MODIFICATION PROPOSAL FORM

| Proposer
(Company) | Date of receipt
(assigned by Secretariat) | Type of Proposal
(delete as appropriate) | Modification Proposal ID
(assigned by Secretariat) |
|---|---|---|---|
| **SEMO** | **5th April 2023** | **Standard** | **Mod_05_23** |

Contact Details for Modification Proposal Originator		
Name	**Telephone number**	**Email address**
Katia Compagnoni		**Katia.compagnoni@eirgrid.com**

Modification Proposal Title
Treatment for Firm Curtailment as per SEM-22-09

| Documents affected
(delete as appropriate)	Section(s) Affected	Version number of T&SC or AP used in Drafting
T&SC Part B

Glossary Part B | **T&SC Part B Section F & G: F.1.2.1, F.6.8.2, F.7.2.1, F.8.3.1, F.11.4.2, G.4.7.1, G.4.11.1 and G.17.3.2**

Glossary Part B Definitions and List of Variables and Parameters | **27.0** |

| Explanation of Proposed Change
(mandatory by originator) |
|---|

The Clean Energy for all Europeans package (CEP) is made up a suite of eight legislative acts, both regulations and directives, which were adopted by the European Parliament and European Council in 2018 and 2019. Among these acts is the revised Regulation on the internal market for electricity (EU) 2019/943 which seeks to amend aspects of wholesale electricity markets in Europe.

In 2020 and 2021, the SEM Committee undertook a process of consultation relating to a number of matters related to the CEP including a consultation on Dispatch, Redispatch and Compensation Pursuant to Regulation (EU) 2019/943 (SEM-21-026) and A Proposed Decision on the Treatment of New Renewable Units in the SEM (SEM-21-027).

A decision paper relating to these papers, SEM-22-009, was published in March 2022. This proposal aims to provide for implementation of the prospective element of that SEM Committee decision in relation to compensation for market revenues for non-market based re-dispatching in relation to curtailment of firm volumes.

The decision paper states as follows:

"All units will initially receive compensation in the SEM for non-market based redispatch (in relation to both constraints and curtailment), where firm, at the better of their complex bid/offer price or imbalance settlement price up to the level of their Firm Access Quantity as is the case for constraints today (with wind and solar units essentially retaining their ex-ante revenue, as such volumes are settled at a deemed decremental price of zero).

This will effectively extend the arrangements in place for constraints in the market to curtailment for all units, with the costs associated with curtailment to be recovered in the same way via the Imperfections Charge. This will

provide for non-discrimination between different units that may be subject to different support schemes within the market for the purpose of market compensation.

The decision paper also states as follows:

It is expected that following implementation of required changes, compensation through this approach will occur through the same settlement mechanisms as per constraints in the market today."

The decision paper also notes the following in relation to the timing of implementation:

In the context of the current and expected next two years' high prices, the SEM Committee has decided to implement and compensate any payments for curtailment associated with this Decision, beginning in tariff year 2024/25."

The decision paper includes a request for SEMO to raise this Modification proposal to reflect the decision in relation to treatment of curtailment:

"The SEM Committee requests SEMO to raise a Modification to reflect the SEM Committee's decision regarding the treatment of curtailment set out in this paper."

This proposed Modification aims to provide for implementation of the element of this decision related to the retention of ex ante market revenues for firm curtailment going forward from the implementation date commencing at the beginning of tariff year 2024/25. Note that this proposed Modification does not seek to implement arrangements for the retention of ex ante revenue for firm curtailment volumes for the period between January 2020 and September 2024 inclusive which will require separate implementation. The intention is that once the details of this Modification are agreed that it will be implemented with an effective date commencing from 1st October 2024. The development work to address the period prior to that from January 2020 may be informed by the considerations taken as a result of this proposed Modification but will be addressed separately.[1]

In essence, if implemented, this Modification would result in firm curtailment volumes receiving the same settlement treatment as constraint does today by including those volumes in the discount charge (which is a payment to the Generator Unit) with a deemed decremental price of zero such that any imbalance charge is offset and those volumes would retain their ex ante market revenue. Costs would be recovered via the imperfections charge in the same way as those costs are recovered for firm constraint as indicated in the relevant decision and noted above.

