Cross-Border Participation in the CRM

Consultation Paper

SEM-25-071

19 December 2025

EXECUTIVE SUMMARY

The go-live of the Celtic Interconnector project, now expected in Spring 2028, will result in the SEM being reintegrated into the European Internal Market. This interconnectivity triggers a set of requirements, including the implementation of explicit cross-border participation in capacity mechanisms. This is specifically required under Article 26 of EU Regulation 2019/943, part of the 2019 Clean Energy Package. Explicit cross-border participation requires the facilitation of foreign units to participate directly in the domestic CRM.

The SEM Committee notes that, in parallel, the CRM Development Programme is being progressed. Given that the existing State aid approval is due to expire in May 2028, shortly after the current expectation around the commissioning of Celtic, the SEM Committee has adopted a principles-based approach in this consultation paper, with the intention that the principles decided upon would apply equally to the current and any evolution of the CRM design. .

The scope of this paper relates to the high-level principles that will inform explicit participation of EU based foreign capacity (located in Member States with direct network connection to the SEM) in the SEM CRM. For the avoidance of doubt, this means that arrangements relating to SEM-GB interconnectors are out of scope. In addition, the detailed implementation and development of relevant CMC modification proposals arising from this consultation are also out of scope.

Two options are presented for the design of the auction, as illustrated in Table 1 below. The first of the two options is based on having standalone foreign unit auctions, separate from the CRM auction held for domestic units. The second option would involve foreign unit auctions that act as a pre-selection mechanism for participation in the 'main' CRM, i.e., an auction where both foreign and domestic units compete. The SEM Committee has not formed a minded to position on these options and would welcome stakeholders' views on both options. Under both options, the volumes to be procured from foreign units would be up to the calculated MEC.

Table 1 - Design Options for Auction

Principles	**Option 1: Standalone foreign unit auction**	**Option 2: Foreign unit auctions that act as a pre-selection mechanism for**

		participation in the main CRM
Auction Structure	Separate auction for foreign units; domestic CRM auctions are run independently	Foreign units participate in a pre-selection auction before participating in the main CRM auction
Competition	Foreign units compete only with other foreign units in their jurisdiction	Foreign units compete with domestic units in the main CRM auction after pre-selection
Impact on Demand Curve	Domestic CRM demand curve adjusted downward to reflect foreign volumes procured separately	No adjustment for the demand curve; foreign units enter main auction after pre-selection
Clearing Price	Each auction clears at different prices (foreign vs. domestic)	Clearing in foreign auction does not guarantee CRM contract; final clearing depends on design of the main auction
Risk for Foreign Units	Guaranteed participation if cleared in foreign auction	May be pushed out of merit by domestic units in main auction if they are too expensive

The paper also seeks the views of stakeholders on various parameters and options for their progression. In total, nine parameters are presented for consideration in this paper, with the SEM Committee having formed minded to positions on four. Where the SEM Committee have formed a minded to position, this is highlighted in **bold** in Table 2 below.

Table 2 - Parameter options

Parameter	**Options**
Length of Contract	• **Option 1: Single-year contracts only**

	• Option 2: ILC and multi-year contracts also
Participation in long-term auctions	• Option 1: T-1 only • Option 2: T-1 and long-term
Market Reference Price (MRP) and Strike Price	• **Option 1: MRP based on SEM price** • Option 2: MRP based on home country price
Application of ECPC and eligibility for a USPC	• Option 1: Yes, same as domestic • **Option 2: No, exclude foreign units**
Applicable Charges	• Option 1: Same as domestic • Option 2: Bespoke charges in addition to domestic
Auction offer structures	• Option 1: Option to bid inflexibly • Option 2: Disallow inflexible offers
Eligibility of Distribution-connected foreign units	• Option 1: Permit DSO-connected units • Option 2: Do not permit DSO-connected units
Secondary Trading	• Option 1: Foreign units can trade with other foreign units in same market only • Option 2: Foreign units can trade with both foreign units in their own market and domestic SEM units (and vice versa, up to the MEC)
Minimum MEC to run auctions	• Option 1: Always run if MEC is non-zero • **Option 2: Only run if MEC is above a certain value (to be determined)**

The SEM Committee welcomes the views of the industry and stakeholders on the minded to positions set out in this consultation. Any comments or feedback on the minded to positions must be sent in electronic form by close of business on 13

February 2026 to both the CRU and the UR CRM Submissions emails at the following addresses: CRMsubmissions@cru.ie and crmsubmissions@uregni.gov.uk. Unless marked confidential, all responses from companies or organisations may be fully published on the SEM Committee's website.

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Glossary of Terms

Term	Meaning
AIRAA	All Island Resource Adequacy Assessment
CMC	Capacity Market Code
CRM	Capacity Renumeration Mechanism
ECPC	Existing Capacity Price Cap
ERAA	European Resource Adequacy Assessment
IEM	Internal Electricity Market
ILCs	Intermediate Length Contracts
MEC	Maximum Entry Capacity
MRP	Market Reference Price
NGFC	Net Going Forward Costs
NRA	National Regulatory Authority
NRAA	National Resource Adequacy Assessment
PSE	Polskie Sieci Elektroenergetyczne
RA	Regulatory Authorities
RO	Reliability Option
RTE	Réseau de Transport d'Electricité
SA	State Aid
SEM	Single Electricity Market
T-1 / T-4	Capacity Auction for delivery in T-1 / T-4 timeframe
USPC	Unit Specific Price Cap

1 Introduction

The Celtic Interconnector is a major strategic infrastructure project that will create an electrical interconnection between Ireland and France, to allow the exchange of electricity between the two countries. The project is being developed by EirGrid and its French equivalent, Réseau de Transport d'Electricité (RTE).

With the expected connection and operation of the Celtic Interconnector in Spring 2028 between Ireland and France,[1] the Single Electricity Market (SEM) will be reintegrated with the European Internal Electricity Market (IEM). Reintegration with the IEM triggers a requirement for implementation of cross-border participation in capacity mechanisms, in line with the 2019 Clean Energy Package.[2]

Historically in the SEM and the EU in general, capacity markets were only available to domestic resources. Foreign resources and interconnectors were not able to receive remuneration for the same service provided. There was a gradual shift to allow non-domestic resource to participate in the capacity markets. Implicit participation of foreign capacity, which is also described as indirect participation of foreign capacity, through the participation of interconnectors in capacity markets, has been used temporarily in a number of Member States, including in the SEM.

However, following the Clean Energy Package and implementation of Article 26 of EU Regulation 2019/943, explicit cross-border participation, whereby foreign units rather than interconnectors can directly participate in capacity markets, was made mandatory for all market-wide capacity mechanisms, (Article 26(2)).

This requirement affects interconnectors between EU Member States and will therefore need to be introduced for the Celtic interconnector. It does not directly affect interconnectors between GB and the SEM.

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[1] In July 2025, EirGrid provided a project update, which indicated that Celtic's commissioning date is expected in Spring 2028 rather than 2027 due to delay to the submarine cable manufacturing and installation. See here: https://www.eirgrid.ie/celticinterconnector#project-updates

[2] The Clean Energy Package (CEP) includes eight new laws, with four focusing on electricity market design, as outlined here: https://energy.ec.europa.eu/topics/energy-strategy/clean-energy-all-europeans-package_en. This includes EU Regulation 2019/943 of the European Parliament and the council of 5 June 2019 on the internal market for electricity (recast), which provides the legislative background for cross-border participation in capacity mechanisms.

1.1 Legal context and overarching principles

The overarching legal context stems from the requirements that are set out in EU Regulation 2019/943, specifically Article 26. Cross-border participation is governed by a set of overarching principles, which are:

- Foreign capacity with equivalent technical performance has the same opportunity to participate as domestic capacity.[3]
- Member States may require foreign capacity to be located in a Member State that has a direct network connection with the Member State applying the mechanism.[4]
- Cross-border participation does not alter physical flows that are a result of capacity allocation as per the principles of capacity allocation and congestion management.[5]
- Regional Coordination Centres (RCCs) make a recommendation on the MEC. The TSO sets the MEC, which is subject to approval by the Regulatory Authorities.[6]
- Member States are required to ensure that the Maximum Entry Capacity is allocated in a transparent, non-discriminatory and market-based manner.
- Capacity Providers can participate in more than one capacity mechanism.[7]
- Member States are not able to prevent capacity providers from participation in another neighbouring capacity mechanism.
- Capacity Providers are required to make non-availability payments if their capacity is not available.[8]

[3] EU Regulation 2019/943 of the European Parliament and the council of 5 June 2019 on the internal market for electricity (recast), Article 26(2)
[4] EU Regulation 2019/943 of the European Parliament and the council of 5 June 2019 on the internal market for electricity (recast), Article 26(2)
[5] EU Regulation 2019/943 of the European Parliament and the council of 5 June 2019 on the internal market for electricity (recast), Article 26(4)
[6] EU Regulation 2019/943 of the European Parliament and the council of 5 June 2019 on the internal market for electricity (recast), Article 26(7)
[7] EU Regulation 2019/943 of the European Parliament and the council of 5 June 2019 on the internal market for electricity (recast), Article 26(5)
[8] EU Regulation 2019/943 of the European Parliament and the council of 5 June 2019 on the internal market for electricity (recast), Article 26(6)

1.2 SEM Committee objectives

The Single Electricity Market Committee (SEMC) is the decision-making authority for all Single Electricity Market (SEM) matters. The SEM Committee's principal objective is to protect the interests of consumers of electricity by promoting effective competition between persons engaged in, or in commercial activities connected with the sale or purchase of electricity through the SEM.

1.3 Wider context

The SEM Committee notes there is another workstream, the CRM Development Programme, which is holistically reviewing the current CRM to assess market design options for inclusion in the next State aid (SA) application. The approval process for the next State aid application is expected to be completed ahead of 2028.

The SEM Committee is cognisant of potential for evolution of the CRM design and its relationship with this project to facilitate cross-border participation in the CRM, in that both are currently anticipated to be effective from within a similar timeline. Therefore, the SEM Committee has decided that it is prudent to adopt a **principles-based approach** in its consultation on cross-border participation, with the intention that these principles apply equally to the current and any evolution of the CRM designs. By adopting this approach, the SEM Committee will develop a cross-border participation framework that is responsive and can accommodate potential adjustments or new requirements that may arise from the ongoing review of the CRM and its long-term evolution, thereby future-proofing the consultation process and maintaining alignment with emerging market structures and regulatory obligations.

