Single Electricity Market

(SEM)

Capacity Remuneration Mechanism

Supported capacity mandatory status decision

SEM-19-027

10 June 2019

EXECUTIVE SUMMARY

The SEM Capacity Remuneration Mechanism (CRM) Detailed Design has been developed through an extensive series of consultation and decision papers. This involved substantial interaction between stakeholders, including both System Operators and Industry. Decisions made during the Detailed Design were translated into auction market rules to form the Capacity Market Code (CMC) (SEM-17-033) which was published in June 2017. The CMC sets out the arrangements whereby market participants can qualify for, and participate in, auctions for the award of capacity. The settlement arrangements for the Capacity Remuneration Mechanism (CRM) form part of the revised Trading and Settlement Code (TSC) (SEM-17-024) published in April 2017.

The European Commission gave State aid approval for the CRM on 24 November 2017.

The Capacity Year (CY) 2018/19 T-1 auction took place in December 2017, the CY2019/20 T-1 auction took place in December 2018, and the CY2022/23 T-4 auction took place in March 2019.

Since mid-2017 the CRU has had correspondence with a number of different affected market participants in relation to concerns they have regarding an interaction between the REFIT rules (for transition to the revised SEM arrangements) and their generation capacity's mandatory participation status in the CRM.

Market participants argued that they are exposed to all the downside of the additional exposure of the RO in the CRM for dispatchable REFIT 3 supported capacity, without receiving any corresponding upside, with RO revenue netted off in the REFIT revenue calculation. Affected market participants argued that there is a risk reward mismatch, without any corresponding reward for the extra risk/exposure of RO obligaions on supported capacity. Due to the mandatory status of this affected capacity participants cannot chose to not qualify this capacity in the CRM.

The SEM Committee published a consultation to look at this issue and possible options in relation to this. The consultation paper (SEM-18-176) proposed two options in how to proceed, these were:

- Option 1: Following consultation process make a modification to the CMC changing the mandatory status of REFIT 3 supported capacity in CRM; or
- Option 2: Do nothing, make no change to mandatory participation requirements for REFIT 3 supported capacity in CRM.

Following this consultation and consideration of submissions received including additional suggested solutions from respondents the SEM Committee has decided to proceed with Option 2 to retain mandatory participation requirements on dispatchable REFIT 3 supported capacity in the CRM.

The SEM Committee will continue to monitor this issue and may take actions in the future if these were deemed required. However at this time the SEM Committee is not making any changes to the mandatory participation requirements on dispatchable REFIT 3 supported capacity in the CRM.

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1. INTRODUCTION

1.1 BACKGROUND

1.1.1 The CRM Detailed Design has been developed through an extensive series of consultation and decision papers. This involved substantial interaction between stakeholders, including both System Operators and Industry. Decisions made during the aforementioned consultations were translated into auction market rules to form the Capacity Market Code (CMC) (SEM-17-033) which was published in June 2017.

1.1.2 The introduction of the CRM involved formal notification to the European Commission (EC) of the proposed mechanism for purposes of State aid. This process was led by Department of Communications, Climate Action & Environment (DCCAE) and Department for the Economy (DfE) who together with the Regulatory Authorities (CRU and UR) engaged with the EC in advance of the notification and during the notification process.

1.1.3 The EC approved the CRM on 24 November 2017[1]. The first Capacity Auction took place in December 2017 to cover the period from I-SEM go-live to 30 September 2019, i.e. CY 2018/19. Subsequent Capacity Auctions took place in December 2018 (for CY2019/20) and March 2019 (for CY2022/23).

1.1.4 Since mid-2017 the CRU has had correspondence with a number of different affected market participants in relation to concerns they have regarding an interaction between the proposed REFIT rules (for transition to I-SEM) and their generation capacity's mandatory participation status in the Capacity Remuneration Mechanism (CRM). Participants also contacted DCCAE voicing similar concerns in relation to REFIT transition to ISEM workstream.

