

# Product Design principles

## High-level principles

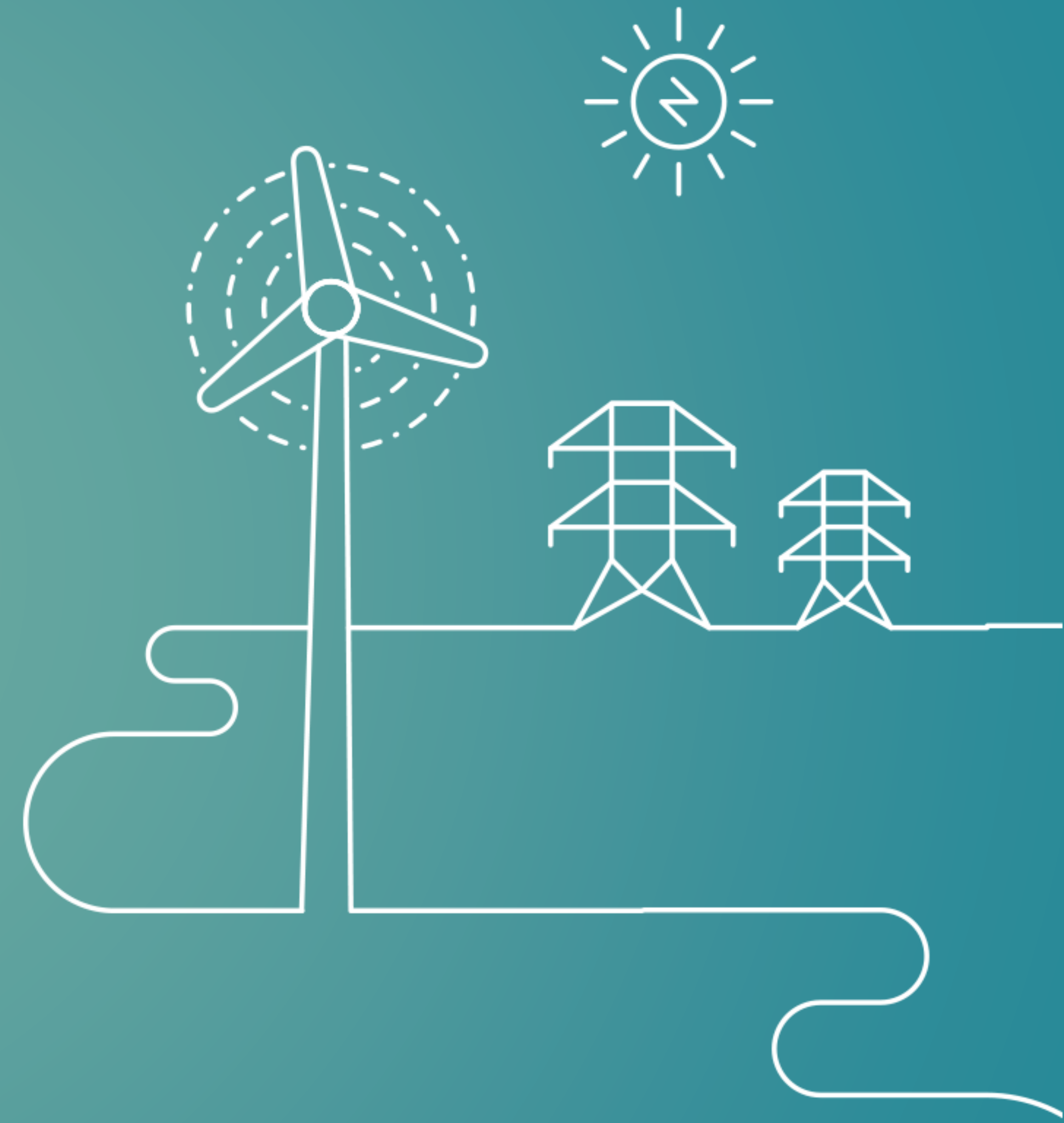
Elmo Van Thielen

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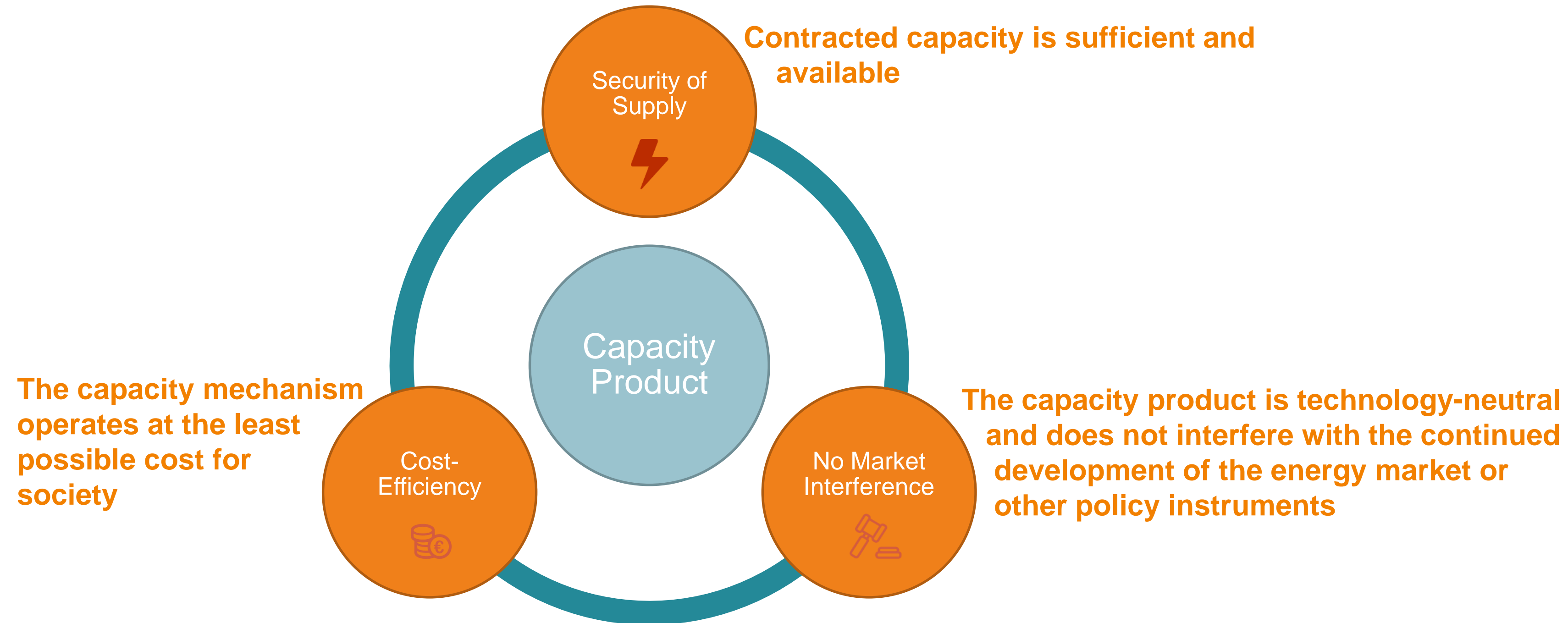
- Overview of obligation types
- Application of the pay-back obligation
- Availability obligations
- Summary of the Belgian capacity product



# Overview of obligation types



# Design objectives for the capacity product



The capacity product should be designed to meet these objectives as best as possible

# Four categories of obligations are common practice in other CRM's

## Entry into market obligation (All):

- **Object:** Obligations between signature of capacity contract (after Y-4/Y-1 auction closure) and delivery year
- **Goal:** Ensure that the capacity has entered into the market by the start of the delivery year

## Availability monitoring (All):

- **Object:** Monitor the compliance of availability as contracted using available data
- **Goal:** Guarantee at least the contracted contribution to security of supply

## Availability testing (All):

- **Object:** Verify compliance of availability as contracted through tests
- **Goal:** Guarantee at least the contracted contribution to security of supply

## Reliability Options (Ireland, Italy, PJM,...):

- **Object:** Pay-back obligation as the difference between a reference price and a strike price
- **Goal:** Capture windfall profits on units already receiving capacity remuneration

