Availability Obligations & Penalties Use Case 4

New Project with two possible configurations:
CCGT or 2 OCGT on a site

Task Force Implementation

Disclaimer

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 Availability Obligation aspects.

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 *Availability Obligation* of the Functioning Rules as known at the moment of writing and shared with market parties on 31/08/2020. It also obviously follows the context set by the Electricity Law.

Use case structure

1. Capacity Provider and CMU’s

2. (Partial) Declared Prices and Unavailable Capacity

3. Participation in Ancillary or Redispatching Services

4. AMT Moment Availability Monitoring

1. Capacity Provider and CMUs

2. (Partial) Declared Prices and Unavailable Capacity

3. Participation in Ancillary or Redispatching Services

4. AMT Moment Monitoring

1. Hypotheses on Delivery Period

For the previous Delivery Period

- Day-Ahead price cap is equals to **3.500 €/MWh**
- intraday reference price cap is equals to **3.500 €/MWh**
- Positive Imbalance Price cap is equals to **13.500 €/MWh**

For the Delivery Period:

- The AMT Price is set at **120 €/MWh** by Elia and published on its website by the May 15 prior the delivery period
- The Strike Price is set at **500 €/MWh** by
- Day-Ahead price cap is equals to **4.000 €/MWh**
- intraday reference price cap is equals to **4.000 €/MWh**
- Positive Imbalance Price cap is equals to **13.500 €/MWh**

1. Capacity Provider and CMUs

- **EnergyProducer.SA/NA is owner of a site** (located in Belgium) having successfully secured a project in the CRM auction
- **New built exclusive CCGT / OCGT project** that has successfully passed to existing in the pre-delivery period monitoring
- After pre-delivery, the following parameters relevant for Availability Monitoring were confirmed:

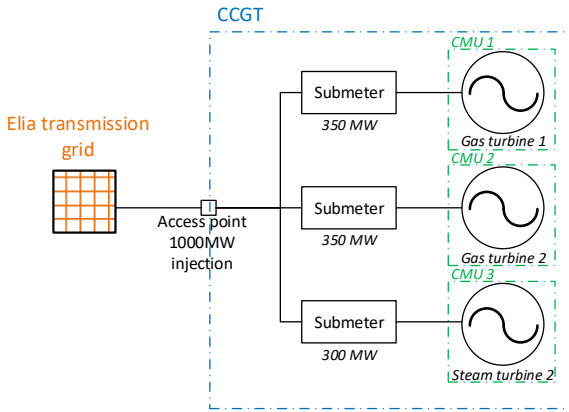
	CMU parameters		
	CMU 1	**CMU 2**	**CMU 3**
Nominal Reference Power	349 MW	352 MW	305 MW
Derating Factor	0,9	0,9	0,9

- All CMUs are **non-energy constrained** with a **daily schedule obligation**

1. Detailed view: Capacity Provider and CMUs

Name of the company:	EnergyProducer.SA/NA
Geographical site:	• Owner: EnergyProducer.SA/NA • Location: Belgium • Connection: Electricity TSO grid & Gas TSO grid

3 CMUs:
CMU 1 = GT1
CMU 2 = GT2
CMU3 = ST1



	CMU parameters		
	CMU 1	**CMU 2**	**CMU 3**
Nominal Reference Power	349 MW	352 MW	305 MW
Derating Factor	0,9	0,9	0,9

1. Capacity Provider and CMUs – Contracted Capacity : Transaction overview

Primary Transaction

- After its participation to a **Y-4 Auction** in October 2021, the following bid of the CMU has been selected:

Auction results	
Selected bids	
Selected Bid volumes	CMU1: 315MW CMU2: 315MW CMU3: 270MW
Related Price	50€/kW/year
Capacity contract duration	15 year

- No bid was selected for the **Y-1 auction** as the Remaining Eligible Volume of the CMU is 0 MW

Secondary Transaction

- See Secondary Market use cases

3. 1. Capacity Provider and CMUs

2. (Partial) Declared Prices and Unavailable Capacity

3. Participation in Ancillary or Redispatching Services

4. AMT Moment Monitoring

2. (Partial) Declared Prices and Unavailable Capacity

(Partial) Declared Prices

As all CMUs of EnergyProducer.SA/NA have a Daily Schedule Obligation, (Partial) Declared Prices do not apply

Unavailable Capacity

- EnergyProducer.SA/NA plans maintenance works on steam turbine #1 (CMU 3) from 01/01/2026 to 15/01/2026
- The gas turbines (CMUs 1 and 2) continue to work in OCGT-mode during this period
- EnergyProducer.SA/NA notifies the limitation on CMU 3 to Elia on 15/12/2025
  - $P_{Max,Remaining}(CMU\ 3, t)$ = **0 MW**

- The **Remaining Maximum Capacity DA** is also equal to **0 MW** for CMU 3 absent any further notification
- On 10/01/2026 at 13h00, gas turbine #2 (CMU 2) malfunctions and is forced to shut down
- EnergyProducer.SA/NA, conform with Availability Obligations in the CRM, does not delay in notifying this limitation to Elia
  - $P_{Max,Remaining}(CMU\ 2, t)$ = **0 MW**
- Nevertheless, the **Remaining Maximum Capacity DA** of CMU 2 was noted at **352 MW** the day before

2. Declaration of Unavailable Capacity (1/2)

A. Notification of Unavailable Capacity on 15/12/2025 at 14:00 – Accepted

CMU ID	Remaining Maximum Capacity	Start date and time	End date and time	Reason
CMU 3	**0 MW**	01/01/2026 13:00	15/01/2026 12:00	Planned Outage

- The notification is accepted as (i) all required information is present and (ii) the Remaining Maximum Capacity does not surpass the CMU's Nominal Reference Power
- Elia registers the Remaining Maximum Capacity for CMU 3 for time 't' between 01/01/2026 13:00 and 15/01/2026 12:00 as **0 MW**
- As the notification took place before 9:00 CET 31/12/2020, Elia registers Announced Unavailable Capacity

$$P_{Announced,Unavailable}(CMU,t) = NRP(CMU,t) - P_{Max,Remaining}(CMU,t) = 305\ MW\ - 0\ MW = \mathbf{305\ MW}$$

2. Declaration of Unavailable Capacity (2/2)

B. Notification of Unavailable Capacity on 10/01/2025 at 17:00 – Rejected

CMU ID	Remaining Maximum Capacity	Start date and time	End date and time	Reason
CMU 2	**0 MW**	10/01/2026 13:00	11/01/2026 23:59	-

- The notification is rejected as the mandatory field 'Reason' was not completed

C. Updated notification of Unavailable Capacity on 10/01/2025 at 17:15 – Accepted

CMU ID	Remaining Maximum Capacity	Start date and time	End date and time	Reason
CMU 2	**0 MW**	10/01/2026 13:00	11/01/2026 23:59	Forced Outage

- Elia registers the Remaining Maximum Capacity for CMU 2 for time 't' between 10/01/2026 13:00 and 11/01/2026 23:59 as **0 MW**
- As the notification did not take place before 9:00 CET 09/12/2020, Elia does not register Announced Unavailable Capacity

$$P_{Announced,Unavailable}(CMU, t) = \mathbf{0\ MW}$$

3. 1. Capacity Provider and CMUs

3. 2. (Partial) Declared Prices and Unavailable Capacity

Participation in Ancillary or Redispatching Services

Not applicable for CMUs with Daily Schedule Obligation

4. AMT Moment Monitoring

3. 1. Capacity Provider and CMUs

3. 2. (Partial) Declared Prices and Unavailable Capacity

3. Participation in Ancillary or Redispatching Services

4. AMT Moment Monitoring

4. AMT Moment Monitoring

Day 1 – 10/01/2026

4. AMT Moment Monitoring

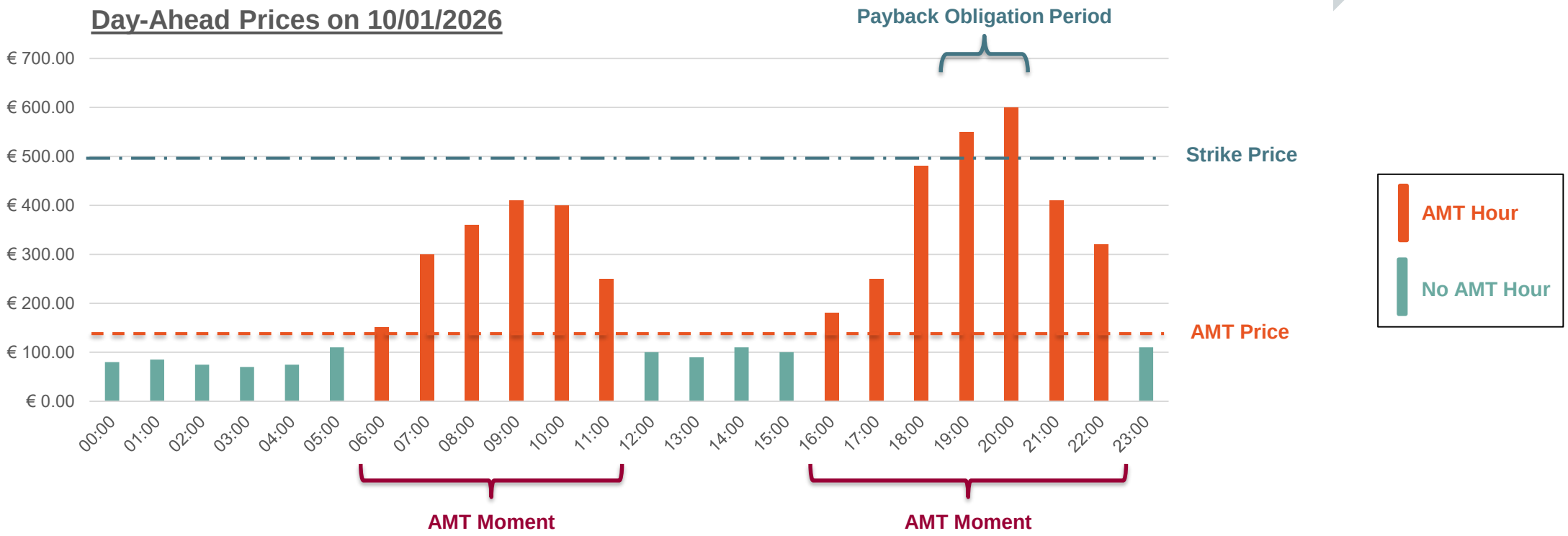
On **10/01/2026**, the system was stressed due to **two peaks of consumption**, one in the morning and one in the evening. The Day-Ahead prices have risen to very high levels, demonstrating that the Belgian electricity market is facing an **adequacy moment**.

As the CRM has been implemented to answer this kind of moment, Availability Monitoring applies to all CMUs on these moments.

