Single Electricity Market

Capacity Remuneration Mechanism

DSU Compliance with State Aid

Decision Paper

SEM-19-029

July 2019

EXECUTIVE SUMMARY

When establishing the Capacity Remuneration Mechanism (CRM), the SEM Committee determined that Demand Side Units (DSUs), while able to participate in CRM auctions, would be exempt from Reliability option (RO) payments where the contracted demand is delivered. RO difference payments would be applied to DSUs only when the demand reduction is not delivered and the Strike Price is exceeded by the Market Reference Price (MRP). This recognised the fact that DSUs do not have offsetting energy payments. State aid approval from the European Commission for the CRM allowed this different treatment to apply to DSUs as a temporary measure but obliged the RAs to end the exemption from payback obligations for DSUs from the delivery period starting October 2020.

To this end in March 2019 the SEM Committee published “DSU Compliance with State aid Consultation Paper” (the Consultation Paper) to provide stakeholders with an opportunity to comment on the proposals for achieving compliance with State aid. Following consideration of the responses to the Consultation Paper, the SEM Committee now publish this Decision Paper to set out its decisions on this matter.

Due to the timescales involved in making system changes and developing the profiles and code changes required to determine the actual delivered quantity of an Individual Demand Site (IDS) and therefore a DSU and to avoid double-counting of energy, the SEM Committee proposed an interim solution, with an enduring solution to follow.

Respondents to the consultation expressed concern regarding the enduring solution, with all parties indicating that further engagement with industry would be required in order to develop a robust enduring solution. The SEM Committee note these comments and recognises the need for further engagement with industry before any further solution is designed or implemented which would encompass the requirements of the Clean Energy Package. In consequence, the decisions set out in this paper relate to the interim solution alone.

The interim solution, as set out in the Consultation Paper, had the following key features:

- The assumption that dispatched quantity was a suitable proxy for metered quantity for DSUs;
- Use of the Socialisation Fund to socialise the costs of DSU energy payments across Suppliers; and
- Option for DSUs energy payments to be made at all times or only at times of scarcity.

The SEM Committee note the concerns raised by respondents in relation to performance of DSUs and the issue raised by the TSO that the current DSU testing regime may not be sufficiently robust to increased dispatch of DSU capacity. In this respect, the SEM Committee welcomes comments by the TSOs in their response to the Consultation Paper that work is being undertaken to improve performance monitoring so as to ensure that the dispatched quantity is equivalent to the metered quantity.

The SEM Committee note the comments of respondents in relation to the socialisation of DSU energy payments across Suppliers and the use of the Socialisation Fund. The SEM Committee recognise that alternative approaches exist within the Trading and Settlement Code (TSC) such as the Residual Error Volume mechanism and that the use of either of these mechanisms have advantages and disadvantages.

The SEM Committee has therefore decided that the choice of mechanism should be determined by the TSC Modification Committee in line with the following principles:

- The socialisation mechanism must be robust to the lumpy nature of DSU energy payments and must ensure that all DSU energy payments are made;
- The recovery mechanism should allocate the costs between Suppliers in a fair and reasonable way, in line with the Equity assessment criteria applied in the design of the I-SEM, i.e. "*that the market design should allocate the costs and benefits associated with the production, transportation and consumption of electricity in a fair and reasonable manner*"; and
- The mechanism must be capable of implementation for 1 October 2020.

Recognising the current issues surrounding the assumption that dispatched quantity is a suitable proxy for metered quantity, the SEM Committee has decided that initially energy payments for DSUs, arising from dispatch in the balancing market above ex-ante position, will only be made at times when DSUs are required to pay difference charges.

It is the intention of the SEM Committee to move to a situation of making full energy payments to DSUs at all times, once it has been determined to the satisfaction of the RAs that;

- Performance monitoring by the TSOs indicates that dispatched quantity is an effective proxy for metered quantity; and
- The socialisation mechanism is operating effectively to ensure that DSUs are paid energy payments and that the costs are socialised as per the principles set out above.

