

# I-SEM Training

## *Capacity Market*

### *Registration and Qualification*

August 2017



# Chapter 1: Introduction

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# Foreword – 1/2

## **CMC – Registration and Qualification**

- The focus of the “Capacity Market – Registration and Qualification” course relates to the requirements to participate under the CMC (CMC) and the workings of the qualification process, which is required for participation in the Capacity Auction. Other self learning guides in this series discuss Auction Offers and the operation of the Capacity Auction. Unless explicitly stated the references to “registration” in this training module relate to registration for all the arrangements under the CMC.

## **Transitional vs Enduring Registration**

- For the transition from SEM to I-SEM arrangements a [Transitional Registration Plan](#) has been implemented. At the time of publication of this training module the major components of this Transitional Registration Plan are already in the process of being completed, with communications being provided through the I-SEM registration team and registration contacts specified by Parties.
- The focus of these training materials is therefore the longer term ‘enduring’ registration processes. Although major components of it are relevant to the Transitional Registration Plan as well.

# Foreword – 2/2

## Currency

- This learning material focuses on examples to illustrate concepts rather than providing comprehensive coverage of every topic. The Capacity Market facilitates settlement in both Euro and Sterling. As the market internally operates in Euro the examples tend to be presented in Euro. However, in practice participants in Northern Ireland will see a Sterling equivalent price.

# Learning Objectives

This training session will help you appreciate:

- That the Capacity Market provides the only mechanism in the new market arrangements to receive payments for capacity.
- The requirements to participate in Qualification.
- The different treatments between Existing Capacity and New Capacity with respect to registration processes and qualification.
- The different treatments of technologies and different unit sizes in Qualification.
- Some of the key differences in Qualification between different unit types.

After this course you should be in a more informed position to follow the more detailed description of the Capacity Market in the Instructor Led Training.

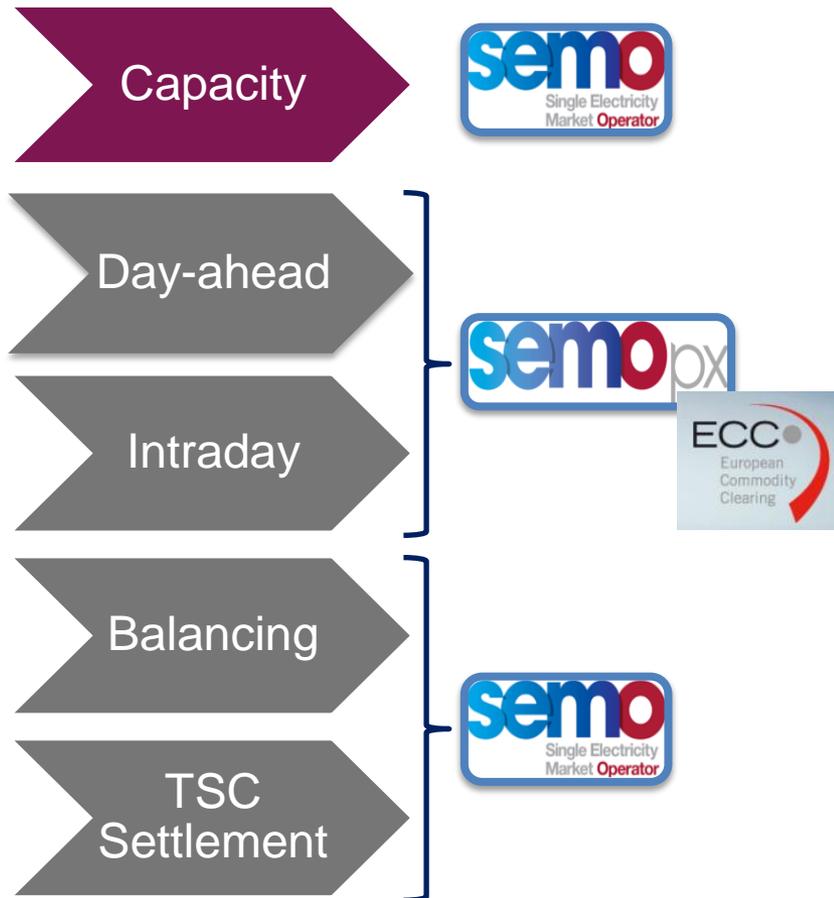
# Governing Rules

The Capacity Market arrangements are governed by a set of rules known as the **CMC** (CMC). [<https://www.semcommittee.com/news-centre/publication-i-sem-crm-capacity-market-code-decision>] The CMC define obligations and responsibilities of the Parties to that code, including the registration, qualification, operation of the capacity market and secondary trade, and the obligations on those awarded capacity. Settlement arrangements are covered under the **Trading and Settlement Code** (TSC). [<https://www.semcommittee.com/news-centre/publication-i-sem-trading-and-settlement-code-amendments-decision-paper>].

The CMC is supported by a set of Agreed Procedures. The most relevant of these for this training module is **Agreed Procedure 3 “Qualification and Auction Process”** [<https://www.semcommittee.com/news-centre/publication-i-sem-crm-capacity-market-code-decision>].

It is important to note that these Agreed Procedures are different to the set of Agreed Procedures that support the TSC.

# Who to Register with?



- The organisation to contact regarding registration under the CMC is SEMO. For context, the organisations relevant for each of the I-SEM markets are shown also.
- Note that it is a requirement that participant under the CMC is, or intends to be, registered under the TSC. This is because those awarded capacity under the CMC are obligated to deliver that capacity and to be settled under the TSC.

# Overview

Capacity

Day-ahead

Intraday

Balancing

TSC  
Settlement

The focus of this training module is Registration and Qualification under the CMC.

Parties may wish to register their units for other markets as well and generally will be required to through participating in the CMC. Details on registration for these other markets is provided in separate training courses and not covered here.