To perform the monitoring, Elia will follow these steps :

4. AMT Moment Monitoring

Identification of AMT Hours/Moments → Determine Obligated Capacity → Determine Available Capacity → Determine Missing Capacity → Determine Unavailability Penalty

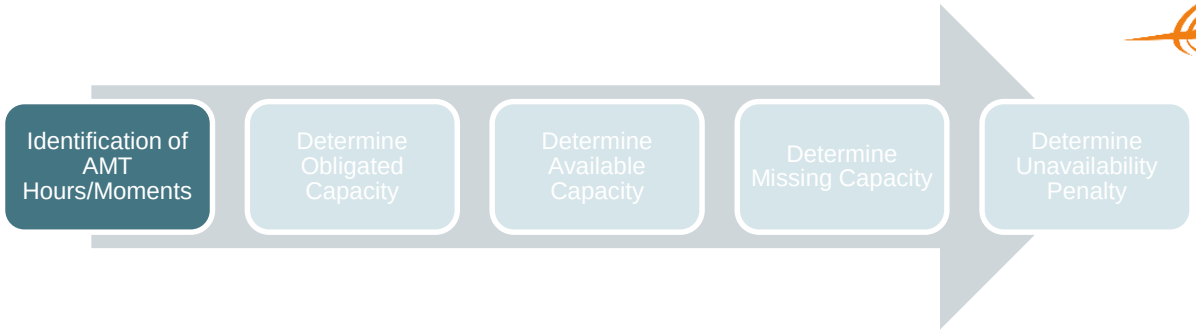


Elia identifies

2 AMT Moments:
- From 06:00 to 12:00
- From 16:00 to 23:00

1 Payback Obligation Period:
- From 19:00 to 21:00

4. AMT Moment Monitoring



	DA Price	AMT Hour	SLA Hour	Obligated Capacity	Available Capacity	Missing Capacity
AMT Moment 1	€ 150,00	06:00 -> 07:00	NA			
	€ 300,00	07:00 -> 08:00	NA			
	€ 360,00	08:00 -> 09:00	NA			
	€ 410,00	09:00 -> 10:00	NA			
	€ 400,00	10:00 -> 11:00	NA			
	€ 250,00	11:00 -> 12:00	NA			
AMT Moment 2	€ 180,00	16:00 -> 17:00	NA			
	€ 250,00	17:00 -> 18:00	NA			
	€ 480,00	18:00 -> 19:00	NA			
	€ 550,00	19:00 -> 20:00	NA			
	€ 600,00	20:00 -> 21:00	NA			
	€ 410,00	21:00 -> 22:00	NA			
	€ 320,00	22:00 -> 23:00	NA			

Payback Obligation Period

CMU 1

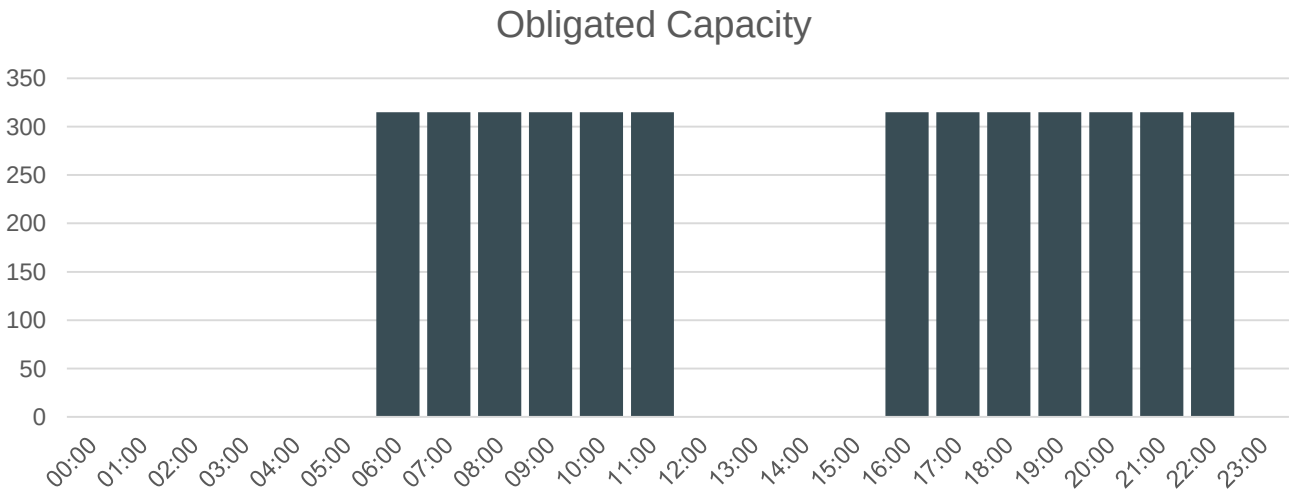
4. AMT Moment Monitoring

Obligated Capacity Determination

- Calculation of Obligated Capacity based on the Contracted Capacity

$$P_{Obligated}(CMU\ 1, t) = Contracted\ Capacity(CMU, t)$$

- Thus, CMU 1 has an **Obligated Capacity** of **315 MW** between **06:00 - 12:00 and 16:00-23:00**



Contracted Capacity	
Primary Transaction (MW)	315
Secondary Transaction (MW)	0
Obligated Capacity(MW)	**315**

CMU 1

4. AMT Moment Monitoring

	DA Price	AMT Hour	SLA Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)
AMT Moment 1	€ 150,00	06:00 -> 07:00	NA	315		
	€ 300,00	07:00 -> 08:00	NA	315		
	€ 360,00	08:00 -> 09:00	NA	315		
	€ 410,00	09:00 -> 10:00	NA	315		
	€ 400,00	10:00 -> 11:00	NA	315		
	€ 250,00	11:00 -> 12:00	NA	315		
AMT Moment 2	€ 180,00	16:00 -> 17:00	NA	315		
	€ 250,00	17:00 -> 18:00	NA	315		
	€ 480,00	18:00 -> 19:00	NA	315		
	€ 550,00	19:00 -> 20:00	NA	315		
	€ 600,00	20:00 -> 21:00	NA	315		
	€ 410,00	21:00 -> 22:00	NA	315		
	€ 320,00	22:00 -> 23:00	NA	315		

Payback Obligation Period

CMU 2

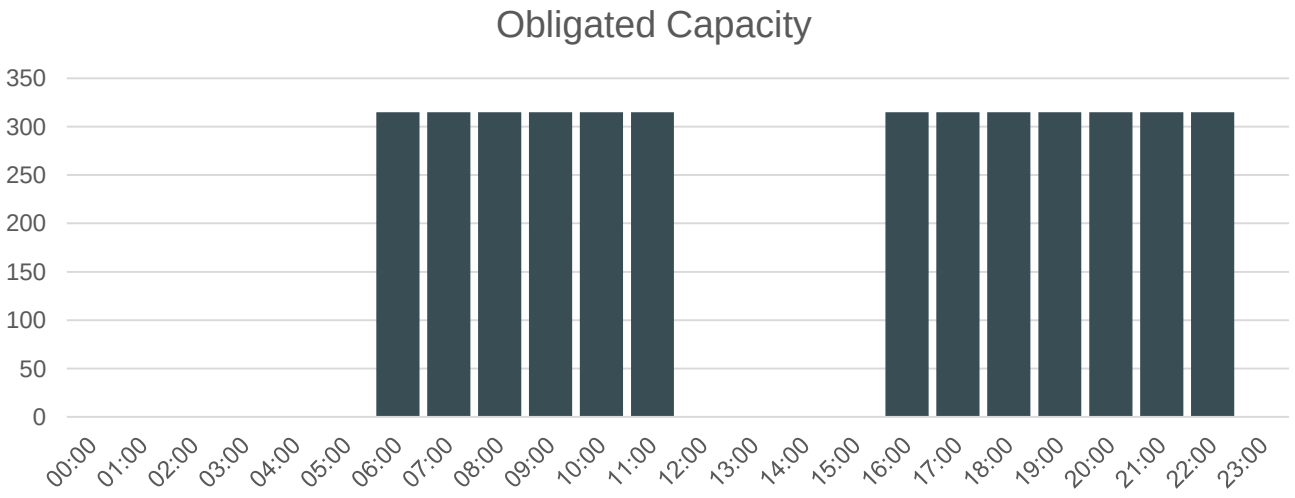
4. AMT Moment Monitoring

Obligated Capacity Determination

- Calculation of Obligated Capacity based on the Contracted Capacity

$$P_{Obligated}(CMU\ 2, t) = Contracted\ Capacity(CMU, t)$$

- Thus, CMU 2 has an **Obligated Capacity** of **315 MW** between **06:00 - 12:00 and 16:00 - 23:00**



Contracted Capacity	
Primary Transaction (MW)	315
Secondary Transaction (MW)	0
Obligated Capacity(MW)	**315**

CMU 2

4. AMT Moment Monitoring

	DA Price	AMT Hour	SLA Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)
AMT Moment 1	€ 150,00	06:00 -> 07:00	NA	315		
	€ 300,00	07:00 -> 08:00	NA	315		
	€ 360,00	08:00 -> 09:00	NA	315		
	€ 410,00	09:00 -> 10:00	NA	315		
	€ 400,00	10:00 -> 11:00	NA	315		
	€ 250,00	11:00 -> 12:00	NA	315		
AMT Moment 2	€ 180,00	16:00 -> 17:00	NA	315		
	€ 250,00	17:00 -> 18:00	NA	315		
	€ 480,00	18:00 -> 19:00	NA	315		
	€ 550,00	19:00 -> 20:00	NA	315		
	€ 600,00	20:00 -> 21:00	NA	315		
	€ 410,00	21:00 -> 22:00	NA	315		
	€ 320,00	22:00 -> 23:00	NA	315		

Payback Obligation Period

CMU 3

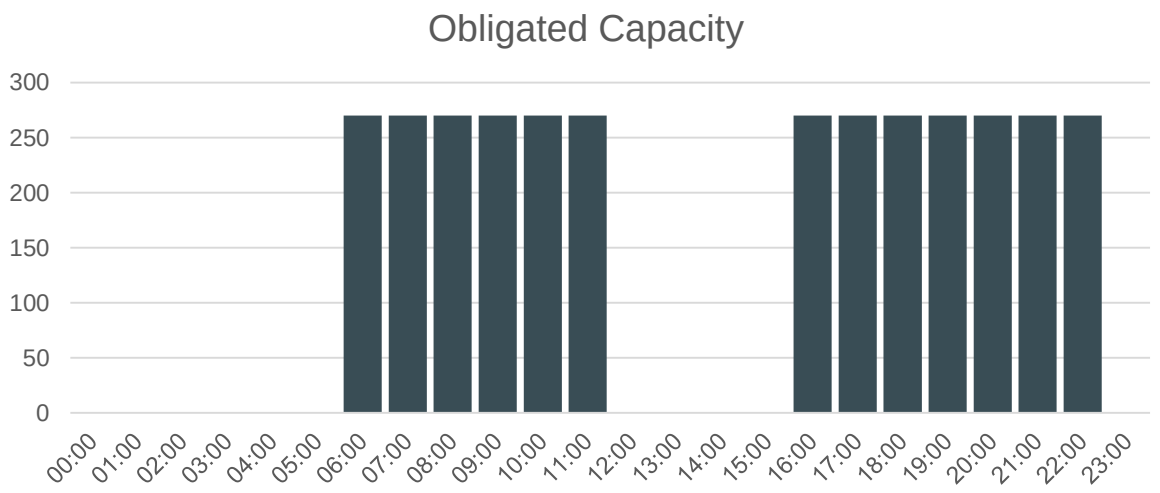
4. AMT Moment Monitoring

Obligated Capacity Determination

- Calculation of Obligated Capacity based on the Contracted Capacity

$$P_{Obligated}(CMU\ 3, t) = Contracted\ Capacity(CMU, t)$$

- Thus, CMU 3 has an **Obligated Capacity** of **270 MW** between **06:00 - 12:00 and 16:00 - 23:00**