1.1.5 These concerns relate to market participants which hold REFIT 3 supported dispatchable capacity and the interaction with its mandatory status under the CRM. These market participants argue that they are exposed to all the downside of the additional exposure of the RO in the CRM (for REFIT 3 supported portion), without receiving any corresponding upside, with RO revenue netted off in REFIT revenue calculation. Affected market participants argue that there is a risk reward mismatch, without any corresponding reward for the extra risk/exposure of RO obligaions on supported capacity. Due to the mandatory status of this affected capacity participants cannot choose not to qualify this capacity in the capacity market.

1.1.6 The table below provides an estimate of the scale of this affected capacity.

[1] http://ec.europa.eu/competition/state_aid/cases/267880/267880_1948214_166_2.pdf

	MW
Dublin Waste	61
Indaver Waste	17
Edenderry (if 20% green)	23.6
Lough Ree (if 20% green)	18.2
West Offaly (if 20% green)	27.4
Total:	147.2

1.1.7 These concerns can be described in an example say where a 70/30 split between peat and biomass (REFIT 3 supported) portions in a plant, the REFIT Total Market Revenue (TMR) calculation will reflect the CRM revenue for the circa 30% REFIT 3 supported portion but does not recognise any uncovered difference payments of the green (supported) portion of capacity. Affected participants argue that they are exposed to all the downside of the additional exposure of the RO in the CRM (for REFIT 3 supported portion), without receiving any corresponding upside (with RO revenue netted off in TMR calculation).

1.1.8 The DCCAE Electricity Support Schemes I-SEM Arrangements Decision Paper published in June 2018 set out that the market revenue calculation would not allow supported capacity to reflect capacity market costs (RO uncovered difference payments). DCCAE stated in this decision paper “the Department understands that the SEM Committee is reviewing the obligation on PSO supported generation to participate in the I-SEM capacity auction”.

1.1.9 The RAs in publishing the consultation paper (SEM-18-176) and this decision paper are looking at the mandatory participation status of green REFIT 3 supported capacity in the CRM and possible options in relation to this.

2. INTERACTION BETWEEN CRM AND REFIT 3

2.1 PREVIOUS POLICY DECISIONS

Mandatory status in CRM

2.1.1 In CRM detailed design decision paper SEM-15-103 the SEM Committee decided that existing dispatchable generators (above de-minimus) have a mandatory requirement to participate in the CRM. In making this decision the SEM Committee had to balance market power and competition concerns. It was described that the main reason to consider making participation mandatory was to mitigate market power.

2.1.2 However the SEM Committee recognised that the risk exposure faced by intermittent plant was different from that faced by dispatchable plant, in that output is more variable and less within the control of the generator.

2.1.3 The RAs considered that for a dispatchable generator, control of its output is largely manageable by the generator. The risk that would be placed on a generator by requiring it to bid would not be excessive, particularly when mitigated with “stop loss” limits. Therefore market power concerns largely outweighed the additional risk placed on generators via mandated bidding.

2.1.4 SEM-15-103 also set out that supported generators were eligible to participate in the CRM. The SEM Committee favoured allowing supported generation to participate in the CRM to maximise competition in the CRM and to increase coverage of the RO hedge for suppliers (reducing any requirement for socialisation of any shortfall in RO difference payments).

State Aid decision

2.1.5 The State Aid decision text specified that any capacity participating in the NI ROCs scheme would not be permitted to also participate in the CRM scheme (on grounds of concerns of aid accumulation). These concerns did not apply to other support schemes, with the design of these other schemes meaning aid accumulation concerns did not arise.

2.1.6 In order to ensure compliance with the State Aid decision text, the RAs modified the final qualification results for T-1 auction for CY2018/19 and subsequently made a modification to the Capacity Market Code (CMC). These changes reflected the DG Comp State Aid decision text requirement to not allow a unit to participate in both the CRM and NI ROCs schemes.

REFIT 3 scheme

2.1.7 The Renewable Energy Feed-in Tariff (REFIT) scheme is funded through the Public Service Obligation (PSO) levy which is charged to all electricity consumers in Ireland (not on a all-island basis). The PSO levy was introduced to support the objective of increasing the level of renewable generation in order to meet Ireland's binding renewable energy targets.