Whereas penalties are part of the obligations design, the focus today is the obligations themselves  
Other CRM's differ in the implementation of these obligations and how they complement each other, not in the types applied (excl.: Reliability Options)

# The primary law foresees these obligation types as well

## Capacity Product Obligations

### Entry into market obligation

Obligations to be in the market in the delivery year

### Availability Monitoring

Verify availability monitoring of the unit through available data

### Availability Testing

Verify availability by performing tests on the unit

### Reliability options

Enforce a pay-back obligation if reference price > strike price

The CRM product consists multiple building blocks, each tailor-made to the needs and structure of the underlying market, that need to be integrated into a reasonable whole

As reliability options are a specific mechanism imposed by the law, they will be presented first to see afterwards how availability obligations can complement them

# Application of the pay-back obligation



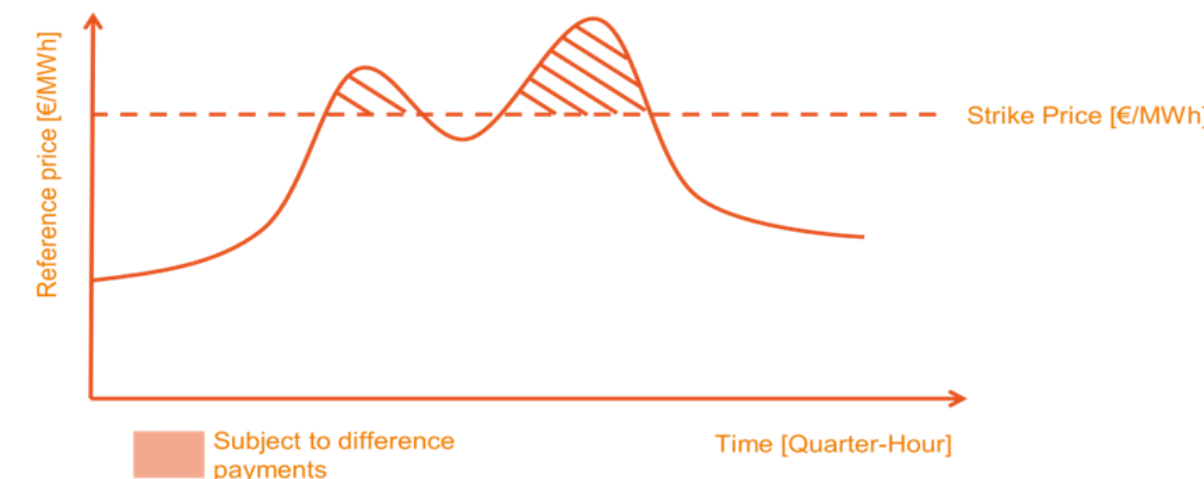
# The payback obligation is in the first place a mechanism to limit windfall profits

## Reliability Options effect is in theory two-fold

- Incentive for availability during scarcity
- Limiting of wind-fall profits

### → In practice:

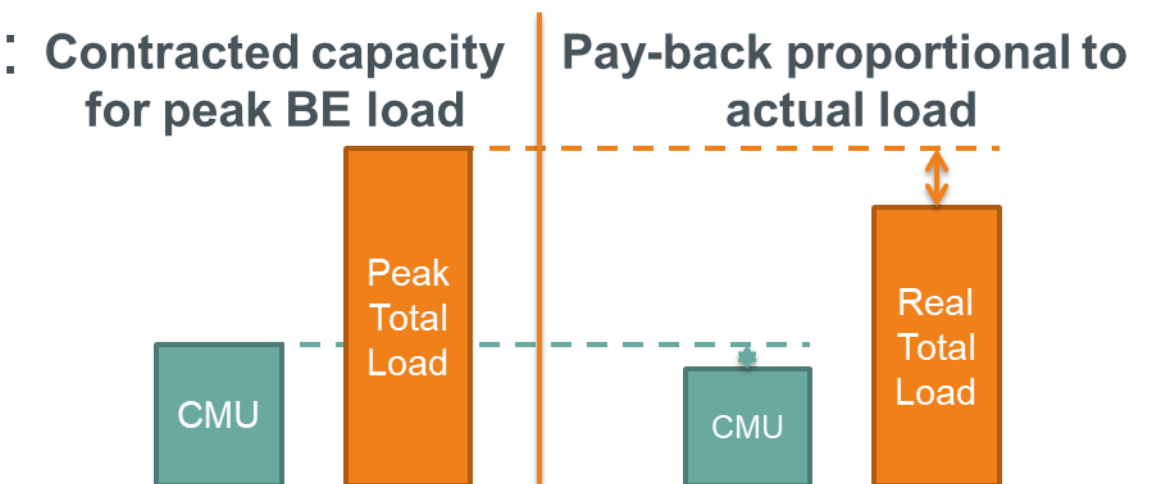
- It is uncertain whether reliability options will occur sufficiently to incentivize availability for all contracted capacities.
- This is particularly true as the CRM ensures adequacy (and thereby limits price spikes) and the payback obligation will particularly trigger technologies with SRMC (Short Run Marginal Costs) smaller than the strike price(s)