Contracted Capacity	
Primary Transaction (MW)	270
Secondary Transaction (MW)	0
Obligated Capacity(MW)	**270**

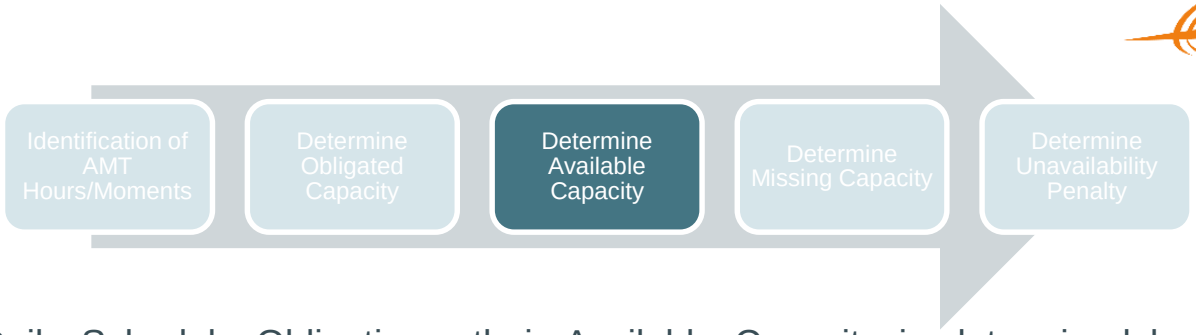
CMU 3

4. AMT Moment Monitoring

	DA Price	AMT Hour	SLA Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)
AMT Moment 1	€ 150,00	06:00 -> 07:00	NA	270		
	€ 300,00	07:00 -> 08:00	NA	270		
	€ 360,00	08:00 -> 09:00	NA	270		
	€ 410,00	09:00 -> 10:00	NA	270		
	€ 400,00	10:00 -> 11:00	NA	270		
	€ 250,00	11:00 -> 12:00	NA	270		
AMT Moment 2	€ 180,00	16:00 -> 17:00	NA	270		
	€ 250,00	17:00 -> 18:00	NA	270		
	€ 480,00	18:00 -> 19:00	NA	270		
	€ 550,00	19:00 -> 20:00	NA	270		
	€ 600,00	20:00 -> 21:00	NA	270		
	€ 410,00	21:00 -> 22:00	NA	270		
	€ 320,00	22:00 -> 23:00	NA	270		

Payback Obligation Period

4. AMT Moment Monitoring



Determination of the Available Capacity

As all of EnergyProducer.SA/NA's CMUs have a Daily Schedule Obligation, their Available Capacity is determined by their Nominated Pmax in their Daily Schedule and Remaining Available Capacity at time 't'

$$P_{Available}(CMU, t) = MIN(P_{Max,Remaining}(CMU, t); P_{Max,Nominated})$$

CMU 1:

- AMT Moment #1 and AMT Moment #2:

$$P_{Max,Available}(CMU\ 1, t) = MIN(349\ MW; 350\ MW) = 349\ MW$$

CMU 2:

- AMT Moment #1:

$$P_{Max,Available}(CMU\ 2, t) = MIN(352\ MW; 350\ MW) = 350\ MW$$

- AMT Moment #2:

$$P_{Max,Available}(CMU\ 2, t) = MIN(0\ MW; 0\ MW) = 0\ MW$$

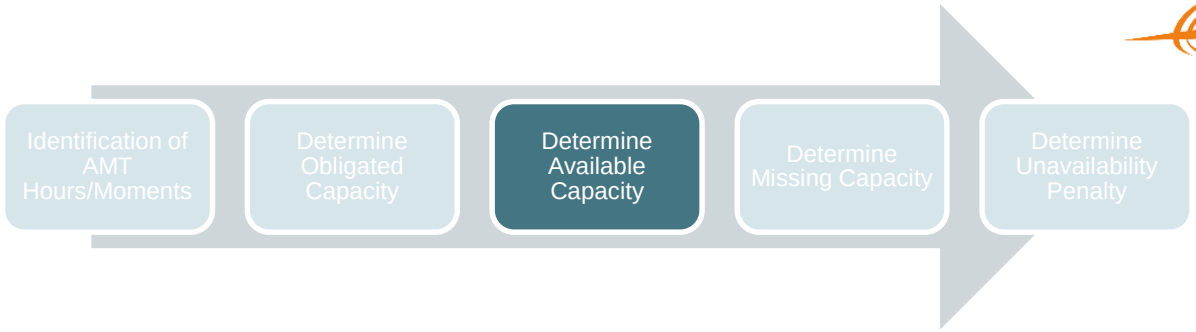
CMU 3:

- AMT Moment #1 and AMT Moment #2:

$$P_{Max,Available}(CMU\ 3, t) = MIN(0\ MW; 0\ MW) = 0\ MW$$

CMU 1

4. AMT Moment Monitoring

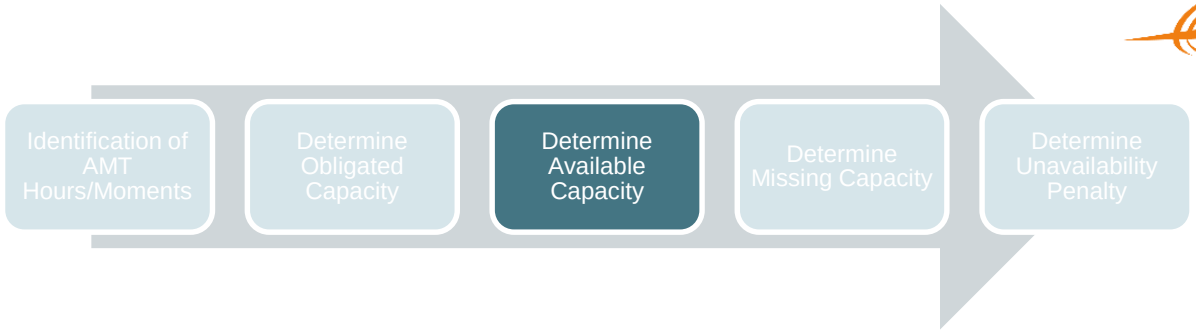


	DA Price	AMT Hour	SLA Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)
AMT Moment 1	€ 150,00	06:00 -> 07:00	NA	315	349	
	€ 300,00	07:00 -> 08:00	NA	315	349	
	€ 360,00	08:00 -> 09:00	NA	315	349	
	€ 410,00	09:00 -> 10:00	NA	315	349	
	€ 400,00	10:00 -> 11:00	NA	315	349	
	€ 250,00	11:00 -> 12:00	NA	315	349	
AMT Moment 2	€ 180,00	16:00 -> 17:00	NA	315	349	
	€ 250,00	17:00 -> 18:00	NA	315	349	
	€ 480,00	18:00 -> 19:00	NA	315	349	
	€ 550,00	19:00 -> 20:00	NA	315	349	
	€ 600,00	20:00 -> 21:00	NA	315	349	
	€ 410,00	21:00 -> 22:00	NA	315	349	
	€ 320,00	22:00 -> 23:00	NA	315	349	

Payback Obligation Period

CMU 2

4. AMT Moment Monitoring

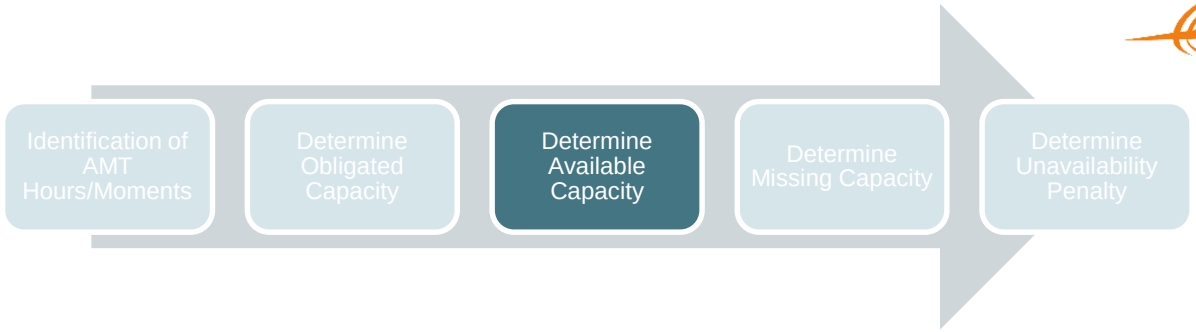


	DA Price	AMT Hour	SLA Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)
AMT Moment 1	€ 150,00	06:00 -> 07:00	NA	315	350	
	€ 300,00	07:00 -> 08:00	NA	315	350	
	€ 360,00	08:00 -> 09:00	NA	315	350	
	€ 410,00	09:00 -> 10:00	NA	315	350	
	€ 400,00	10:00 -> 11:00	NA	315	350	
	€ 250,00	11:00 -> 12:00	NA	315	350	
AMT Moment 2	€ 180,00	16:00 -> 17:00	NA	315	0	
	€ 250,00	17:00 -> 18:00	NA	315	0	
	€ 480,00	18:00 -> 19:00	NA	315	0	
	€ 550,00	19:00 -> 20:00	NA	315	0	
	€ 600,00	20:00 -> 21:00	NA	315	0	
	€ 410,00	21:00 -> 22:00	NA	315	0	
	€ 320,00	22:00 -> 23:00	NA	315	0	

Payback Obligation Period

CMU 3

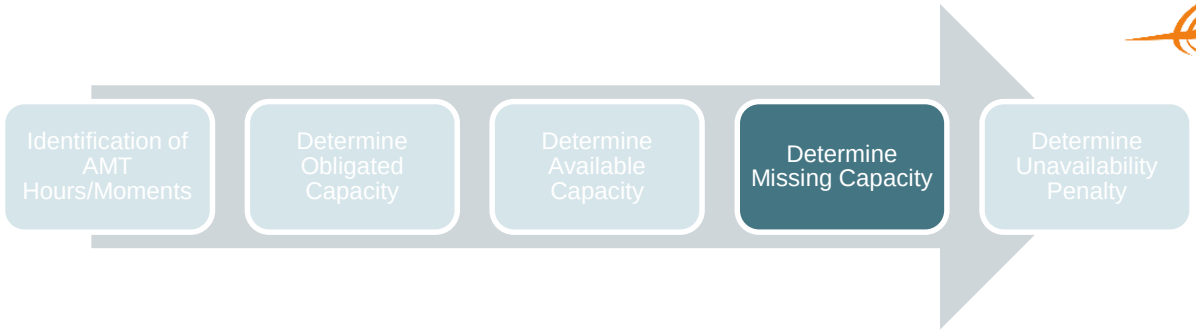
4. AMT Moment Monitoring



	DA Price	AMT Hour	SLA Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)
AMT Moment 1	€ 150,00	06:00 -> 07:00	NA	270	0	
	€ 300,00	07:00 -> 08:00	NA	270	0	
	€ 360,00	08:00 -> 09:00	NA	270	0	
	€ 410,00	09:00 -> 10:00	NA	270	0	
	€ 400,00	10:00 -> 11:00	NA	270	0	
	€ 250,00	11:00 -> 12:00	NA	270	0	
AMT Moment 2	€ 180,00	16:00 -> 17:00	NA	270	0	
	€ 250,00	17:00 -> 18:00	NA	270	0	
	€ 480,00	18:00 -> 19:00	NA	270	0	
	€ 550,00	19:00 -> 20:00	NA	270	0	
	€ 600,00	20:00 -> 21:00	NA	270	0	
	€ 410,00	21:00 -> 22:00	NA	270	0	
	€ 320,00	22:00 -> 23:00	NA	270	0	