Settlement of non-firm curtailment volumes would remain unchanged i.e. they would remain excluded from discount charges but would continue to receive curtailment charges (which can be a payment or charge) reflecting the relative magnitude of the curtailment price, being the weighted average price of all ex ante trades, and the imbalance price for a given unit in a given period.

The approach to making this change in the settlement logic is intended to be relatively unintrusive, knowing that any attempt to change bid offer acceptance quantity calculations within instruction profiling rules and systems is highly complex and therefore likely to be both costly and carry a higher risk of unintended outcomes. That approach would also likely necessitate changes in multiple systems whereas the proposed approach should be possible to implement with changes only to the SEMO settlement systems, although this would have to be fully confirmed via impact assessment.

In order to limit the changes to settlement rules and systems only, this proposal uses existing bid offer acceptance quantities (non-firm and curtailment accepted bid quantities) which are already present within the settlement logic/systems to determine a non-firm curtailment accepted bid quantity. This quantity is then used in downstream settlement charge calculations to apply the existing constraint settlement logic to firm curtailment volumes and to continue to apply the existing curtailment logic to non-firm curtailment volumes.

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[1] SEMO has an obligation to plan for the implementation of the decision within the specified timelines; however, it is duly noted that SEM-22-009 is currently under Judicial Review.

These are some clarifications on the proposed Legal Drafting:

- Instead of creating a new variable to deal with the non-firm quantity, we are re-purposing the existing CCURL and adapting the relative wording in all the variable definitions, descriptions in 'where clauses' and calculation. The new logic will simply end date the previous and avoid potential system changes for Participants. This will lead to an easier system implementation.
- Change of QABCURLLF to Max(QABCURLLFuoiγ, QABNFLFuoiγ) in CABBPO calculation in F.7.2.1. We consider that, at present, a QABCURL volume would not be expected to occur for an undo action so that this change is currently immaterial; however, we also anticipate that this may be more likely to manifest in future with non-priority dispatch renewables being dispatched for energy balancing once a new approach is implemented there. We propose to make this change now as future proofing for that circumstance such that non-firm curtailment accepted bid quantity only (i.e. not the firm curtailment equivalent) is included in this adjustment for volumes settled at PCURL .
- We propose to remove QABCURLLF from CDISCOUNT charge logic in F.6.8.2 since all non-firm volumes, including non-firm curtailment, are effectively already removed due to the presence of QABNFLF in the min function, which will always be a lesser quantity.
- Calculation of CREVMWP in F.11.4.2 has similar considerations to the above two points around removal of QABCURLLF or changing it to Max(QABCURLLFuoiγ, QABNFLFuoiγ) as appropriate; and around the changes to this paragraph not being material at present but proposing to make them now as future proofing for future non priority dispatch renewable treatments in balancing.

Legal Drafting Change
*(Clearly show proposed code change using **tracked** changes, if proposer fails to identify changes, please indicate best estimate of potential changes)*

Part B T&SC Sections F and G

F.1.2 Settlement Charges and Payments for Generator Units

F.1.2.1 The Market Operator shall calculate the following charges and payments for each Generator Unit in accordance with the Settlement Calendar in section G.2.4:

(a) $CIMB_{uγ}$, the Imbalance Component Payment or Charge calculated in accordance with section **Error! Reference source not found.**;

(b) $CPREMIUM_{uγ}$, the Premium Component Payment calculated in accordance with section **Error! Reference source not found.**;

(c) $CDISCOUNT_{uγ}$, the Discount Component Payment calculated in accordance with section **Error! Reference source not found.**;

(d) $CAOOPO_{uγ}$, the Offer Price Only Accepted Offer Payment or Charge calculated in accordance with section **Error! Reference source not found.**;

(e) $CABBPO_{uγ}$, the Bid Price Only Accepted Bid Payment or Charge calculated in accordance with section **Error! Reference source not found.**;

(f) $CCURL_{uγ}$, the Non-Firm Curtailment Payment or Charge calculated in accordance with section **Error! Reference source not found.**;

(g) $CUNIMB_{uγ}$, the Uninstructed Imbalance Charge calculated in accordance with section **Error! Reference source not found.**;

(h) $CII_{uγ}$, the Information Imbalance Charge calculated in accordance with section **Error! Reference source not found.**;

(i) CFC_{ub}, the Fixed Cost Payment or Charge calculated in accordance with section **Error! Reference source not found.**; and

(j) $CTEST_{uγ}$, the Testing Charge calculated in accordance with section F.13.