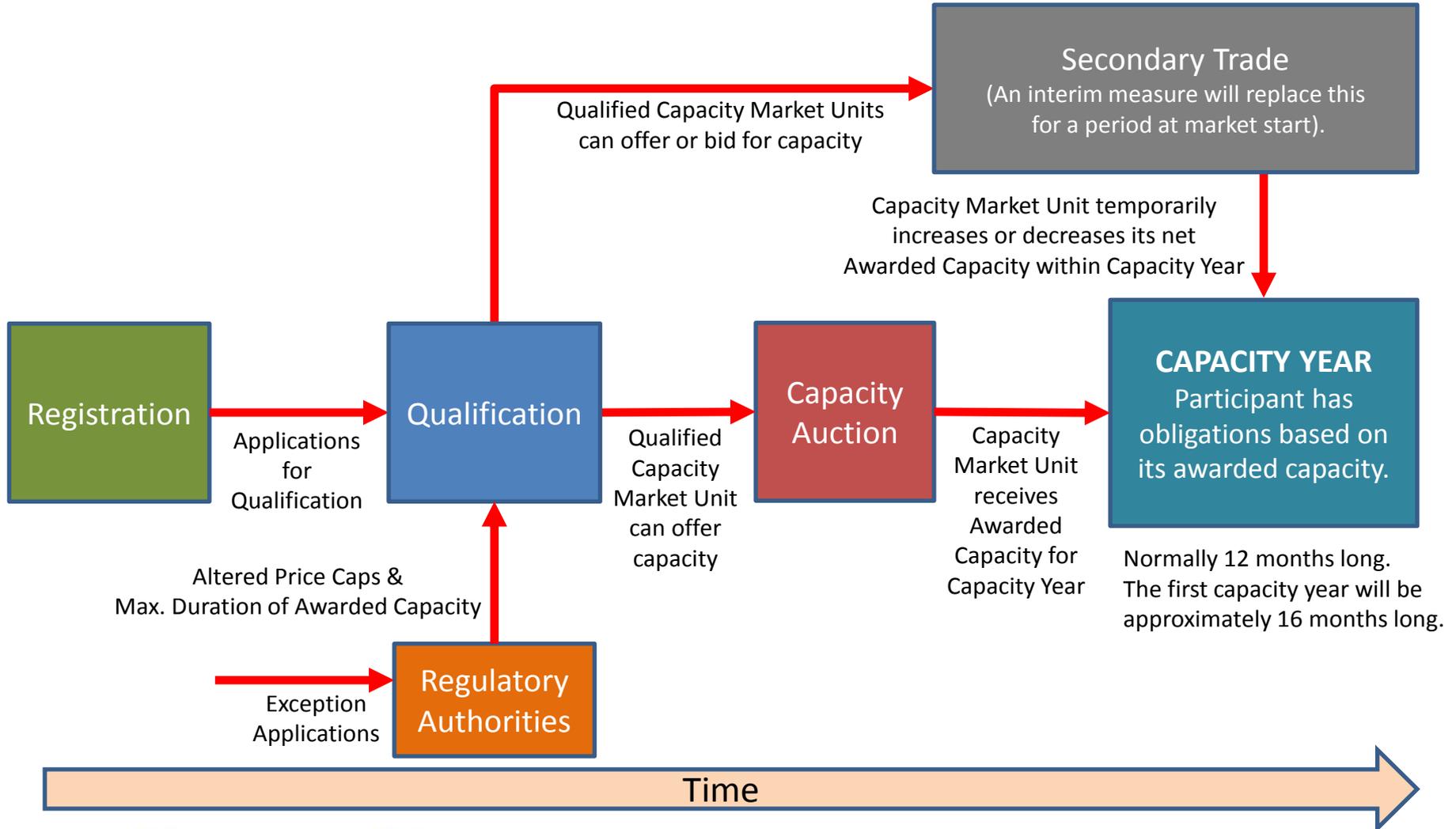
For the I-SEM arrangements, the CMC requires participation in Qualification with respect to a Capacity Year for:

- All existing demand side units.
- All existing or proposed dispatchable generator units that are greater than the de-minimis threshold (10 MW).
- All existing and proposed Interconnectors.

Participation in Qualification for other units, particularly Variable Units, is voluntary.

# Chapter 2: Registration

# The Context of Registration



# Accession and Registration

- A Party required to register under the CMC or wishing to register under the CMC must first Accede to the CMC as part of the Registration Process.
- To register as a Party to the CMC an applicant is required to:
  1. Complete the Application Form available from the System Operators' website.
  2. Comply with eligibility requirements (i.e. the requirements of the B.5 of the CMC and the Application Form).
  3. Pay the Accession Fee to the System Operators (invoice issued by SEMO):
    - The Accession Fee is zero at the time of transition from SEM to I-SEM, but may be non-zero in the future.
  4. When provided, execute an Accession Deed to adhere to the Capacity Market Framework Agreement and the Code. The Framework Agreement is the device by which a Party becomes bound to the CMC.
  5. Have already registered or intend to register as a Party to the Trading and Settlement Code (which requires Accession to the TSC).

# Intermediaries

- An Intermediary is a Party to that acts on behalf of the Unit Owner in respect of a Generator Unit.
- A Form of Authority is required to register an Intermediary, with this being authorisation from the Unit Owner for the Intermediary to register the Generator Unit and to participate in respect of that Generator Unit in the Capacity Market.
- If a Party ceases to be an Intermediary then the CMC has provisions whereby the System Operators can, subject to conditions, allow the Generator Unit and any associated Capacity Market Units to be de-registered from this Party and registered with another Party.
  - This feature can be used to manage a change of Intermediary.
- If voluntarily seeking to de-register any unit that is part of a Capacity Market Unit with Awarded Capacity (from a Capacity Auction) then the units and the Capacity Market Unit must be moved to another Party. I.e. De-registration is not an option for avoiding obligations to deliver capacity. Further the System Operators must be satisfied that the Party taking over the Capacity Market Unit (and physical units backing it) is capable of taking over the obligations associated with that Awarded Capacity, including under the Trading and Settlement Code and in respect of delivery of capacity that is yet to be commissioned.

# Relationship with TSC

- The Party, Participant and Unit setup for the TSC is strongly related to the setup required for the Capacity Market.
- The Party, Participant and Unit must be the same in both the TSC and Capacity Market. This is to allow settlement of the Capacity to occur as part of the TSC settlement processes.
- The implications from the relationship between Capacity and TSC Entity setup are:
  1. settlement documents produced are designed to incorporate both TSC and Capacity market settlement
  2. the bank account used for payments to Participants is the same for both balancing and capacity payments
  3. collateral requirements for capacity settlement are combined with the balancing and imbalance settlement

# Participation under the CMC

- A party to the CMC becomes a participant under the CMC if a Candidate Unit has been registered, deemed registered, or provisionally registered under the CMC.
  - **Deeming Registered** means a unit registered under the TSC is a unit under the CMC (though SO can request additional information where required). Deeming applies to:
    - Supplier Units. Their only role is in capacity market settlement.
    - Existing Generator Units and Interconnectors.
  - **Provisionally Registered** means the unit is not yet registered under the TSC but the intention is that it will be:
    - Enables Qualification in respect of capacity that is yet to be commissioned.
    - A unit has to be able to participate in the Balancing Market under the TSC to deliver on its obligations if it sells capacity in a Capacity Auction or Secondary Trade. For this it must be commissioned under the Grid Code.
  - A Capacity Market Unit is **Registered** only once it has qualified for its first auction:
    - A Capacity Market Unit identifier can be recorded in systems for the purpose of mapping Candidate Units to a Capacity Market Unit seeking qualification.
- The following units have no role under the CMC: Assetless Units, Trading Units, Interconnector Error Units, and Interconnector Residual Capacity Units.

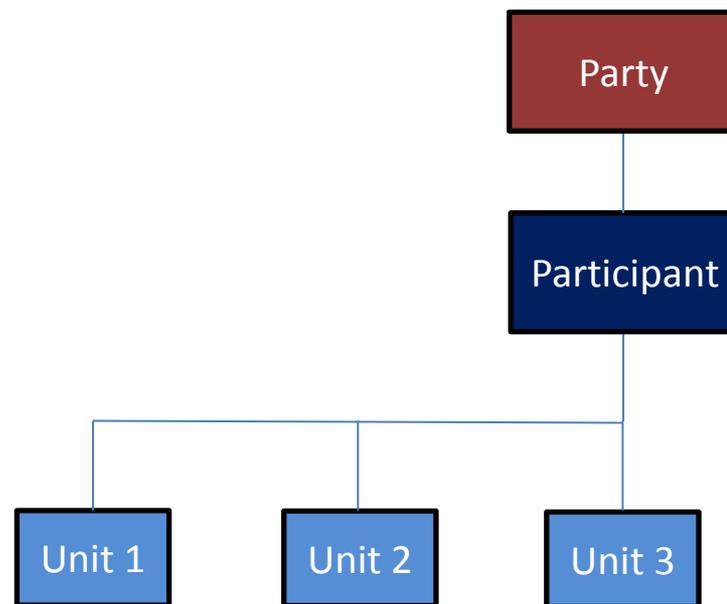
**Please note:** Registration forms are available on the SEMO website. These should be completed as part of the registration process for I-SEM, whether deemed registered by the code or otherwise.

