

Single Electricity Market

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| Final REcommendation ReportMod\_18\_19 Clarification to apply recoverable start up costs to dsus28 November 2019 |

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Document History

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| **Version** | **Date** | **Author** | **Comment** |
| 1.0 | 28 Nov 2019 | Modifications Committee Secretariat | Issued to Modifications Committee for review and approval |
| 2.0 | 11 Dec 2019 | Modifications Committee Secretariat | Issued to Regulatory Authorities for final decision |

Reference Documents

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| **Document Name** |
| [Trading and Settlement Code](https://www.sem-o.com/rules-and-modifications/balancing-market-modifications/market-rules/TSC-Part-B.docx) |
| [Modification Proposal Form](https://www.sem-o.com/documents/market-modifications/Mod_18_19/Mod_18_19ClarificationtoapplyRecoverableStartUpCoststoDSUs.docx) |
| [Presentation](https://www.sem-o.com/documents/market-modifications/Mod_18_19/Mod_18_19Slides.pptx) |
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# MODIFICATIONS COMMITTEE RECOMMENDATION

## Recommended for approval– unanimous Vote

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| **Recommended for Approval by Unanimous Vote** |
| Rochelle Broderick | Supplier Alternate | Approve |
| Kevin Hannafin | Generator Member | Approve |
| Siobhain O’Neill | Assetless Alternate | Approve |
| Ian Mullins | Supplier Alternate | Approve |
| Sinead O’Hare | Generator Member | Approve |
| Jim Wynne | Supplier Member  | Approve |
| Robert McCarthy | DSU Alternate | Approve |
| Cormac Daly | Generator Member | Approve |
| Andrew Burke | Supplier Member | Approve |
| Paraic Higgins (Chair) | Generator Member | Approve |

# Background

This Modification Proposal was raised by SEMO and was received by the Secretariat on the 10th October 2019. The proposal was raised and voted on at Meeting 94 on 24th October 2019.

Following queries from DSU Participant on the application of Recoverable Shut Down Cost, SEMO wishes to accentuate the intention of paragraph F.11.2.6 and correct typos in F.11.2.2 and F.11.2.4 plus some adjustments to Glossary definitions and variables.

It is clear for the **I-SEM ETA Detailed Design – Markets Decision Paper**

<https://www.semcommittee.com/publication/sem-15-065-i-sem-eta-markets-decision-paper> that the intention from the market design is to treat Demand Side Units (DSUs) and Generator Units (GUs) the same in terms of their settlement in fixed cost payments and charges. For reference please note the following extracts:

**Section 5.5**

*‘Given the decision that generators will get paid the higher of the imbalance price and their offer price in settlement, the SEM Committee is of the view that a mechanism will need to be put in place to ensure that units don’t over-recover their fixed costs. This mechanism will consider the revenue earned by a generator over a contiguous operating period.’*

**Section 10.7.1**

*‘The Consultation Paper did not contain specific proposals concerning demand side units. The general presumption in I-SEM is that the demand side should be able, wherever appropriate, to compete with generation on an equal footing. The Consultation Paper observed that demand side response could have an equal role in the management of constraints; and that instructions profiling would apply equally to demand side units as to generation. The Consultation Paper also observed that the publication of prices close to real time potentially could facilitate greater demand side participation and innovation in the retail market.’*

And reflected in the decision **section 10.7.4**

*‘The SEM Committee intends that the implementation of I-SEM will permit the participation of DSUs on an equal footing with generation at all instances where this is appropriate.’*

Start Up Costs and Recoverable Start Up Costs are applied with the same logic to DSUs, with the clarification that only the variable name is different for those units. Instead of Start Up Costs, DSUs submit Shut down Costs, which are explicitly mentioned as equivalent in F.11.2.6. The Code drafting currently only refers to Start Up Cost in F.11.2.6. This is also intended to apply to the derivative variable Recoverable Start Up Cost which is equivalent to the Recoverable Shut Down Cost for DSUs.

This Modification seeks to emphasize it for clarity.

This is also clear from the definitions of the relevant variables in the Glossary in conjunction with paragraph F.11.2.6 and applied to the determination of the Recoverable Start Up Cost in F.11.2.4.