The SEM Committee also acknowledges that the role of CRMs is continuing to evolve as we decarbonise our power system and as the generation mix and nature of system stress events changes, in the SEM, in neighbouring markets, and at an EU-level. Adopting a principles-based approach is intended to help future-proof the cross-border participation framework. In this context, the SEM Committee would welcome stakeholder comments and views on:

- Any emerging trends that we should consider as we develop the framework for cross-border participation in the SEM CRM, and,

- Whether any of the topics presented, or minded-to positions adopted, in this consultation paper are likely to be impacted by trends that we have not considered.

1.4 Structure of this Paper

The scope of this paper relates to the high-level principles that will inform the explicit participation of foreign capacity in the SEM CRM, pursuant to EU Regulation 2019/943 Article 26. This consultation paper is structured as follows:

- Section 2 sets out the key implementation considerations such as the overall roles and responsibilities, including high-level timelines.
- Section 3 sets out consultation auction design options for enabling foreign unit participation.
- Section 4 sets out the detailed CRM parameters that will govern cross-border participation.
- Section 5 sets out the next steps and how industry can engage with the consultation positions set out in this paper.

1.5 Out of scope

There are several related issues that are out of scope for the purpose of this consultation paper, which are:

- **GB-SEM interconnector participation in the CRM:** this consultation is focused on implementing EU regulation 2019/943 Article 26, particularly in relation to how neighbouring EU member states participate in the SEM CRM. Arrangements regarding the continued participation of SEM-GB interconnectors in the CRM are therefore out of scope.
- **Detailed implementation and Capacity Market Code (CMC) modifications:** the detailed implementation of the principles set out in this consultation paper are out of scope and will be further considered through modifications to the CMC, as part of an overall Regulatory Authorities (RA) and TSO programme of work. For example, this would include specific CMC changes, qualification process changes and IT system changes.

1.6 Responding to this paper

The SEM Committee welcomes all stakeholder views and comments on the minded to

positions that are set out in this consultation paper. Please keep responses as concise and focused as possible, given the tight timelines involved. Comments should be sent by close of business on 13 February 2026 in electronic form to:

- CRMsubmissions@cru.ie, and
- CRMsubmissions@uregni.gov.uk.

Unless marked confidential, all responses from companies or organisations may be fully published on the SEM Committee's website. Respondents may request that either their full response or specific aspects of it be kept confidential. The SEM Committee shall respect this request, subject to any obligations to disclose information. Respondents who wish to have their responses remain confidential should clearly mark the document to that effect and include the reasons for confidentiality.

2 High-level implementation considerations

This section discusses the high-level implementation considerations. It describes the expected overall programme of work, including the high-level timelines. It also sets out a description of the key tasks that will be TSO led such as the Maximum Entry Capacity (MEC) methodology and the TSOs' agreement, which will govern the exchange of data between the TSOs and RTE.

The SEM Committee welcomes the views of stakeholders on the high-level implementation considerations set out below.

2.1 Overall programme of work

The design and implementation of cross-border capacity participation in the SEM CRM involves several key stages, such as the regulatory design options, stakeholder engagement and subsequently, the implementation stage.

- **SEM-specific regulatory design options:** This consultation paper initiates the regulatory design phase of the programme, focusing on auction design and high-level design principles around the key CRM parameters that will govern the implementation of cross-border participation. It sets out options and the underlying rationale, as well as minded-to positions where relevant.
- **Stakeholder engagement and the SEM** Committee **decision:** The SEM Committee will consider stakeholder views on the options presented in this paper. The SEM Committee will determine the SEM regulatory design option that best aligns with the SEM Committee's principal objectives, while considering stakeholder views. The SEM Committee is expected to make its decision by the end of Q2 of 2026.
- **Implementation stage:** The implementation stage is to commence shortly after the publication of the SEM Committee decision. It will be a coordinated programme to cover both RA and TSO tasks, such as CMC modifications, qualification process changes and MEC calculation.

The following sub-sections set out a description of the key implementation considerations that relate to cross-border participation in the SEM's CRM. Noting that the implementation considerations below are non-exhaustive and a further implementation programme will be developed in coordination with the TSOs.

2.1.1 Maximum Entry Capacity (MEC) Calculation and derating curves

The Maximum Entry Capacity (MEC) is a de-rated capacity metric (in de-rated MW) that sets the upper bound of de-rated foreign capacity that can be procured from a connecting market for a given capacity delivery year. It reflects the best expectation of contributions from the connecting market during local system stress events in that delivery year.

The MEC is typically calculated with reference to a Resource Adequacy Assessment study conducted for the relevant market, and is intended to ensure that risks to adequacy linked to foreign unit contributions and reliance on interconnector flows are appropriately reflected, including:

- the risk of concurrent security of supply shocks in both markets,
- the risk of transmission infrastructure outages for the relevant interconnector(s), and
- the relevant cross-border market's generation mix.

Appropriately calibrating the MEC is important. Overestimating MEC for a given border would mean that SEM consumers would incur higher costs without benefitting from a corresponding enhancement to security of supply and may endanger resource adequacy. Underestimating MEC would lead to over-procurement of local capacity, potentially at a higher cost to consumers than they would face otherwise.

The annual estimation of MEC and development of underlying calculations to achieve this is a new TSO task, which will be subject to Regulatory Authority approval. The development of MEC will include consideration of the Regional Coordination Centre (RCC) recommendations on the MEC[9] on the basis of the European Resource Adequacy Assessment (ERAA) study, and how this may interact with SEM processes and approvals.

The SEM Committee requires the TSOs to develop an enduring methodology for calculating MEC by Q3 2026, well-ahead of the implementation of cross-border

[9] The applicable RCC in the case of the SEM is Coreso.

participation of foreign units.[10] Timely development of this methodology is important given its role in setting the appropriate volume of reserved capacity in T-4 auctions for foreign unit participation. The methodology will be subject to SEM Committee approval.

The MEC variable is separate to the derating curves that apply per technology class, which are approved by the Regulatory Authorities pursuant to Section D.3.1.2 of the CMC. In line with the EU regulation principle of technical equivalence between local and foreign capacity providers, the SEM Committee considers that the de-rating curves methodology would apply to both domestic and foreign units, depending on the technology class. The SEM Committee requires the TSOs to consider if any updates are required to the derating curves methodology to accommodate foreign capacity providers.

2.1.2 TSOs' agreement

The SEM Committee considers that robust and timely coordination between the neighbouring TSOs will facilitate the implementation of cross-border participation between SEM and France. The SEM Committee notes that the completion of the TSOs' agreement is a prerequisite for implementing EU Regulation 2019/943 Article 26 and, as such, is on the critical path for timely delivery of this workstream.

The SEM Committee invites the TSOs to commence developing the relevant processes between SEM TSOs and RTE that would support the implementation of cross-border participation. The SEM Committee expects that the TSOs may engage directly with RTE on operational matters, but where items in the agreement have cost and/or revenue sharing implications, this will be in the remit of the relevant National Regulatory Authorities (NRAs) and subject to their approval.

The SEM Committee expects the agreement to include, but not necessarily be limited to, the following areas:

[10] It is worth noting that for the T-4 2027-2028, it was determined that it would be prudent to reserve 350 MW in the CRM to take into account participation of French capacity, to support in 2027/28 delivery year. Similarly for the 2028/29 delivery year, there were 354 MWd that has been reserved to take into account Celtic capacity support. See, CRU, Capacity Remuneration Mechanism, 2028/29 T-4 Auction, Volumes Information Note (SEM-25-019), 03 June 2025. Available here: 2028 29 T-4 Volumes Information Paper SEM-25-019 for publication.pdf

- The data sharing framework, including the validation of technical specifications of foreign capacity providers, to support the qualification process. For example, are there technical requirements that are SEM-specific that may be required for foreign capacity providers as part of the qualification-related information?
- Any revenue or cost sharing that may arise as a result of implementing cross-border participation in the CRM.
- Should this be applicable,[11] the specifics underpinning availability testing and monitoring in line with EU Regulation 2019/943 Article 26. This will inform the necessary data sharing to validate the performance of capacity providers during times of system stress.

2.1.3 Qualification process

The detailed qualification process for foreign participation is an important practical implementation consideration, which requires careful consideration and planning. A streamlined process is needed which does not create a high administrative burden for the TSOs and the Regulatory Authorities. The SEM Committee requires the TSOs to commence developing a qualification framework for foreign units, which has regard to the overall principles set out in this consultation paper.

Under the current CRM, full qualification precedes auction participation. While this model can be applied to foreign units too, there is a concern that this may disproportionally increase the administrative burden of the qualification process. Relative administrative burden will be particularly high if the calculated MEC volume is small and if the number of foreign units applying for qualification is disproportionately high relative to the number of foreign units that may clear in practice.

The alternative is to undertake a two-step process: (1) a simple pre-qualification, which is followed by (2) full qualification only for cleared units. This means that foreign units wishing to bid in the CRM would only have to clear pre-qualification, which may be enhanced with additional unit-specific self-declarations that the unit is able to meet the full qualification process requirements alongside appropriate evidence. The cross-border element of the CRM would then run and a set of foreign units would clear. Following clearing of foreign units, the cleared units would proceed through the full

[11] Availability monitoring/testing is not currently relevant in the SEM CRM context, but may be relevant to SEM unit participation in the French CRM and/or may be included in the future CRM design.

qualification process.

The administrative burden would be minimised, as the full qualification process would only apply to a handful of cleared foreign units. However, this introduces the risk that a cleared foreign unit fails qualification after the cross-border element of the CRM has been run, leaving no opportunity for another foreign unit to be awarded a CRM contract in its place. Limiting the number of qualified foreign units to those that have cleared in the cross-border element of the CRM also has implications for enabling secondary trading for foreign units – discussed further in section 4.8.