# Candidate Units and Capacity Market Units

Unit Type	Context	Detail
Candidate Unit	Deemed	Existing Generator Unit or Interconnector registered under TSC.
Candidate Unit	Proposed	Proposed Generator Unit or Interconnector that is yet to be commissioned (and therefore cannot yet be registered under the TSC)
Capacity Market Unit	Prior to Qualifying for its first Capacity Auction (no awarded capacity)	A place holder ID associated with Candidate Units.
Capacity Market Unit	Post-Qualification	If qualification is accepted, the CMU formally exists and is associated with an Interconnector or one or more Generator Units (i.e. the deemed or proposed Candidate Units)

# Entity Model and the CMC

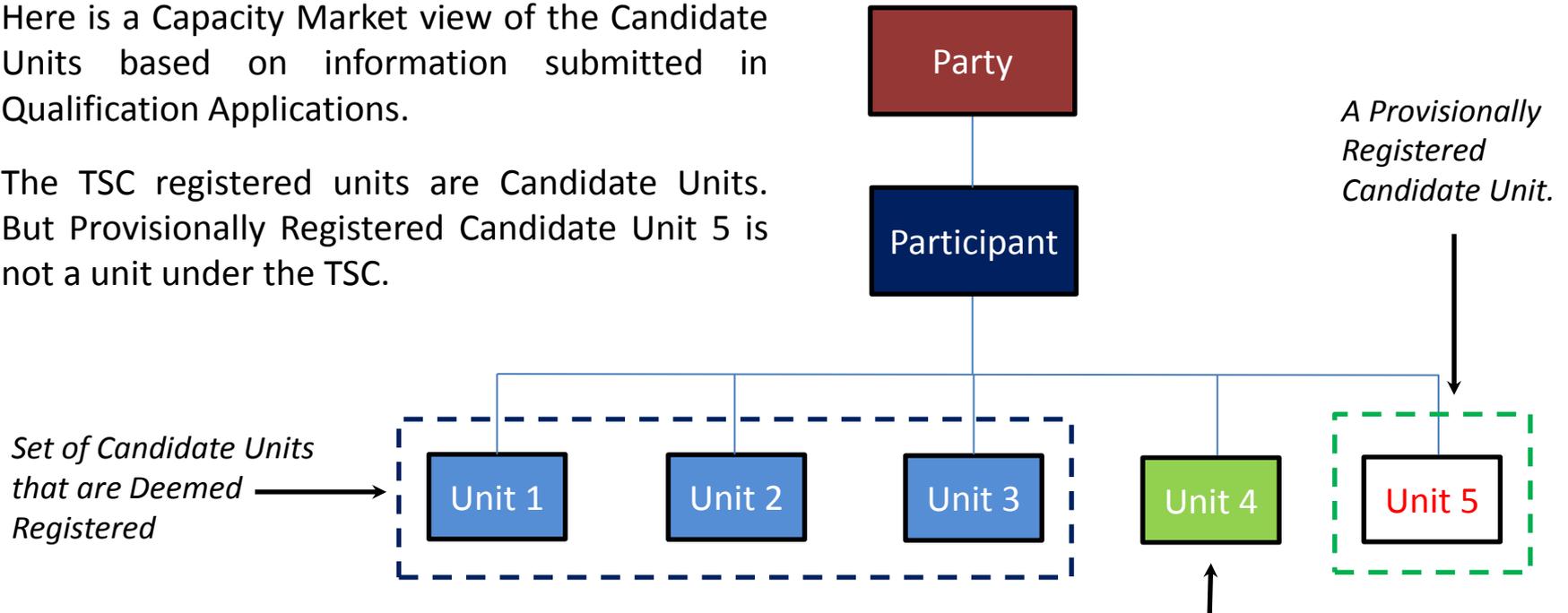
- The TSC requires the use of certain “entities” to represent a company and its units.
- Here we show the basic ‘Entity Model’ used for the purpose of the TSC.
- This allows the correct representation of the unit for the purposes of TSC trading, settlement and invoicing, and credit cover calculations.
- A Party operating in both Northern Ireland and the Republic of Ireland must have separate Participants in each Jurisdiction. All units must be in the same Jurisdiction as the Participant.
- In the following slides we show additional features of the entity model used by the Capacity Market:
  - All of the additional Capacity Market features are set up by the System Operators based on submitted Qualification Data and the results of Qualification.
  - The Qualification section of this course gives more information about the Qualification scenarios that give rise to use of different features of this model.



# Entity Model and Candidate Units

Here is a Capacity Market view of the Candidate Units based on information submitted in Qualification Applications.

The TSC registered units are Candidate Units. But Provisionally Registered Candidate Unit 5 is not a unit under the TSC.