Payback Obligation Period

4. AMT Moment Monitoring



Determination of the Missing Capacity

- The Missing Capacity of a CMU is equal to the positive difference between Obligated and Available Capacity during an AMT Hour during Availability Monitoring
- From this Missing Capacity, Elia differentiates two types of Missing Capacity
  - Announced Missing Capacity (AMC)

$$AMC(CMU,t) = Min(P_{Unavailable,Announced}(CMU,t)\,;MC(CMU,t))$$

Where $P_{Unavailable,Announced}(CMU,t)$ is the Announced Unavailable Capacity that covers the AMT Hour and $MC(CMU,t)$ is the Missing Capacity of the CMU for the AMT Hour

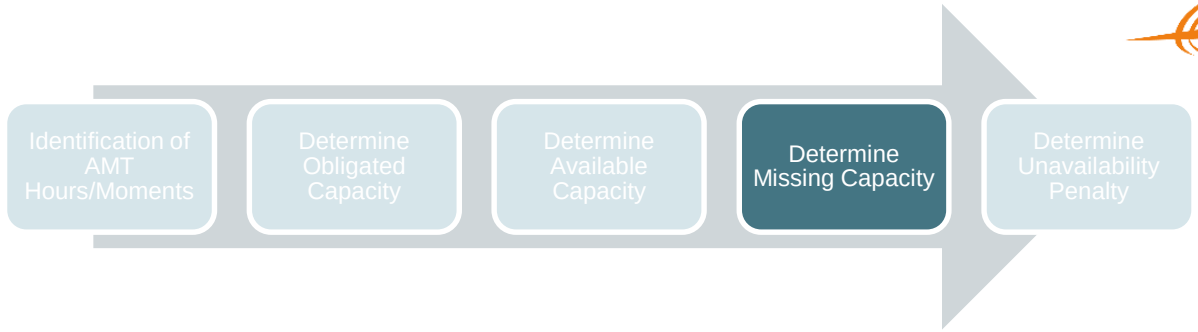
  - Unannounced Missing Capacity (UMC)

$$UMC(CMU,t) = Max(MC(CMU,t) - AMC(CMU,t);0)$$

- EnergyProducer.SA/NA's CMU's show Announced as well as Unannounced Missing Capacity, pursuant to the Unavailable Capacity notifications

CMU 1

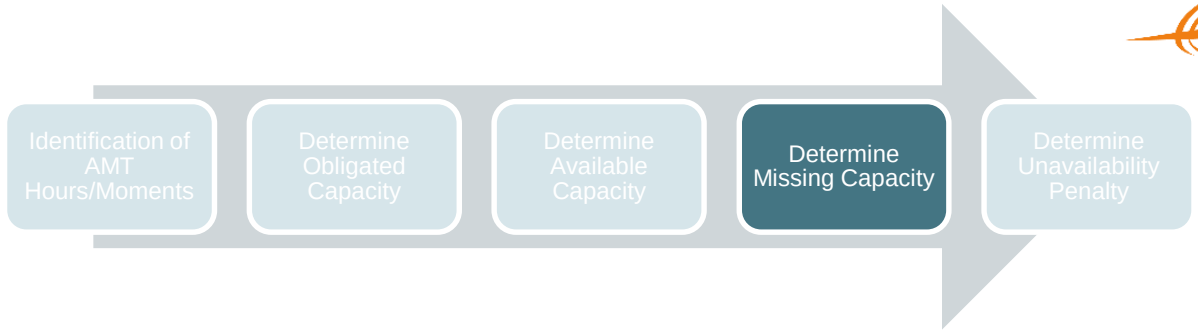
4. AMT Moment Monitoring



	AMT Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)	Announced Missing Capacity (MW)	Unannounced Missing Capacity (MW)
AMT Moment 1	06:00 -> 07:00	315	349	0	0	0
	07:00 -> 08:00	315	349	0	0	0
	08:00 -> 09:00	315	349	0	0	0
	09:00 -> 10:00	315	349	0	0	0
	10:00 -> 11:00	315	349	0	0	0
	11:00 -> 12:00	315	349	0	0	0
AMT Moment 2	16:00 -> 17:00	315	349	0	0	0
	17:00 -> 18:00	315	349	0	0	0
	18:00 -> 19:00	315	349	0	0	0
	19:00 -> 20:00	315	349	0	0	0
	20:00 -> 21:00	315	349	0	0	0
	21:00 -> 22:00	315	349	0	0	0
	22:00 -> 23:00	315	349	0	0	0

CMU 2

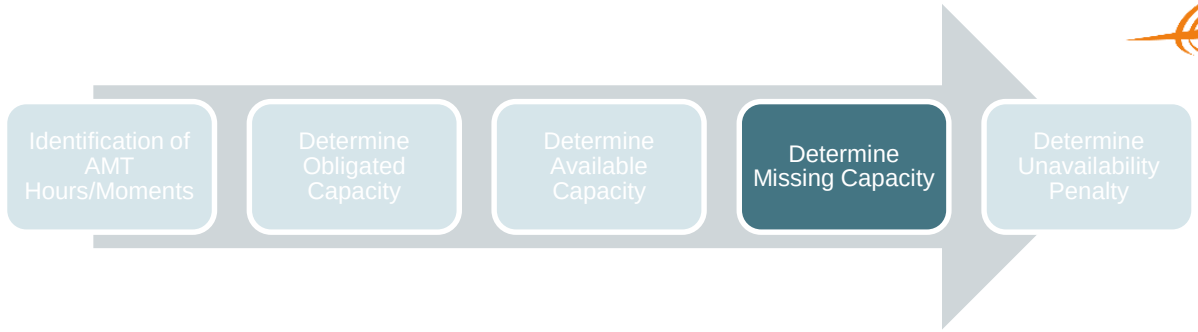
4. AMT Moment Monitoring



	AMT Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)	Announced Missing Capacity (MW)	Unannounced Missing Capacity (MW)
AMT Moment 1	06:00 -> 07:00	315	350	0	0	0
	07:00 -> 08:00	315	350	0	0	0
	08:00 -> 09:00	315	350	0	0	0
	09:00 -> 10:00	315	350	0	0	0
	10:00 -> 11:00	315	350	0	0	0
	11:00 -> 12:00	315	350	0	0	0
AMT Moment 2	16:00 -> 17:00	315	0	315	0	315
	17:00 -> 18:00	315	0	315	0	315
	18:00 -> 19:00	315	0	315	0	315
	19:00 -> 20:00	315	0	315	0	315
	20:00 -> 21:00	315	0	315	0	315
	21:00 -> 22:00	315	0	315	0	315
	22:00 -> 23:00	315	0	315	0	315

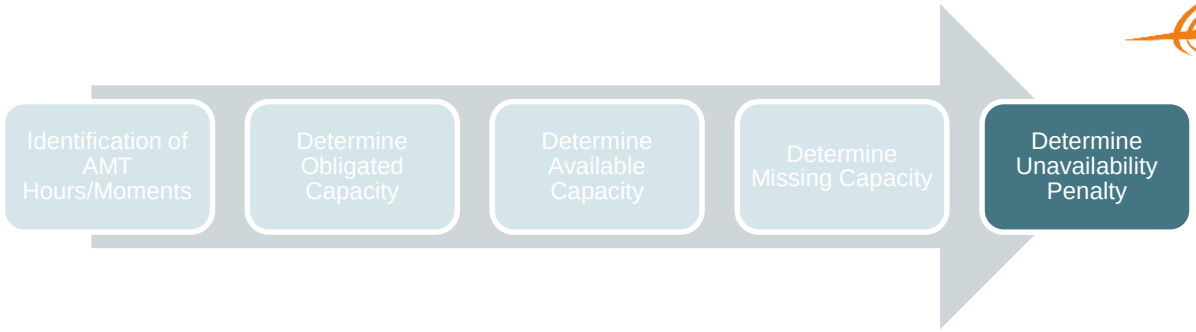
CMU 3

4. AMT Moment Monitoring



	AMT Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)	Announced Missing Capacity (MW)	Unannounced Missing Capacity (MW)
AMT Moment 1	06:00 -> 07:00	270	0	270	270	0
	07:00 -> 08:00	270	0	270	270	0
	08:00 -> 09:00	270	0	270	270	0
	09:00 -> 10:00	270	0	270	270	0
	10:00 -> 11:00	270	0	270	270	0
	11:00 -> 12:00	270	0	270	270	0
AMT Moment 2	16:00 -> 17:00	270	0	270	270	0
	17:00 -> 18:00	270	0	270	270	0
	18:00 -> 19:00	270	0	270	270	0
	19:00 -> 20:00	270	0	270	270	0
	20:00 -> 21:00	270	0	270	270	0
	21:00 -> 22:00	270	0	270	270	0
	22:00 -> 23:00	270	0	270	270	0

4. AMT Moment Monitoring



Determination of the Unavailability Penalty

- EnergyProducer.SA/NA is sanctioned with an Unavailability Penalty for any Missing Capacity on their CMUs. This penalty is applicable over a complete AMT Moment and is calculated according to the following formula:

$$Unavailability\ Penalty\ [€] = \frac{1}{T * UP}[\sum_{t=1}^{T}(1+X) * Weigthed\ Contract\ Value(CMU,t) * UMC(CMU,t) + \sum_{t=1}^{T}(1+X) * Weighted\ Contract\ Value(CMU,t) * AMC(CMU,t)]$$

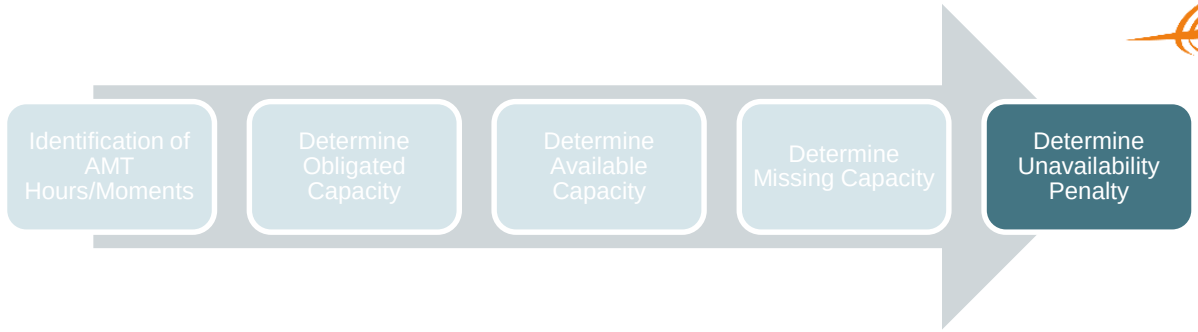
Where:

- T is the number of hours or quarter hours (as applicable) for which the penalty applies
- X is the penalty factor to be applied to the Missing Capacity for time ‘t’
- $UMC(CMU,t)$ is the Unannounced Missing Capacity at time t
- $AMC(CMU,t)$ is the Announced Missing Capacity for time t
- UP is the anticipated number of AMT Moments where availability is verified, equal to 15
- $Weigthed\ Contract\ Value(CMU,t)$ is calculated as follow

$$Weighted\ Contract\ Value(CMU,t) = \frac{\sum_{i=1}^{N} Capacity\ Remuneration_i * Contracted\ Capacity_i}{\sum_{i=1}^{N} Contracted\ Capacity_i}$$