3 Foreign unit participation auction design

This section discusses the design of the auction which will determine how foreign units are selected and awarded CRM contracts, including whether and how they compete with domestic SEM units.[12]

This section explores two high-level options and their variants:

- **Option 1: Standalone foreign unit auctions**, separate from the CRM auction held for domestic SEM units
- **Option 2: Foreign unit auctions that act as a pre-selection mechanism** for participation in the 'main' CRM i.e., in an auction where both foreign and domestic units compete

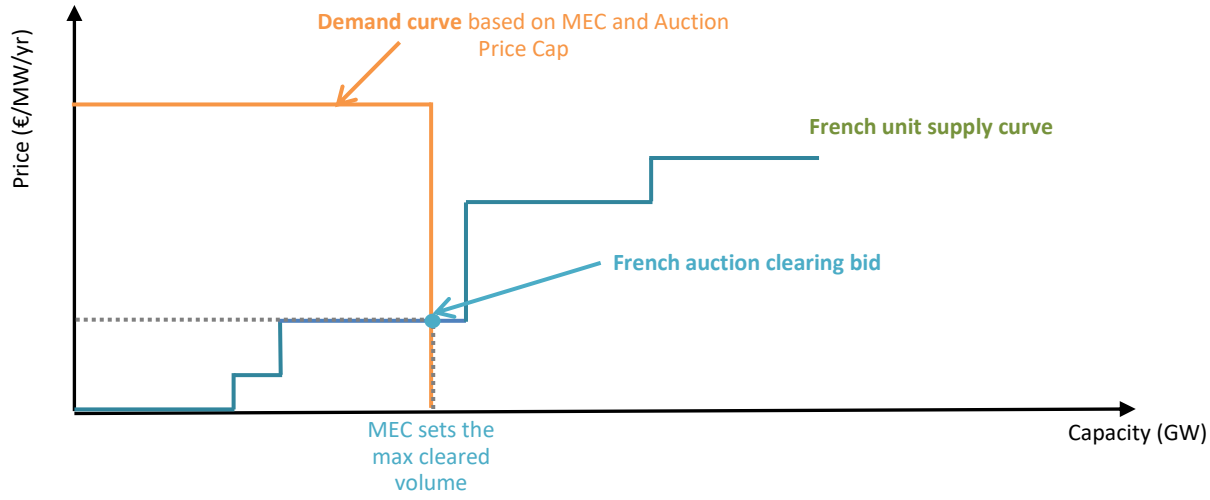
The SEM Committee welcomes the views of stakeholders on these options as outlined below, the initial assessment of the advantages and disadvantages of each option and the implementation considerations.

3.1 Option 1: Standalone foreign unit auctions

Under a standalone mechanism, foreign units face their own demand curve and compete with other foreign units in the same jurisdiction. The primary auction for domestic SEM units is run separately, with the demand curve adjusted downwards to reflect volumes procured in the standalone foreign unit auction. This means that each auction can clear at different prices. This is illustrated in Figure 1 below.

[12] We note that all options considered in this section assume that auction clearing will be based on a pay-as-clear principle.

French Unit Auction – Standalone



With a domestic SEM Unit Auction – completely separate

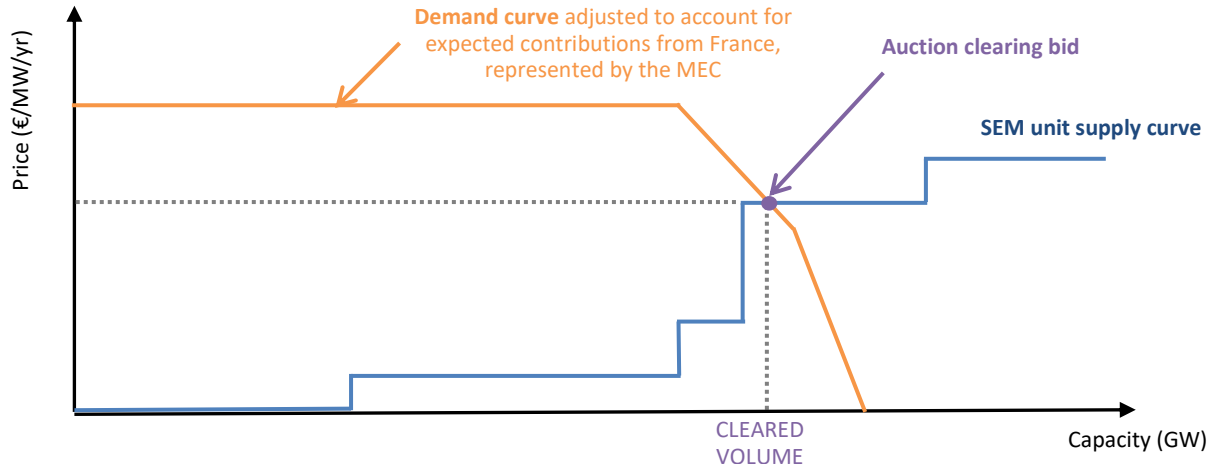


Figure 1 - Foreign unit auction design – Option 1: standalone foreign unit auctions

To note - the demand curve for a foreign unit auction is set to ensure that procured de-rated capacity volumes do not exceed the MEC set for the relevant market and delivery year. This applies to all auction design options outlined in this paper.

The auction price cap also applies, aligned with the domestic SEM unit/main auction. We note that the demand curve in the French standalone auction is not sloping given that there is assumed to be no additional benefit to adequacy from procuring above the MEC and therefore there would be no benefit to the consumer of procuring additional capacity, even at a lower price.

3.1.1 Key design considerations under option 1

There are two key auction design considerations under option 1:

- **The foreign unit auction clearing price and how it may compare to the domestic SEM clearing price:** Under this design, the clearing price in the foreign unit auction is unrelated to the clearing price in the domestic SEM auction – one does not directly impact on the other.
  This means that the foreign unit auction may potentially clear at a lower or higher price than the clearing price that domestic units receive in the SEM auction. There may be an option to set an additional price cap in the foreign unit auction, equal to the level of the domestic SEM auction clearing price to ensure that the foreign unit auction does not clear at a value above the clearing price of the domestic auction. The SEM Committee is not aware of any examples where this approach has been implemented in practice.
- **Whether the local SEM auction demand curve is adjusted if the full cross-border demand (represented by the MEC) is not met in practice in the foreign unit auction, for example, due to the auction being undersubscribed**: The auction demand curve in the domestic SEM auction assumes the MEC is met in the standalone foreign unit auction. If this was not achieved in practice, the domestic SEM demand curve may need to be adjusted to procure additional local units to cover the shortfall. However, this is not necessarily the case. Whether or not a correction of the demand curve would be necessary and appropriate is a complex policy decision, and is discussed further in section 3.3.

3.2 Option 2: Foreign unit auctions as a selection mechanism

As is the case for option 1, foreign units face their own demand curve and compete with other foreign units in the same jurisdiction in a specific auction. However, under option 2, clearing in this foreign unit auction does not guarantee that units will be awarded CRM contracts. Instead, clearing in the foreign unit auction only enables participation in the main auction where the ‘pre-cleared’ foreign units compete with qualified domestic SEM units. In other words, foreign unit auctions are simply a selection mechanism, allowing successful bidders to compete in the main CRM auction.

When foreign unit auctions are a selection mechanism for competing in the main auction, 'pre-cleared' foreign units only clear when they are cheaper than the marginal unit in the CRM and may be pushed out of merit by domestic units.

The main auction demand curve is set in the same way as it is today, with no adjustments for foreign versus domestic volumes.

There are two further sub-options for determining the clearing price of successful foreign capacity units:

- Option 2a: A single main auction clearing price applies to all capacity including foreign units
- Option 2b: Market-specific clearing prices are set by the most expensive unit that has cleared in each market.

The two options are illustrated in the figures below.

Main auction – where both domestic SEM and foreign French units participate

Note: A standalone French unit auction as per option 1 precedes this, but only acts as a selection mechanism

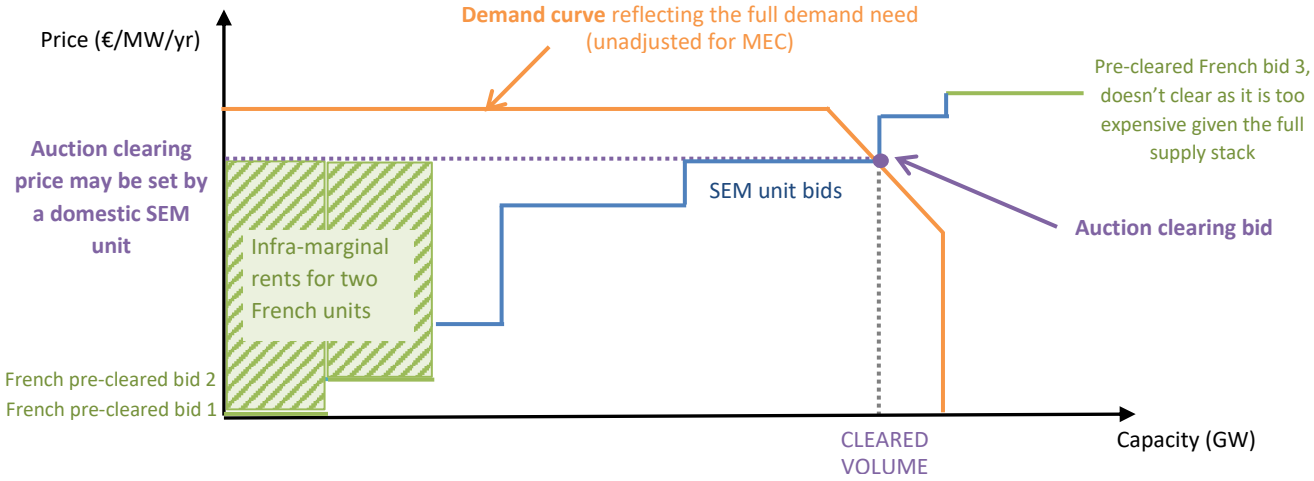


Figure 2 - Foreign unit auction design – Option 2a: foreign unit auctions as a selection mechanism, with a single main auction clearing price

Main auction – where both domestic SEM and foreign French units participate – as per option 2a but also with border-specific clearing prices, set by the most expensive unit that clears from each market

Note: A standalone French unit auction as per option 1 precedes this, but only acts as a selection mechanism