Given that, initially, energy payments are only made to DSUs when the payment of difference charges is triggered, there is a continued need for DSU energy payments to be cancelled when difference charges are not triggered. The SEM Committee note that his can be most readily accomplished using the existing, cancelling volume associated with the Trading Site Supplier Unit (TSSU). In consequence, in a change from the proposal set out in the consultation paper, the SEM Committee consider that the TSSU associated with each DSU should be retained and, initially, its energy volume set to cancel the energy volume associated with the DSU when difference charges are not triggered.

As set out in the consultation paper, the SEM Committee has decided that the exception to the application of sub-sections F.18.4, F.18.5 and F.18.6 of the TSC to DSUs will cease. Further, the special treatment of DSUs set out in F.18.7.1 and the requirement to set a value for Demand Side Non-Delivery Percentage will no longer apply and the Non-Performance Difference Quantity for a DSU will be set in accordance with F.18.7.3.

The SEM Committee request the RAs to engage with the TSOs to generate a Modification Proposal to enable the TSC Modifications Committee to implement this Decision within the TSC.

The SEM Committee have decided that this solution for DSUs will apply from the start of Capacity Year 2020/21, i.e. from October 2020 in line with the State aid approval for the CRM.

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1. INTRODUCTION

1.1 BACKGROUND

1.1.1 The Capacity Remuneration Mechanism forms part of the new Single Electricity Market launched in October 2018. The mechanism operates to ensure that there is sufficient capacity procured throughout the island of Ireland to maintain the relevant security standards

1.1.2 The Capacity Remuneration Mechanism procures capacity through competitive auctions which are carried out approximately four years (T-4) and one year (T-1) ahead of delivery (see SEM-16-039[1]). To participate in these auctions, capacity providers must undertake the qualification process. If successful at auction, units are awarded a Reliability Option (RO).

1.1.3 The Reliability Option requires the participant to make a difference payment when the Market Reference Price (MRP) rises above the Strike Price (currently set with a DSU floor price of 500€/MWh). The MRP will depend on the market in which the capacity provider has participated: DAM, IDM or Balancing Market (see SEM-15-103[2]). If a capacity provider does not participate in any market for some or all of its obligated capacity, then the MRP for this capacity is based on the balancing market price.

1.1.4 Where a capacity provider has participated at its full obligated capacity in one or more of the energy markets, it will have energy revenue from that market which it can offset against the obligation to make a difference payment. Where a capacity provider has not participated or participated below its obligated capacity it is exposed to “uncovered difference payments”, i.e. it is required to make a difference payment without any energy market revenue to fund this payment. This provides the incentive for capacity providers to deliver their capacity at times of scarcity.

1.1.5 The CRM operates to rules set out in the Capacity Market Code (CMC) (SEM-17-033[3]) 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[4]) published in April 2017.

1.1.6 When establishing the CRM, the SEM Committee determined that DSUs, while able to participate in CRM auctions, would be exempt from RO payments where the contracted demand is delivered. RO difference payments would be applied to DSUs only when the demand reduction is not delivered and the Strike Price is exceeded by the MRP.

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[1] https://www.semcommittee.com/publication/sem-16-039-crm-decision-3
[2] https://www.semcommittee.com/publication/sem-15-103-capacity-remuneration-mechanism-decision-1
[3] https://www.semcommittee.com/publication/publication-i-sem-crm-capacity-market-code-decision
[4] https://www.semcommittee.com/publication/i-sem-trading-and-settlement-code-amendments-decision-paper

1.1.7 State aid approval from the European Commission for the CRM allowed this different treatment to apply to DSUs as a temporary measure. The RAs are required by the State aid decision to deliver their commitment to end the exemption from payback obligations for DSUs from the delivery period starting October 2020.

1.1.8 To this end the SEM Committee published a consultation paper in March 2019, SEM-19-013 DSU Compliance with State aid[5] (the Consultation Paper) to provide stakeholders with an opportunity to comment on the proposals for achieving compliance with State aid within the necessary timeframe.

1.1.9 Following consideration of the responses to the Consultation Paper SEM Committee now publish this Decision Paper to set out its decisions on this matter.