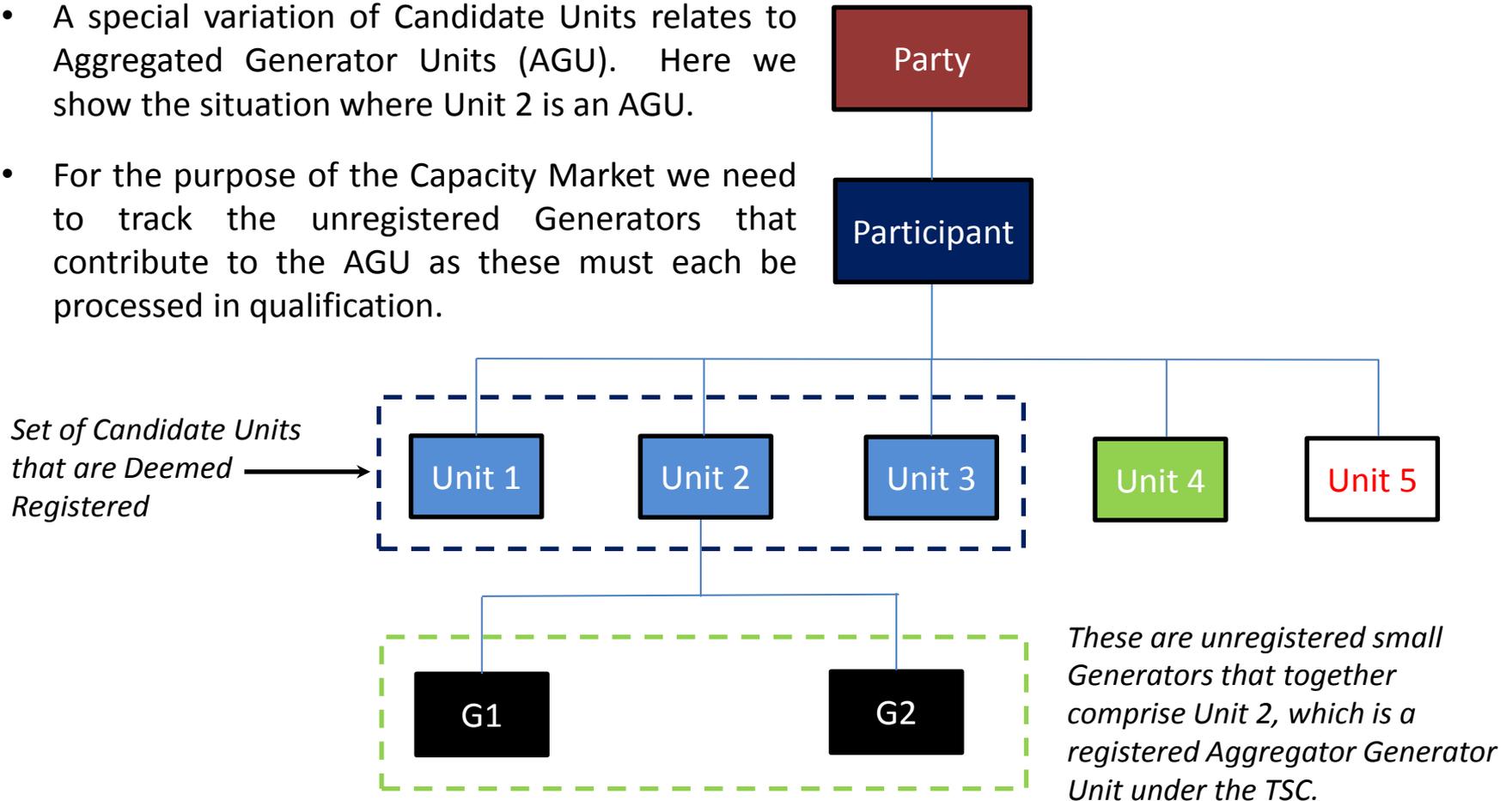


*While recorded in systems at the same level as TSC units, this is actually a 'Capacity Aggregation Unit' – a device to link several Candidate Units in Qualification to associate them with one Capacity Market Unit. This is illustrated in later slides on CMUs.*

*Only Variable Generator Units and units with Initial Capacity below the De Minimis Threshold (10 MW) can be combined to form one CMU.*

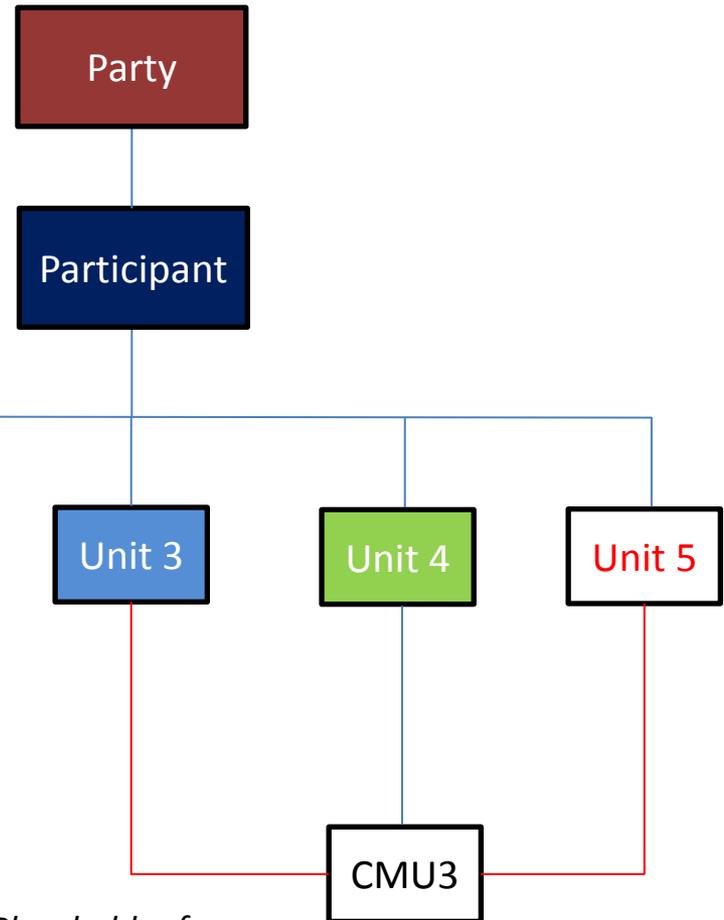
# Entity Model and Candidate Units that are AGUs

- A special variation of Candidate Units relates to Aggregated Generator Units (AGU). Here we show the situation where Unit 2 is an AGU.
- For the purpose of the Capacity Market we need to track the unregistered Generators that contribute to the AGU as these must each be processed in qualification.



# Entity Models and Capacity Market Units

- Now we show the Capacity Market Units prior to completion of Qualification. CMU1 pre-exists as it already has awarded capacity from a prior auction. CMU2 and CMU3 are yet to be Qualified. The participant has applied for Unit 3 and Unit 5 to be aggregated as CMU3.
- The Generators contributing to Unit 2 (from prior slide) are not shown.

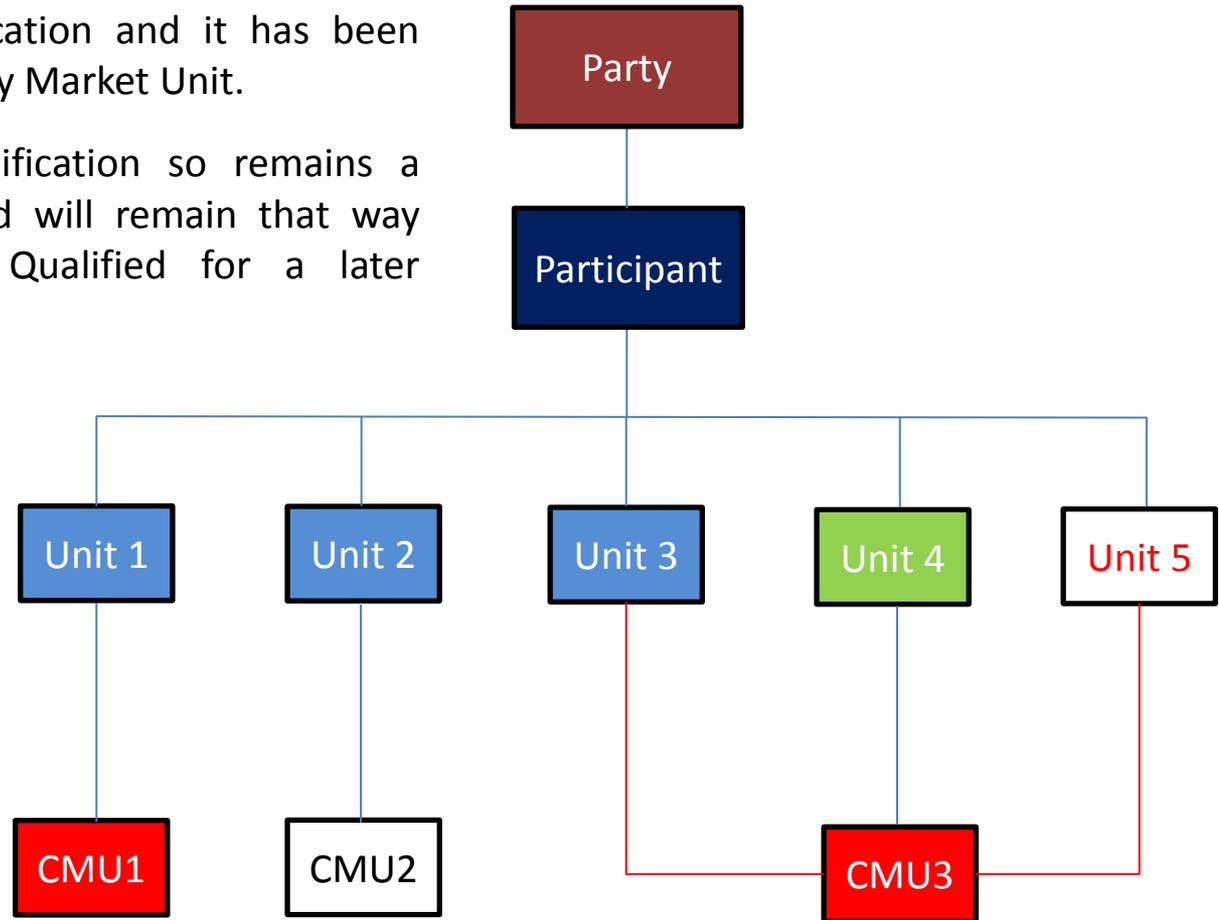


*Pre-existing registered CMU with Awarded Capacity from a prior Capacity Auction.*