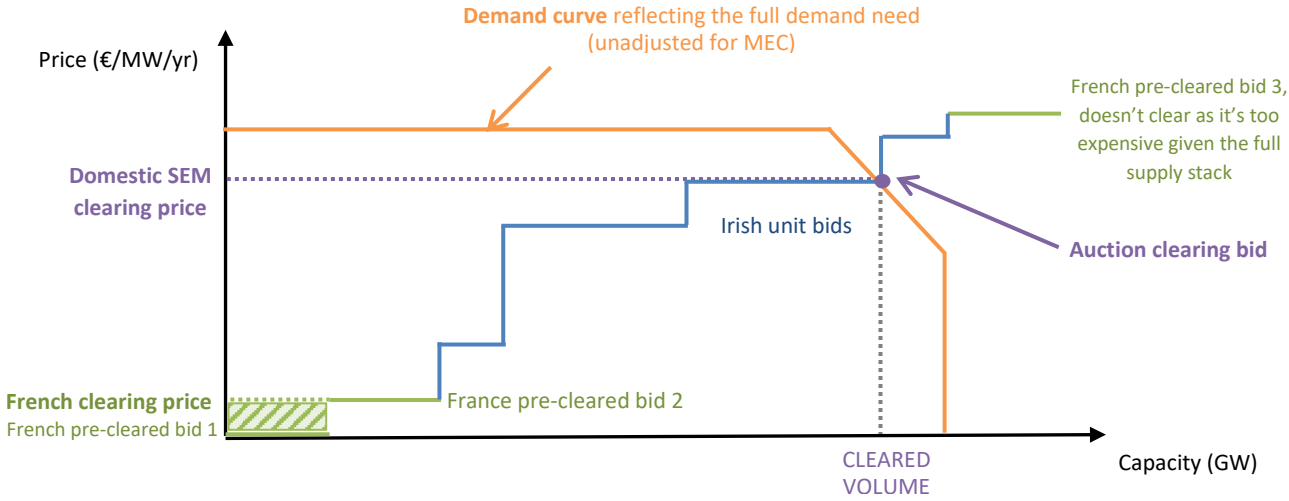


Figure 3 - Foreign unit auction design – Option 2b: foreign unit auctions as a selection mechanism, with border-specific clearing prices

3.2.1 Key design considerations under option 2

There are two key auction design considerations to note under option 2:

- **Interactions between the price received by foreign units and how it may compare to the price received by domestic SEM units:** Under option 2a, there is a single clearing price in the main auction – which could in theory be set by either a domestic or a foreign unit that is marginal. Should the clearing price for SEM be significantly higher than the foreign units' bid prices, it may result in high inframarginal rents for foreign capacity as a result, as illustrated in Figure 2 above.[13] Option 2b mitigates this, by setting market-specific clearing prices. There is still the possibility (albeit small) that a foreign unit is marginal for the whole auction, which would mean that foreign units would receive a higher clearing price than domestic units in this scenario.

[13] It is worth noting that any foreign units that clear do so by pushing more expensive units in the supply curve out of merit, likely lowering the resulting auction clearing price. This delivers a benefit to SEM consumers, non-withstanding the inframarginal rent paid to the successful foreign units.

- **Whether the volumes procured in the CRM are adjusted if the full foreign unit demand (represented by the MEC) is not met in the main auction:** Under option 2, foreign units will not clear in the main auction if they are more expensive than domestic units they compete with. Should that happen (or should the MEC not be met for other reasons, e.g., the foreign unit auction being under-subscribed), under this design, more local SEM unit volumes would be procured to fill the 'gap' relative to the MEC by definition. As discussed further in section 3.3, this may not always be desirable – instead there may be a need for a second step in the auction clearing algorithm to adjust the demand curve downwards to avoid that.

3.3 Other considerations related to auction design

There are additional key design considerations related to auction design that need to be considered regardless of the choice of option 1, option 2, or sub-options:

- **Transparency obligations:** In line with the principles of transparency, the SEM Committee expects that there will likely be new obligations for the TSOs in the CMC to publish cross-border auction results by a specific date after the cross-border auction has been conducted. The exact process, responsibility and timing will be considered further as part of on-going implementation of cross-border participation.
- **Interaction with Celtic's revenue:** In line with EU Regulation 2019/943[14] and ACER decision 36/2020 and associated technical guidelines,[15] where revenue arises as a result of the allocation of Celtic entry capacity to foreign units in the context of their participation in the SEM CRM as described in this section, this revenue shall accrue to the TSOs concerned, i.e., EirGrid and RTE, as Celtic's joint owners.[16] We expect that within Celtic's regulatory regime, these revenues will be shared between EirGrid and RTE on the basis of the 50/50 sharing,

[14] EU Regulation 2019/943 of the European Parliament and the council of 5 June 2019 on the internal market for electricity (recast), Article 26(9)
[15] ACER Decision on technical specifications for cross-border participation in capacity mechanisms: Annex I Technical specifications for cross-border participation in capacity mechanisms (December 2020)
[16] Noting that Celtic interconnector is under a Regulated Asset Base (RAB) regime, which ensures that it receives a fixed regulated revenue to recover its investment, and as such its final revenue is unaffected by any revenues linked to the direct French unit participation in the SEM CRM.

similar to the approach applied to the project's revenues from congestion rents.[17,18]

- **Interaction with the qualification process:** There are additional implementation considerations and interdependencies related to the qualification process that would also need to be thoroughly considered. For example:
    - Should foreign unit qualification align with the timelines for domestic unit qualification, or would this need to be extended to allow additional time for verifying foreign unit parameters in cooperation with the foreign TSO?
    - Would foreign unit participation necessitate that the foreign unit auction is held earlier than the main auction under option 2, to allow the full foreign unit qualification to be completed ahead of the main auction to avoid post-auction adjustments, as in the case of the Belgian CRM?
- **Should more domestic unit volumes be procured if the full MEC is not met?** This may arise for example:
    - if the foreign unit auction is undersubscribed, or
    - if a cleared foreign unit fails full qualification, which as discussed above may follow the foreign unit auction clearing to reduce the administrative burden of enabling foreign unit participation, or
    - if one or more 'pre-cleared' foreign units are pushed out of merit by domestic units in the main auction under option 2.

The SEM Committee considers that the MEC should represent the best expectation of cross-border contributions in periods of system stress for a given capacity year, regardless of the volume of CRM contracts that are actually awarded to foreign units. As such, our minded to position is that no additional domestic unit volumes should be procured to make up any shortfall in awarded foreign capacity contracts relative to the MEC. This is in line with one of the key principles in EU Regulation 2019/943 Article 26(4) that cross-border physical flows are not affected by foreign unit participation in a domestic CRM.

[17] In line with the coordinated Cross-Border Cost Allocation (CBCA) decision by both NRAs: CRU19125-revised-CBCA-decision.pdf.
[18] Noting that EU Regulation 2019/943 and ACER decision 36/2020 also allow for an alternative common revenue sharing methodology to be designed and jointly approved by applicable NRAs, CRU and CRE.

4 Parameters for foreign participation

There are several relevant and important parameters that will affect the auction design and the overall framework of foreign unit participation, which are discussed in this section and summarised in the table below. The SEM Committee welcomes comments and views of stakeholders on the particular options and five minded to positions presented in this section and/or if stakeholders have views on other parameters that are not included below.

Table 3 – Parameters considered

Parameter	Minded to position
Length of Contract	Foreign units limited to single year contracts
Participation in long-term auctions	No minded to position
Market Reference Price and Strike Price	MRP based on SEM price
Application of the Existing Capacity Price Cap (ECPC) and Unit Specific Price Caps (USPCs)	Exclude foreign units from the application of the ECPC and USPCs
Applicable Charges	No minded to position
Auction offer structures	No minded to position
Eligibility of distribution-connected foreign units	No minded to position
Secondary Trading	No minded to position
Minimum MEC to run foreign unit auctions	Only run if MEC is above a certain value

4.1 Length of Contract

This section discusses the contract length that foreign units are eligible for, including the interrelationship with auction design and current Regulatory Authorities' processes. The length of contract refers to the length of time for which a plant can fix their Reliability Option (RO) fee. It is an important auction design element and a key driver in providing investors with the stability required to finance their projects. Under the

existing arrangements of the CRM, New Capacity can bid into an auction for either a single-year contract, or a multi-year contract (subject to RA approval of an Exception Application) for any number of years up to a maximum of ten years. In the past, Existing Capacity was subject to single-year contract bids only. However, with the introduction of Intermediate Length Contracts (ILCs), an existing unit can, subject to RA approval of an Exception Application and ILC qualification approval, bid into an auction for a multi-year contract with a maximum duration of up to five years.

When considering the appropriate length of contract to set, particularly for foreign units, it is important to consider two key factors:

- **Difficulty of forecasting MEC for a multi-year period:** The length of contract offered to foreign units may be impacted by difficulties in forecasting MEC for durations greater than one year, particularly if the MEC might decline and capacity which may not be needed to contribute to adequacy has already been contracted long-term and is being paid for by consumers. Only allowing single year contracts for foreign capacity can mitigate such challenges. For example, issues pertaining to uncertainty and instability of the MEC over longer durations are mitigated in the Belgian CRM[19] as are difficulties in actually forecasting contributions from other borders and risks of coincidence of security of supply shocks beyond near-term horizons[20]; and
- **Interconnector availability:** In the case of the SEM, it may be difficult to predict interconnector availability of Celtic's commissioning given the risk of late delivery, as well as performance in the early commissioning years before sufficient historical evidence is available.

Given the above, the SEM Committee welcomes views on the appropriate length of contract for foreign units and seeks feedback specifically on the two options below.

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[19] According to the Belgian authorities in the Belgian CRM State aid, the possibility for multi-year contracts cannot be foreseen for foreign capacity as, in the long-term, sufficient entry capacity cannot always be guaranteed. The latter does not only depend on the level of interconnection and its availability, but also on the risk of concurrent system stress with neighbouring countries. This latter risk may vary significantly over time, depending on the adequacy and market situation in other countries. See Recital 143 in Commission Decision (EU) 2022/639 of 27 August 2021 on the aid scheme SA.54915 – 2020/C (ex 2019/N) Belgium – capacity remuneration mechanism. Available here: Publications Office

[20] It is worth noting that, a conservative MEC estimate per border is reserved at the T-4 stage to reflect expectations of contributions from those markets at the T-1 auction, to be refined ahead of the pre-auctions.

