MODIFICATION PROPOSAL FORM			
Proposer *(Company)*	**Date of receipt** *(assigned by Secretariat)*	**Type of Proposal** *(delete as appropriate)*	**Modification Proposal ID** *(assigned by Secretariat)*
Energia	**8th August 2022**	**Standard**	**Mod_02_22v3**
Contact Details for Modification Proposal Originator			
Name	**Telephone number**		**Email address**
Sean McParland			**sean.mcparland@energia.ie**
Modification Proposal Title			
Cost Recovery when Under Test (Version 2)			
Documents affected *(delete as appropriate)*	**Section(s) Affected**		**Version number of T&SC or AP used in Drafting**
T&SC Part B			**Version 26.0**
Explanation of Proposed Change *(mandatory by originator)*			

<u>Area of Concern</u>

The modification seeks to address a risk where a Generator Unit (GU) operating 'Under Test' upon returning from outage only recovers costs in the Balancing Market (BM) at the level of the BM price. That means a GU will <u>**not recover their costs**</u> when 'Under Test' when the BM price is low and BM revenue is lower than the units costs.

The focus on resolving the issue is on how / who is best placed to manage this risk i.e. ensuring an efficient allocation of risk. Energia consider that the GU cannot efficiently manage this for a number of reasons:
- GU has limited control over the 'Under Test' process. Whilst the Test Profile is initially submitted by the GU to the TSO, the Test Profile can be subsequently changed (both running levels and timing) and is ultimately subject to TSO approval;
- GUs have limited ability to substantially alter timings of when they carry out testing in the event of forecast low BM prices given practical scenarios of having required personnel available (i.e. OEMs etc.).

This modification puts forward proposals (see below under "Proposed Change") on how to better deal with this risk/cost by ensuring a GU recovers its costs when "Under Test" but prevents it from making a profit should BM revenue outturn higher than its costs.

As the risk/cost currently sits with the GU, it will have to take steps to determine where they can recover this cost. If not through the proposed modification, the GUs will have to consider what other options are available to them in the various markets (i.e. energy or capacity markets) in seeking to manage this risk moving forward e.g. it may be recovered through various bids; it could become part of discussions on the BNE price that could increase the capacity cost across the whole market etc. Given the uncertainty of costs to GUs the alternative steps taken to manage this risk will be more inefficient and the cost to consumer may actually end up being greater than if the cost was socialised under the proposed solution.

Furthermore, as we progress towards a low carbon future with increasing RES generation on the system, energy prices will be expected to be lower (or go negative) more frequently and hence the probability of under recovery when testing will increase.

In summary, the lack of cost recovery for GUs when Under Test is an inefficiency in the current market which will result in inefficient outcomes. As the overall energy system will still need investment in conventional capacity, if such investments are to be incentivised and remunerated then this cost/risk needs to be addressed. This modification proposal seeks to find an alternative, transparent and more efficient solution for managing this risk.

Proposed Change

Several concerns were raised about a proposed initial solution :
- The GU could make a profit if BM revenue was higher than the costs when Under Test. Although this can already occur under current rules, the underlying principle behind the proposal is to address a risk/cost in the market that GUs are not able to manage efficiently;
- Making the change in Settlement only requires difficult and complex and algebra changes to the TSC.

In order to address these issues, the updated proposal has the following key elements:
I. GU submits zero PNs when Under Test and are dispatched to the agreed test profile. This forms the basis of an alternative TSO proposal presented at the April Mods meeting (albeit applied in a wider manner than proposed by the TSO).
II. Settlement changes to allow for GUs paying back should the BM price be greater than the GUs costs (and therefore introducing the principle that the GU only recovers costs when Under Test).

This updated approach is a more straightforward method to making a change and addressing the risk facing GUs. It also removes any upside that the GU can profit when going through a testing process by introducing a new "Generation Under Test Not Entitled to Imbalance Component Payment or Charge"", "Accepted Offer Not Entitled to Premium Component Charge" for each Generator Unit.