In carrying the review of this section of the T&SC, the need for a separate defined Variable for Shut Down Cost, CSDhas been removed, therefore it has been deleted from the Glossary list of Variables and Parameters, while the additional explanation from the Variable has been included in the general Glossary definition for Shut Down Cost. For completeness the equivalency between standard GU’s Start Up Cost and DSU’s Shut Down Cost has been included in the definition/description of both Start Up Costs and Recoverable Start Up Costs.

This modification also addresses typos in F.11.2.2 (a) and F.11.2.4 (a) where Start Cost was used incorrectly instead of the defined term Start Up Cost.

# PURPOSE OF PROPOSED MODIFICATION

**3A.) justification of Modification**

The design intention of F.11.2.6 was simply to say that “Shut Down Costs” or similar phrase are equivalent to “Start Up Costs” or similar phrase mentioned in the code – the only difference being the naming convention for DSUs versus GUs. This is because the costs payable to DSU units would be calculated in the same way as GUs (F.11.2.1 and 2), and also that the costs recoverable from DSU units would be calculated in the same way as GUs (F.11.2.4). Otherwise DSUs would be able to reflect a cost in their bids which could not actually be payable or recoverable, which would not be equitable between DSUs and GUs.

The intention of the design was not to exclude Recoverable Shut Down Cost because it would mean that DSUs could only ever be paid for start-ups incurred in the balancing market, and not pay back saved start costs, which would mean inequitable treatment versus GUs who would have to pay them back. If such an interpretation were to be taken, it could lead to perverse incentives and outcomes.

A unit could appear to the scheduling software as if it would save a large fixed cost by keeping a unit off at a price of 0, but then that large saving doesn’t come true in settlement, meaning the units just get to keeps their ex-ante trading revenue without having incurred any running costs. If only a price of zero was seen in the scheduling software, with zero recoverable start costs, it would be very likely that the unit would be scheduled to run to their ex-ante traded position, therefore incurring their running costs.

Therefore this modification is proposed to further emphasize that Shut Down Costs are considered as both payable and recoverable, which is in line with the approach taken for GUs and the approach in optimising the cost of scheduling of the system.

DSUs must try to properly ensure cost recovery of their Start Up Costs in their ex-ante market bids, the same as is expected of GUs. If it is found that the balancing market actions on the unit save them their start cost, then they will need to pay that cost through Recoverable Start Up Costs, and therefore would want to have ensured they received sufficient revenue from their ex-ante market trades to do so.

**3B.) Impact of not Implementing a Solution**

The treatment of DSUs and GUs under fixed cost payments and charges to be on the same basis would not be as clear otherwise.

**3c.) Impact on Code Objectiv****es**

(e) to provide transparency in the operation of the Single Electricity Market;

- This would transparently reflect the intent of the market design to have the same treatment in terms of fixed cost payments and charges between DSUs and GUs, whereas at the moment the limited emphasis on the T&SC drafting could lead to misinterpretation of the Code.

# Working Group and/or Consultation

N/A

# impact on systems and resources

N/A - system already reflects the correct approach.

# Impact on other Codes/Documents

N/A

# MODIFICATION COMMITTEE VIEWS

## Meeting **94 – 24 october 2019**

SEMO delivered a [presentation](https://www.sem-o.com/documents/market-modifications/Mod_18_19/Mod_18_19Slides.pptx) giving an overview of this proposal which was raised on foot of a query by a Demand Side Unit Participant stemming from uncertainty as to whether Recoverable Start Up Costs applied to them given that from defect in the system was present which obscured the data on the variable.

There are 2 very clear typos in paragraphs F.11.2.2 and F.11.2.4 addressed in the proposal by changing reference to Start Cost to the Codified term Start Up Cost. The other change proposed is a straightforward addition to the paragraph which the equivalence of Start Up Costs with Shut Down Costs for Demand Side Units. This change seeks to explicitly emphasize that this also extends to Recoverable Start Up Costs. This is currently the case in the Systems and so is not a material change but this proposal seeks to further highlight the fact to avoid any uncertainty. The proposer made a note that the Shut Down Cost (CSD) variable name is also removed from the paragraph on equivalence with Start Up Cost as part of the proposal. Since this is not used anywhere else the proposal also removes it from the list of variables and acronyms in the Code Glossary. Since the variable definition contains some helpful explanatory text which is not in the Glossary definition for Shut Down Cost the proposal also seeks to add this text in to the glossary definition so that it is not lost. The committee agreed to move to a vote.