4.1.1 Options

Option 1: Foreign units limited to single-year contracts

This option proposes to limit the length of contract for foreign units to a single year. The State aid approval for the Belgian CRM regarded the limitation to one-year contracts as a transitional measure and the Belgian authorities committed to reviewing this approach every two years.[21]

Option 2: Foreign units eligible for ILC and multi-year contracts

Under this option, the SEM Committee proposes allowing foreign units to participate and compete in the SEM CRM and to bid for multi-year contracts, in the same way that SEM units do.

The SEM Committee envisages that if this option is progressed, new and existing direct foreign capacity providers would need to submit Exception Applications, showing clearly how their proposed investment would be greater than the relevant Investment Rate Threshold.

4.1.2 Minded to position

The SEM Committee is minded to proceed with Option 1, noting that this may need to form a transitional measure as was the case in the Belgian State aid approval. It would be implemented with a view to reviewing appropriate contract length once sufficient historical evidence is available on the operational performance of the Celtic interconnector and directly participating foreign units.

4.2 Participation in long-term auctions

This section discusses whether foreign units should be eligible to participate in long-term auctions. In the SEM CRM, the SOs are currently required to conduct a T-4 auction for every Capacity Year, with other auctions (T-3, T-2 or T-1) held at the instruction of the RAs. It was envisaged at the time of consultation for the detailed design of the SEM CRM in SEM-16-010[22], that the majority of the Capacity Requirement would be procured at the T-4 auctions, with T-1 auctions held to procure any residual capacity in the year preceding the Capacity Delivery Year and to facilitate

[21] SA.54915 – 2020/C (ex 2019/N) Belgium – capacity remuneration mechanism. Paragraph (520) Available here: https://ec.europa.eu/competition/state_aid/cases1/202137/288236_2313671_226_2.pdf

[22] https://www.semcommittee.com/files/semcommittee/media-files/SEM-16-010%20CRM%203%20Consultation%203_1.pdf

DSU participation. Furthermore, it was accepted that for T-4 auctions, the Capacity Requirement cannot be forecast with complete accuracy four years in advance of the Capacity Delivery Year, so procuring 100% of the expected requirement at this time may result in procuring more capacity than is required. T-1 auctions are therefore used to procure remaining capacity requirements, given there is less uncertainty regarding the volumes that need to be procured and procure some resources when it is more appropriate to do so, which could now be for foreign units, in addition to DSUs.

In the context of direct foreign participation of cross-border capacity, which auction or auctions such units should be eligible to participate in is another key element in the design of the mechanism. This parameter may need to be considered alongside the length of the contract and applicability to new and/or existing units, as discussed in the previous section. As such, the SEM Committee would welcome the views of stakeholders on the two options below, with consideration of the favoured option in the previous section.

4.2.1 Options

Option 1: T-1 only

Under this option, participation of foreign units would be limited to T-1 auctions only, with forecast MEC reserved in longer-term auctions to carry into the T-1 auction.

The SEM Committee notes this approach may be a more risk averse approach if adopted with the option to limit contract duration for foreign units' participation to one year. If this option is progressed, it is worth noting that this would mean volumes procured in T-1 auctions would continue to be greater than they are today. However, the SEM Committee does not envisage this to give rise to material under-procurement or cause security of supply concerns. The MEC is the best expectation of contributions from the foreign market, regardless of whether CRM contracts are awarded to foreign units. This means that any potential under-procurement of foreign unit capacity at the T-1 stage would not need to be replaced by additional domestic unit volumes.

In the T-4 2027/28 and T-4 2028/29 auctions, 350MWd of capacity was reserved to reflect the MEC for French unit participation, which would be auctioned in the relevant T-1 auction.

Option 2: T-1 and long-term

Under this option, foreign units will be eligible to participate in both T-1 and long-term

auctions. The SEM Committee recognises that foreign units may help to lower the costs of securing adequacy and allowing participation in longer-term auctions may enhance participation. If this option were elected alongside the option to allow multi-year contracts, in the example of a long-term auction where a ten-year contract was awarded, the MEC would need to be forecasted up to fourteen years in advance of the Capacity Year, to ensure that capacity is not over procured, which would raise potentially significant challenges.

4.2.2 Minded to position

The SEM Committee has not formed a minded to position on this parameter. However, notwithstanding this, the SEM Committee considers that proceeding with Option 1 may avoid the risk of over-procurement due to forecasting errors in the calculation of the MEC, where capacity that is not capable of meeting adequacy requirements are being paid for by consumers in the SEM. The SEM Committee also considers that proceeding with Option 2 may be dependent on the decision made regarding the length of contract, noting the difficulty in requiring visibility up to fourteen years in advance of the adequacy situation for the MEC calculation.

4.3 Market Reference Price

This section discusses whether the Market Reference Price (MRP) the foreign unit will be exposed to should be based on the SEM day-ahead market price or the foreign day-ahead market price.

In the SEM CRM, the Reliability Option (RO) takes the form of a one-way Contract for Difference with a Strike Price and a MRP based on the SEM day-ahead price, intraday market or balancing market price, depending on the market in which the RO holder actually traded.[23] In all settlement periods when the MRP exceeds the Strike Price, the RO holder will be required to pay an amount equal to the MRP minus the Strike Price to the RO Counterparties, referred to as Difference Charges. The Market Operator then recovers/pays the net difference between reliability option fees paid out to RO

[23] And if the RO holder did not trade/deliver to the market in a given high price period, then they will not earn energy revenue but will still be subject to Difference Charges at the Imbalance Price from the balancing market. This means that the SEM CRM MRP is designed to 'track' the actual electricity market revenues of the SEM capacity providers, ensuring that ROs only expose providers to difference payments when they earn (or could have earned) high electricity market revenues.

holders and Difference Charges received from suppliers, and this is passed on to consumers.

In the context of foreign unit participation, the design of the RO and whether this needs to be amended in the case of foreign units is worth consideration. Specifically, the choice of MRP would need to be considered.

Illustrations of how this may work in the SEM are provided below in two separate hypothetical scenarios. For both examples, the Strike Price remains the same at €500/MWh. In developing the graphs to illustrate the examples, the SEM Committee has considered the following:

1. Different market prices in the SEM and foreign market mean different levels of 'missing money' for local and foreign units, which influence how they may bid and influence the auction clearing price for each market.[24]
2. Different market prices during a system stress event in the SEM have implications for what a foreign unit will have to pay back in its RO contract. This is what the examples below focus on, as:
    a) If the MRP in a foreign unit's RO contract is set with reference to the SEM market price (e.g., the SEM day-ahead market price), the foreign unit would be exposed to the basis risk between the SEM price and the foreign market price that they have received depending on the market in which the unit traded (e.g., the foreign day-ahead market). While hedging products may be available to help them manage this, this basis risk exposure is likely to increase the price they may bid at in the cross-border auction. On the other hand, this is beneficial for Irish consumers as they will get payments back from all relevant RO holders if prices in the SEM spike above the Strike Price.
    b) If the MRP in the foreign unit's RO contract is set with reference to its own foreign market price (e.g., the foreign day-ahead market price), the foreign unit will be protected from basis risk exposure as the MRP of the RO contract will more closely to track actual electricity market revenues that

[24] Where these differ – this depends on auction design, explored further in Section 3. Where they don't, this may influence the combined SEM-foreign unit auction clearing price.

the foreign unit is able to earn in its own market. Selecting an MRP that closely tracks the electricity market revenues that a given unit has earned (or could have earned) is aligned with how the MRP is ser for local SEM units. But, given that the SEM and foreign market prices are likely to diverge, particularly so during SEM system stress events (and vice versa during the foreign market's own system stress events), this may give rise to inconsistencies in who pays what if a system stress event arises and may give rise to misalignment in incentives for when to be deliver.

Scenario 1: SEM MRP exceeds the Strike Price, but foreign market MRP does not

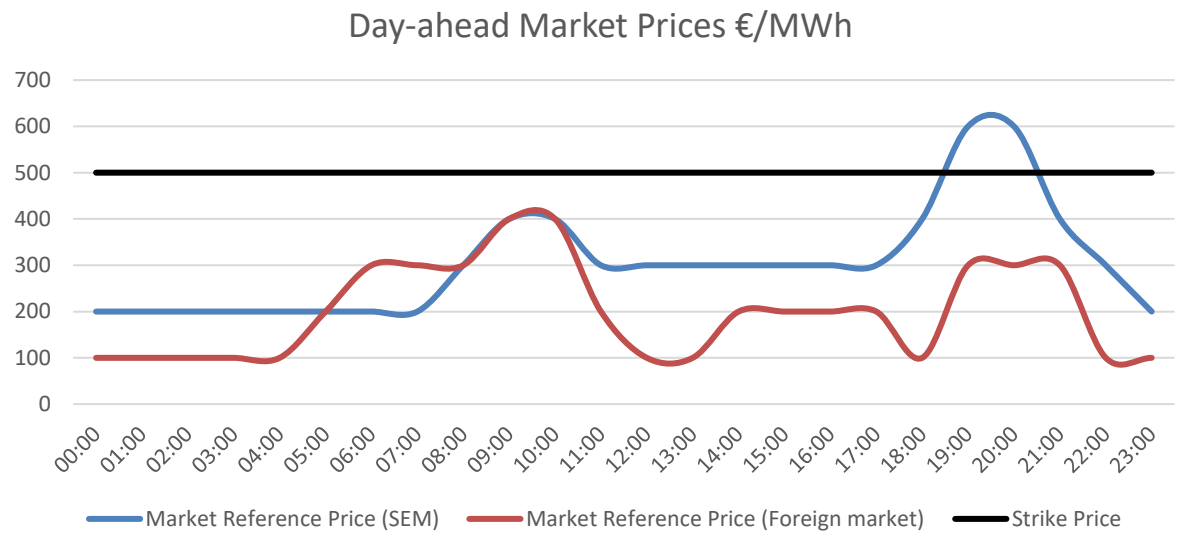

Figure 4 - Illustrative example of SEM and foreign market MRPs and how these may diverge – particularly when there is a system stress event with high prices in the SEM but not in the foreign market

In this example, the MRP in the SEM over the settlement periods between 19:00 and 20:00 exceeds the Strike Price of €500/MWh, reaching around €600/MWh. The MRP in the foreign market over the same period is lower than the Strike Price, at around €300/MWh. Under this scenario, if foreign units are exposed to the SEM MRP, they would have to make difference payments of around €100/MWh, i.e., the SEM MRP (~€600/MWh) minus the Strike Price (€500/MWh), when they have not earned this in market revenues in excess of €500/MWh. If they were exposed to their local MRP (the foreign market MRP on the graph above), on the other hand, they would not have to make this difference payment that they have not earned in higher than €500/MWh

electricity market revenues – but may also be less incentivised to deliver as a result. This also has an impact on SEM consumer costs: if foreign units are exposed to the SEM MRP, difference payments made would reduce consumer costs during high price system stress events, but if foreign units are exposed to the foreign MRP, they would not need to make any difference payments, resulting in higher consumers costs.