CMU 1

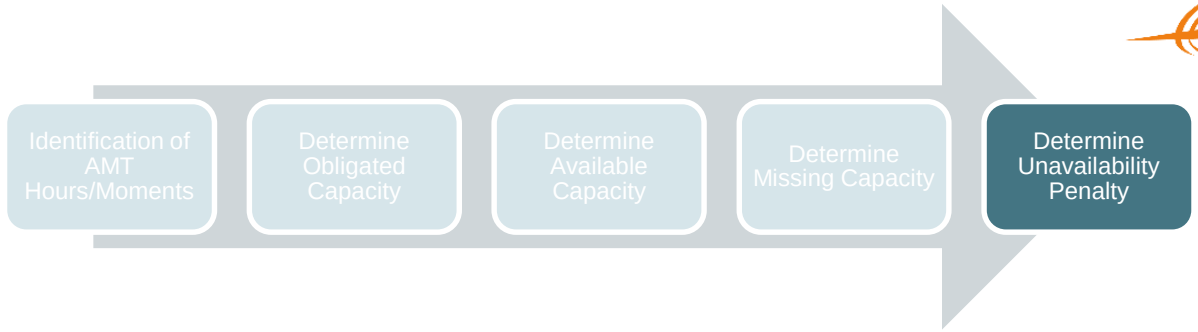
4. AMT Moment Monitoring



	AMT Hour	Announced Missing Capacity (MW)	Unannounced Missing Capacity (MW)	Weighted Contract Value (€/MW)	X Factror AMC/UMC	T	Unavailability Penalty
AMT Moment 1	06:00 -> 07:00	0	0	50.000	0,9/1	6	0
	07:00 -> 08:00	0	0	50.000	0,9/1	6	
	08:00 -> 09:00	0	0	50.000	0,9/1	6	
	09:00 -> 10:00	0	0	50.000	0,9/1	6	
	10:00 -> 11:00	0	0	50.000	0,9/1	6	
	11:00 -> 12:00	0	0	50.000	0,9/1	6	
AMT Moment 2	16:00 -> 17:00	0	0	50.000	0,9/1	7	0
	17:00 -> 18:00	0	0	50.000	0,9/1	7	
	18:00 -> 19:00	0	0	50.000	0,9/1	7	
	19:00 -> 20:00	0	0	50.000	0,9/1	7	
	20:00 -> 21:00	0	0	50.000	0,9/1	7	
	21:00 -> 22:00	0	0	50.000	0,9/1	7	
	22:00 -> 23:00	0	0	50.000	0,9/1	7	

CMU 2

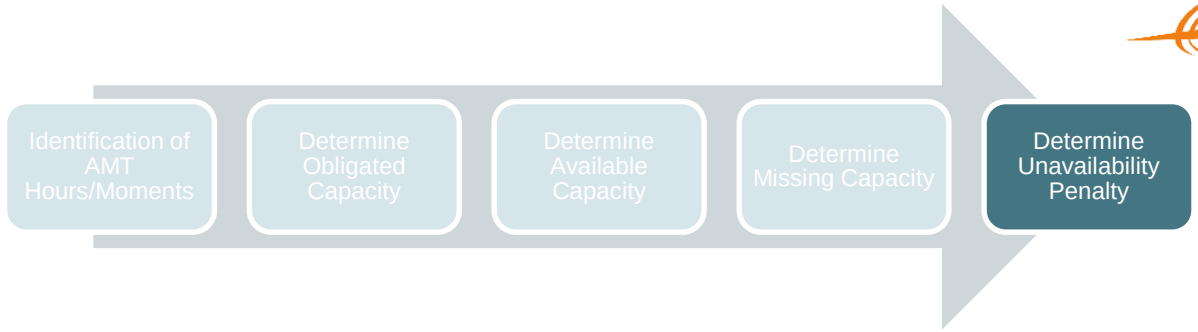
4. AMT Moment Monitoring



	AMT Hour	Announced Missing Capacity (MW)	Unannounced Missing Capacity (MW)	Weighted Contract Value (€/MW)	X Factror AMC/UMC	T	Unavailability Penalty
AMT Moment 1	06:00 -> 07:00	0	0	50.000	0,9/1	6	0
	07:00 -> 08:00	0	0	50.000	0,9/1	6	
	08:00 -> 09:00	0	0	50.000	0,9/1	6	
	09:00 -> 10:00	0	0	50.000	0,9/1	6	
	10:00 -> 11:00	0	0	50.000	0,9/1	6	
	11:00 -> 12:00	0	0	50.000	0,9/1	6	
AMT Moment 2	16:00 -> 17:00	0	315	50.000	0,9/1	7	2.100.000
	17:00 -> 18:00	0	315	50.000	0,9/1	7	
	18:00 -> 19:00	0	315	50.000	0,9/1	7	
	19:00 -> 20:00	0	315	50.000	0,9/1	7	
	20:00 -> 21:00	0	315	50.000	0,9/1	7	
	21:00 -> 22:00	0	315	50.000	0,9/1	7	
	22:00 -> 23:00	0	315	50.000	0,9/1	7	

CMU 3

4. AMT Moment Monitoring



	AMT Hour	Announced Missing Capacity (MW)	Unannounced Missing Capacity (MW)	Weighted Contract Value (€/MW)	X Factror AMC/UMC	T	Unavailability Penalty
AMT Moment 1	06:00 -> 07:00	270	0	50.000	0,9/1	6	1.710.000
	07:00 -> 08:00	270	0	50.000	0,9/1	6	
	08:00 -> 09:00	270	0	50.000	0,9/1	6	
	09:00 -> 10:00	270	0	50.000	0,9/1	6	
	10:00 -> 11:00	270	0	50.000	0,9/1	6	
	11:00 -> 12:00	270	0	50.000	0,9/1	6	
AMT Moment 2	16:00 -> 17:00	270	0	50.000	0,9/1	7	1.710.000
	17:00 -> 18:00	270	0	50.000	0,9/1	7	
	18:00 -> 19:00	270	0	50.000	0,9/1	7	
	19:00 -> 20:00	270	0	50.000	0,9/1	7	
	20:00 -> 21:00	270	0	50.000	0,9/1	7	
	21:00 -> 22:00	270	0	50.000	0,9/1	7	
	22:00 -> 23:00	270	0	50.000	0,9/1	7	

4. AMT Moment Monitoring

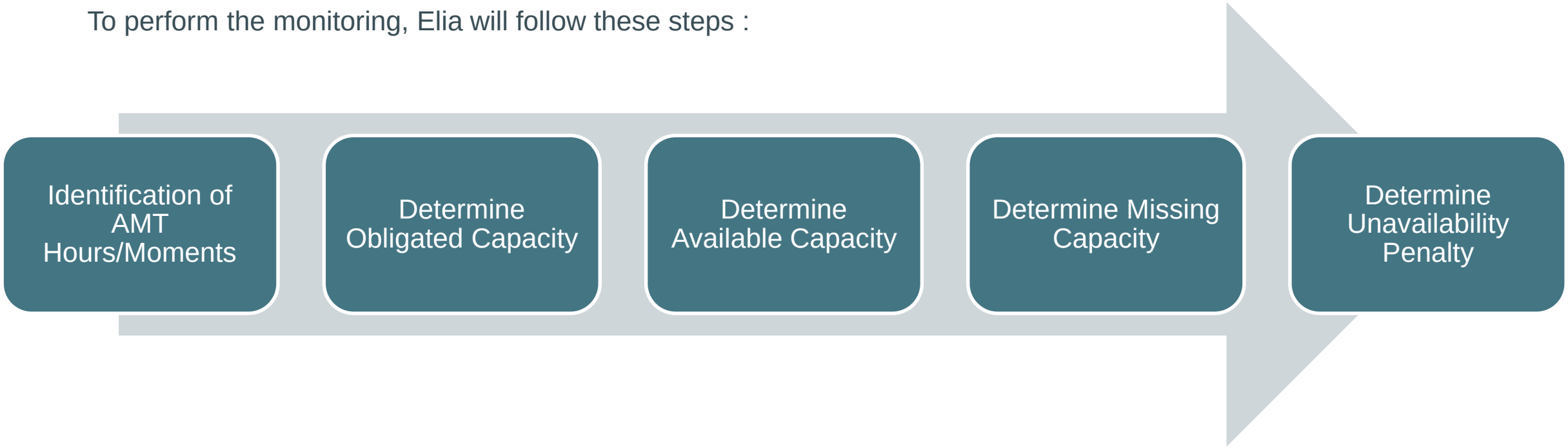
Day 2 – 14/02/2026

4. AMT Moment Monitoring

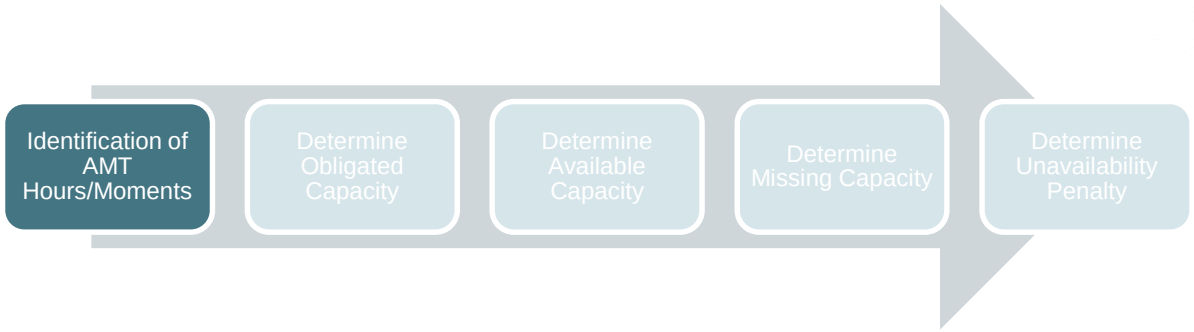
On **14/02/2026**, due to some forced outages and low temperature, the Belgian network faced price increases on the short term market (Day-Ahead) leading up to a moment of adequacy in the evening.