Impact on Pricing

In relation to the proposal for GU to submit zero PNs when Under Test and dispatched to the agreed test profile, we note this is a change from current processes (whereby GUs submit PNs in line with test profile). Subsequent discussions have taken place on whether this will change will have an impact on Imbalance Pricing

Currently, when units submit a PN when Under Test they are submitted as a positive PN so have limited impact on Imbalance Price (i.e. impact occurs when unit dispatched away from the originally agreed Testing Profile). In order to minimise the impact of the proposed Mod on Imbalance Price and replicate as closely as possible the current outcomes derived when units are Under Test, we suggest the Under Test flag that exists in systems already is repurposed such that it flags out units which are Under Test from pricing. The TSC is not detailed with respects to the implementation of SO Flagging and therefore should the proposal be implemented would require review of separate external documents outside of TSC to account for the change i.e. SO & Non Marginal Flags

Alternative TSO Proposal

We welcome that the TSO has looked at this issue and in recognising that there is a concern that needs to be addressed have put forward an alternative proposal i.e.
- When GU notifies TSO that it is ready to test, as per agreed test profile, but will defer testing until X date/time due to risk of costs not being recovered;
- If TSO needs plant back earlier than date/time proposed by GU TSO can choose to step in and agree that PNs are submitted as 0, while dispatching to agreed test profile.

However, we have concerns that the TSO proposal does not address the underlying risk and rationale for the modification i.e. it still gives no certainty to GUs ahead of time and therefore they would still have to assume under recovery of costs when Under Test. As a result, the GU will still seek to manage this risk by alternative, more inefficient methods than the modification proposal.

Further concerns with the TSO proposal include:
- Interactions with REMIT requirements;
- Other implications if a GU delays its testing and return to availability for commercial reasons i.e. less units available for the TSO to schedule and dispatch therefore potentially having to run more expensive alternative generators.

D.7.3 Generator Units Under Test

D.7.3.1   The relevant System Operator may grant Generator Units the status of 'Under Test' for a limited period under the terms of the relevant Grid Code.

D.7.3.2   Notwithstanding paragraph A, the status of Under Test shall not be granted to Generator Units which have Priority Dispatch and which are not Dispatchable, Generator Units which are not Dispatchable and not Controllable (with the exception of Interconnector Error Units), or Interconnector Residual Capacity Units. Any request from any such Units shall be deemed returned whether or not a response is received from the System Operator.

D.7.3.3   Prior to the submission of an Under Test flag under paragraph D.7.3.4, an eligible Participant shall submit a Generator Unit Under Test Request which shall propose a Unit Under Test Start Date and Time and a Unit Under Test End Date and Time as specified in Appendix F "Other Communications" and in accordance with Agreed Procedure 4 "Transaction Submission and Validation".

D.7.3.4   In order for a Generator Unit to acquire Under Test status under this Code, an eligible Participant shall submit an Under Test Flag to the relevant System Operator as part of its Physical Notification Data ~~which shall identify the relevant Physical Notification Quantities to be considered Under Test.~~ The submission of this data shall constitute an application by the Participant for Under Test status which can be rejected by the System Operator in accordance with Agreed Procedure 4 "Transaction Submission and Validation"

D.7.3.5   The System Operator will endeavour to operate the Generator Unit Under Test to reflect the pattern of operation as agreed as part of the Generator Unit Under Test Request process in accordance with paragraph D.7.3.3. ~~The Physical Notification Quantities for a Generator Unit Under Test within the Physical Notification Data shall reflect the pattern of operation agreed as part of the Generator Unit Under Test Request process in accordance with paragraph D.7.3.3.~~

D.7.3.6   The Market Operator shall record the Generator Unit Under Test status under this Code for the Imbalance Settlement Periods between the Physical Notification Quantity times associated with the Under Test Flag, starting on the Imbalance Settlement Period in which the Under Test Flag first applies, and ending on the Imbalance Settlement Period in which the Under Test Flag last applies in order to apply the appropriate Testing Tariffs.

Section F – Settlement changes

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

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

(c)   CDISCOUNT$_{u\gamma}$, the Discount Component Payment calculated in accordance with section **Error! Reference source not found.**;

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

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

(f)   CCURL$_{u\gamma}$, the Curtailment Payment or Charge calculated in accordance with section **Error! Reference source not found.**;

(f)(g)   ~~and CGUTCIMB~~CAONEPC$_{u\gamma}$ the ~~Generation Under Test Not Entitled to Imbalance Component Payment or Charge~~Accepted Offer Not Entitled to Premium Component Charge calculated in accordance with section F.8.4;

(g)(h)   CUNIMB$_{u\gamma}$, the Uninstructed Imbalance Charge calculated in accordance with section **Error! Reference source not found.**;

(h)(i)   CII$_{u\gamma}$, the Information Imbalance Charge calculated in accordance with section **Error! Reference source not found.**;

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

(j)(k)   CTEST$_{u\gamma}$, the Testing Charge calculated in accordance with section **Error! Reference source not found.**.