1.2 PURPOSE OF THIS DECISION PAPER

1.2.1 The purpose of this decision paper is to set out the decisions of the SEM Committee, following consideration of the responses received to the Consultation paper, to ensure compliance with the State aid approval by ending the exemption from payback obligations for DSUs from the delivery period starting October 2020.

1.3 RESPONSES TO THE CONSULTATION

1.3.1 This paper includes a summary of the responses made to the Consultation Paper (SEM-19-013) published on 15 March 2019.

1.3.2 A total of eight responses were received to the Consultation Paper from TSO, DSUs, Generators and Suppliers. These responses are published alongside this decision paper.

- Powerhouse Generation
- Energia
- Bord Gais Energy (BGE)
- GridBeyond
- ESB
- Power NI PPB
- DRAI
- Eirgrid

[5] https://www.semcommittee.com/publications/sem-19-013-capacity-remuneration-mechanism-crm-dsu-compliance-state-aid

2. TREATMENT OF DSUS IN THE CRM

2.1 CONSULTATION SUMMARY

2.1.1 In order to be compliant with the State aid requirements the SEM Committee set out for consultation proposals to end the exemption from payback obligations for DSUs from the delivery period starting October 2020.

2.1.2 In constructing these proposals the SEM Committee was mindful of the upcoming draft Electricity Regulation, part of the Clean Energy Package[6], which set out additional requirements on the integration of demand response in electricity markets beyond those in the State aid decision. It was the intention of SEM Committee that the proposals to ensure State aid compliance would be consistent with the latest version of the Electricity Directive.

2.1.3 Due to the timescales involved in making system changes and developing the profiles and code changes required to determine the actual delivered quantity of an IDS and therefore a DSU, SEM Committee proposed an interim solution, with an enduring solution, which would be compliant with the final Electricity Regulation, to be rolled out as soon as reasonably practicable.

2.1.4 The key features of the proposed interim solution as set out in the consultation were:

- Assume that the dispatched quantity for DSUs is equal to the metered quantity in the absence of settlement quality metering at each IDS;
- Remove the TSSU (Trading Site Supplier Unit) for the DSU from the settlement algebra of the TSC;
- Socialise the DSU energy revenue across all suppliers through the Socialisation fund; and
- Increase the FSOCDIFFP (Socialisation Difference Payment Factor).

2.1.5 In addition, the interim solution set out a proposal to provide energy revenue to DSUs only at times when difference payments are triggered.

2.1.6 The key features of the proposed enduring solution as set out in the consultation were;

- Installing settlement quality metering at each IDS (Individual Demand Site);
- Associate each IDS with a host Supplier;
- Remove the TSSU for the DSU from the settlement algebra of the TSC;
- Amend the TSC to construct the metered quantity for each DSU from the sum of the metered demand response of each IDS;
- Amend the TSC to adjust metered quantity for each supplier unit by removing any metered demand response from any associated IDS; and
- System changes to Meter Data Providers (MDPs), SEMO and TSOs' systems to support the above changes.

[6] https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/clean-energy-all-europeans

2.1.7 Within the Consultation Paper, the SEM Committee considered that the interim solution would be compliant with the State aid decision, but that the use of Dispatch Quantity (QD) and the Socialisation Fund may be considered sub optimal for an enduring solution. The SEM Committee further acknowledged that an enduring solution could not be fully designed and implemented until such time as the Electricity Regulation came into force and its implications properly assessed.

2.2 SUMMARY OF RESPONSES

2.2.1 The Consultation Paper sought views on the proposed interim and enduring solution.

2.2.2 Overall respondents broadly agreed that the interim approach was appropriate for achieving compliance with the State aid obligation in time for the October 2020 delivery date.

2.2.3 Respondents expressed concern regarding the key features to the enduring solution, with all parties indicating that further engagement with industry would be required in order to develop a robust enduring solution.

2.2.4 On the interim solution respondents commented on three main issues:

- Assumption that dispatched quantity was a suitable proxy for metered quantity;
- Use of the Socialisation Fund; and
- Payment of DSUs only at times of scarcity v payment at all times.

Dispatched quantity as a suitable proxy for metered quantity

2.2.5 Several respondents stated that this proposed method does not deliver equitable treatment for all CRM participants as there is no penalty should the DSU fail to meet the dispatch quantity or fail to deliver at all, where other RO holders are assessed on their actual measured delivery.