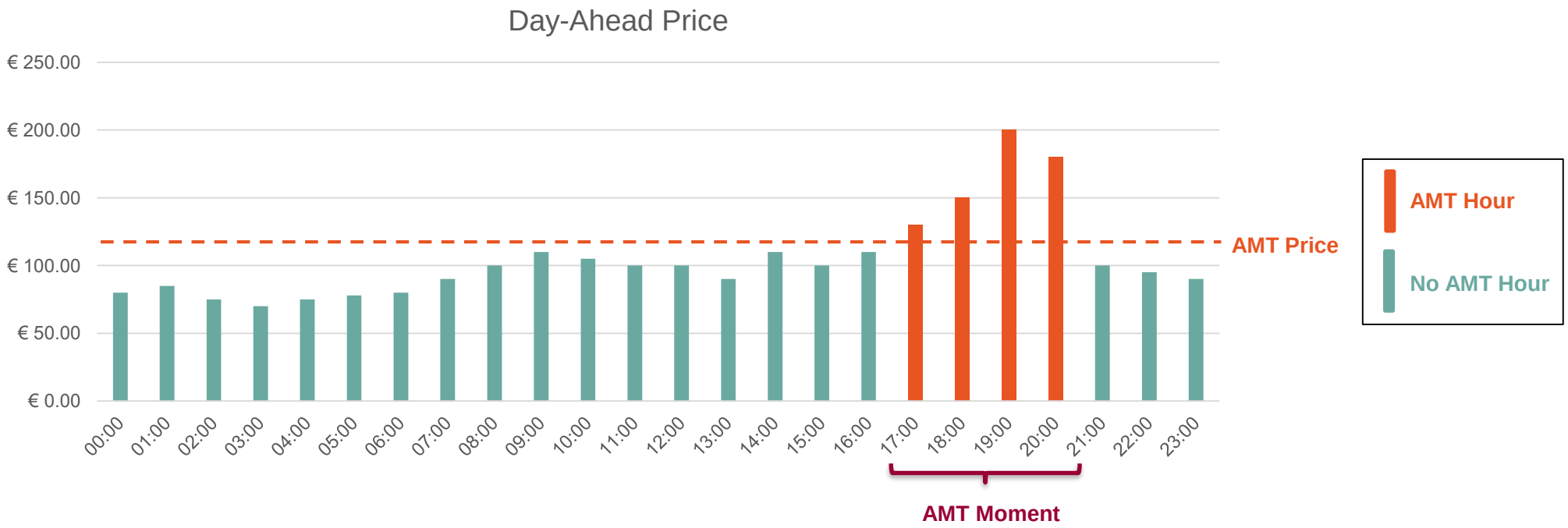
As the CRM has been implemented to answer this kind of moment, Availability Monitoring applies to all CMUs on these moments.

To perform the monitoring, Elia will follow these steps :



4. AMT Moment Monitoring



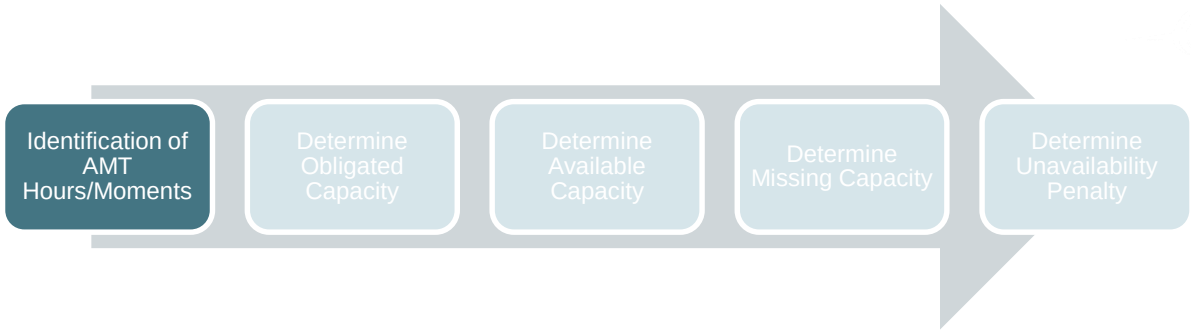


Elia identifies

1 AMT Moments:

- From 17:00 to 21:00

4. AMT Moment Monitoring



AMT Moment 1

DA Price	AMT Hour	SLA Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)
€ 130,00	17:00 -> 18:00	NA	319,4		
€ 150,00	18:00 -> 19:00	NA	319,4		
€ 200,00	19:00 -> 20:00	NA	319,4		
€ 180,00	20:00 -> 21:00	NA	319,4		

CMU 1

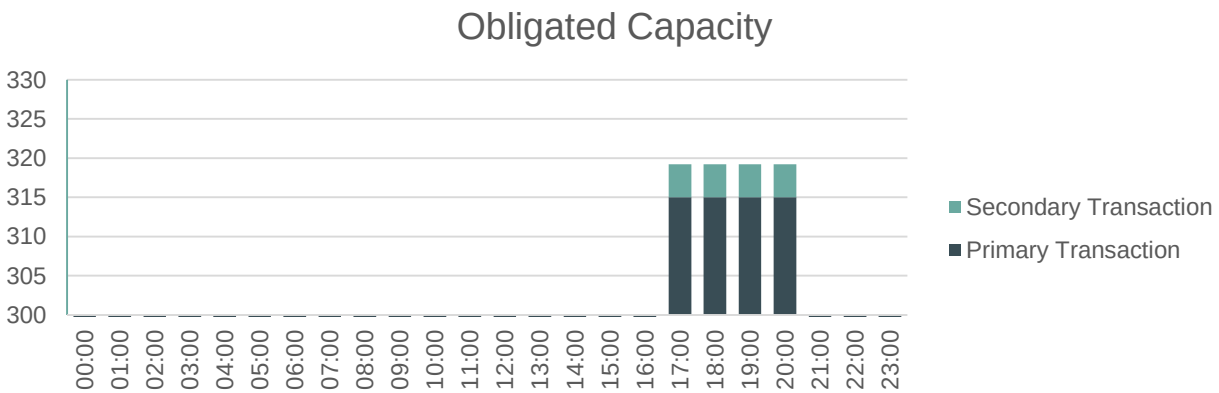
4. AMT Moment Monitoring

Obligated Capacity Determination

- Calculation of Obligated Capacity based on the Contracted Capacity

$$P_{Obligated}(CMU\ 1, t) = Contracted\ Capacity(CMU, t)$$

- As **EnergyProducer** didn't sell any Obligation on the Secondary Market for its **CMU 1** , the Primary Transaction remains unchanged and is therefore **315 MW**
- However, **EnergyProducer** bought ex-post an Obligation of **4,2 MW** for **CMU 1** to **CptyE** from **14/02/2026 17:00** to **14/02/2026 21:00** according to the Second Market
- Thus, CMU 1 has an **Obligated Capacity** of **319,2 MW** between **17:00-20:00**



Contracted Capacity	Volume	Period
Primary Transaction (MW)	315	Throughout the current delivery period
Secondary Transaction (MW)	4,2	From 14/02/2026 17:00 To 14/02/2026 21:00
Obligated Capacity(MW)	**319,2**	

CMU 1

4. AMT Moment Monitoring

AMT Moment 1

DA Price	AMT Hour	SLA Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)
€ 130,00	17:00 -> 18:00	NA	319,4		
€ 150,00	18:00 -> 19:00	NA	319,4		
€ 200,00	19:00 -> 20:00	NA	319,4		
€ 180,00	20:00 -> 21:00	NA	319,4		

4. AMT Moment Monitoring

Determination of the Available Capacity

As all of EnergyProducer.SA/NA's CMUs have a Daily Schedule Obligation, their Available Capacity is determined by their Nominated Pmax in their Daily Schedule and Remaining Available Capacity at time 't'

$$P_{Available}(CMU, t) = MIN(P_{Max,Remaining}(CMU, t); P_{Max,Nominated})$$

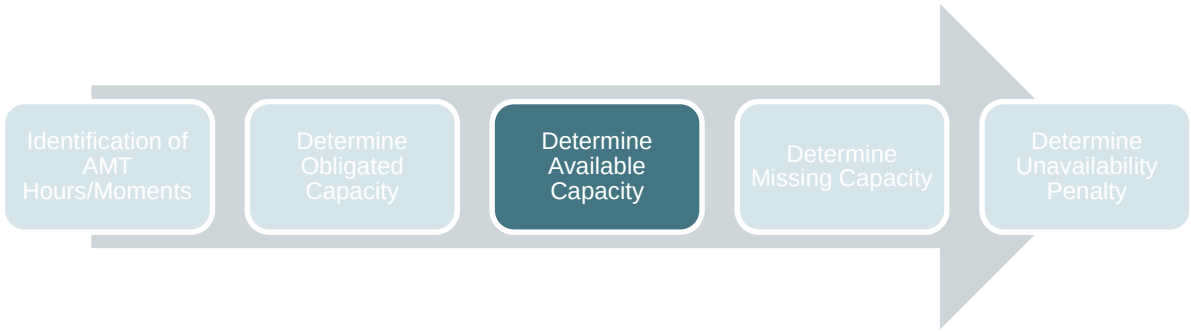
CMU 1:

- AMT Moment #1

$$P_{Max,Available}(CMU\ 1, t) = MIN(349\ MW; 350\ MW) = 349\ MW$$

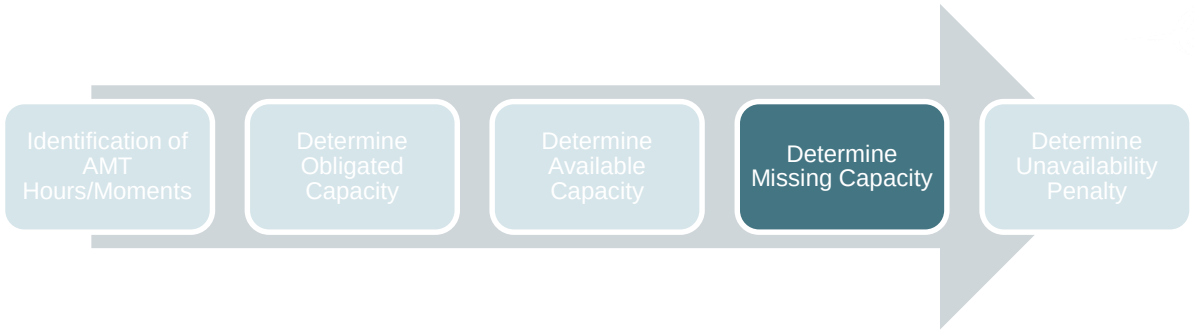
CMU 1

4. AMT Moment Monitoring



	DA Price	AMT Hour	SLA Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)
AMT Moment 1	€ 130,00	17:00 -> 18:00	NA	319,4	349	
	€ 150,00	18:00 -> 19:00	NA	319,4	349	
	€ 200,00	19:00 -> 20:00	NA	319,4	349	
	€ 180,00	20:00 -> 21:00	NA	319,4	349	

4. AMT Moment Monitoring



Determination of the Missing Capacity

- The Missing Capacity of a CMU is equal to the positive difference between Obligated and Available Capacity during an AMT Hour during Availability Monitoring
- From this Missing Capacity, Elia differentiates two types of Missing Capacity
  - Announced Missing Capacity (AMC)

$$AMC(CMU,t) = Min(P_{Unavailable,Announced}(CMU,t)\,;MC(CMU,t))$$

Where $P_{Unavailable,Announced}(CMU,t)$ is the Announced Unavailable Capacity that covers the AMT Hour and $MC(CMU,t)$ is the Missing Capacity of the CMU for the AMT Hour