F.8.4   Calculation of ~~Generation Under Test Not Entitled to Imbalance Component Payment or Charge~~Accepted Offer Not Entitled to Premium Component Charge

F.8.4.1 The following provisions of section F.8.4 do not apply to any Unit which is:

(a)   An Interconnector Error Unit;

(b)   An Interconnector Residual Capacity Unit; or

(c)   A Demand Side Unit.

F.8.4.2~~1~~   The Market Operator shall calculate the ~~Generation Under Test Not Entitled to Imbalance Component Payment or Charge~~Accepted Offer Not Entitled to Premium Component Charge for each Generator Unit, u, in each Imbalance Settlement Period, γ, for which it is Under Test as follows:

$$CAONEPC_{u\gamma} = \left(\sum_{o} \sum_{i} \left(QAOLF_{uoi\gamma} - Max\left(QAOOPOLF_{uoi\gamma}, QAOBIAS_{uoi\gamma}, QAOUNDEL_{uoi\gamma}, QAOTOTSOLF_{uoi\gamma} \right) \right. \right.$$
$$\left. \left. \times Min\left(PBO_{uoi\gamma} - PIMB_{\gamma}, 0 \right) \right) \right) - CDIFFCWD_{\Omega\gamma}$$

$$CGUTCIMB_{u\gamma} = \left(\left(Min\left(PBO_{uoi\gamma} - PIMB_{\gamma}, 0 \right) \times \left(QMLF_{u\gamma} - QEX_{u\gamma} \right) \right) \right) - CDIFFCWD_{\gamma}$$

where:

(a) $\sum_{o}$, is a summation over all Bid Offer Acceptances, o;

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

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

(d) $QAOOPOLF_{uoi\gamma}$ 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 F.7.1;

(e) $QAOBIAS_{uoi\gamma}$ 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.**;

(f) $QAOUNDEL_{uoi\gamma}$ 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 F.6.6;

(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) $PBO_{uoi\gamma}$ 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.**;

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

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

(l)   ~~$PBO_{uoi\gamma}$ 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 F.6.3;~~

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

(n)   ~~$iCDIFFCWD\Omega\gamma$~~$CDIFFCWD_{\Omega\gamma}$ is the Within−day Difference Charge for Capacity Market Unit, Ω, for Imbalance Settlement Period, γ, calculated in accordance with section F.18.5.6. ~~is a summation over all Bands, i;~~

(o)   ~~$QMLF_{u\gamma}$ is the Loss-Adjusted Metered Quantity for Generator Unit, u, in Imbalance Settlement Period, γ;~~

(p)   ~~$QEX_{u\gamma}$ is the Ex-Ante Quantity for Generator Unit, u, in Imbalance Settlement Period, γ; and~~

~~(q)~~(j)   ~~$CDIFFCWD_\gamma$ is the Within Day Difference Charge~~

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:

$$CREVMWP_{uk}$$

$$= \sum_{\gamma \in k} \left(\sum_o \sum_i \left(Max(PBO_{uoi\gamma}, PIMB_\gamma) \right. \right.$$

$$\times \left(QAOLF_{uoi\gamma} - Max(QAOOPOLF_{uoi\gamma}, QAOBIAS_{uoi\gamma}, QAOUNDEL_{uoi\gamma}, QAOTOTSOLF_{uoi\gamma}) \right) \right)$$

$$+ \sum_o \sum_i \left(Min(PBO_{uoi\gamma}, PIMB_\gamma) \right.$$

$$\times \left(QABLF_{uoi\gamma} \right.$$

$$- Min(QABBPOLF_{uoi\gamma}, QABBIAS_{uoi\gamma}, QABUNDEL_{uoi\gamma}, QABNFLF_{uoi\gamma}, QABCURLLF_{uoi\gamma},$$

$$QABTOTSOLF_{uoi\gamma}))) \quad + \sum_o \sum_i \left(PBO_{uoi\gamma} \times Max(QAOOPOLF_{uoi\gamma} - QAOUNDEL_{uoi\gamma}, 0) \right)$$

$$+ \sum_o \sum_i \left(PBO_{uoi\gamma} \times Min(QABBPOLF_{uoi\gamma} - Min(QABCURLLF_{uoi\gamma}, QABUNDEL_{uoi\gamma}), 0) \right)$$

$$+ \sum_o \sum_i \left(PCURL_{uy} \times Min(QABCURLLF_{uoi\gamma} - Min(QABBIAS_{uoi\gamma}, QABUNDEL_{uoi\gamma}), 0) \right) \right)$$

$$+ \text{~~CGUTCIMB~~}_{uy}CAONEPC_{uy}$$

where:

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

(b) PBO$_{uoiy}$ 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$_{uoiy}$ 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$_{uoiy}$ 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) CAOOPO$_{uy}$ is the Offer Price Only Accepted Offer Payment or Offer Price Only Accepted Offer Charge for Generator Unit, u, in Imbalance Settlement Period, γ;

(f) CABBPO$_{uy}$ is the Bid Price Only Accepted Bid Payment or Bid Price Only Accepted Bid Charge, γ;

(g) CCURL$_{uy}$ is the Curtailment Payment or Charge for Generator Unit, u, in Imbalance Settlement Period, γ;

(h) PIMB$_{y}$ is the Imbalance Settlement Price in Imbalance Settlement Period, γ, calculated in accordance with Chapter E (Imbalance Pricing);

(i) QAOTOTSOLF$_{uoiy}$ 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.**;

(j) QABTOTSOLF$_{uoiy}$ 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.**;

(k) 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 **Error! Reference source not found.**;

(l) 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, calculated in accordance with section **Error! Reference source not found.**;

(m) 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, calculated in accordance with section **Error! Reference source not found.**;

(n) QAOBIAS$_{uoiγ}$ 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.**;

(o) 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, calculated in accordance with section **Error! Reference source not found.**;

(p) 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, calculated in accordance with section **Error! Reference source not found.**;

(q) 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, calculated in accordance with section **Error! Reference source not found.**;

(r) 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, calculated in accordance with section **Error! Reference source not found.**;

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

(t) $\sum_i$ is a summation over all Bands, i. and

(u) ~~CGUTCIMB$_{uγ}$~~ CAONEPC$_{uγ}$ is the ~~Accepted Offer Not Entitled to Premium Component Charge~~ ~~Generation Under Test Not Entitled to Imbalance Component Payment or Charge~~ for Generator Unit, u, in Imbalance Settlement Period γ calculated in accordance with section F.8.4.~~;~~

Section G

~~F.12.5~~G.4.10 **Charges for Testing**

~~F.12.5.1~~G.4.10.1   The total Testing Charge (CTEST$_{ud}$) made for each Generator Unit u for each Settlement Day d shall be calculated by the Market Operator as follows:

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

where:

(a) CTESTuγ is the Testing Charge for Generator Unit u in Imbalance Settlement Period γ calculated in accordance with section F.13; and

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

F.12.5.2G.4.10.2   The Accepted Offer Not Entitled to Premium Component ChargeGeneration Under Test Not Entitled to Imbalance Component Payment or Charge (CAONEPC*GUTCIMB*ud) made for each Generator Unit u for each Settlement Day d shall be calculated by the Market Operator as follows:

$$CAONEPC\text{GUTCIMB}_{ud} = \sum_{\gamma\ in\ d} CAONEPC\text{GUTIMB}_{u\gamma}$$

where:

(a) CAONEPC~~CUTCIMB~~uγ is the Accepted Offer Not Entitled to Premium Component ChargeGeneration Under Test Not Entitled to Imbalance Component Payment or Charge for Generator Unit u in Imbalance Settlement Period γ calculated in accordance with section F.8.4; and

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

F.12.6G.4.11 **Total Daily Amounts for Generator Units**

F.12.6.1G.4.11.1   The Total Daily Amounts (CDAYud) made for each Generator Unit u for each Settlement Day d shall be calculated by the Market Operator as follows:

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

where:

(a) CIMBud 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) CPREMIUMud is the total Premium Component Payment for Generator Unit u for Settlement Day d calculated in accordance with section G.4.3;

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

(d) CAOOPOud 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) CABBPOud 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;

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(f) CCURL$_{ud}$ is the total 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.