# Proposed Legal Drafting

As set out in Appendix 1.

# LEGAL REVIEW

N/A

# IMPLEMENTATION TIMESCALE

It is proposed that this Modification is implemented as the Modifications Committee have Recommended it for Approval and on a Settlement day following receipt of the RA Decision.

# Appendix 1: Mod\_18\_19 clarification to apply recoverable start up costs to dsus

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| **MODIFICATION PROPOSAL FORM** |
| **Proposer***(Company)* | **Date of receipt***(assigned by Secretariat)* | **Type of Proposal***(delete as appropriate)* | **Modification Proposal ID***(assigned by Secretariat)* |
| **SEMO** | **10 October 2019** | **Standard** | **Mod\_18\_19** |
| **Contact Details for Modification Proposal Originator** |
| **Name** | **Telephone number** | **Email address** |
| **Katia Compagnoni** |  | **Katia.compagnoni@EirGrid.com** |
| **Modification Proposal Title** |
| **Clarification to apply Recoverable Start Up Costs to DSUs** |
| **Documents affected***(delete as appropriate)* | **Section(s) Affected** | **Version number of T&SC or AP used in Drafting** |
| **T&SC Part B** | **F.11.2.2/4/6** | **V20** |
| **Explanation of Proposed Change***(mandatory by originator)* |
| Following queries from DSU Participant on the application of Recoverable Shut Down Cost, SEMO wishes to accentuate the intention of paragraph F.11.2.6 and correct typos in F.11.2.2 and F.11.2.4 plus some adjustments to Glossary definitions and variables. It is clear for the **I-SEM ETA Detailed Design – Markets Decision Paper** <https://www.semcommittee.com/publication/sem-15-065-i-sem-eta-markets-decision-paper> that the intention from the market design is to treat Demand Side Units (DSUs) and Generator Units (GUs) the same in terms of their settlement in fixed cost payments and charges. For reference please note the following extracts: **section 5.5** *‘Given the decision that generators will get paid the higher of the imbalance price and their offer price in settlement, the SEM Committee is of the view that a mechanism will need to be put in place to ensure that units don’t over-recover their fixed costs. This mechanism will consider the revenue earned by a generator over a contiguous operating period.’***Section 10.7.1***‘The Consultation Paper did not contain specific proposals concerning demand side units. The general presumption in I-SEM is that the demand side should be able, wherever appropriate, to compete with generation on an equal footing. The Consultation Paper observed that demand side response could have an equal role in the management of constraints; and that instructions profiling would apply equally to demand side units as to generation. The Consultation Paper also observed that the publication of prices close to real time potentially could facilitate greater demand side participation and innovation in the retail market.’*And reflected in the decision **section 10.7.4***‘The SEM Committee intends that the implementation of I-SEM will permit the participation of DSUs on an equal footing with generation at all instances where this is appropriate.’*Start Up Costs and Recoverable Start Up Costs are applied with the same logic to DSUs, with the clarification that only the variable name is different for those units. Instead of Start Up Costs, DSUs submit Shut down Costs, which are explicitly mentioned as equivalent in F.11.2.6 . The Code drafting currently only refers to Start Up Cost in F.11.2.6. This is also intended to apply to the derivative variable Recoverable Start Up Cost which is equivalent to the Recoverable Shut Down Cost for DSUs. This Modification seeks to emphasize it for clarity.This is also clear from the definitions of the relevant variables in the Glossary in conjunction with paragraph F.11.2.6 and applied to the determination of the Recoverable Start Up Cost in F.11.2.4.In carrying the review of this section of the T&SC, the need for a separate defined Variable for Shut Down Cost, CSDuγ , has been removed , therefore it has been deleted from the Glossary list of Variables and Parameters, while the additional explanation from the Variable has been included in the general Glossary definition for Shut Down Cost. For completeness the equivalency between standard GU’s Start Up Cost and DSU’s Shut Down Cost has been included in the definition/description of both Start Up Costs and Recoverable Start Up Costs.This modification also addresses typos in F.11.2.2 (a) and F.11.2.4 (a) where Start Cost was used incorrectly instead of the defined term Start Up Cost. |
| **Legal Drafting Change***(Clearly show proposed code change using* ***tracked*** *changes, if proposer fails to identify changes, please indicate best estimate of potential changes)* |
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		2. 1. In all circumstances not listed in paragraphs F.11.2.1, for any Bid Offer Acceptance, o, within the Period of Physical Operation which is associated with a Synchronise Dispatch Instruction and for which Complex Bid Offer Data is to be used in accordance with section F.3.3:
				1. CSUuγ for the first Imbalance Settlement Period, γ, within the Period of Physical Operation shall have a value equal to the value of the Start Up Cost submitted in accordance with Chapter D (Balancing Market Data Submission) relating to the Warmth State at the time of the start time of the Period of Physical Operation for the Generator Unit as part of the applicable Complex Bid Offer Data if:

The Final Physical Notification Quantity (qFPNuγ(t)) for the Generator Unit, u, has a value of zero for all times within the Period of Physical Operation;For the first Period of Physical Operation in the Billing Period only, the Initial Condition of Period of Physical Operation has a state of “off” and the Initial Condition of Period of Market Operation has a state of “on” in the Billing Period; orThe start of the Period of Physical Operation and the end of the previous Period of Physical Operation are within the same Period of Market Operation.In all circumstances not listed in paragraph F.11.2.2 (a)(i) to (iii), CSUuγ for the first Imbalance Settlement Period, γ, within the Period of Physical Operation shall have a value of zero.* + - * 1. CSUuγ shall have a value of zero for each other Imbalance Settlement Period, γ, falling wholly within the Period of Physical Operation, or in which the Period of Physical Operation starts or ends.
			1. The Market Operator shall determine the Recoverable Start Up Costs (CSURuγ) for each Generator Unit, u, in each Imbalance Settlement Period, γ, within the Period of Market Operation as follows:
				1. CSURuγ for the first Imbalance Settlement Period, γ, within the Period of Market Operation shall have a value equal to value of the Start Up Cost submitted in accordance with Chapter D (Balancing Market Data Submission) relating to the Warmth State at the start time of the Period of Market Operation submitted for the Generator Unit as part of the most recently submitted valid Complex Bid Offer Data as at the Bid Offer Acceptance Time in respect of the first Bid Offer Acceptance, o, for which Complex Bid Offer Data is to be used in accordance with section F.3.3, in that Imbalance Settlement Period, γ, if:

The Dispatch Quantity (qDuoγ(t)) for the final Bid Offer Acceptance, o, in Imbalance Settlement Period, γ, for the Generator Unit, u, has a value of zero for all times within the Period of Market Operation;For the first Period of Market Operation in the Billing Period only, the Initial Condition of Period of Physical Operation has a state of “on” and the Initial Condition of Period of Market Operation has a state of “off” in the Billing Period; orThe start of the Period of Market Operation and the end of the previous Period of Market Operation are within the same Period of Physical Operation.In all circumstances not listed in paragraph F.11.2.4(a)(i) to (iii), and for the first Period of Market Operation in the Billing Period only if the Initial Condition of Period of Physical Operation has a state of “off” and the Initial Condition of Period of Market Operation has a state of “on” in the Billing Period, CSURuγ for the first Imbalance Settlement Period, γ, within the Period of Market Operation shall have a value of zero.* + - * 1. CSURuγ shall have a value of zero for each other Imbalance Settlement Period, γ, falling wholly within the Period of Market Operation, or in which the Period of Market Operation starts or ends.
			1. For the purposes of calculations under this Code the Market Operator shall calculate each value of Start Up Costs (CSUuγ) or Recoverable Start Up Costs (CSURuγ) for each Demand Side Unit, u, from the relevant value of Shut Down Cost (instead of Start Up Cost) submitted in accordance with Chapter D (Balancing Market Data Submission) for the Demand Side Unit as part of the most recently submitted valid Complex Bid Offer Data as at the Bid Offer Acceptance Time in respect of the first Bid Offer Acceptance, o, for which Complex Bid Offer Data is to be used in accordance with section F.3.3, for the relevant Imbalance Settlement Period, γ. The Market Operator shall set all values of No Load Costs (CNLuγ) for Demand Side Units u to be zero for all Imbalance Settlement Periods, γ.