2.2.6 Respondents commented on the effectiveness of penalties that may be issued to DSUs relating to any issues with compliance with the dispatch instruction.

2.2.7 The TSOs stated that the assumption that dispatched quantity and metered quantity are equal or relatively similar in magnitude may not be an accurate assumption in all cases. However, they also state that they are in the process of making improvements to the performance monitoring process for DSUs.

Socialisation of DSU energy revenue

2.2.8 The majority of parties agreed that the socialisation of DSU energy revenue across all suppliers was the most appropriate solution in order to ensure compliance with the State aid requirements by October 2020.

2.2.9 Several parties stated that the socialisation of DSU energy revenue across all suppliers, rather than charging the individual Supplier associated with the IDS was inequitable. However, these parties also commented that should energy payments be restricted only to those occasions when RO difference payments were triggered, the impact of this socialisation would be reduced.

2.2.10 The TSOs commented on the use of the Socialisation Fund as the mechanism to socialise costs across Suppliers. In their response they stated that the Socialisation Fund was intended to manage “hole in the hedge” issues, rather than payments resulting from differences in Metered Quantities. The TSO therefore suggested the use of the Residual Error Volume Charge Tariff as a more appropriate mechanism for socialising the energy revenue paid to DSUs.

Payment to DSUs only when difference payment is triggered

2.2.11 Respondents were split on the proposal in the consultation paper that payments would only be made when the difference payment is triggered. As noted above several participants stated that restricting energy payments to DSUs would represent a more equitable solution.

2.2.12 Others took the view that DSUs should be paid at all times as to do otherwise would introduce unequal treatment of units.

2.3 SEM COMMITTEE RESPONSE

2.3.1 The SEM Committee welcome the broad support for the Interim Solution and the recognition that it is the only practical option to meet the obligation “to end the exemption from payback obligations as of the delivery period starting in October 2020”, as set out in the State aid approval for the CRM.

2.3.2 The SEM Committee recognise that DSUs are able to participate in ex-ante markets (i.e. the Day Ahead Market and Intraday Market) and that energy revenue from these markets is paid to DSUs in exactly the same way as it is for other Generator Units. As a result, the solution only needs to cover the energy revenue that would arise from the balancing market where a DSU is dispatched above the level scheduled in ex-ante markets.

2.3.3 The SEM Committee observe that the removal of the exemptions relating to DSUs in TSC sections F.18.4 and F.18.5 would mean that any ex-ante position taken by a DSU will be recognised in the delivery of its capacity obligation.

2.3.4 The SEM Committee note that if a DSU has an ex-ante market position, then under this solution it may be liable to receive or to make a payment in the balancing market: depending on how its Dispatch Quantity compares to this ex-ante position.

2.3.5 For the Interim Solution to deliver energy payments to DSUs, the setting of a consumption volume in the associated TSSU which matches and cancels the volume for the DSU Generation Unit, as set out in F.2.5.6 of the TSC, cannot continue unamended as it would cause the cancelling out of energy payments arising from the Balancing Market to DSUs at all times.

2.3.6 This issue could be resolved either through the setting of the metered volume for the TSSU or in the processing of payments arising from the TSSU.

2.3.7 In the initial situation, where energy payments are being made to DSUs only at times when the payment of difference charges are triggered (see 2.3.22 below), there is a continued need for DSU energy payments to be cancelled when difference charges are not triggered. The SEM Committee note that his can be most readily accomplished using the existing, cancelling volume associated with the TSSU. As a result, in a change from the proposal in the consultation paper, the SEM Committee believe that the TSSU associated with each DSU will need to be retained and, initially, its energy volume set to cancel the energy volume associated with the DSU when difference charges are not triggered.

2.3.8 In consequence, there will be no requirement to de-register existing TSSUs created, as required under B.9.5.4 of the TSC, and associated with each DSU.

2.3.9 The SEM Committee recognise that use of Dispatch Quantity (QD) as a proxy for Metered Quantity (QM) creates potential issues, as noted in the consultation paper and raised by several respondents to the consultation.