(j) C~~AONEPC~~~~GUTCIMB~~$_{ud}$ is the total ~~Accepted Offer Not Entitled to Premium Component Charge~~~~Generation Under Test Not Entitled to Imbalance Component Payment or Charge~~ for Generator Unit u for Settlement Day d calculated in accordance with section G.4.10.2

Glossary

~~Accepted Offer Not Entitled to Premium Component Charge~~~~Generation Under Test Not Entitled to Imbalance Component Payment or Charge~~	an adjustment to ensure that Generator Units Under Test do not recoup ~~Imbalance Component~~Premium Component Payments or Charges where it is not entitled to. It is calculated in accordance with section F.8.4.

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

The principle justification of the modification is that the current TSC ruleset means that a GU operating 'Under Test' upon returning from an outage will **not recover their costs when 'Under Test'** if the BM price is low and BM revenue is less than the units actual costs. Given the potential impact on cost recovery when 'Under Test' this is a serious issue for GUs in the market with potentially serious commercial implications. This is unfair on GU's whose costs may exceed BM revenue and are unable to avoid making a loss when testing following an outage.

Both through increasing costs for GUs and expected lower or negative BM prices more frequently as the market moves towards increasing RES generation, the variance between BM revenues and costs incurred by thermal GU's will become more pronounced. The resulting impact is an increasing risk of GUs not recovering their costs when Under Test. This risk will lead to GUs taking steps to determine how these costs can be recovered (through various markets) which will ultimately be more inefficient and still be borne by the consumer.

Other comments/concerns
Imperfections
Whilst unable to calculate any exact increase in imperfections from the modification proposal, we believe the focus on an increase to imperfections resulting from the change is too narrow and does not consider all counter factual arguments. These points include:

- Any increase to the Imperfections arising from this change would be reflective of the costs currently being incurred by GUs.
- The increase to Imperfections should be partially offset by the repayment proposal as part of this modification proposal i.e. if a GU makes a profit when Under Test due to higher BM revenues;
- If a GU delays its testing and return to availability (as per TSO proposal), this removes that GU as an option for the TSO for that delayed period of time which will potentially also increase costs (as a more expensive GU may be required instead of the GU waiting to test).
- There should be a focus on *maximising availability on system at all* times which this modification proposal helps to achieve.

Incentive to minimise costs
Concerns were raised that the modification would incentivise units to test more or not minimise costs when testing. However, we do not believe these concerns will materialise for the following reasons.

There is no incentive for GUs to go 'Under Test' under the current proposal as they cannot make any profit when testing in scenarios where the BM revenues are higher than the unit's costs. In addition the GU will be subject to a testing tariff. Furthermore, all testing needs TSO approval. Perversely, the current settlement rules when Under Test could encourage a GU to carry out inadequate testing due to the risk of commercial loss which could actually lead to more outages of generators going forward.

How often does the issue occur
It was previously queried if a GU was ready to go Under Test but due to forecast of BM it would incur a loss, how long would they have to seek to delay testing before it became commercially viable. It is difficult to quantify this due to a number of different factors i.e. different GUs will have different operating costs, will run at different profiles when testing, will require to test for different lengths of time etc.

However, some high-level analysis for February 2022 found that under a baseload profile our thermal plant would have incurred a loss when testing for 71% of the days. Although this analysis is high level it helps to demonstrate that there will be scenarios when a GU would not fully recover its costs for a significant period of time when testing.

Crucially, it is worth re-emphasizing that the modification is seeking to be *forward looking* and address a risk that is expected to become more pronounced as demand is increasingly met by Renewable generation. This is expected to result in conventional generators being in merit for a reducing proportion of the year and hence will be less likely to be testing during a period where they could expect to recover their costs.

Ex- Ante Participation
In respect of the potential for a GU to enter ex-ante markets when 'Under Test', whilst this is possible, we do not believe this represents a viable solution to the underlying risk. In the same way that it may not be possible to recover costs back in the BM, the Ex-Ante market may not cover the GUs costs on a given day.

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)
The following Code Objectives will be furthered with this Modification Proposal:

(d)   to promote competition in the Single Electricity Market;

(f)   to ensure no undue discrimination between persons who are parties to the Code;

Implication of not implementing the Modification Proposal
(State the possible outcomes should the Modification Proposal not be implemented)
The GU cannot efficiently manage this risk and if no changes are made will look to mitigate and manage this risk through alternative, more inefficient methods. Ultimately, this cost is likely to come back to the consumer and the cost may actually end up being greater than if managed through the proposed solution.

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.)*
	A system change in Settlement will be required

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.