Scenario 2: Foreign market MRP exceeds Strike Price, but SEM MRP does not

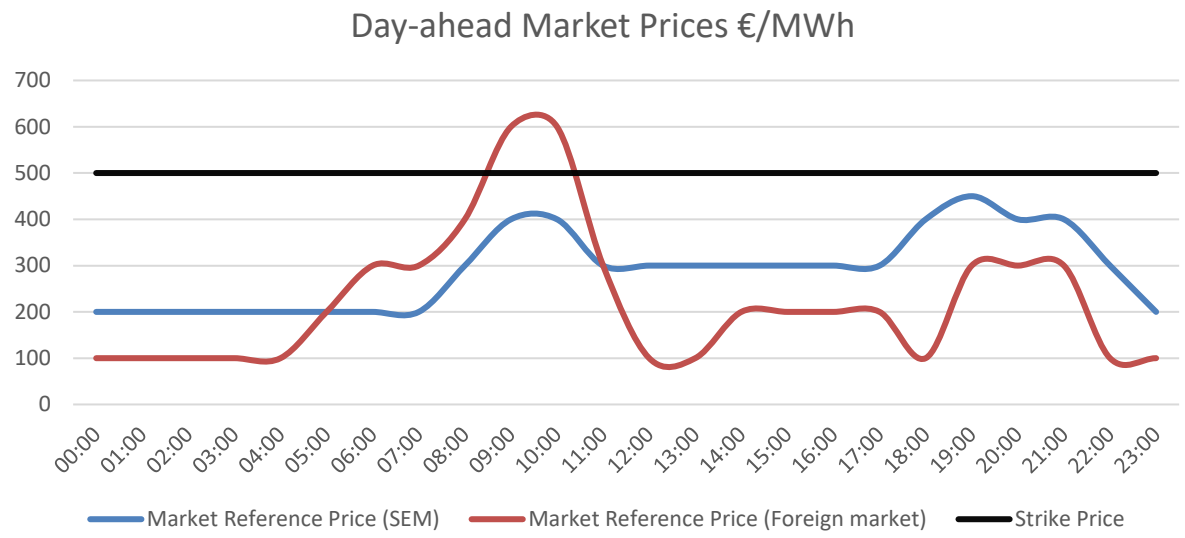

Figure 5 - Illustrative example of SEM and foreign market MRPs and how these may diverge – particularly when there is a system stress event with high prices in the foreign market but not in the SEM

In this example, the MRP in the SEM over the settlement periods between 09:00 and 10:00 is around €400/MWh, below the Strike Price of €500/MWh. Over the same period, the MRP in the foreign market is at around €600/MWh, higher than the Strike Price of €500/MWh. If the foreign unit is exposed to its local market MRP (the foreign market MRP on the graph above), it would have to make a difference payment of around €100/MWh on the revenue it earned above the Strike Price, i.e., the foreign MRP (€600/MWh) minus the Strike Price (€500/MWh). This more closely aligns with the approach to setting the MRP for SEM units in alignment with market revenues actually earned (or that could have been earned) and avoids exposing the foreign unit to the basis risk linked to the divergence between SEM and foreign market prices. But, in this scenario, the spike in the MRP for the foreign market may have resulted from a security of supply event in the foreign market itself, or if interconnected to other

Member State markets, an event there. However, it is unlikely to reflect a security of supply event in the SEM given that the price in the SEM is below the Strike Price. This may lead to a misaligned incentive to deliver during SEM system stress events and times of scarcity.

The SEM Committee would welcome the views of stakeholders on the two options proposed below given the above considerations. For the avoidance of doubt, for each option proposed, the SEM Committee is not considering a different Strike Price for foreign units.

4.3.1 Options

Option 1: MRP based on the SEM price

Under this option, the MRP for foreign units would be set with reference to the SEM price (e.g., at the SEM day-ahead market price). On one hand, this approach would benefit Irish consumers by:

- ensuring efficient alignment of the incentive to deliver during SEM system stress events, and
- providing the same level of protection from high prices as an RO contract for a local unit does, as if the SEM MRP goes above the Strike Price, the Irish consumer would benefit from receiving a payment back from the foreign unit.

This approach may also be simpler to implement given there would be no need to engage in complex cross-border agreements to implement a set of rules for how the foreign MRP would be chosen.

On the other hand, the foreign unit would be exposed to the SEM price, which may not reflect the actual market dynamics of the foreign unit's local bidding zone. For example, if prices spike in the SEM while the foreign bidding zone's price remains stable, the unit may face high payback obligations without having earned a correspondingly high market revenue. While this basis risk exposure can be hedged, this may lead to higher risk premia for foreign units, resulting in higher foreign unit auction bid prices and/or reduced participation.

Option 2: MRP based on local bidding zone price

Under this option, the MRP would be set with reference to the foreign unit's local

bidding zone prices.[25]

With this option, the foreign unit would be exposed to prices that reflect the actual market dynamics and earned (or potential for earning) market revenue in its local bidding zone. This means that the foreign unit would not face any basis risk exposure linked to the divergence between the SEM price and the local price, which may reduce risk premia for foreign units and lead to lower bids in the foreign unit CRM auctions. On the other hand, this may introduce the risk of misaligned incentives to deliver in periods of SEM system stress events, and is unlikely to offer an equivalent level of protection from high prices to SEM consumers as setting the MRP with reference to SEM prices would.[26] Additionally, the administrative nature of implementing this may be quite complex as this would require close coordination with the foreign TSO and any differences in the overall market design or rules of the foreign market may create unintended consequences and complicate integration.

The SEM Committee is aware of the precedent under the Belgian CRM where foreign units are effectively offered ROs with a MRP based on their local bidding zone.[27] However, we note that in the Belgian CRM context, unavailability penalties apply to incentivise delivery during periods of system stress events, and as such the role of Difference Charges is not instrumental to incentive alignment – a key differentiating factor to the SEM CRM, whereby the responsiveness to system stress events is a key design feature of the CRM.

4.3.2 Minded to position

Overall, considering the appropriate balance between incentivising foreign unit participation in the SEM CRM, appropriately incentivising foreign unit delivery during

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[25] E.g., this may be set at the foreign day-ahead market price, or an approach similar to what applies to the SEM unit MRP may be followed, whereby the MRP is set with reference to the foreign market in which the generator sold the energy (i.e. the foreign bidding zone's Day Ahead Market, Intra-Day Market or Balancing Market) – and if the unit did not deliver, then the Imbalance Price from the foreign bidding zone's Balancing Market could be used.

[26] Though in theory if the foreign market faces significantly higher prices than the SEM, or more frequent and/or severe system stress events, there is the possibility for higher Difference Charges with applying a foreign MRP than with a SEM MRP – but this would still be a misaligned protection from high price periods for consumers.

[27] Specifically, foreign units may select their preferred Nominated Electricity Market Operator (NEMO) as long as this NEMO is active in the foreign unit's *local bidding zone*. The choice of NEMO then determines the market operator from which the relevant unit's MRP is observed. In other words, foreign unit MRP's are based on prices in their local bidding zone (and within that bidding zone, they may select an appropriate NEMO where multiple operate).

periods of SEM system stress events and costs to consumers on the island of Ireland, the SEM Committee is minded to proceed with Option 1.

4.4 Existing Capacity Price Cap and Unit Specific Price Cap

This section discusses whether foreign units should be eligible to for the application of Existing Capacity Price Cap (ECPC) and subsequently a derogation to apply for a Unit Specific Price Cap. Where an existing unit in the SEM CRM can demonstrate that its Net Going Forward Costs are greater than the ECPC, it can apply to the RAs for a Unit Specific Price Cap (USPC) to be allowed to bid into an auction at a higher price than the ECPC. The ECPC was introduced as a market power mitigation measure, with the option of a USPC afforded to existing units as a way to recover costs if they could demonstrate to the RAs' satisfaction that their Net Going Forward Costs (NGFC) were in excess of the ECPC (SEM-16-039).

The SEM Committee is considering whether to apply the ECPC, and therefore eligibility to apply for USPC, to foreign units. In considering the options for this parameter, the SEM Committee has had regard to the following:

- the original design intent that underpinned the application of ECPC and USPC for domestic units in the SEM,
- the overall auction dynamic and the proposed design options of how foreign units would participate in the SEM CRM and any potential gaming risk, and
- the additional administrative burden for RA in reviewing the NGFC for foreign units.

The SEM Committee would welcome stakeholders' views on the options set out below.

4.4.1 Options

Option 1: Same as domestic

Under this option, the SEM Committee proposes to allow existing capacity foreign units to be subject to the ECPC and to be also eligible to apply to the RAs for a USPC. In this case, the same rules that apply to existing units in the SEM would apply to foreign units – i.e., existing foreign units will be subject to ECPC and should they wish to receive a USPC they would be required to submit an Exception Application to the RAs and demonstrate to the RAs' satisfaction that its NGFC are in excess of the

ECPC. The SEM Committee is aware that a variant of this option is applied in the cross-border arrangements in the Belgian CRM. In that case, “derogations”, i.e., approval to bid at a higher price than the existing unit price cap, are available for both local and foreign units, subject to the Belgian NRA’s approval. However, there is a clear CRM auction design difference, as the Belgian CRM is on a ‘pay as bid’ basis.

Option 2: Exclude foreign units from the application of the ECPC and USPCs

Under this option, the SEM Committee proposes not to apply the ECPC to foreign units and therefore, foreign units would not be eligible to apply to the RAs for a USPC (nor would they need to).