2.3.10 The SEM Committee note the issues with DSU performance raised by the TSO at the Demand Side Management Industry Forum on 15 November 2018[7]. The SEM Committee also note the TSOs consultation response and the concerns raised that the current DSU testing regime will not be robust to increased dispatch of DSU capacity arising from increased penetration of DSUs and/or the move of some DSUs into a more mid-merit role.

2.3.11 The SEM Committee welcome the work being undertaken by the TSOs to improve performance monitoring so as to ensure that the dispatched quantity is equivalent to the metered quantity and anticipates that this work will be significantly progressed by October 2020. The SEM Committee are also cognisant that there is evidence of improved performance of DSUs against dispatch instruction since November 2018.

Socialisation of DSU energy revenue

2.3.12 Within the consultation paper the SEM Committee proposed the use of the Socialisation Fund as a potential, existing mechanism within the current systems that could be used to socialise the costs of the Interim Solution.

2.3.13 As stated by the TSOs, the Socialisation Fund was not created to deal with the socialisation of the costs associated with the Interim Solution and these costs are not linked to the "hole-in-the-hedge". Given that the interim solution will tend to create a residual error volume in respect of DSU energy volumes – as these volumes will already have been accounted for in the consumption of Supplier Units - there is clear logic in the use of the Residual Error mechanism as set out by the TSOs in their response. This approach would also make use of existing mechanisms within the TSC[8].

2.3.14 Having considered the points raised by the TSOs regarding the socialisation of costs, the SEM Committee consider both mechanisms to have benefits.

[7] http://www.eirgridgroup.com/site-files/library/EirGrid/Demand-Side-Management.pdf

[8] For 2018/19, the total money in respect of residual error volumes being recovered though the TSC was set to €24.7m

2.3.15 The SEM Committee note that monies associated with residual error volumes are recovered from suppliers in all hours, whereas the costs of the Socialisation Fund are only recovered in hours where the Capacity Charge Metered Quantity Factor (FQMCCγ) is set to 1: broadly during "peak" hours.

2.3.16 Given the current value of the Residual Meter Volume Interval Proportion (RMVIP), use of residual error volumes will recover only against supplier volumes without interval metering. This contrasts with the Socialisation Fund which recovers across all supplier volumes. RMVIP is set jurisdictionally and could be modified by the RAs to create more equitable recovery where DSU energy payments are being recovered through this mechanism.

2.3.17 The SEM Committee note the TSOs concerns about the timing of energy payments to DSUs and the ability of the residual error volume process within the TSC to appropriately fund the necessary payments. If this process were to be used to manage DSU energy payments, it would need to be made robust to the "lumpy" nature of expected DSU energy payments: for example, with the addition of an analogue of the 'suspend and accrue' approach used by the Socialisation Fund.

2.3.18 The SEM Committee recognise that any approach to the socialisation of the costs of energy payments made to DSUs across Suppliers will require changes to both the TSC and the Market Operator's systems. The very tight timescales involved to deliver either approach for 1 October 2020 is a key determinant in ensuring compliance.

2.3.19 The SEM Committee consider that the TSC changes to implement the Interim Solution should be managed through the normal Modification process set out in section B.17 of the TSC. The SEM Committee considers that it is not appropriate to specify the detailed mechanism, either Socialisation Fund or Residual Error Volume, to be used at this stage, and potentially prejudice the ability of the TSOs in conjunction with the Modifications Committee to produce a solution which can be delivered by 1 October 2020.

2.3.20 However, the SEM Committee require that any socialisation of the costs of DSU energy payments is consistent with the following principles:

- The socialisation mechanism must be robust to the lumpy nature of DSU energy payments and must ensure that all DSU energy payments are made as appropriate;
- The recovery mechanism should allocate the costs between Suppliers in a fair and reasonable way, in line with the *Equity* assessment criteria applied in the design of the I-SEM, i.e. "*that the market design should allocate the costs and benefits associated with the production, transportation and consumption of electricity in a fair and reasonable manner*"; and
- The mechanism must be capable of implementation for 1 October 2020.