F.6.8.2 The Market Operator shall calculate Premium and Discount Component Payments for each Generator Unit, u, and each Imbalance Settlement Period, γ, as follows:

$$
\begin{aligned}
CPREMIUM_{u\gamma} &= \sum_o \sum_i \Big(Max\big(PBO_{uoi\gamma} - PIMB_\gamma, 0\big) \\
&\times \big(QAOLF_{uoi\gamma} \\
&- Max\big(QAOOPOLF_{uoi\gamma}, QAOBIAS_{uoi\gamma}, QAOUNDEL_{uoi\gamma}, QAOTOTSOLF_{uoi\gamma}\big)\big)\Big)
\end{aligned}
$$

$$
\begin{aligned}
CDISCOUNT_{u\gamma} &= \sum_o \sum_i \Big(Min\big(PBO_{uoi\gamma} - PIMB_\gamma, 0\big) \\
&\times \big(QABLF_{uoi\gamma} \\
&- Min\big(QABBPOLF_{uoi\gamma}, QABBIAS_{uoi\gamma}, QABUNDEL_{uoi\gamma}, QABNFLF_{uoi\gamma}, \sout{QABCURLLF_{uoi\gamma}}, \\
& QABTOTSOLF_{uoi\gamma}\big)\big)\Big)
\end{aligned}
$$

where:

(a) $PIMB_\gamma$ is the Imbalance Settlement Price in Imbalance Settlement Period, γ, calculated in accordance with Chapter E (Imbalance Pricing);

(b) $PBO_{uoi\gamma}$ is the Bid Offer Price for each Accepted Bid Quantity and Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, determined in accordance with section **Error! Reference source not found.**;

(c) $\sum_o$ is a summation over all Bid Offer Acceptances, o;

(d) $\sum_i$ is a summation over all Bands, i;

(e) $QAOLF_{uoi\gamma}$ is the Loss-Adjusted Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(f) $QABLF_{uoi\gamma}$ is the Loss-Adjusted Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(g) $QAOTOTSOLF_{uoi\gamma}$ is the Loss-Adjusted Trade Opposite TSO Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(h) $QABTOTSOLF_{uoi\gamma}$ is the Loss-Adjusted Trade Opposite TSO Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(i) $QABNFLF_{uoi\gamma}$ is the Loss-Adjusted Non-Firm Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance

Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(j) $QAOUNDEL_{uoi\gamma}$ is the Undelivered Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(k) $QABUNDEL_{uoi\gamma}$ is the Undelivered Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(l) $QAOBIAS_{uoi\gamma}$ is the Biased Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(m) $QABBIAS_{uoi\gamma}$ is the Biased Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(n)   ~~$QABCURLLF_{uoi\gamma}$ is the Loss-Adjusted Curtailment Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section F.8.1;~~

~~(o)~~(n) $QAOOPOLF_{uoi\gamma}$ is the Loss-Adjusted Offer Price Only Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**; and

~~(p)~~(o) $QABBPOLF_{uoi\gamma}$ is the Loss-Adjusted Bid Price Only Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**.

F.7.2.1 Market Operator shall calculate the Offer Price Only Accepted Offer Payment or Charge ($CAOOPO_{u\gamma}$) and the Bid Price Only Accepted Bid Payment or Charge ($CABBPO_{u\gamma}$) for each Generator Unit, u, in each Imbalance Settlement Period, γ, as follows:

$$CAOOPO_{u\gamma} = \sum_{o}\sum_{i}\left(\left(PBO_{uoi\gamma} - PIMB_{\gamma}\right)\right.$$
$$\left.\times Max\left(QAOOPOLF_{uoi\gamma} - QAOUNDEL_{uoi\gamma}, 0\right)\right)$$

$$CABBPO_{u\gamma} = \sum_{o}\sum_{i}\left(\left(PBO_{uoi\gamma} - PIMB_{\gamma}\right)\right.$$
$$\times Min\left(QABBPOLF_{uoi\gamma}\right.$$
$$\left.\left. - Min\left(Max\left(QABCURLLF_{uoi\gamma}, QABNFLFuoi\gamma\right), QABUNDEL_{uoi\gamma}\right), 0\right)\right)$$

where:

(a) $PIMB_{\gamma}$ is the Imbalance Settlement Price in Imbalance Settlement Period, γ, calculated in accordance with Chapter E (Imbalance Pricing);

(b) PBO_{uoiγ} is the Bid Offer Price for each Accepted Bid Quantity and Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ;

(c) $\sum_o$ is a summation over all Bid Offer Acceptances, o;

(d) $\sum_i$ is a summation over all Bands, i;

(e) QAOOPOLF_{uoiγ} is the Loss-Adjusted Offer Price Only Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ;

(f) QABBPOLF_{uoiγ} is the Loss-Adjusted Bid Price Only Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ;

(g) QAOUNDEL_{uoiγ} is the Undelivered Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ;

(h) QABCURLLF_{uoiγ} is the Loss-Adjusted Curtailment Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ; and

(i) QABUNDEL_{uoiγ} is the Undelivered Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ;

(j) QABNFLF_{uoiγ} is the Loss-Adjusted Non-Firm Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section F.6.5;

F.8.3 Calculation of Non-Firm Curtailment Payments and Charges

F.8.3.1 The Market Operator shall calculate the Non-Firm Curtailment Payment or Charge (CCURL_{uγ}) for each Generator Unit, u, in each Imbalance Settlement Period, γ, as follows:

$$CCURL_{u\gamma} = \sum_o \sum_i \left((PCURL_{u\gamma} - PIMB_\gamma) \times Min\big(Max(QABCURLLF_{uoi\gamma}, QABNFLFuoi\gamma) - Min(QABBIAS_{uoi\gamma}, QABUNDEL_{uoi\gamma}), 0\big) \right)$$

where:

(a) PIMB_γ is the Imbalance Settlement Price in Imbalance Settlement Period, γ, calculated in accordance with Chapter E (Imbalance Pricing);

(b) PCURL_{uγ} is the Curtailment Price for Generator Unit, u, in Imbalance Settlement Period, γ;

(c) $\sum_o$ is a summation over all Bid Offer Acceptances, o;

(d) $\sum_i$ is a summation over all Bands, i;

(e) QABCURLLF_{uoiγ} is the Loss-Adjusted Curtailment Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ;

(f) QABUNDEL$_{uoiγ}$ is the Undelivered Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ; and

(g) QABBIAS$_{uoiγ}$ is the Biased Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ.;

(h) QABNFLF$_{uoiγ}$ is the Loss-Adjusted Non-Firm Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section F.6.5;

F.11.4.2 The Market Operator shall calculate the Make-Whole Payment Revenue (CREVMWP$_{uk}$) for each Generator Unit, u, for each Contiguous Operating Period, k, in each Billing Period, b, as follows:

$$
\begin{aligned}
CREVMWP_{uk} \\
= \sum_{γ \in k} \Bigg(\sum_{o} \sum_{i} \Big(Max\big(PBO_{uoiγ}, PIMB_γ\big) \\
\times \big(QAOLF_{uoiγ} \\
- Max\big(QAOOPOLF_{uoiγ}, QAOBIAS_{uoiγ}, QAOUNDEL_{uoiγ}, QAOTOTSOLF_{uoiγ}\big)\big)\Big) \\
+ \sum_{o} \sum_{i} \Big(Min\big(PBO_{uoiγ}, PIMB_γ\big) \\
\times \big(QABLF_{uoiγ} \\
- Min\big(QABBPOLF_{uoiγ}, QABBIAS_{uoiγ}, QABUNDEL_{uoiγ}, QABNFLF_{uoiγ}, \cancel{QABCURLLF_{uoiγ}}, \\
QABTOTSOLF_{uoiγ}\big)\big)\Big) \\
+ \sum_{o} \sum_{i} \Big(PBO_{uoiγ} \times Max\big(QAOOPOLF_{uoiγ} - QAOUNDEL_{uoiγ}, 0\big)\Big) \\
+ \sum_{o} \sum_{i} \Big(PBO_{uoiγ} \\
\times Min\big(QABBPOLF_{uoiγ} \\
- Min\big(Max\big(QABCURLLF_{uoiγ}, QABNFLFuoiγ\big), QABUNDEL_{uoiγ}\big), 0\big)\Big) \\
+ \sum_{o} \sum_{i} \Big(PCURL_{uγ} \\
\times Min\big(Max\big(QABCURLLF_{uoiγ}, QABNFLFuoiγ\big) \\
- Min\big(QABBIAS_{uoiγ}, QABUNDEL_{uoiγ}\big), 0\big)\Big) \Bigg)
\end{aligned}
$$