*Placeholder for a Capacity Market Unit (CMU ID).*

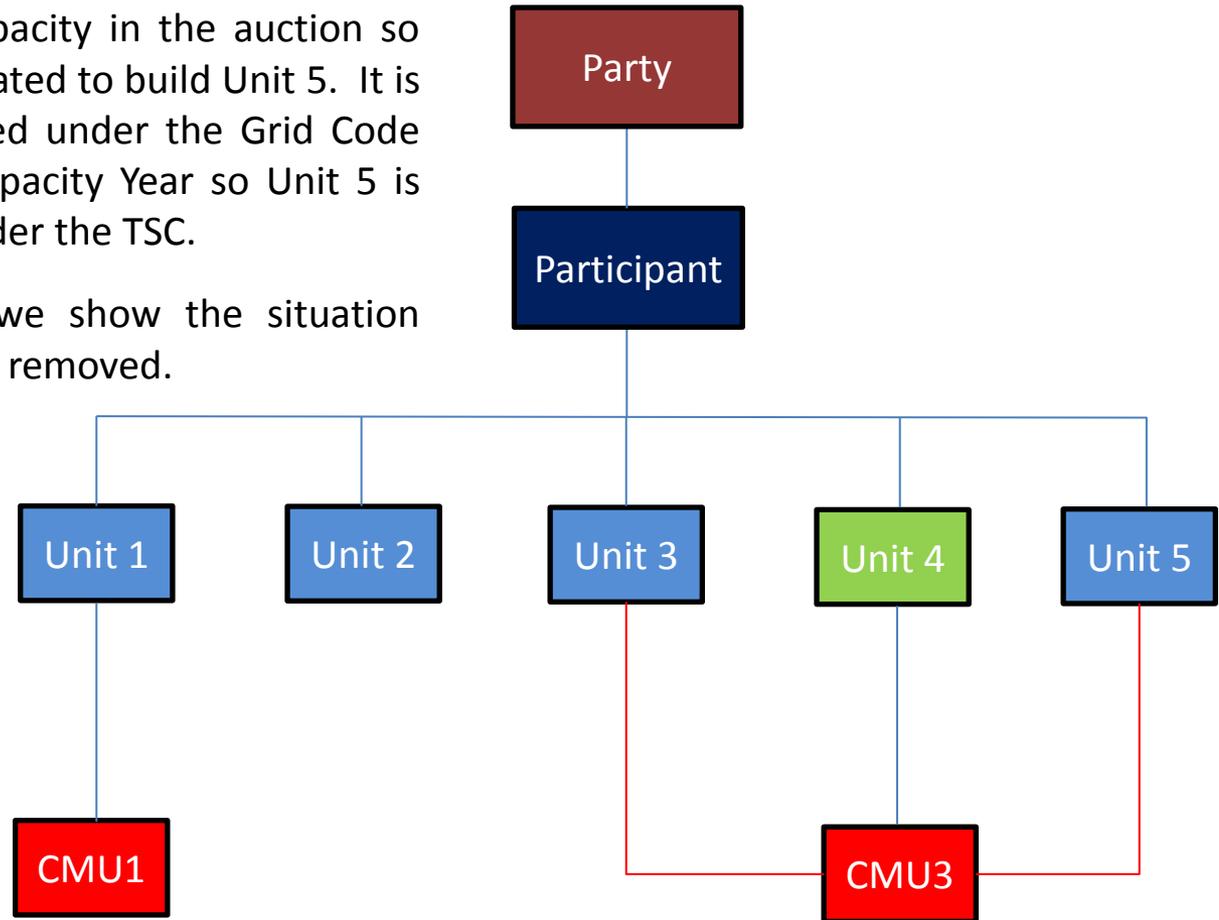
# The Situation Post Qualification

- CMU3 passes Qualification and it has been registered as a Capacity Market Unit.
- CMU2 failed in Qualification so remains a place holder only and will remain that way unless removed or Qualified for a later auction.



