takes place via the Availability Obligation module of the CRM IT Interface.

For the specific applications of the choice of NEMO as well as the Declared Day-ahead Price, Elia invites the reader to go down the rabbit hole of the design notes of both the Availability Obligation⁸ and Payback Obligation⁹.

⁶ Nominated Electricity Market Operator

⁷ (NL) [Day-ahead referentieprijis \(elia.be\)](https://www.elia.be/-/media/project/elia/elia-site/electricity-market-and-system/adequacy/crm/2024/20240430_crm-design-note-availability-obligation-april2024.pdf)

(FR) [Prix de référence day-ahead \(elia.be\)](https://www.elia.be/-/media/project/elia/elia-site/electricity-market-and-system/adequacy/crm/2024/20240430_crm-design-note-availability-obligation-april2024.pdf)

⁸ https://www.elia.be/-/media/project/elia/elia-site/electricity-market-and-system/adequacy/crm/2024/20240430_crm-design-note-availability-obligation-april2024.pdf

⁹ https://www.elia.be/-/media/project/elia/elia-site/electricity-market-and-system/adequacy/crm/2024/20240430_crm-design-note-payback-obligation-april2024.pdf

Design Recap:

Before the start of the Delivery Period, Elia requires all Capacity Providers to submit the NEMO for their CMUs and the Declared Price for its Non-daily Scheduled CMUs.