where:

(a) $\sum_{γ \in k}$ is a summation over all Imbalance Settlement Periods, γ, within the Contiguous Operating Period, k;

(b) PBO$_{uoiγ}$ is the Bid Offer Price for each Accepted Bid Quantity and Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ;

(c) QAOLF$_{uoiγ}$ is the Loss-Adjusted Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ;

(d) $QABLF_{uoi\gamma}$ is the Loss-Adjusted Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ;

(e) $PIMB_\gamma$ is the Imbalance Settlement Price in Imbalance Settlement Period, γ, calculated in accordance with Chapter E (Imbalance Pricing);

(f) $QAOTOTSOLF_{uoi\gamma}$ is the Loss-Adjusted Trade Opposite TSO Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(g) $QABTOTSOLF_{uoi\gamma}$ is the Loss-Adjusted Trade Opposite TSO Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(h) $QABNFLF_{uoi\gamma}$ is the Loss-Adjusted Non-Firm Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(i) $QAOUNDEL_{uoi\gamma}$ is the Undelivered Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(j) $QABUNDEL_{uoi\gamma}$ is the Undelivered Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(k) $QAOBIAS_{uoi\gamma}$ is the Biased Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(l) $QABBIAS_{uoi\gamma}$ is the Biased Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(m) $QABCURLLF_{uoi\gamma}$ is the Loss-Adjusted Curtailment Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(n) $QAOOPOLF_{uoi\gamma}$ is the Loss-Adjusted Offer Price Only Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(o) $QABBPOLF_{uoi\gamma}$ is the Loss-Adjusted Bid Price Only Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(p) $\sum_o$ is a summation over all Bid Offer Acceptances, o;

(q) $\sum_i$ is a summation over all Bands, i; and

(r) $PCURL_{u\gamma}$ is the Curtailment Price for Generator Unit, u, in Imbalance Settlement Period, γ.

G.4.7 Payments or Charges for Curtailment

G.4.7.1 The total Non-Firm Curtailment Payment or Charge ($CCURL_{ud}$) made for each Generator Unit u for each Settlement Day d shall be calculated by the Market Operator as follows:

$$CCURL_{ud} = \sum_{\gamma\ in\ d} CCURL_{u\gamma}$$

where:

(a) $CCURL_{u\gamma}$ is the Non-Firm Curtailment Payment or Charge for Generator Unit u in Imbalance Settlement Period γ calculated in accordance with section F.8; and

(b) $\sum_{\gamma\ in\ d}$ is a summation over all Imbalance Settlement Periods γ in Settlement Day d.

G.4.11 Total Daily Amounts for Generator Units

G.4.11.1 The Total Daily Amounts ($CDAY_{ud}$) made for each Generator Unit u for each Settlement Day d shall be calculated by the Market Operator as follows:

$$CDAY_{ud} = CIMB_{ud} + CPREMIUM_{ud} + CDISCOUNT_{ud} + CAOOPO_{ud} + CABBPO_{ud} + CCURL_{ud} + CUNIMB_{ud} + CII_{ud} + CTEST_{ud}$$

where:

(a) $CIMB_{ud}$ is the total Imbalance Component Payment or Charge for Generator Unit u for Settlement Day d calculated in accordance with section G.4.2;

(b) $CPREMIUM_{ud}$ is the total Premium Component Payment for Generator Unit u for Settlement Day d calculated in accordance with section G.4.3;

(c) $CDISCOUNT_{ud}$ is the total Discount Component Payment for Generator Unit u for Settlement Day d calculated in accordance with section G.4.4;