### → Aiming to prevent for windfall profits and so payback should ideally apply only on revenues actually received

In order to reflect this “wind-fall profits approach”, the following features are deemed appropriate:

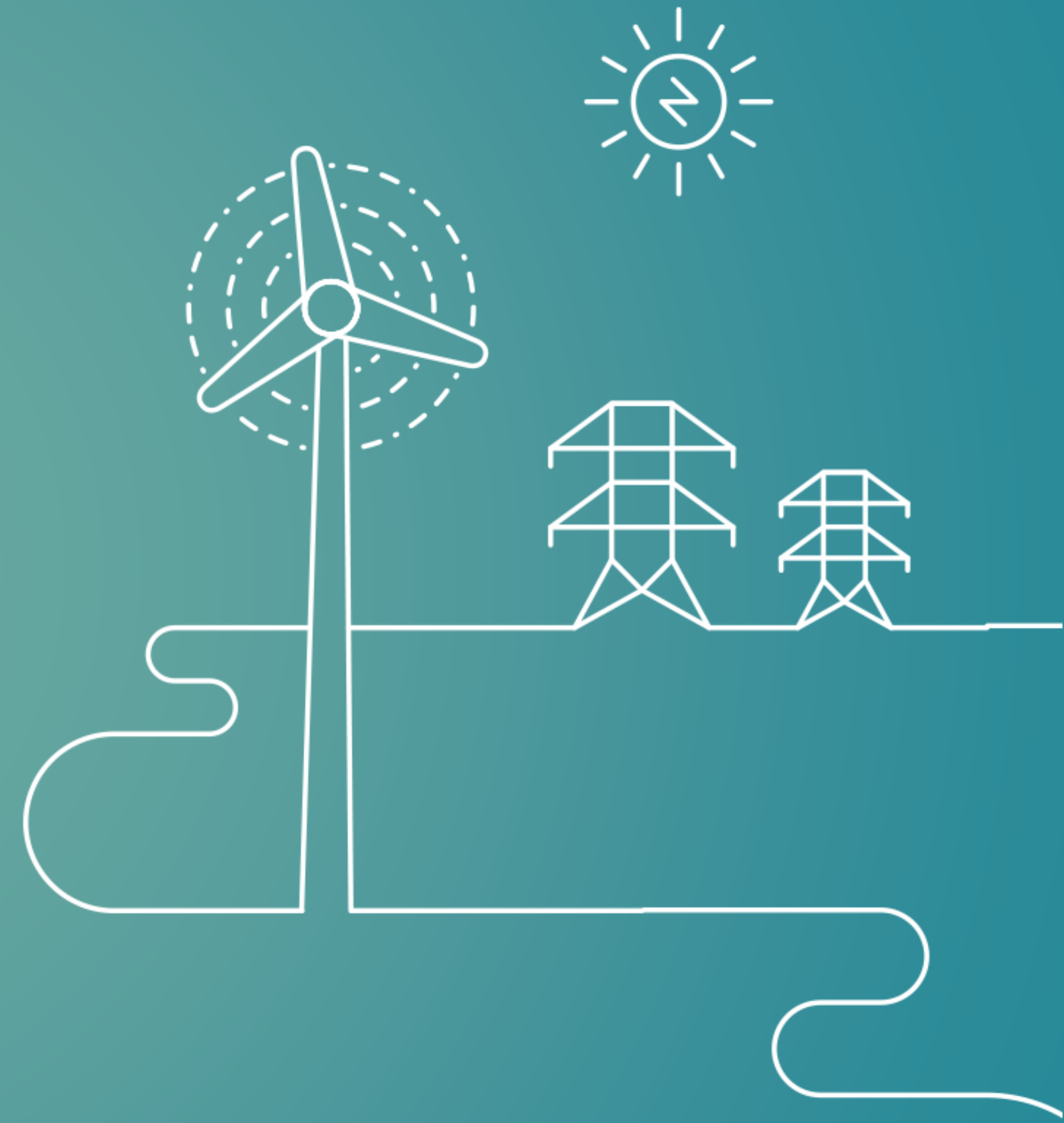
- Outages (both forced and planned) should be exempted from the pay-back obligation, but checked in the availability requirements
- Apply a load-following obligations
- Forward sold volumes treatment: presented under “Strike & Reference Price” topic