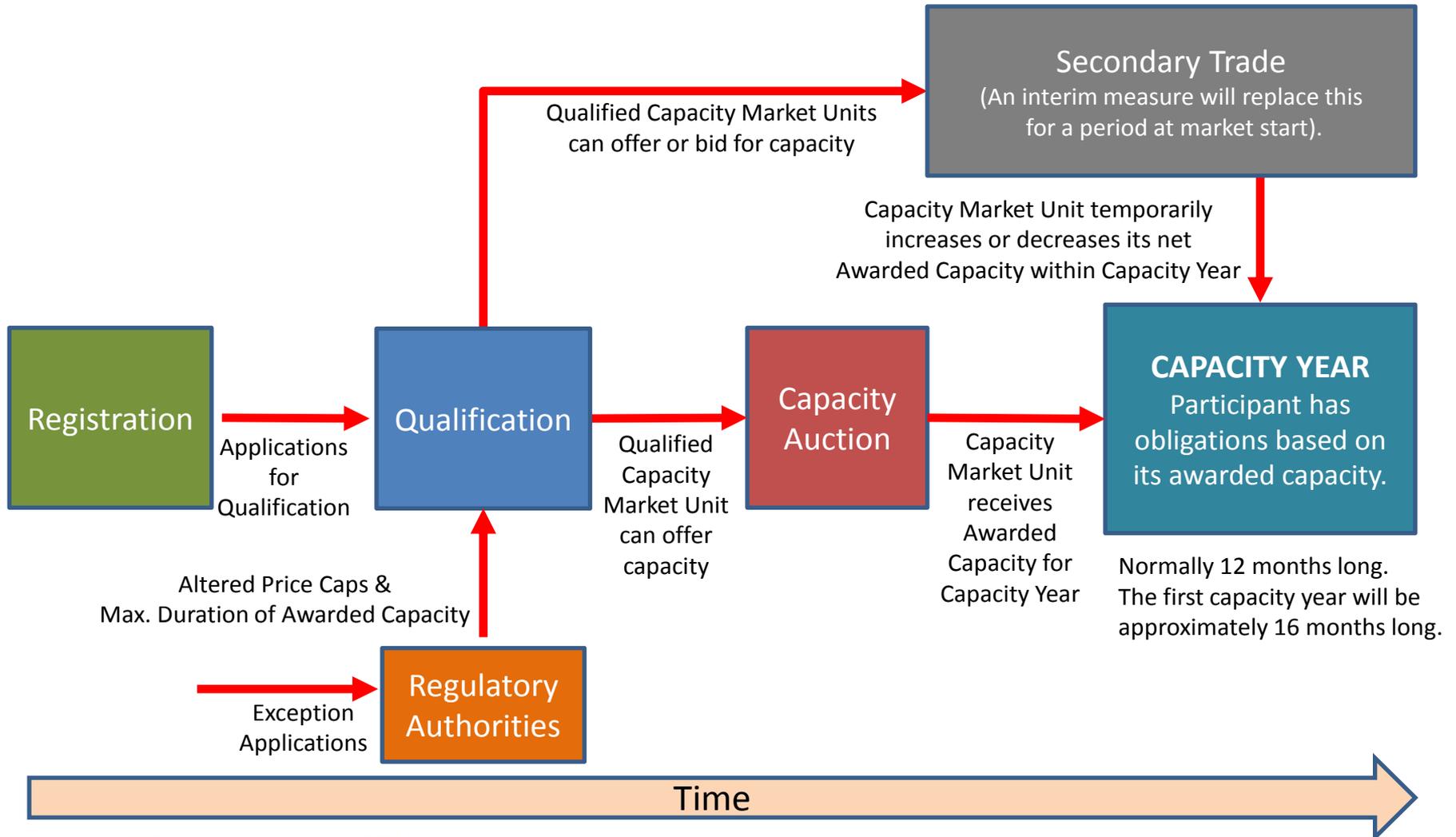
# The Situation In the Capacity Year

- CMU3 is Awarded Capacity in the auction so the Participant is obligated to build Unit 5. It is built and commissioned under the Grid Code by the start of the Capacity Year so Unit 5 is formally registered under the TSC.
- While not required, we show the situation where CMU2 has been removed.



# Chapter 3: Qualification

# The Context of Qualification (and Exception Applications)



# Qualification and Opt Out Notifications

- Qualification is a System Operator run process which establishes:
  - The eligibility of Candidate Units, being Generating Units or Interconnectors, to be qualified as a Capacity Market Unit (or part of a Capacity Market Unit).
  - How much can be offered into a Capacity Auction and determines limits on what can be traded in Secondary Trade.
- A participant may submit an opt-out notification to the SOs in respect of a Candidate Unit that would otherwise be required to Qualify for a Capacity Year, if:
  - The Candidate Unit will close down by the end of the Capacity Year; or
  - If the RAs determine it does not need to Qualify due to Planned Outages exceeding 3 months, or mothballing of the unit, during the Capacity Year.
- Participants should not submit opt out notifications in respect of Candidate Units that are not required to Qualify.

# Implications of Qualification

- Once a Capacity Market Unit is Qualified there are requirements on its participation in the subsequent Capacity Auction.
- Participation in the Capacity Auction is the mechanism for securing an enduring capacity payment in the I-SEM. Arrangements that exist in the SEM will cease.
- Qualified capacity **must** be offered into the Capacity Auction if:
  - The capacity is commissioned at the time of Qualification (it is “Existing Capacity”) and contributes to the capacity of a Capacity Market Unit.
  - But only to the extent that it has firm access to the Transmission or Distribution network as at the time of Qualification.
- Qualified capacity not subject to these requirements **may** be offered into a Capacity Auction.
- It is important that participants understand that features of Qualification that can determine whether or not, and the extent to which, they must participate in the Capacity Auction.

# Requirements to Qualify

- Qualification for a Capacity Year is mandatory for a Candidate Unit that is:
  - a Dispatchable Generator Unit with a Registered Capacity  $\geq$  the De Minimis Threshold (DMT) which is 10 MW (or is a DSU with a DSU MW Capacity  $\geq$  DMT);
  - a proposed Dispatchable Generator Unit (other than a DSU) or an existing Dispatchable Generator Unit proposing to increase capacity, and expected to have a Registered Capacity  $\geq$  DMT prior to the start of the Capacity Year;
  - an existing or proposed Interconnector expected to be operational prior to the start of the Capacity Year;
  - contributing to a Capacity Market Unit that holds Awarded Capacity for the Capacity Year.

Unless an opt-out notification has been accepted by the System Operators.

- Qualification for a Capacity Year is voluntary for a Candidate Unit that is:
  - a proposed DSU.
  - an existing or proposed Variable Unit, non-dispatchable Generator Unit, or dispatchable Generator Unit with an (expected) registered capacity  $<$  DMT.

# Qualification Data Required to be Submitted – (1/3)

- General information required includes:
  - The identity of the Participant Applying.
  - The identify of the Candidate Unit\*.
  - Details of the (proposed) CMU and its mapping to the proposed Candidate Units.
- For each Candidate Unit:
  - The unit type.
  - The technology of the Candidate Unit\*.
  - Whether or not the Candidate Unit is above the De Minimis Threshold (10 MW).
  - Whether it is existing or new capacity or a combination.
  - The Initial Capacity – for existing and total (existing + new) capacity\*.
  - The Gross De-Rated Capacity – for existing and new capacity\*.
  - Its Firm Network Access and a de-rated value of that (except for DSU)\*.
  - Its Firm Offer Requirement.
  - Where applicable, whether it is Clean (used in auction tie-breaking)\*.
- For a Candidate Unit that is an Aggregated Generator Unit:
  - Evidence it has permission to include capacity in New Capacity if offered.
  - For each Generator Unit the \* information above in respect of the Generator Unit.

## Qualification Data Required to be Submitted – (2/3)

- For Candidate Unit that is an Autoproducer:
  - Its demand reduction volume and evidence to support any value above 0 MW.
- In respect of New Capacity:
  - Detail of the nature of the project, the total spend and who is undertaking the work.
  - The dates for Implementation Plan milestones (as required by the CMC):
    - Substantial Financial Completion;
    - Commencement of Construction Works;
    - Mechanical Completion;
    - Completion of Network Connection;
    - First Energy to Network;
    - Start of Performance/ Acceptance Testing;
    - Provisional acceptance or Completion of Performance Testing; and
    - Substantial Completion.
  - Whether it is applying for an Exception Application from the RAs.
  - For DSU further detail on how the response will be secured and delivered and to allow DSU to be identified relative to Locational Capacity Constraints.
  - Statements that the data is accurate and based on reasonable assumptions, accurately summarises works or how demand response will be secured & is not deceptive.
  - Evidence of Connection Agreements or Connection Offers.

## Qualification Data Required to be Submitted – (3/3)

- A certificate signed by a Participant Director that:
  - Submitted data is not for the purposes of, or connected with, Market Manipulation.
  - The participant is not subject to an Insolvency Event.
  - The participant has good-faith intentions to offer the capacity and none of that offered capacity holds awarded capacity (including via Secondary Trade) for the capacity year.
  - Information provided to the RAs and SOs is true.
  - Neither the participant or its associates will engage in bribery or offering inducements.
  - Confidential information is being appropriately managed.
- In the case of an Intermediary that it has appropriate authority to submit the application.
- Such other information as SOs reasonably require.
- Exception Application details are available from the SEM Committee website.

# Chapter 4: Qualification Mechanics

# An Example of Qualification

- We present an example of qualification based on a generic unit without being specific as to what type of unit it is.
- This will illustrate the core concepts and processes used in Qualification.
- Later, material is presented on how specific types of units may be treated differently from the generic unit in this example.
- We do not touch on broader topic – like Implementation Plans for New Capacity - as the Qualification Process is more about assessing its completeness and credibility.

# Initial Capacity, Existing Capacity & New Capacity

Type of Capacity	Initial Capacity (MW)	
Existing Capacity	25	← <i>Initial Capacity (Existing)</i>
New Capacity	20	
Total Capacity	45	← <i>Initial Capacity (Total)</i>

- Our generic unit is already registered under the current TSC so has **Existing Capacity**.
- **Initial Capacity** is a like name plate, or installed capacity, but:
  - Limited what can be delivered to the network (e.g. the Maximum Export Capacity).
  - If multiple units have capacity that exceeds this limit, then participant has some freedom to allocate the capacity that can be exported between units, though not exceeding what any one unit can deliver.
- There is a plan to increase the **Initial Capacity (Existing)** of 25 MW with 20 MW of **New Capacity** to give an **Initial Capacity (Total)** of 45 MW.