Payment to DSUs only when difference payment is triggered

2.3.21 The Consultation Paper set out a proposal that energy payments could be made to DSUs only at times when difference payments are triggered[9]. Support for this proposal was split with DSUs preferring to be paid at all times and other respondents supporting the proposal to pay only when the RO is triggered.

[9] CRM DSU Compliance with State Aid Consultation Paper (SEM-019-013) Paragraph 2.2.28

2.3.22 Recognising the current issues surrounding the assumption that dispatched quantity is a suitable proxy for metered quantity, the SEM Committee has therefore decided that initially energy payments for DSUs, arising from dispatch in the balancing market above ex-ante position, will only be made at times when DSUs are required to pay difference charges.

2.3.23 Based on modelling carried out for the capacity auction for CY2022/23, the RAs estimated that there would be three hours of scarcity or partial scarcity in that capacity year. If DSUs are dispatched, or receive energy payments, for these three hours, and they have no ex-ante position, then based on the qualified DSU capacity for CY2022/23, the total value of DSU energy payments would be €1.2m. When compared to the current levels of the socialisation fund charge and the Residual Error Volume Charge, this would represent a relatively modest addition to the total value being recovered.

2.3.24 The SEM Committee note that the TSOs have already initiated a project to improve the effectiveness of DSU monitoring. In the meantime, the SEM Committee will ensure that the relevant teams in the RAs will engage with the TSOs on their monitoring of the level of DSU compliance with instruction and, if necessary, implement supplementary measures to manage any systematic non-compliance.

2.3.25 The SEM Committee further note the statement by the Commission, within the State aid approval, that "the situation that DSUs cannot access energy payments needs to be remedied in the medium term[10]". While this has no specific timetable, the SEM Committee are keen to make progress towards the delivery of this obligation.

2.3.26 It is the SEM Committee's intention to move to a situation of making full energy payments to DSUs at all times, once it has been determined to the satisfaction of the RAs that;

- Performance monitoring by the TSOs indicates that dispatched quantity is an effective proxy for metered quantity; and
- The mechanism is operating effectively to ensure that DSUs receive energy payments and that the costs are socialised as per the principles set out in 2.3.20 above.

2.3.27 The SEM Committee note the comments of respondents in relation to the enduring solution and recognises the need for further engagement with industry before any further solution is designed or implemented which would encompass the requirements of the Clean Energy Package.

[10] Paragraph 127

2.4 SEM COMMITTEE DECISION

2.4.1 The SEM Committee has decided that the exception to the application of sub-sections F.18.4, F.18.5 and F.18.6 of the TSC to DSUs will cease as part of the implementation of the Interim Solution. Further, the special treatment of DSUs set out in F.18.7.1 and the requirement to set a value for Demand Side Non-Delivery Percentage will no longer apply and the Non-Performance Difference Quantity for a DSU will be set in accordance with F.18.7.3.

2.4.2 The SEM Committee has decided that energy payments, in respect of DSU volumes dispatched in the balancing market over and above their ex-ante position, will be made to DSUs at those times when the Imbalance Price (PIMBγ) is above the Strike Price, i.e. when DSUs are liable to pay difference charges.

2.4.3 The SEM Committee has decided that the costs of these payments will be socialised across Suppliers in accordance with the following principles:

- The socialisation mechanism must be robust to the lumpy nature of DSU energy payments and must ensure that all DSU energy payments are made;
- The recovery mechanism should allocate the costs between Suppliers in a fair and reasonable way, in line with the Equity assessment criteria applied in the design of the I-SEM, i.e. "*that the market design should allocate the costs and benefits associated with the production, transportation and consumption of electricity in a fair and reasonable manner*" ; and
- The mechanism must be capable of implementation for 1 October 2020.

2.4.4 The SEM Committee will ensure the relevant RA teams engage with the TSOs to draft a Modification Proposal to enable the TSC Modifications Committee to recommend an approach. This proposal may need to be processed as Urgent to permit implementation of the necessary system changes by the start of October 2020.

2.4.5 The SEM Committee have decided that this Interim Solution for DSUs will apply from the start of Capacity Year 2020/21, i.e. from October 2020 in line with the State aid approval for the CRM.