**Changes proposed to Glossary including the List of Variables and Parameters:**

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| Shut Down Cost | means the costs associated with Shut Down of a Demand Side Unit as the component of the operational costs considered for the Make-Whole Payment (through its equivalency with Start Up Costs) which is a payment for a Generator Unit, u, where Shut Down Costs have been incurred in an Imbalance Settlement Period, γ. |

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| Variable | CSURuγ | Recoverable Start Up Costs | The component of the Fixed Cost Payment or Charge which is a charge for a Generator Unit, u, where Start Up Costs (or the equivalent Shut Down Cost for a Demand Side Unit) have been saved in an Imbalance Settlement Period, γ. | € |
| Variable | CSUuγ | Start Up Costs | The component of the operational costs considered for the make-whole payment which is a payment for a Generator Unit, u, where Start Up Costs (or the equivalent Shut Down Cost for a Demand Side Unit) have been incurred in an Imbalance Settlement Period, γ. | € |

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| **Modification Proposal Justification***(Clearly state the reason for the Modification)* |
| The design intention of F.11.2.6 was simply to say that “Shut Down Costs” or similar phrase are equivalent to “Start Up Costs” or similar phrase mentioned in the code – the only difference being the naming convention for DSUs versus GUs. This is because the costs payable to DSU units would be calculated in the same way as GUs (F.11.2.1 and 2), and also that the costs recoverable from DSU units would be calculated in the same way as GUs (F.11.2.4). Otherwise DSUs would be able to reflect a cost in their bids which could not actually be payable or recoverable, which would not be equitable between DSUs and GUs.The intention of the design, was not to exclude Recoverable Shut Down Cost because it would mean that DSUs could only ever be paid for start ups incurred in the balancing market, and not pay back saved start costs, which would mean inequitable treatment versus GUs who would have to pay them back. If such an interpretation were to be taken, it could lead to perverse incentives and outcomes. A unit could appear to the scheduling software as if it would save a large fixed cost by keeping a unit off at a price of 0, but then that large saving doesn’t come true in settlement, meaning the units just get to keep their ex-ante trading revenue without having incurred any running costs. If only a price of zero was seen in the scheduling software, with zero recoverable start costs, it would be very likely that the unit would be scheduled to run to their ex-ante traded position, therefore incurring their running costs. Therefore this modification is proposed to further emphasize that Shut Down Costs are considered as both payable and recoverable, which is in line with the approach taken for GUs and the approach in optimising the cost of scheduling of the system.DSUs must try to properly ensure cost recovery of their Start Up Costs in their ex-ante market bids, the same as is expected of GUs. If it is found that the balancing market actions on the unit save them their start cost, then they will need to pay that cost through Recoverable Start Up Costs, and therefore would want to have ensured they received sufficient revenue from their ex-ante market trades to do so. |
| **Code Objectives Furthered***(State the Code Objectives the Proposal furthers, see Section 1.3 of Part A and/or Section A.2.1.4 of Part B of the T&SC for Code Objectives)* |
| (e) to provide transparency in the operation of the Single Electricity Market;- This would transparently reflect the intent of the market design to have the same treatment in terms of fixed cost payments and charges between DSUs and GUs, whereas at the moment the limited emphasis on the T&SC drafting could lead to misinterpretation of the Code. |
| **Implication of not implementing the Modification Proposal***(State the possible outcomes should the Modification Proposal not be implemented)* |
| The treatment of DSUs and GUs under fixed cost payments and charges to be on the same basis would not be as clear otherwise. |
| **Working Group***(State if Working Group considered necessary to develop proposal)* | **Impacts***(Indicate the impacts on systems, resources, processes and/or procedures; also indicate impacts on any other Market Code such as Capacity Marker Code, Grid Code, Exchange Rules etc.)* |
| N/A | N/A - system already reflects the correct approach. |
| ***Please return this form to Secretariat by email to*** balancingmodifications@sem-o.com |