2.1.8 The REFIT schemes are the primary financial supports provided to renewable electricity generators. REFIT offers a 15 year support period and backstop dates of 31 December 2027 for REFIT 1, 31 December 2032 for REFIT 2 and 31 December 2030 for REFIT 3.

2.1.9 The REFIT letter of offer issued to an applicant enables them to enter into a Power Purchase Agreement (PPA) with an electricity supplier. An obligation is then placed on the supplier to purchase the output from the electricity generation plant. The supplier is provided with a mechanism to recover the "additional costs" incurred by the supply company in fulfilling this obligation through the REFIT tariff. The supplier, in turn, is required to provide an assured price to the generation plant.

2.1.10 REFIT 3 is designed to incentivise the addition of 310MW of renewable electricity capacity to the Irish grid composed of High efficiency Combined Heat and Power (using both Anaerobic Digestion and the thermo-chemical conversion of solid biomass), biomass combustion and biomass co-firing.

Solutions proposed by participants

2.1.11 A number of market participants proposed two possible solutions to allay their concerns outlined above, these were:

1. Remove mandatory participation status of green supported capacity in the CRM; or
2. Allow the green supported capacity be immune from any penalty (uncovered RO difference payments) with a through up using R-factor in REFIT 3 scheme.

2.1.12 The DCCAE Electricity Support Schemes I-SEM Arrangements Decision Paper published in June 2018 set out that the market revenue calculation would not allow supported capacity to reflect capacity market costs (RO uncovered difference payments). DCCAE stated in this decision paper "the Department understands that the SEM Committee is reviewing the obligation on PSO supported generation to participate in the I-SEM capacity auction".

2.1.13 The RAs in publishing the consultation paper (SEM-18-176) and this subsequent decision paper looked at the mandatory participation status of green REFIT 3 supported capacity in the CRM and considered whether to amend this requirement.

3. OPTIONS PUT FORWARD

3.1 CONSULTATION SUMMARY

3.1.1 In consultation SEM-18-176 in considering the concerns put forward by market participants the RAs consulted upon two options in how to proceed, these were:

- **Option 1:** Following consultation process make a modification to the CMC changing the mandatory status of REFIT 3 supported capacity in CRM; or
- **Option 2:** Do nothing, make no change to mandatory participation requirements for REFIT 3 supported capacity in CRM.

The advantages and disadvantages of these two options were subsequently explored.

Assessment of options in consultation

3.1.2 The RAs in making previous decisions during the detailed design phase of the CRM (SEM-15-103) in requiring existing dispatchable capacity to participate and allowing supported capacity to participate considered different factors such as market power concerns and competition.

3.1.3 The decisions taken on mandatory participation requirements in the CRM reflected certain elements of risk mitigation built into the CRM design. These included de-rating, load following and the use of stop-loss limits.

3.1.4 In decision paper SEM-15-103 the SEM Committee recognised that the risk exposure faced by intermittent plant was different from that faced by dispatchable plant, in that output is more variable and less within the control of the generator. For a dispatchable generator, control of its output is largely manageable by the generator. The risk that would be placed on a generator by requiring it to bid should not be excessive, particularly when mitigated with “stop loss” limits. Therefore it was decided that market power concerns largely outweigh the additional risk placed on generators via mandated bidding.

3.1.5 In looking at the concerns raised by some market participants in relation to the interaction between REFIT 3 supported dispatchable capacity and its mandatory status under the CRM, the RAs must consider the full consequences of changing any previous decisions. The mandatory participation status of dispatchable plant in the CRM is one of the key pillars of allaying market power concerns (along with the inclusion of prices caps and sloping demand curve), any amendment to this represents a potentially significant change. Any change to the mandatory participation status of this supported capacity could weaken this important market power mitigation measure.

3.1.6 The specific concerns raised relate to market participants which hold REFIT 3 supported dispatchable capacity and the interaction with its mandatory status under the CRM. Due to the mandatory status of this affected capacity participants cannot chose to not qualify this capacity into the CRM. These market participants argue that for this affected supported capacity they are exposed to all the downside of the additional exposure of the RO in the CRM, without receiving any corresponding upside. Affected market participants argue that there is a risk-reward mismatch, without any corresponding reward for the extra risk/exposure of RO obligaions on supported capacity (with RO revenue netted off in REFIT revenue calculation).