(d) $CAOOPO_{ud}$ is the total Offer Price Only Accepted Offer Payment or Charge for Generator Unit u for Settlement Day d calculated in accordance with section G.4.5;

(e) $CABBPO_{ud}$ is the total Bid Price Only Accepted Bid Payment or Charge for Generator Unit u for Settlement Day d calculated in accordance with section G.4.6;

(f) $CCURL_{ud}$ is the total Non-Firm Curtailment Payment or Charge for Generator Unit u for Settlement Day d calculated in accordance with section G.4.7;

(g) $CUNIMB_{ud}$ is the total Uninstructed Imbalance Charge for Generator Unit u for Settlement Day d calculated in accordance with section G.4.8;

(h) CII_{ud} is the total Information Imbalance Charge for Generator Unit u for Settlement Day d calculated in accordance with section G.4.9; and

(i) $CTEST_{ud}$ is the total Testing Charge for Generator Unit u for Settlement Day d calculated in accordance with section G.4.10.

G.17.3.2 For all Imbalance Settlement Periods, γ, for which Administered Imbalance Settlement is in effect, the Market Operator shall set the following amounts equal to zero for all Generator Units and Supplier Units as applicable:

(a) Premium Component Payment ($CPREMIUM_{\gamma}$);

(b) Discount Component Payment ($CDISCOUNT_{\gamma}$);

(c) Offer Price Only Accepted Offer Payment or Charge ($CAOOPO_{\gamma}$);

(d) Bid Price Only Accepted Bid Payment or Charge ($CABBPO_{\gamma}$);

(e) Non-Firm Curtailment Payment or Charge ($CCURL_{\gamma}$);

(f)   Uninstructed Imbalance Charge (CUNIMB$_\gamma$);

(g)   Fixed Cost Payment or Charge (CFC$_\gamma$);

(h)   Information Imbalance Charge (CII$_\gamma$);

(i)   Testing Charge (CTEST$_\gamma$);

(j)   Imperfections Charge (CIMP$_\gamma$);

(k)   Residual Error Volume Charge (CREV$_\gamma$);

(l)   Currency Adjustment Payment or Charge (CCA$_\gamma$);

(m)   Difference Payment Socialisation Charge (CSOCDIFFP$_\gamma$);

(n)   Achievable Difference Payment (CDIFFPACHIEVE$_\gamma$);

(o)   Day Ahead Difference Charge (CDIFFCDA$_\gamma$);

(p)   Within Day Difference Charge (CDIFFCWD$_\gamma$);

(q)   Non Performance Difference Charge (CDIFFCNP$_\gamma$); and

(r)   Total Difference Charge (CDIFFCTOT$_\gamma$).

Part B Glossary and List of Variables and Parameters

Non-Firm Curtailment Payment or Charge	an adjustment to ensure that Accepted Bid Quantities due to a Dispatch Instruction curtailing a Unit in the non-firm region of its output range are settled at the curtailment price only. It is calculated in accordance with section F.8.

Variable	CCURL$_{u\gamma}$, CCURL$_{ud}$	Non-Firm Curtailment Payment or Charge	An adjustment payment or charge for a Generator Unit, u, in an Imbalance Settlement Period, γ, or Settlement Day, d, as applicable, to ensure that Non-Firm Accepted Bid Quantities due to a Dispatch Instruction curtailing the Unit are settled at the Curtailment Price only.	€

Modification Proposal Justification
(Clearly state the reason for the Modification)

This proposal has been raised by SEMO at the request of the SEM Committee on foot of SEM-22-009.

This proposed Modification is intended to implement the forward looking element of the SEM Committee policy decision in relation to the treatment of non-market based redispatch compensation pursuant to (EU) 2019/943 therefore ensuring that the Trading and Settlement Code both reflects the local policy requirements and the provisions of the clean energy package in this area.