The SEM Committee acknowledges that the foreign units’ cost structure is likely to be different with regard to the fixed operation and maintenance costs when compared to domestic units, given the range of cost pressures that apply in different jurisdictions. Therefore, their NGFC might not be entirely comparable for domestic and foreign units. The SEM Committee is aware that in the implementation of cross-border participation in Poland, foreign units are not subject to the ECPC that domestic units face (referred to as ‘price taker threshold’ in the Polish regime), but that their ability to exert market power and overall impact on the CRM market is managed via the competitive pressure that is expected for a high number of foreign units competing for a limited amount of de-rated interconnector capacity that is represented by the MEC.[28]

In addition, there is likely to be a significant administrative burden in reviewing a foreign unit NGFC in an Exception Application. Given the additional information asymmetry and given that some of the cost bases would be in another jurisdiction, extensive information will be required from the foreign TSO as well as the foreign NRA, to cross-check a foreign unit’s evidence.

4.4.2 Minded to position

The SEM Committee is minded to proceed with Option 2. The SEM Committee notes that the introduction of ECPC along with USPCs formed part of a market power mitigation control, which, subject to the final auction design for foreign units’ participation, may not be as necessary for foreign units. In the SEM, concerns around

[28] European Commission, State aid N. SA.46100 (2017/N) – Poland – Planned Polish Capacity Mechanism, page 17, paragraph (62). Available here: 272253_1977790_162_2.pdf

structural market power required mitigation measures to protect against uncompetitive practices – including the application of the ECPC to mitigate market power, particularly in auctions where there is little scope for new entrants to place significant competitive pressure on existing units. Existing units were also mandated to bid into auctions to prevent physical withholding of capacity in an effort to exert market power. Given this mandate and being subject to the ECPC, having the ability to apply for a USPC may be required for some plants to remain financially viable and justify their continued operation. In the case of foreign units participating in the SEM CRM, the SEM Committee considers that on balance, the following factors mitigate potential market power issues that could distort CRM outcomes: the auction design for foreign units[29] (bearing in mind that some designs may do so more than others) and competitive pressure against a limited de-rated interconnector capacity (as represented by the MEC). Therefore, the application of ECPC, and therefore the eligibility for USPC, does not appear to be justified.

4.5 Applicable Charges

This section discusses what charges should be applicable to foreign direct units and whether there is a need for bespoke charges. Charges in the SEM CRM are an important element in the CRM, and they apply when capacity providers fail to meet their obligations under the CMC and RO framework.

Charges take the form of Non-Performance Difference Charges, which are applied when an RO holder is not available or does not deliver during an event, and Termination Charges, which New Capacity is obliged to pay if they fail to meet relevant milestones within the CMC, with the result that their contracts are terminated. Termination Charges increase as the project gets closer to the Capacity Year for which it was contracted, with Performance Securities increasing in tandem. The primary purpose of Termination Charges is to incentivise the physical delivery of the plant, whilst also helping to protect consumers from the costs of needing to procure replacement capacity at short notice. Meanwhile, the main objective of Non-Performance Difference Charges is to incentivise reliability at times of system stress.

The SEM Committee understands that it is common for Member States to apply the

[29] Discussed in section 30.

same charges to cross-border capacity providers as those that apply to domestic units participating in their CM. It is also common to apply the same exceptions from charges, for example, during notified planned outages or local transmission infrastructure congestion/outage that prevented a unit from generating. There is a requirement on the RAs to ensure that cross-border participation is organised in an effective manner and that there is adequate enforcement of non-availability payments across borders. This is particularly necessary given the potential for gaming of dual participation. Clear obligations and charges must be set out to ensure commitments are understood and charges imposed if they are not met in either of the capacity markets in which a unit is participating.

The SEM Committee would welcome the views of stakeholders as to the applicable charges to apply to foreign units.

4.5.1 Options

Option 1: Charges for foreign units the same as for domestic units

Under this option and on a principles-basis, the rules which apply to units in the SEM will also apply to foreign units, creating a consistent and fair playing field for all participants. If this option is adopted, there will be simpler administration of the CMC, as a separate charges framework in the CMC would not be required. The SEM Committee acknowledges that the EU Regulation 2019/943 Article 26(5) permits participation in more than one capacity mechanism. Therefore, to mitigate gaming risk, the SEM Committee considers that specific data sharing, as part of the TSOs' agreement, on capacity unit's availability is necessary. Such data sharing would consider the availability of units, considering their obligations under multiple capacity mechanisms, thereby ensuring that consumers only pay for capacity that is available.

Option 2: Bespoke charges for foreign units in addition to domestic charges

Under this option, bespoke charges will apply for foreign units, in addition to the charges in the current design for domestic units, which will be set out in the CMC in detail. A possible advantage of this approach may be that a separate framework could be tailored to reflect the market realities of the foreign unit's home country and could account for cross-border complexities like transmission availability and foreign market rules. Furthermore, if this option is progressed, there will be a higher administrative burden on the RAs to develop the additional rules and the TSOs to enforce them.

4.5.2 Minded to position

The SEM Committee has not formed a minded to position on this parameter. The SEM Committee has major concerns in regard to gaming, which could result in double payments and market distortion if not accounted for. The SEM Committee would welcome views of stakeholders on whether any other measure could be introduced to account for gaming concerns.

4.6 Auction offer structures

This section discusses the structure of auction offers for foreign units. In the SEM CRM, units have the option of submitting Inflexible Offers, i.e., to declare a price-quantity pair to be inflexible or indivisible, such that the offer may be accepted and awarded a CRM contract in full or not at all. This contrasts with Flexible Offers, with may be partially accepted, i.e., which may have their partial quantity clear and awarded a CRM contract if they are the marginal offer.

Allowing the submission of Inflexible Offers enables bidders to efficiently express their cost structures, and in particular the lumpiness of both new plant investment and with regards to the significant fixed costs associated with some existing units. To avoid adverse impacts of Inflexible Offers on auction efficiency, a two-step auction clearing process was chosen for the SEM CRM, where a 'Constrained' auction that is based on maximising social welfare follows the 'Unconstrained' auction, as well as a sloped demand curve. These features of the SEM CRM design help mitigate the potential for both gaming opportunities and other unintended consequences that can arise when some, or all, of the offers are inflexible.

By contrast, in the context of foreign unit participation in the SEM CRM, the foreign unit auction demand curve cannot be sloped. Rather, the maximum demand in a given auction and delivery year for a given connecting market's foreign capacity is *strictly* set by the applicable MEC, as any additional foreign capacity procured beyond the MEC would not be expected to contribute to the SEM's resource adequacy. This means that the foreign unit auction demand curve is vertical at the MEC, subject to auction price caps, as has been illustrated in Figure 1 - Foreign unit auction design – Option 1: standalone foreign unit auctions. This foreign unit auction feature significantly limits the ability of auction design to be used to mitigate the potential for gaming and other unintended consequences that may be associated with Inflexible Offers.

In this context, the SEM Committee is considering whether it would be appropriate to allow Inflexible Offers for foreign units or whether these should be disallowed.

The SEM Committee welcomes feedback from stakeholders on whether either option presented below should be adopted, and whether any additional mitigations should be applied to avoid unintended consequences that may be associated with these.

4.6.1 Options

Option 1: Allow foreign units to submit Inflexible Offers

Under this option, the SEM Committee proposes to provide foreign units with the option of asking for full acceptance (or rejection) of their bid, i.e., to allow foreign units to submit Inflexible Offers. This would align with how local SEM units are treated and may encourage foreign capacity with lumpiness associated with investment or fixed cost structures to participate, improving the competitiveness of SEM CRM foreign unit auctions.

The are two potential risks associated with this option, given the vertical foreign unit demand curve that is set at the MEC:

- **The potential for under-procurement of foreign capacity:** If many foreign units opt for large, inflexible bids, this may result in limited foreign capacity clearing. However, given that the MEC represents the best expectation of cross-border contributions during SEM security of supply events for a given capacity year regardless of CRM contracts being awarded to foreign units or not, as discussed in Section 3.3, our minded-to position is that this is unlikely to be a significant risk.
- **The potential for gaming and unintended consequences:** At the extreme, a very small and extremely expensive foreign unit clears in place of cheaper, larger units that have inflexible bids. The impact of such a scenario could be mitigated by the overall foreign unit auction design, discussed in section 0.[30] Alternatively, a targeted mitigation may be designed as part of the auction clearing algorithm. For example, under the Polish CRM, where Inflexible Offers (known as 'indivisible offers' in the Polish context) by foreign units are allowed, a

[30] For example, under auction design option 1, this risk may be mitigated by applying the SEM auction clearing price as a ceiling in the foreign unit auction; under option 2 variants, this risk may be mitigated by competing with local SEM units in a single main auction following the foreign unit auction.

limit is imposed on how far 'up' the foreign unit supply curve the auction clearing algorithm will consider marginal offers for if the initial marginal offer was an inflexible one (and would lead to the MEC being exceeded if accepted). Specifically, if the initial marginal offer was an inflexible one and would lead to the MEC being exceeded if accepted, one more offer shall be considered and if this is also inflexible and leads to the MEC being exceeded if accepted, no further offers are considered.[31] This approach may also help to ensure that the foreign unit auction clearing algorithm is proportionate and has an efficient run time.

Option 2: Disallow Inflexible Offers by foreign units

Under this option, the SEM Committee proposes to disallow Inflexible Offers by foreign units. This approach would help mitigate the risks identified under option 1 and would increase the likelihood that the MEC is procured. This approach also reflects the fact that mandatory bidding is not a requirement for existing foreign units, and therefore there is less of an imperative to accommodate lumpy fixed cost structures relative to SEM units and as such accepting partial volumes may be more appropriate.

However, there is a risk that this may reduce participation from foreign units that face significant lumpiness in their investment[32] or fixed cost structures, which may raise costs in the foreign unit auction.

4.6.2 Minded to position

The SEM Committee has not formed a minded-to position on Inflexible Offers by foreign units.

4.7 Eligibility of Distribution-connected foreign units

This section discusses whether distribution-connected foreign units should be eligible to participate in the SEM CRM. Distribution-connected units refer to generation or demand-side resources connected to the distribution network rather than the transmission system. Their eligibility for participation in the CRM via cross-border arrangements raises several considerations, particularly in relation to data

[31] As outlined in version 1.4 of the 'Guideline on participation in Polish capacity market for foreign capacity providers' published in June 2025 by PSE.
[32] Participation of foreign new capacity units may be particularly disincentivised, which may seem discriminatory.

transparency, monitoring, and system reliability.