The payback obligation should be mainly considered as a mechanism to limit wind-fall profits, as it is insufficient to guarantee the actual availability as contracted. Consequently, availability requirements are crucial to ensure security of supply at all times.



# Availability obligations for capacity market units

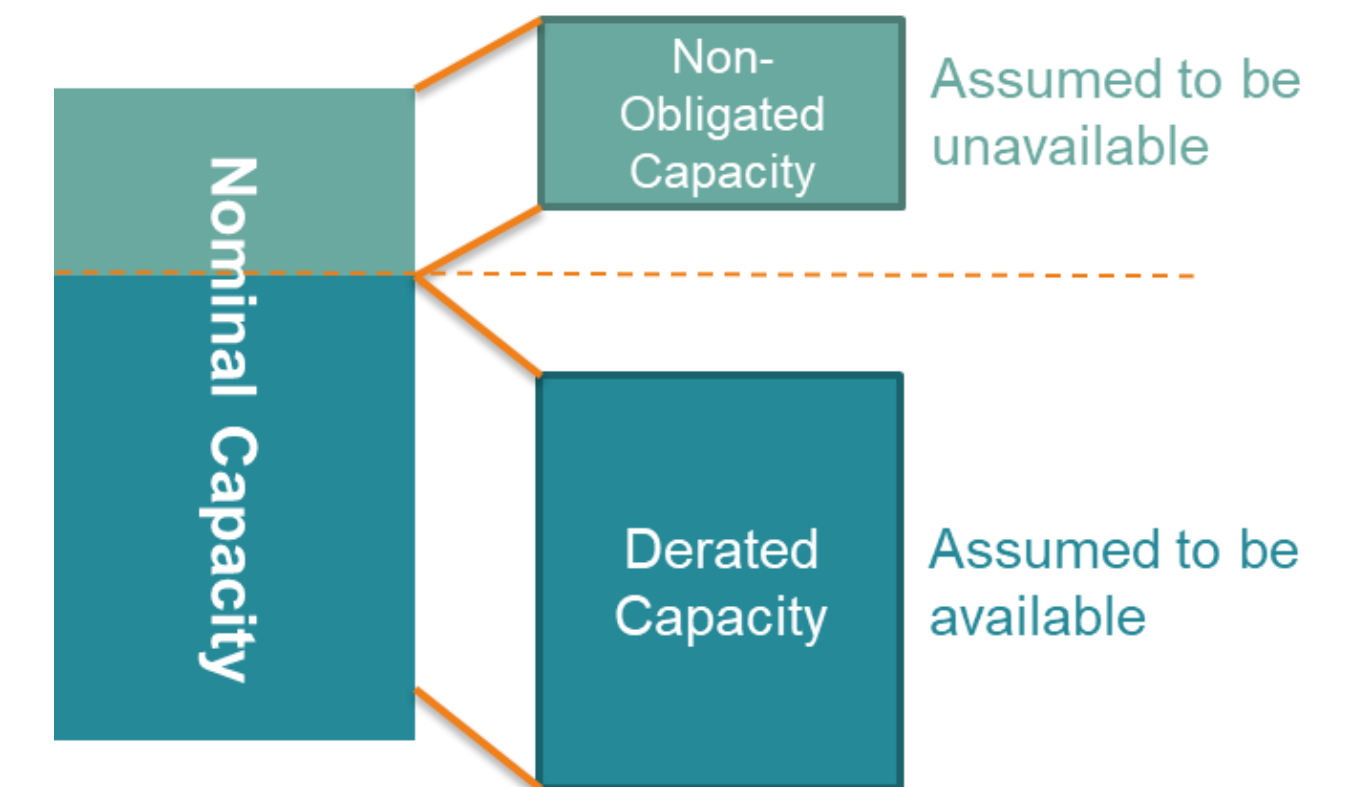


# The obligations of the CMU should reflect availability for the amount of capacity and moments it was contracted

- The objective of a CRM is to contract capacity to ensure an adequate production park at all times
- To evaluate the contribution to this end by a candidate in the CRM, their capacity will be de-rated taking into account certain limitations on capacity availability (cfr.: topic “de-rating”)

## → Availability should be checked looking at:

- Real availability compared to availability in line with de-rating
- At SoS-driven periods when this capacity should be available in the market



The most appropriate way of verifying contract compliance is to monitor availability in-the-market during SoS-driven moments of when this capacity should be available in the market

# A trigger based mechanism for conditions of near scarcity seems appropriate

## Availability Monitoring Trigger (AMT)



Before real-time  
(e.g.: D-1 18h)



### Following the trigger:

- Capacity contract holders are monitored on availability during a certain period
- The performance is determined based on the collected data
- In case of underperformance the party is liable to penalties, e.g.:
  - Fines
  - Possible adaptation of contract parameters
  - Termination of the contract in case of severe underperformance
- This obligation applies to availability of the de-rated capacity, regardless of outages or the total load (contrary to the pay-back obligation)

De-rated (obligated) capacity has to be available at AMT

There are precedents for this type of approach:

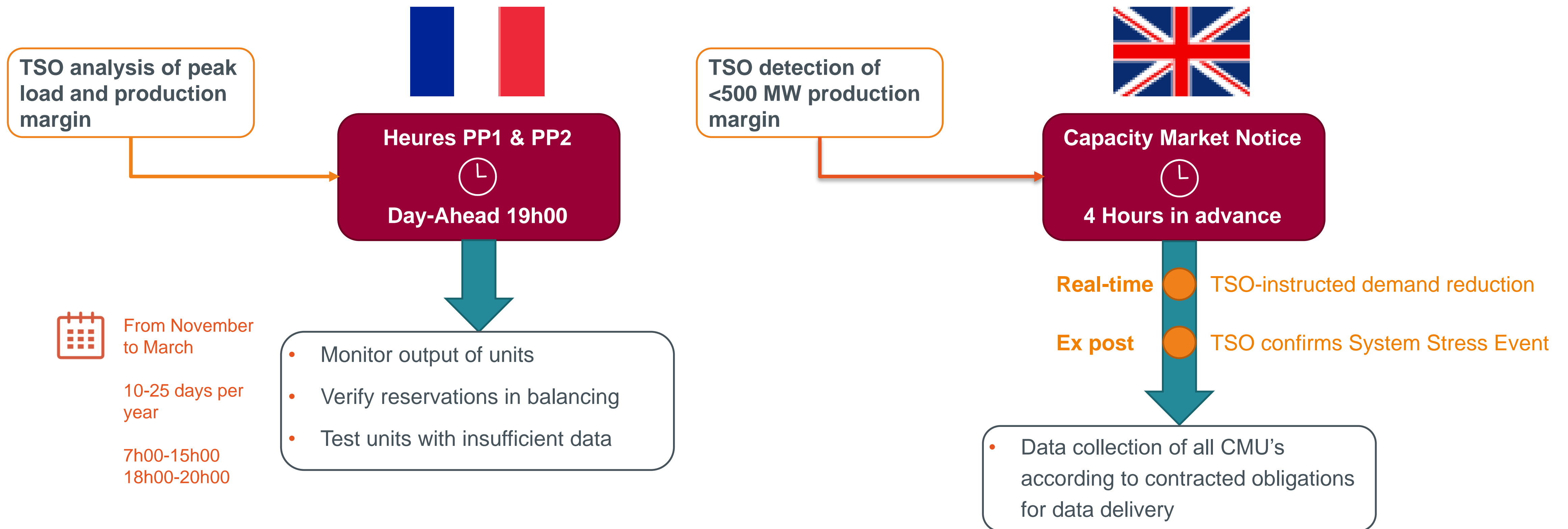
 **France:** PP1 and PP2 days

 **UK:** System Stress Events

 **Poland:** Similar to UK

Contracted capacity with limited visibility in the market should be more likely to be tested in order to create similar degrees of availability checks for all CMU's

# France and the UK\* apply similar “AMT-like” concepts in their CRM



# The payback obligation and availability obligations fulfil complementary roles to attain the objectives of the capacity product as a whole

## The pay-back obligation:

- Applies to (windfall) revenues made in the energy market
- Applies regardless of availability performance with respect to contract
- Is insufficiently strong as incentive to ensure availability
- Is a limitation of excessive revenues, not a penalty

## Availability obligations:

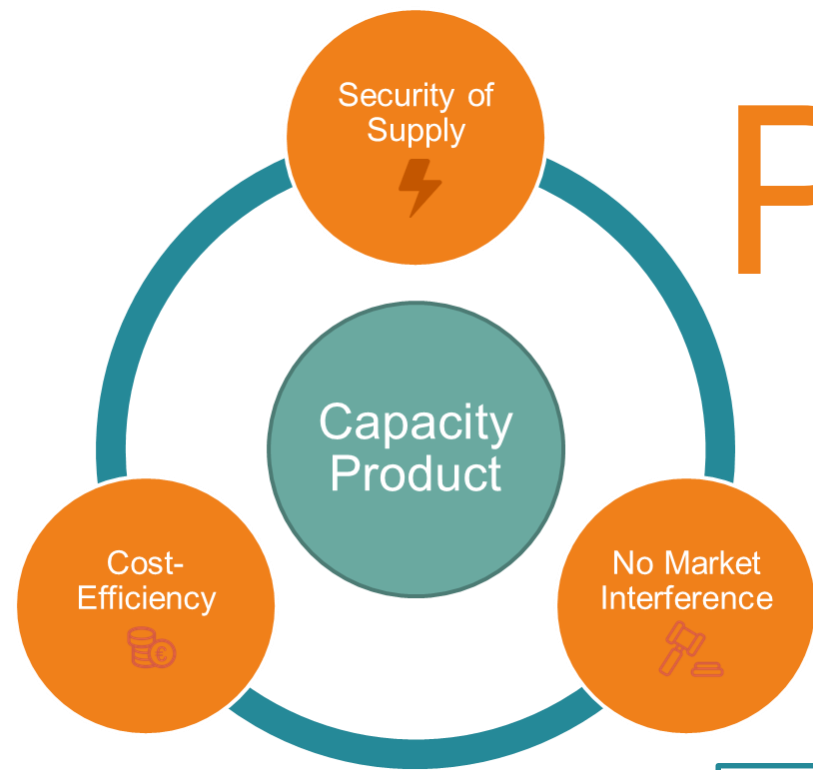
- Apply to the remuneration received in the framework of the CRM
- Penalties only apply if the performance is below what was contracted
- Do not impact on energy market revenues

This design separates wind-fall profits (Payback) from security of supply (Availability)

# Overview of the Belgian capacity product



# Proposal for the Belgian Capacity Product obligations:



## Capacity Product Obligations

### Entry into market obligation

To be discussed in prequalification topic

### Availability Monitoring

Monitor availability during moments SoS-driven moments

### Availability Testing

As a last resort: testing to complement data acquired during monitoring so all CMU's are monitored equally

### Reliability options

Load-following and exemption towards outages to limit windfall profits

The main objectives will also need to be safeguarded in the further details of the product design  
The secondary market should allow coverage of obligations in case of unexpected availability