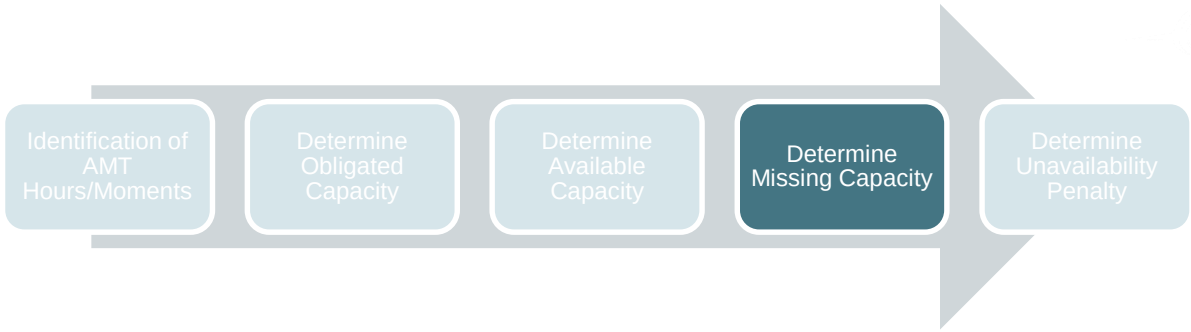
  - Unannounced Missing Capacity (UMC)

$$UMC(CMU,t) = Max(MC(CMU,t) - AMC(CMU,t);0)$$

- EnergyProducer.SA/NA's CMU's didn't show any Announced or Unannounced Missing Capacity

CMU 1

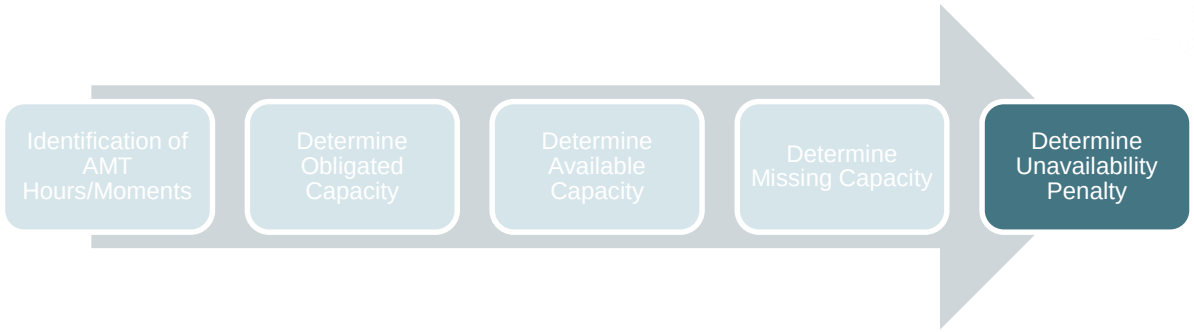
4. AMT Moment Monitoring



AMT Moment 1

AMT Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)	Announced Missing Capacity (MW)	Unannounced Missing Capacity (MW)
17:00 -> 18:00	319,4	349	0	0	0
18:00 -> 19:00	319,4	349	0	0	0
19:00 -> 20:00	319,4	349	0	0	0
20:00 -> 21:00	319,4	349	0	0	0

4. AMT Moment Monitoring



Determination of the Unavailability Penalty

- EnergyProducer.SA/NA is sanctioned with an Unavailability Penalty for any Missing Capacity on their CMUs. This penalty is applicable over a complete AMT Moment and is calculated according to the following formula:

$$Unavailability\ Penalty\ [€] = \frac{1}{T * UP}[\sum_{t=1}^{T}(1+X) * Weigthed\ Contract\ Value(CMU,t) * UMC(CMU,t)\ + \sum_{t=1}^{T}(1+X) * Weighted\ Contract\ Value(CMU,t) * AMC(CMU,t)]$$

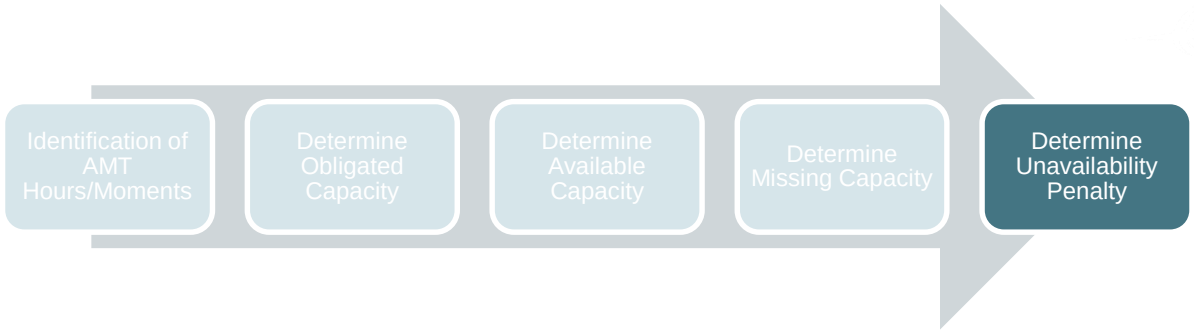
Where:

- T is the number of hours or quarter hours (as applicable) for which the penalty applies
- X is the penalty factor to be applied to the Missing Capacity for time ‘t’
- $UMC(CMU,t)$ is the Unannounced Missing Capacity at time t
- $AMC(CMU,t)$ is the Announced Missing Capacity for time t
- UP is the anticipated number of AMT Moments where availability is verified, equal to 15
- $Weigthed\ Contract\ Value(CMU,t)$ is calculated as follows

$$Weighted\ Contract\ Value(CMU,t) = \frac{\sum_{i=1}^{N} Capacity\ Remuneration_i * Contracted\ Capacity_i}{\sum_{i=1}^{N} Contracted\ Capacity_i}$$

CMU 1

4. AMT Moment Monitoring



	AMT Hour	Announced Missing Capacity (MW)	Unannounced Missing Capacity (MW)	Weighted Contract Value (€/MW)	X Factror AMC/UMC	T	Unavailability Penalty (€)
AMT Moment 1	17:00 -> 18:00	0	0	49.698	0,9/1	4	0
	18:00 -> 19:00	0	0	49.698	0,9/1		
	19:00 -> 20:00	0	0	49.698	0,9/1		
	20:00 -> 21:00	0	0	49.698	0,9/1		

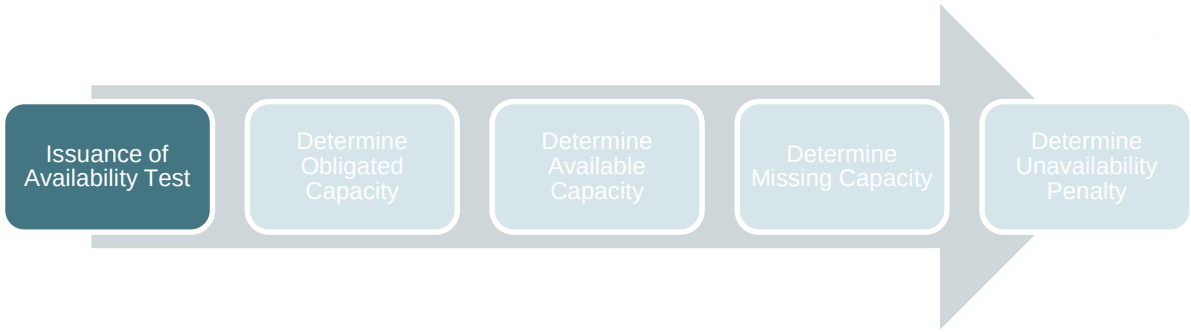
Where

$$Weighted\ Contract\ Value(CMU\ 1, t) = \frac{50.000 * 315 + 27.000 * 4{,}2}{319{,}2} = 49.698\ €/MW$$

t = From 14/02/2026 17:00 to 14/02/2026 21:00

Annex – Availability Test

Annex. Availability Test



On 13/03/2026 at 14:00 Elia issues an Availability Test on CMU 1, 2 and 3 to Capacity Provider EnergyProducer.SA/NA

- Expected duration: **1 quarter-hour**
- Start time: **14/03/2026 00:00**
- End time: **14/03/2026 00:00**

- EnergyProducer.SA/NA can no longer buy/sell obligations on the secondary market for CMUs 1, 2 and 3 with transaction periods covering 14/03/2026 00:00-00:00 with other CMUs
- CMU's 1 and 2 were registered as technically dependent and so EnergyProducer.SA/NA can still exchange obligations among CMU's 1 and 2 during this period
- EnergyProducer.SA/NA cannot exchange any obligations for CMU 3 during this period
- EnergyProducer.SA/NA did not declare Unavailable Capacity for this period on any of their CMUs

Annex. Availability Test

Obligated Capacity Determination:

Obligated Capacity is determined by the Total Contracted Capacity, Derating Factor and Announced Unavailable Capacity

$$P_{Obligated}(CMU,t) = Min(NRP(CMU,t) - P_{Unavailable,Announced}(CMU,t)\ ; \frac{Total\ Contracted\ Capacity(CMU,t)}{Derating\ Factor\ (CMU,t)})$$

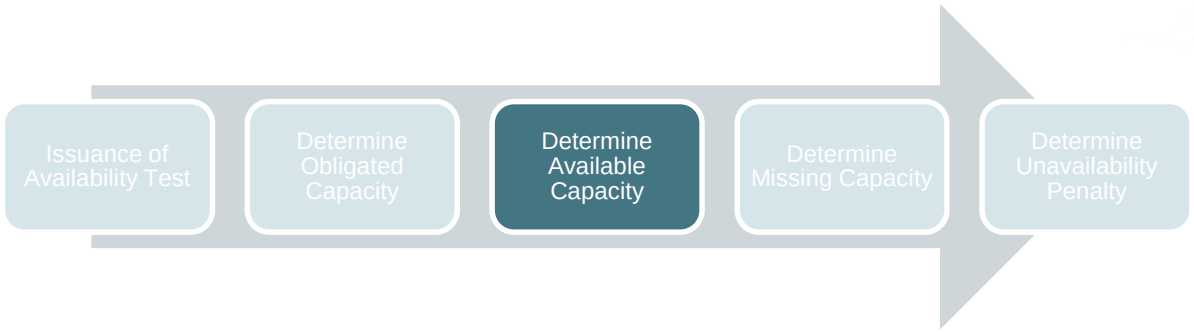
CMU	Nominal Reference Power (MW	Announced Unavailable Capacity (MW)	Total Contracted Capacity (MW)	Derating Factor	Obligated Capacity (MW)
1	349	0	315	0,9	349
2	352	0	315	0,9	350
3	305	0	270	0,9	300

This value only applies during the quarter hour (= expected duration) where Available Capacity was the highest (see next slide)

For all 3 CMUs, this coincides between 14:15->14:30

CMU 1

4. AMT Moment Monitoring



Available Capacity Determination:

Available Capacity is determined as the 15-minute measurement of injection at the Delivery Point:

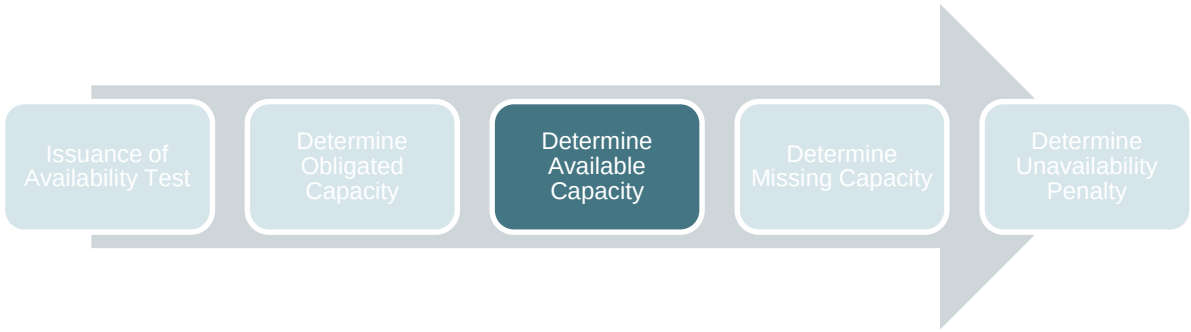
$$P_{Available}(CMU, t) = P_{Measured}(CMU, t)$$