3.1.7 The RAs note that the control of dispatchable supported capacity's output is largely manageable by the participant. In contrast, the risk exposure faced by intermittent plant is different in that output is more variable and less within the control of the participant. As long as this supported capacity performs and meets its RO obligations it does not face any uncovered difference payments. The RAs note that it is largely within the participants control to meet these requirements.

3.1.8 The RAs note that the RO obligations provide additional incentives on supported capacity to be available and to perform. Removing the mandatory requirement for REFIT 3 supported capacity to participate in the CRM could weaken the overall incentives on this capacity to perform. Also removing this mandatory requirement would reduce coverage of the RO hedge for suppliers, increasing any requirement for socialisation of any shortfall in RO difference payments.

3.2 SUMMARY OF RESPONSES

3.2.1 A total of seven responses to the consultation were received. These were submitted from:

- Tynagh;
- SSE;
- Captured Carbon;
- Bord Gais Energy;
- Bord na Mona;
- ESB Generation and Trading;
- Joint response – Bord na Mona, Dublin Waste to Energy and Indaver.

3.2.2 Of the seven responses received none favoured option 2 making no change to the mandatory participation requirements of supported generation in the CRM. Three respondents favoured option 1 making a modification to the CMC changing the mandatory participation status of dispatchable REFIT 3 supported capacity in CRM.

3.2.3 Four of the respondents suggested alternative options to the two presented in the consultation paper. Three of these alternative options were broadly similar, suggesting an approach previously put forward to DCCAE as part of their Electricity Support Schemes I-SEM Arrangements consultation.

3.2.4 This approach involves maintaining mandatory status and using a REFIT R-factor to recover difference payments for supported (green) capacity. This approach would likely increase PSO costs. One respondent proposed a version that did not include recovering uncovered difference payments (to maintain incentive to perform). These respondents favoured option 1 as their next preference if their suggested alternative options were not accepted.

3.2.5 Another respondent favoured maintaining the mandatory participation status of this dispatchable REFIT 3 supported capacity but suggested changing REFIT revenue calculation to take account of energy market revenue earned only up to the RO strike price. This proposal would affect how energy revenue would be calculated at ex-ante and ex-post stages of PSO calculation, and likely increase PSO costs. The end effect of this suggestion is similar to the alternative approaches above except it was not explicit the correction would only be done at ex-post stage.

3.2.6 Respondents argued option 1 (remove mandatory participation status) allows assets to be managed to ensure their commercial viability, avoids issue of additional risk without commensurate reward, avoids exposure to “excessive” risk. Respondents argued that this change would give participants a choice on whether or not to qualify their capacity, ensuring asets can be managed to ensure their commercial viability. It was argued that the impacts of option 1 are minimal due to the scale of generation involved (MWs of dispatchable supported generation).

3.2.7 One respondent argued that annual stop loss limits do not sufficiently limit the exposure a unit faces for non-performance. One respondent questioned the ability of participants to avoid uncovered difference payments by performing when required as described in the consultation paper and highlighted the incidents of imbalance pricing and capacity difference payments that have occurred in the first number of months of the revised SEM arrangements.

3.2.8 One respondent voiced concerns on the introduction of option 1 (remove mandatory participation status) describing risks such as raising market power concerns and eroding the coverage of the RO hedge for suppliers with possible impacts on the socialisation charge. This respondent also stated they believe there is an element of inequity in how these REFIT 3 participants are treated, suggesting an alternative approach (alternative option described above).

3.3 SEM COMMITTEE RESPONSE

3.3.1 The SEM Committee note that DCCAE's Electricity Support Schemes I-SEM Arrangements Decision Paper published in June 2018 set out that the market revenue calculation would not allow supported capacity to reflect capacity market costs (e.g. recover RO uncovered difference payments).