# Firm Network Access

Type of Capacity	Initial Capacity (MW)
Existing Capacity	25
New Capacity	20
Total Capacity	45

- A unit can have firm or non-firm network access in Qualification.
- Between Connection Agreements for the existing capacity and Connection Offers for the new capacity, this unit has 35 MW of **Firm Network Access** for the Capacity Year at the time of Qualification.

Firm Network Access (MW)
35

# De-Rating Factors

Type of Capacity	Initial Capacity (MW)	De-Rating Factor	Implied De-Rated (MW)
Existing Capacity	25	0.906	$25 \times 0.906 = 22.65$
New Capacity	20		
Total Capacity	45	0.902	$45 \times 0.902 = 40.59$

- **De-Rating Factors** are used to convert raw MW values into de-rated values that are employed in the capacity market. De-rating recognises that given a pool of units, some of them will not be available at any given time. By matching de-rated capacity to the expected system capacity requirement the market effectively secures extra capacity to cover for unavailability of units.
- De-Rating Factors vary with **Technology**. A high availability, high reliability unit will have a de-rating factor near to 1. Less available units will have lower values. The values may decline with unit size as larger units impact reliability more when unavailable.
- Suppose our unit's **Technology** is a Steam Turbine unit, then Table 1 of the Initial Auction Information Pack (SEM-17-042 available on the SEMO website) tells us that de-rating factor for units 25 MW is 0.906, and for 45 MW is 0.902.

Firm Network Access (MW)	De-Rating Factor	Implied De-Rated (MW)
35	0.904	$35 \times 0.904 = 31.64$

# Increase and Decrease Tolerances

Type of Capacity	Initial Capacity (MW)	Implied De-Rated (MW)	Lowest Nomination (De-rated MW)	Highest Nomination (De-rated MW)
Existing Capacity	25	22.65	$22.65 \times (1-0.1) = 20.385$	$22.65 \times (1+0) = 22.65$
New Capacity	20			
Total Capacity	45	40.59	$40.59 \times (1-0.1) = 36.531$	$40.59 \times (1+0) = 40.59$

- In Qualification a participant can nominate the quantity of de-rated existing capacity – or **Gross De-Rated Capacity (Existing)** – and the quantity of **Gross De-Rated Capacity (New)** – it is seeking.
- The Initial Auction Information Pack indicates tolerances that may be applied in these nominations, which are set relative to what we show as the Implied De-Rated values.
- Suppose INCTOL (increase tolerance) is 0% and DECTOL (decrease tolerance) is 10% then the table above indicates the low and high range of de-rated capacity that can be nominated.
- Tolerances are not applied to the Firm Network Access value.

Firm Network Access (MW)	Implied De-Rated (MW)
35	31.64

# Setting Gross De-Rated Capacity

Type of Capacity	Initial Capacity (MW)	Implied De-Rated (MW)	Lowest Nomination (De-rated MW)	Highest Nomination (De-rated MW)
Existing Capacity	25	22.65	$22.65 \times (1-0.1) = 20.385$	$22.65 \times (1+0) = 22.65$
New Capacity	20			
Total Capacity	45	40.59	$40.59 \times (1-0.1) = 36.531$	$40.59 \times (1+0) = 40.59$

- In Qualification a participant can nominate how much de-rated capacity its unit can provide. This is called Gross De-Rated Capacity as it takes no account of already Awarded Capacity.
- Suppose the participant nominates 22 MW of Gross De-Rated Capacity from existing capacity. This is below the upper limit of 22.65 MW so 22 MW is accepted. If it had exceeded the upper limit of 22.65 then 22.65 MW would be applied.
- Suppose the participant nominates 15 MW of Gross De-Rated Capacity from its new capacity. Its effective total capacity based on nominations would be  $22 + 15 = 37$  MW. This is within the allow range of 36.531 MW to 40.590 MW, so the total Gross De-Rated Capacity is 37 MW.
- The Gross De-Rated Capacity of New Capacity is the difference, or 37 - 22 = 15 MW.

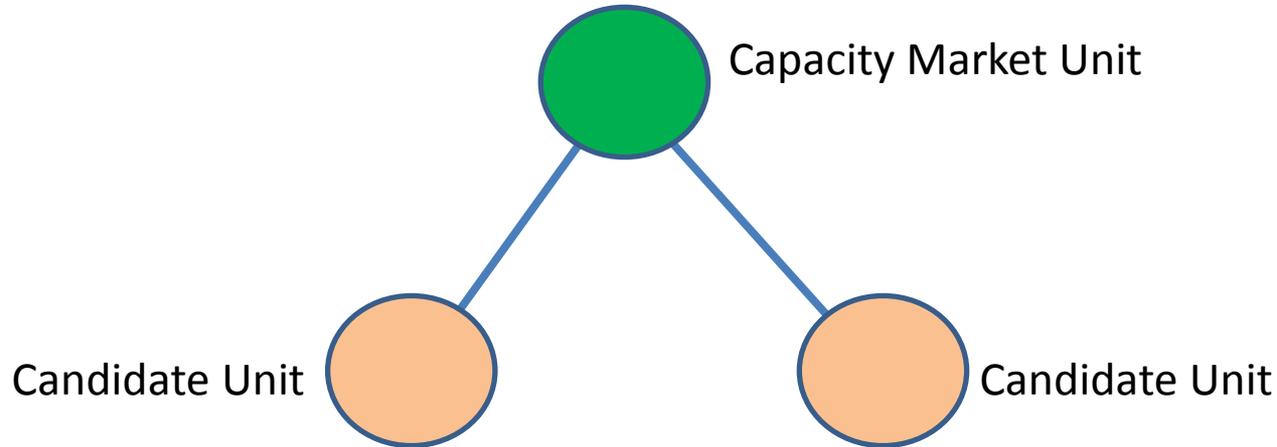
# Qualification Results – Candidate Unit

Type of Capacity	Initial Capacity (MW)	Gross De-Rated Capacity (De-rated MW)
Existing Capacity	25	22 ← <b>Gross De-Rated Capacity (Existing)</b>
New Capacity	20	15 ← <b>Gross De-Rated Capacity (New)</b>
Total Capacity	45	37 ← <b>Gross De-Rated Capacity (Total)</b>

Firm Network Access (MW)	Implied De-Rated (MW)
35	31.64

- The above tables summarises the key results for the Candidate Unit.
- The de-rated Firm Network Access needs to be tracked as it is used in the next step.

# Qualification and Capacity Market Unit



- The Qualification data for Capacity Market Units (CMUs) reflect accumulated results for the Candidate Units that comprise them, and previously Awarded Capacity.
- Only Variable Generator Units and units with Initial Capacity below the De Minimis Threshold (10 MW) can be combined to form one CMU.
- Normally there is a 1 to 1 relationship between a CMU and a Candidate Unit.
- We assume there is 1 to 1 relationship in our example.