In Belgium, the CRM design restricts participation to transmission-connected foreign units only.[33] This approach is primarily driven by concerns around data availability and the ability of the foreign TSO to validate performance and availability. Transmission-connected units are generally easier to monitor and less likely to be impacted by local network congestion, which can affect their ability to deliver capacity during system stress events.

The alternative would be to allow all units to participate regardless of their connection level. This approach likely reflects a broader interpretation of the principle of non-discrimination under EU Regulation 2019/943, which requires that foreign capacity with equivalent technical performance be given the same opportunity to participate as domestic capacity.

However, allowing distribution-connected units to participate introduces several complexities. These include:

- Data granularity and validation: Distribution-connected units may not have the same level of metering or telemetry as transmission-connected units, making it harder for the foreign TSO (RTE) to provide the necessary data to TSOs for availability monitoring.
- Congestion risk: Units connected at the distribution level may be more susceptible to local network constraints, which would require more detailed modelling to test the risk of congestion during times of system stress.
- Qualification and testing: Ensuring that distribution-connected units meet the same qualification standards as transmission-connected units may require additional coordination and process development between TSOs and DSOs.

Stakeholder views are invited on whether the benefits of broader participation outweigh the risks and administrative burden.

4.7.1 Options

Option 1: Permit DSO connected units to participate

[33] Elia, Capacity Remuneration Mechanism (CRM) – Functioning Rules (Version 4) – Established by the CREG based on the proposal from Elia on 1 February 2024, page 254. 14 May 2024.

This option would allow distribution-connected foreign capacity units to participate in the SEM CRM, subject to meeting the same qualification and performance standards as transmission-connected units. It aligns with the principle of non-discrimination and may expand the pool of eligible capacity. However, it would require robust data-sharing arrangements and monitoring frameworks between foreign TSOs, SEM TSOs, and potentially foreign DSOs.

Option 2: Do not permit DSO connected units to participate

This option would restrict participation to transmission-connected foreign units only, consistent with the approach taken in Belgium. This would simplify implementation and monitoring, reduce the risk of congestion-related delivery failures, and ensure that only units with validated performance data are eligible. However, it may limit competition and exclude viable capacity resources.

4.7.2 Minded to position

The SEM Committee has not formed a minded-to position on this parameter.

4.8 Secondary Trading

This section discusses the complexities for consideration of secondary trading arrangements. Capacity market secondary trading enables holders of awarded capacity contracts to ‘trade out’ of their obligations when the unit’s reliability and performance is affected for a legitimate reason, such as planned or unplanned outages, as per the provisions of the CMC. Specifically, holders of awarded capacity contracts may buy secondary trading products and use these to offset the capacity they have ‘sold’ previously by entering into a reliability obligation contract for a given capacity delivery year.

The sellers of these products take on the obligation to provide the committed capacity instead. They are then subject to difference charges and receive capacity payments in place of the original holder of the contract. Only existing capacity market units that have successfully been qualified for a given capacity year over which the secondary market product will apply are eligible to act as sellers. ‘Seller limits’ apply and are linked to a unit’s de-rated capacity and existing commitments to ensure that units do not over-commit.

In line with the requirements set out in EU Regulation 2019/943, specifically Article

26(14), secondary trading must also be made available to foreign units that have been awarded capacity market contracts.

Enabling secondary trading reduces the risk premium of holding capacity contracts, as holders can adjust their obligation volumes for legitimate reasons such as long-term unplanned outages, which can in turn lead to lower bid prices and lower clearing prices in auctions. However, in the context of foreign units, there are some additional complexities to consider:

- **Interactions with the MEC for a given delivery year and border:** As previously noted, the MEC represents the best expectation of contributions from a connecting market during SEM security of supply events for a given delivery year. As such, it sets the upper limit of foreign capacity from a connecting market that should take on reliability obligations. This upper limit applies irrespective of whether the foreign capacity has been contracted through an auction or through secondary trading. This means that foreign units may only act as secondary market sellers up to the MEC limit *when considered cumulatively for all foreign capacity for that connecting market and delivery year*. Additionally, given that the MEC represents the best expectation of cross-border contributions during SEM security of supply events for a given capacity year *regardless of CRM contracts being awarded to foreign units or not* as discussed in Section 3.3, then should foreign units wish to be buyers (i.e., should they wish to offset their obligations by buying a secondary market product from an eligible seller), it may not be appropriate to allow this purchase from domestic SEM unit sellers. This is a manifestation of our minded-to position discussed in Section 3.3 that no additional domestic unit volumes should be procured to make up any shortfall in awarded foreign capacity contracts relative to the MEC, applied to secondary trading.
- **Availability of cross-border secondary market 'sellers' and the interaction with the timing and scope of the qualification process for foreign units:** Units must be qualified for a given capacity delivery year to be able to act as secondary market sellers, in line with the CMC. This is designed to ensure that the reliability of these units has been adequately tested and their available de-rated capacity set at the right level to inform seller limits. If foreign units are only fully qualified after the foreign unit auction (as discussed in Sections 2.1.3 and

3.3) to reduce the administrative burden, there may be no foreign units able to sell secondary market products to other foreign units seeking to buy these. In such a case, it may be necessary to allow foreign units to apply to be qualified for the sole purpose of secondary trading, which may negate the reduction in administrative burden.

Given the above, the SEM Committee would welcome the views of stakeholders on how secondary trading should be enabled for foreign units, specifically considering the two options outlined below.

4.8.1 Options

Option 1: Foreign units can trade in the secondary market with other foreign units in the same market only

Under this option, foreign units wishing to buy or sell secondary market products would only be allowed to trade with other foreign units in their market. They would not be allowed to trade with domestic units. This would effectively require separate secondary trading auction clearing processes for domestic and foreign unit secondary trading, as well as appropriately flagging whether a unit is foreign (and the relevant market) in the Capacity and Trade Register.

This option ensures that there is no change in the total contracted foreign volumes for a given delivery year. It ensures that the MEC upper limit is always respected. It also aligns with the principle that the MEC represents the best expectation of cross-border contributions in periods of system stress for a given capacity year regardless of awarded contracts. In turn, it aligns with our minded-to position that domestic units should not be used to cover 'shortfalls' in foreign unit capacities. Implementation would likely also be simpler than option 2 outlined below, as it would not require testing against the cumulative MEC every time a foreign unit wished to sell in the secondary market.

However, under this option, foreign units may struggle to 'trade out' of their obligations when reliability and performance are affected for a legitimate reason, such as planned or unplanned outages. Limited numbers of qualified foreign unit 'sellers' are likely to be available, particularly should full qualification follow rather than precede foreign unit auctions to reduce administrative burden, as outlined in Section 3.3. This may impact on the risk premium attached to CRM contracts by foreign units, and in turn on their

likelihood of participating and on their bids.

A variant of this option could mitigate this risk by allowing foreign unit contract holders to buy secondary trading products from TSOs in the SEM. TSOs (on behalf of SEM consumers) would act as a notional foreign unit seller (effectively taking on a market-making role) when there are no eligible sellers available. Such trades could be executed at an administratively set price, such as the applicable secondary market product price cap as set out in CMC clause H.3.2. However, this variant would require further consideration as the TSOs do not currently take on this role in the domestic CRM secondary market, and it would be complex to implement. The SEM Committee is also unaware of any examples where this has been implemented in practice.

Option 2: Foreign units can secondary trade with both foreign units in their own market *and* domestic SEM units

Under this option, foreign units wishing to buy or sell secondary market products would be allowed to trade with either foreign units in their own market or domestic SEM units (and vice versa), under the same secondary trading auction clearing process. This would be subject to the MEC upper limit. In other words, the MEC would act as a cumulative upper limit to foreign units selling secondary market products for a given delivery year. In practice, foreign units would only be able to sell secondary market products for a given delivery year in one of two cases. Firstly, if the MEC had not been met at auction for that delivery year. Secondly, if a foreign unit had bought secondary market products from domestic SEM units, reducing the contracted foreign capacity volume post-auction.

Appropriately flagging whether a unit is foreign (and its relevant market) in the Capacity and Trade Register would still be necessary to enforce the MEC limit.

This option would improve secondary market liquidity and eligible counterparty availability for foreign units in particular, given the greater availability of qualified units with available de-rated capacity to sell. This would help keep risk premia and auction bid prices low. However, ensuring the MEC upper limit is not exceeded through live secondary trading auctions across multiple products would involve additional complexity. This may impact on implementation timelines and costs for enabling foreign unit participation in the CRM.

4.8.2 Minded to position

The SEM Committee has not formed a minded-to position on this parameter.

4.9 Minimum MEC to run foreign unit auctions

This section considers whether cross border auctions should only be run if a minimum MEC value is calculated. In making a decision on whether to run a cross-border auction or not, the cost of running the auction as well as the administrative burden is worth considering within the context of the calculated MEC. If, for instance, the calculated MEC is very low, the overall cost of running a cross-border auction may outweigh any significant contribution from direct foreign capacity to the overall adequacy position.

In the case of Belgium for example, the SEM Committee understands that the TSO does not allow foreign participation if the MEC is too low (<50MW). The rationale is that there is limited benefit in running a pre-auction in such cases.

Considering the above, the SEM Committee would welcome views on whether a cross-border auction should always be run if the calculated MEC is a non-zero value, or if a minimum threshold is needed and a cross-border auction would only run if it is above this value.

4.9.1 Options

Option 1: Always run foreign unit auctions if the MEC is non-zero

Under this option, foreign unit auctions would always run where the calculated MEC is non-zero.

Option 2: Only run foreign unit auctions if the MEC is above a certain value

Under this option, foreign unit auctions would only run if the MEC is above a certain value. The SEM Committee would welcome views on what the appropriate value of such a threshold should be in the context of the SEM and how this should be determined.

4.9.2 Minded to position

The SEM Committee is minded to proceed with Option 2, where foreign unit auctions will only be run if the calculated MEC is above a certain value. This value is to be determined.

5 Next Steps

The SEM Committee welcomes the views of the industry and stakeholders on the minded to positions set out in this consultation. Any comments or feedback on the minded to positions must be sent in electronic form by close of business on 13 February 2026 to both the CRU and the UR CRM submissions emails at the following addresses: CRMsubmissions@cru.ie and crmsubmissions@uregni.gov.uk.

The SEM Committee intends to publish a decision paper in Q2 2026.