3.3.2 The SEM Committee are of the view that it would not be appropriate to allow the use of a REFIT R-factor in the PSO revenue calculation to recover CRM Difference Charges for supported (green) capacity falling out of its CRM obligations. Permitting certain supported capacity (in scheme in jurisdiction of Ireland) to claw back RO Difference Charges based on commitments from the all-island SEM CRM could create distortions in the CRM.

3.3.3 Also this change would represent a significant change to the CRM design, and would raise State Aid concerns. In the SEM Committee's view any change like this proposal would require notification to DG Comp, and this suggested change is not in line with DG Comps current guidelines.

3.3.4 This change could also potentially increase PSO costs, with this exposure affected by Difference Charges obligations in the CRM. Removing this exposure to Difference Charges may weaken the performance incentives of supported capacity which hold RO obligations.

3.3.5 In terms of option 1 (remove mandatory participation status) the SEM Committee notes arguments made by some respondents that this change allows assets to be managed to ensure their commercial viability, and avoid exposure to risk. The SEM Committee does consider the CRM design features of the Billing period and Annual Stop-Loss limits as helping to limit risk on participants. Also the load following feature of the RO obligation helps to reduce risk faced by participants.

3.3.6 The SEM Committee considers the RO obligations as providing additional incentives on supported capacity to be available and to perform. The SEM Committee consider that removing this mandatory requirement for REFIT 3 supported capacity to participate in the CRM would weaken the overall incentives on this capacity to perform.

3.3.7 The SEM Committee note that one respondent questioned the ability of participants to avoid uncovered difference payments as described in the consultation paper, highlighting incidents of imbalance pricing and capacity Difference Charges that have occurred in the first number of months of ISEM. These wider issues are being dealt with separately (in consultation SEM-19-024) to this consultation and do not feed into consideration here.

3.3.8 The SEM Committee consider that removing this mandatory requirement would reduce coverage of the RO hedge for suppliers, increasing any requirement for socialisation of any shortfall in RO difference payments. However the SEM Committee notes respondents views that the scale of this effect should not be significant considering the volume of supported capacity affected. The SEM Committee note that this option could potentially increase PSO costs.

3.3.9 The SEM Committee note that and as was also highlighted by respondents the introduction of option 1 (remove mandatory participation status) would require forecasting the renewable fraction of the feedstock, which would add complexity to the qualification process and introduce forecast error.

3.3.10 Implementing option 1 removes the mandatory participation status for all dispatchable REFIT 3 supported capacity. This SEM Committee do not favour eroding the market design principle of mandatory participation for dispatchable generation at this stage. However, the SEM Committee acknowledges that the immediate effect of this specific change would be minimal due to the scale of generation involved compared to total installed capacity.

3.3.11 As already described above of the seven responses received to the consultation none favoured option 2 making no change to the mandatory participation requirements of supported generation in the CRM. The SEM Committee do see benefits with option 2. Firstly it avoids any of the potential impacts on PSO costs described above. Also the SEM Committee recognise how option 2 maintains coverage of RO hedge for suppliers with no subsequent impacts on socialisation charge.

3.3.12 The SEM Committee see that another benefit of proceeding with option 2 in contrast to option 1 is that it avoids any requirement to forecast the renewable fraction of the feedstock, avoiding adding any further complexity to the qualification process and introducing forecast error.

3.3.13 The SEM Committee sees merit in option 2, in that it maintains the mandatory requirement for REFIT 3 supported capacity to participate in the CRM maintaining the current overall incentives on this capacity to perform.

3.3.14 On balance the SEM Committee considers option 2 retaining the mandatory participation requirements for dispatchable REFIT 3 supported capacity in the CRM as the optimal approach.

3.4 SEM COMMITTEE DECISION

3.4.1 The SEM Committee has decided to proceed with option 2 to retain mandatory participation requirements on dispatchable REFIT 3 supported capacity in CRM.

4. NEXT STEPS

4.1.1 The SEM Committee will continue to monitor this issue and may take actions in the future if these were deemed required. However at this time the SEM Committee does not intend making any changes to the mandatory participation requirements on dispatchable REFIT 3 supported capacity in the CRM.