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)
• *to facilitate the efficient, economic and coordinated operation, administration and development of the Single Electricity Market in a financially secure manner* Facilitates the development of the SEM with respect to the new SEM Committee policy in relation to the treatment of firm curtailment as set out in SEM-22-009. • *to ensure no undue discrimination between persons who are parties to the Code* As noted in SEM-22-009 and copied below: *This will effectively extend the arrangements in place for constraints in the market to curtailment for all units, with the costs associated with curtailment to be recovered in the same way via the Imperfections Charge. This will provide for non-discrimination between different units that may be subject to different support schemes within the market for the purpose of market compensation*

Implication of not implementing the Modification Proposal *(State the possible outcomes should the Modification Proposal not be implemented)*
If this proposal is not implemented then the element of SEM-22-009 to which it pertains will not be implemented or implementation will be delayed, leading to a situation whereby the relevant parts of the Trading and Settlement Code do not reflect an active SEM Committee policy.

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 Market Code, Grid Code, Exchange Rules etc.)*
N/A	Impacts SEMO settlement system since a system change will be required to implement this Modification. Impacts SEMO resources required to implement this Modification. No ongoing resource impact is anticipated once implemented. No impact to any other market code anticipated.

Please return this form to Secretariat by email to balancingmodifications@sem-o.com

Notes on completing Modification Proposal Form:

1. If a person submits a Modification Proposal on behalf of another person, that person who proposes the material of the change should be identified on the Modification Proposal Form as the Modification Proposal Originator.

2. Any person raising a Modification Proposal shall ensure that their proposal is clear and substantiated with the appropriate detail including the way in which it furthers the Code Objectives to enable it to be fully considered by the Modifications Committee.

3. Each Modification Proposal will include a draft text of the proposed Modification to the Code unless, if raising a Provisional Modification Proposal whereby legal drafting text is not imperative.

4. For the purposes of this Modification Proposal Form, the following terms shall have the following meanings:

Agreed Procedure(s):	means the detailed procedures to be followed by Parties in performing their obligations and functions under the Code as listed in either Part A or Part B Appendix D "List of Agreed Procedures". The Proposer will need to specify whether the Agreed Procedure to modify refers to Part A, Part B or both.
T&SC / Code:	means the Trading and Settlement Code for the Single Electricity Market. The Proposer will also need to specify whether all Part A, Part B, Part C of the Code or a subset of these, are affected by the proposed Modification;
Modification Proposal:	means the proposal to modify the Code as set out in the attached form
Derivative Work:	means any text or work which incorporates or contains all or part of the Modification Proposal or any adaptation, abridgement, expansion or other modification of the Modification Proposal

The terms "Market Operator", "Modifications Committee" and "Regulatory Authorities" shall have the meanings assigned to those terms in the Code.

In consideration for the right to submit, and have the Modification Proposal assessed in accordance with the terms of Section 2 of Part A or Chapter B of Part B of the Code (and Part A Agreed Procedure 12 or Part B Agreed Procedure 12) , which I have read and understand, I agree as follows:

1. I hereby grant a worldwide, perpetual, royalty-free, non-exclusive licence:

    1.1 to the Market Operator and the Regulatory Authorities to publish and/or distribute the Modification Proposal for free and unrestricted access;

    1.2 to the Regulatory Authorities, the Modifications Committee and each member of the Modifications Committee to amend, adapt, combine, abridge, expand or otherwise modify the Modification Proposal at their sole discretion for the purpose of developing the Modification Proposal in accordance with the Code;

    1.3 to the Market Operator and the Regulatory Authorities to incorporate the Modification Proposal into the Code;

    1.4 to all Parties to the Code and the Regulatory Authorities to use, reproduce and distribute the Modification Proposal, whether as part of the Code or otherwise, for any purpose arising out of or in connection with the Code.

2. The licences set out in clause 1 shall equally apply to any Derivative Works.

3. I hereby waive in favour of the Parties to the Code and the Regulatory Authorities any and all moral rights I may have arising out of or in connection with the Modification Proposal or any Derivative Works.

4. I hereby warrant that, except where expressly indicated otherwise, I am the owner of the copyright and any other intellectual property and proprietary rights in the Modification Proposal and, where not the owner, I have the requisite permissions to grant the rights set out in this form.

5. I hereby acknowledge that the Modification Proposal may be rejected by the Modifications Committee and/or the Regulatory Authorities and that there is no guarantee that my Modification Proposal will be incorporated into the Code.