# Capacity Market Units and Awarded Capacity

Type of Capacity	Initial Capacity (MW)	Gross De-Rated Capacity (De-rated MW)	Awarded Capacity (De-Rated MW)	Net De-Rated Capacity (De-Rated MW)
Existing Capacity	25	22	18	$\text{Max}(0, 22-18) = 4$
New Capacity	20	15	0	$\text{Max}(0, 15-0) = 15$
Total Capacity	45	37		

- The Gross De-Rated Capacity values of our CMU matches those of the Candidate Unit.
- The CMU was Awarded Capacity in a prior Capacity Auction for the same Capacity Year. This must be netted from the Gross De-Rated Capacity to give the Net De-Rated Capacity above.
- Further, the Awarded Capacity must be netted from the Firm Network Access to give the Firm Offer Requirement.

Firm Network Access (MW)	Implied De-Rated (MW)	Awarded Capacity (De-Rated MW)	Firm Offer Requirement (De-Rated MW)
35	31.64	18	$\text{Max}(0, 31.64-18) = 13.64$

# Qualification Results – Capacity Market Unit

Type of Capacity	Initial Capacity (MW)	Gross De-Rated Capacity (De-rated MW)	Net De-Rated Capacity (De-Rated MW)
Exiting Capacity	25	22	4 ← <b>Net De-Rated Capacity (Existing)</b>
New Capacity	20	15	15 ← <b>Net De-Rated Capacity (New)</b>
Total Capacity	45	37	

- These results have implications for how the CMU participates in the Capacity Auction.
- It may offer 4 MW of Existing Capacity and 15 MW of New Capacity into the Auction.
- It must offer the lesser of its Existing Capacity and the Firm Offer Requirement, or  $\text{Min}(4, 13.64) = 4 \text{ MW}$ .
  - This allows non-firm units to bid lower than their Net De-Rated Capacity if they are not firm up to this level.

Firm Network Access (MW)	Implied De-Rated (MW)	Firm Offer Requirement (De-Rated MW)
35	31.64	13.64

# The Default Price Caps

- In Qualification the SOs will set the applicable offer price caps for Capacity Market Units based on default values determined by the RAs. This information can be found in the Initial and Final Auction Information Packs for each Capacity Auction.
- New Capacity and existing demand response from DSUs or Autoproducers can be offered at the higher Auction Price Cap:
  - For the first auction this will be valued at:
    - €123,190.00/MW per year in the Republic of Ireland, and
    - €110,464.47/MW per year in Northern Ireland.
- Other Existing Capacity will be qualified to offer up to the Existing Capacity Price Cap;
  - For the first auction this will be valued at:
    - €41,060.00/MW per year in the Republic of Ireland, and
    - €36,818.50/MW per year in Northern Ireland.

# Exception Applications And Price Caps

- Participants can apply to the RAs (via an Exception Application) to have a Unit Specific Price Cap applied to all or part of the capacity of a CMU in Qualification Results.
- A Unit Specific Price Cap can be set on a case by case basis, between the normal Existing Capacity Price Cap and the Auction Price Cap. It is applicable to:
  - Units with unusually high costs that cannot be sufficiently funded within the Existing Capacity Price Cap.
  - Dual Rated Units:
    - These are units which typically have different capacities on different fuels.
    - These must be qualified based on their maximum capacity.
    - They can apply for a Unit Specific Price Cap if they normally operate on a fuel that provides less capacity. This gives scope to recover more revenue to offset risks and costs associated with ever being required to deliver the higher capacity.
- If notified of RA acceptance of a Unit Specific Price Cap for a CMU prior to the release of either Preliminary or Final Qualification Results, the SOs will modify the Qualified price caps accordingly.

# Exception Applications And Maximum Capacity Duration

- By default all Qualified capacity will have “Maximum Capacity Duration” of 1 Capacity Year.
- In the auction a participant can specify by offer step for how many Capacity Years it wants capacity to be awarded, with this between 1 and the Maximum Capacity Duration:
  - The standard Maximum Capacity Duration limits this to 1 Capacity Year.
- A participant can submit an Exception Application to the RAs in respect of New Capacity if it believes it cannot adequately recover its investment costs with Awarded Capacity for just 1 year (at a time) but must demonstrate that the cost of the New Capacity will exceed a New Capacity Investment Rate Threshold.
  - For the first auction this will be valued at:
    - €300,000.00/MW per year in the Republic of Ireland, and
    - £269,010.00/MW per year in Northern Ireland.
- If notified of RA acceptance of such an Exception Application for a CMU prior to the release of either Preliminary or Final Qualification Results, the SOs will modify the Maximum Capacity Duration of that CMU to 10 years.

# Treatment of Different Units In Qualification

Our example unit is not the same as all units. Here we list some special cases:

- Variable generator units do not need to qualify. If they choose to Qualify they can qualify at any level between 0 and their normal de-rated capacity:
  - This is specified in the CMC.
- For the first auction Demand Side Units and qualified demand response from Autoproducers (i.e. increasing net output by decreasing consumption) have a 100% decrease tolerance so can qualify between 0 and their normal de-rated capacity:
  - The tolerance is specified in the Initial Auction Information Pack.
- The de-rating factors for interconnectors is the product of two factors:
  - One is the normal de-rating factor specific to interconnectors.
  - The other is a External Market De-rating Factor specific to the market to which it is connected (e.g. Great Britain). This recognises what the pattern of flows might be at times of peak requirements in the SEM.

# Treatment of Different Units In Qualification

Further:

- Aggregated Generator Units (AGUs) are a single Generating Unit under the TSC and are a single Candidate Unit under the CMC:
  - These are made of a number of unregistered small generators which provide a service under contract to System Operators.
  - Qualification is applied to the individual Generators that comprise them, and are summed up to give results for the AGU.
- Candidate Units that are Variable Generator Units and Generators that are below the De Minimis Threshold (10 MW) can be aggregated as a single Capacity Market Unit. Due to different settlement equations for different unit types:
  - Demand Side Units can only be aggregated with Demand Side Units.
  - Autoproducers can only be aggregated with Autoproducers.
- The Capacity Auction course discusses Locational Capacity Constraints that are employed in the auction. If a Capacity Market Unit is fully and solely within the region of a Locational Capacity Constraint then it will be associated with the constraint in Qualification results.

# Changing DSU on AGU composition during Capacity Year

- The CMC does contemplate that the composition of AGUs and DSUs may change during the Capacity Year.
- The obligation remains to deliver any Awarded Capacity such that:
  - If the capacity of the unit increases above that required to deliver the Awarded Capacity then this is irrelevant to the Capacity Market. It can be reflected in future Qualification.
  - If the capacity of the unit falls below that required to deliver the Awarded Capacity then the unit is failing to meet its obligations and can be exposed to Difference Charges under the TSC.
- If the Awarded Capacity is contributing to a Locational Capacity Constraint then the Capacity Market Unit must continue to deliver Awarded Capacity that satisfies that Locational Capacity Constraint (unless permission is granted by the System Operators in writing).

# The Capacity Market Platform



## Non CMP Processes

Reviews and Disputes of Qualification Results are via Notices submitted to relevant parties.

Published results are released via the System Operator website.

Procedures allow for alternative processes for offer submission if issues arise with offer submission.

# Chapter 5: Course Summary

# Review of Learning Objectives

As a result of this training module, for the arrangements under the CMC, you should now:

Understand that participation under the CMC is required to get payments for capacity



Understand whether or not you need to participate in Qualification



Understand how registration occurs under the CMC



Understand the difference between Existing Capacity and New Capacity



Understand how de-rating is applied in the Qualification process



Have an awareness of the different Qualification treatment of different unit types