Between 14:15 and 14:30 the injection was the highest (only snapshot between 2 pm and 4 pm shown for brevity)

AMT Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)
14:00->14:15	0	320	
14:15->14:30	315	331	
14:30->14:45	0	329	
14:45->15:00	0	284	
15:00 -> 15:15	0	253	
15:15 -> 15:30	0	253	
15:30 -> 15:45	0	245	
15:45 -> 16:00	0	286	

CMU 2

4. AMT Moment Monitoring



Available Capacity Determination:

Available Capacity is determined as the 15-minute measurement of injection at the Delivery Point:

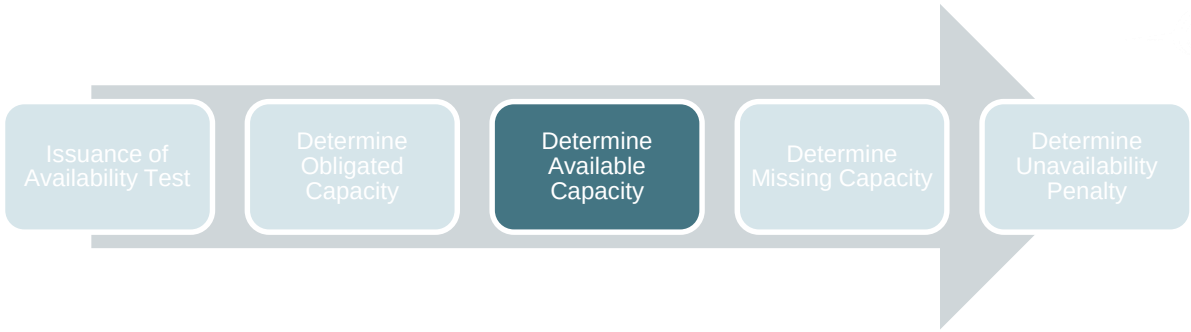
$$P_{Available}(CMU, t) = P_{Measured}(CMU, t)$$

Between 14:15 and 14:30 the injection was the highest (only snapshot between 2 pm and 4 pm shown for brevity)

AMT Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)
14:00->14:15	0	322	
14:15->14:30	315	335	
14:30->14:45	0	324	
14:45->15:00	0	289	
15:00 -> 15:15	0	256	
15:15 -> 15:30	0	252	
15:30 -> 15:45	0	250	
15:45 -> 16:00	0	288	

CMU 3

4. AMT Moment Monitoring



Available Capacity Determination:

Available Capacity is determined as the 15-minute measurement of injection at the Delivery Point:

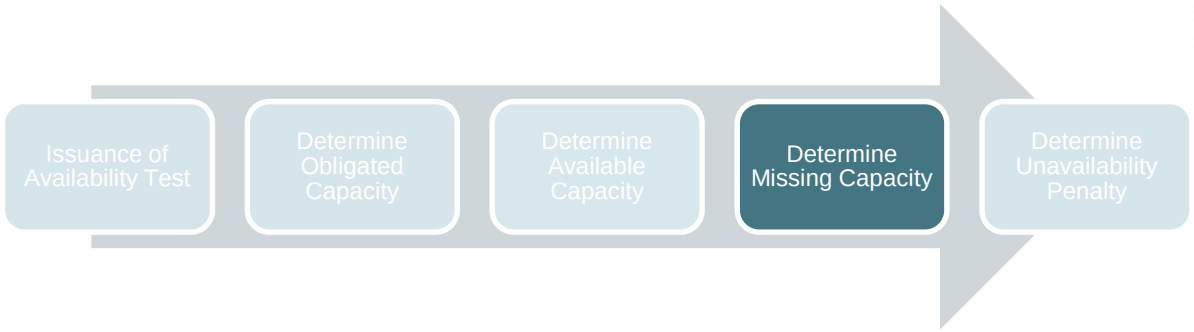
$$P_{Available}(CMU, t) = P_{Measured}(CMU, t)$$

Between 14:15 and 14:30 the injection was the highest (only snapshot between 2 pm and 4 pm shown for brevity)

AMT Hour	Obligated Capacity (MW)	Available Capacity (MW)	Missing Capacity (MW)
14:00->14:15	0	275	
14:15->14:30	270	299	
14:30->14:45	0	289	
14:45->15:00	0	243	
15:00 -> 15:15	0	206	
15:15 -> 15:30	0	206	
15:30 -> 15:45	0	204	
15:45 -> 16:00	0	236	

CMU 1

4. AMT Moment Monitoring



Missing Capacity Determination:

Missing Capacity is the positive difference between the Obligated Capacity and Available Capacity

In this case, any Missing Capacity is Unannounced Missing Capacity, since:

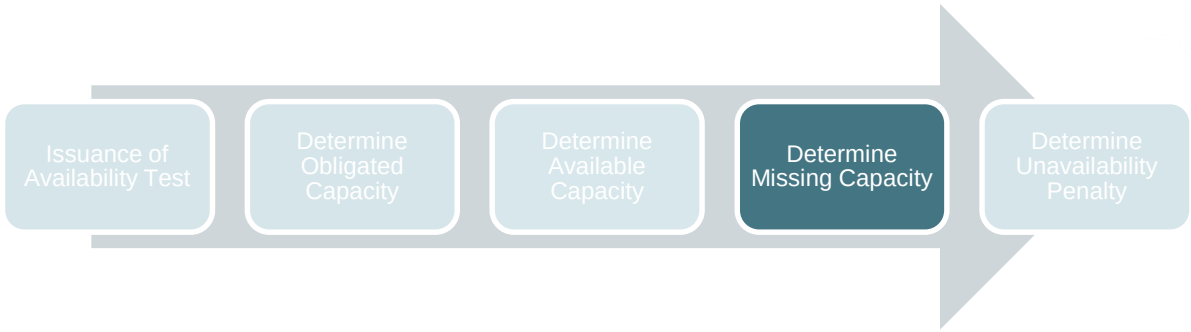
$$AMC(CMU,t) = Min\left(P_{Announced,Unavailable}(CMU,t); MC(CMU,t)\right)$$

And Announced Unavailable Capacity is **0 MW** at this time

AMT Hour	Obligated Capacity (MW)	Available Capacity (MW)	(Unannounced) Missing Capacity (MW)
14:00->14:15	0	320	0
14:15->14:30	315	331	0
14:30->14:45	0	329	0
14:45->15:00	0	284	0
15:00 -> 15:15	0	253	0
15:15 -> 15:30	0	253	0
15:30 -> 15:45	0	245	0
15:45 -> 16:00	0	286	0

CMU 2

4. AMT Moment Monitoring



Missing Capacity Determination:

Missing Capacity is the positive difference between the Obligated Capacity and Available Capacity

In this case, any Missing Capacity is Unannounced Missing Capacity, since:

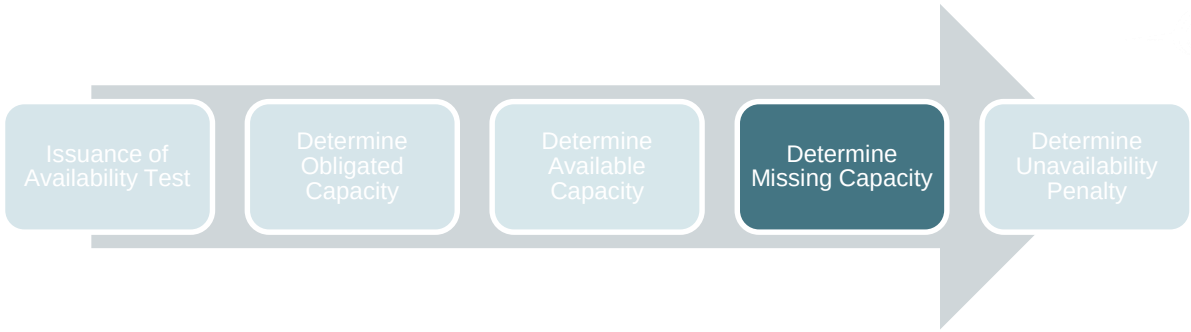
$$AMC(CMU,t) = Min\left(P_{Announced,Unavailable}(CMU,t); MC(CMU,t)\right)$$

And Announced Unavailable Capacity is **0 MW** at this time

AMT Hour	Obligated Capacity (MW)	Available Capacity (MW)	(Unannounced) Missing Capacity (MW)
14:00->14:15	0	322	0
14:15->14:30	315	335	0
14:30->14:45	0	324	0
14:45->15:00	0	289	0
15:00 -> 15:15	0	256	0
15:15 -> 15:30	0	252	0
15:30 -> 15:45	0	250	0
15:45 -> 16:00	0	288	0

CMU 3

4. AMT Moment Monitoring



Missing Capacity Determination:

Missing Capacity is the positive difference between the Obligated Capacity and Available Capacity

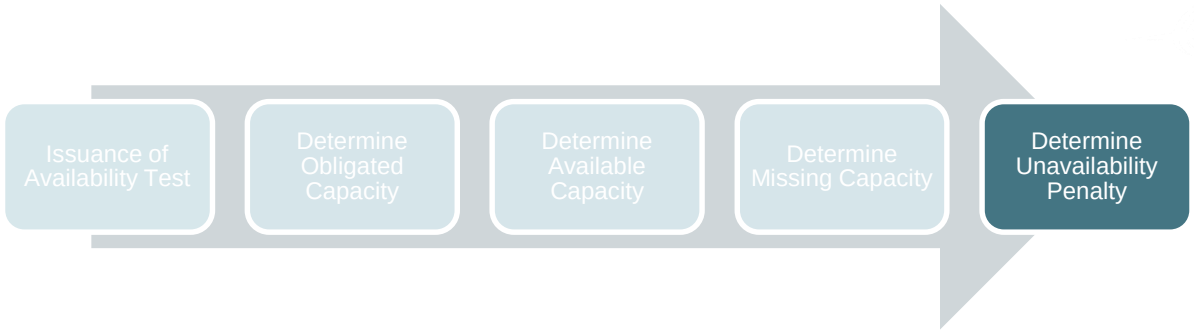
In this case, any Missing Capacity is Unannounced Missing Capacity, since:

$$AMC(CMU,t) = Min\left(P_{Announced,Unavailable}(CMU,t); MC(CMU,t)\right)$$

And Announced Unavailable Capacity is **0 MW** at this time

AMT Hour	Obligated Capacity (MW)	Available Capacity (MW)	(Unannounced) Missing Capacity (MW)
14:00->14:15	0	275	0
14:15->14:30	270	299	0
14:30->14:45	0	289	0
14:45->15:00	0	243	0
15:00 -> 15:15	0	206	0
15:15 -> 15:30	0	206	0
15:30 -> 15:45	0	204	0
15:45 -> 16:00	0	236	0

Annex. Availability Test



Determination of the Unavailability Penalty

- Since all three CMUs had **0 MW** Missing Capacity for each quarter hour between start and end time of the Availability Test, no Unavailability Penalty applies
- All three CMUs have successfully passed 1/3 possible tests during the winter period

  => Each of these CMUs can be tested up to 2 times during winter and once during summer for the remainder of the current Delivery Period