



Energy for
generations

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ESB Generation and Trading Response:

Balancing Market and Capacity Market Options Consultation Paper (SEM-19-024)

12th July 2019



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Contents

1. Introduction.....	1
2. Executive Summary	1
2.1 Balancing Market Pricing	1
2.2 CM Difference Charge Exposures	2
3. Main Comments	3
3.1 Balancing Market Options.....	4
3.1.1 High Level Concerns:	4
3.1.2 Issues with SEMC Assessment:	7
3.1.3 Potential Changes to the Imbalance Pricing Methodology	11
3.1.4 Assessment of Consultation Paper Sample Days	12
3.2 Capacity Market Options	15
3.2.1 Unfair exposure to charges.....	15
3.2.2 Incentive on Generators	15
3.2.3 Data.....	15
3.2.4 Likelihood of future RO events.....	16
3.2.5 Investment Signals	16
3.2.6 Future Changes.....	16
4. Questions	17

1. INTRODUCTION

ESB Generation and Trading (GT) welcomes the opportunity to respond to the Balancing Market (BM) and Capacity Market (CM) Consultation Paper (SEM-19-024). The purpose of the Consultation Paper is to consult on potential changes to the Imbalance Pricing methodology in the Balancing Market and the treatment of difference and non-performance difference charges when certain system operational constraints are, in ESB GT's view, unfairly exposing generators to these charges.

ESB GT's response is laid out into three sections; the first is an executive summary of ESB GT's response to the Consultation Paper, the second section expands on the main comments ESB GT has on this consultation paper and the third section addresses the specific questions from the Consultation Paper.

2. EXECUTIVE SUMMARY

Firstly, as one of the participants that was adversely affected by the Reliability Option (RO) events that occurred on the 3rd of October, 9th of October and 24th of January ESB GT welcomes the acknowledgement of the SEM Committee (SEMC) to address (1) the short comings in the Balancing Market pricing methodology and (2) the exposure to difference charges for those units that were available to deliver but could not be dispatched up to meet their reliability option obligation due to a binding operational constraint.

2.1 Balancing Market Pricing

The quick development and implementation of Modification_09_19 that came into effect on the 2nd of May, which aims to prevent events like the 24th of January occurring again, was a progressive and targeted step to addressing the root causes of the unintuitive imbalance prices. Conversely, the assessments in the Consultation Paper fail to adequately determine what the root cause of the issue is and as a result the BM option proposed in this Consultation Paper could be considered a gross over correction of the existing issues in the imbalance pricing methodology and would be unwarranted at this moment in time.

One of the main issues ESB GT has with this consultation paper is the lack of detail on what the root cause of the issue the SEMC is seeking to address. It appears the SEMC have targeted the correlation of the DAM price, BM price and NIV direction. However, the Consultation Paper does not address what is causing the difference. ESB GT has tried to delve deeper into the issues and assess if there are any underlying issues in an attempt to assist the SEMC in defining its concerns. However, within the time limitation of the consultation response deadline ESB GT is unable to fully understand what is the underlying driver of this issue. Therefore, ESB GT would request the SEMC to delay any decision on this element of the Consultation and work with industry, through the existing governance structures, to identify the root cause of this issue so as to determine a path forward that is both suitable for all market participants and respects the high level design.

The proposed removal of SO and NM flagging from the imbalance pricing methodology is in effect a pollution of the imbalance price by not identify the true marginal energy action via the system fundamentals. Under the simple NIV tag option a unit that is operating at its minimum generation level, max generation level or constraint from its ramp rate will now be determined to be the marginal energy action. The approach of simple NIV tagging in identifying the action below the NIV tagged volume as the marginal action is a significant step away from the high level design and years of SEM experience where the marginal unit is one that can increase or decrease its MW output and an imbalance price systematically determined by energy action and not by non-energy actions. The proposed Simple NIV tagging is a clear divergence from the principle of the imbalance pricing being reflective of system fundamentals.

ESB GT believes there is a need to review the aim of what is trying to be achieved. In the HLD¹ it was clearly identified that “*the SEM is a more constrained system than GB, with the majority of operational plant required for reserve scheduling and / or associated with active transmission constraint groups...*” and “*...the proportion of actions flagged would be expected to be higher in the I-SEM than GB, given the greater prevalence of constraints on the all-island system and the potential requirement to flag more action types (e.g. reserve, inertia, SNSP) than are covered by the GB methodology*”. However, it appears that there is an assumption within the consultation that the I-SEM BM outcomes should be similar to other electricity markets and that there should be a clear and distinct correlation between the Ex-Ante Market prices², the BM price and the direction of Net Imbalance Volume (NIV).

The ISEM BM is not directly comparable to other electricity markets in that it is a small market that is heavily constrained (~95% of TSO actions in the first six months under the revised market arrangements were complex³) and the effects of generator lumpiness is more prominent. While it is not unreasonable to step out of the detail when viewing the Balancing Market prices and compare them to the DAM prices over an extended period, in principle the validity of the Balancing Market price in any specific period should be first assessed on whether they accurately reflect the energy and non-energy actions taken by the TSO in the period. This is something that this Consultation Paper could have benefited from when providing the evidence to support any move away from the SEM HLD design decision.

Non-Marginal (NM) flags have yet to be analysed in significant detail in terms of the signals it is sending to the market. The NM flag is binding whenever a unit is at its maximum generation level, minimum generation level and at its max ramp rate. In terms of this Consultation Paper, a piece of analysis that is critical is how often are we seeing the NM flag binding for ramp rate constraints and the subsequent imbalance price reaction. This would be a clear signal to the market that there is a need for faster ramping units. To implement the Simple NIV tagging option would at least distort if not even remove this crucial signal to the market. Considering the desire to move to a market with even higher levels of renewable penetration and the Clean Energy Package drive for flexibility within the generation portfolio, the need for faster and more flexible units is essential and the Simple NIV tagging option will distort the investment signal.

A sharp balancing market price signal, based on system fundamentals and reflective of the energy and non-energy actions taken by the TSO, is crucial to the efficient operation of SEM, that will encourage participants to be balance responsible and it is ESB GTs view that through the implementation of a number of targeted T&SC modifications that the consistency and intuitive volatile imbalance price can be achieved while retaining all the constructive work that has been applied to implementing the ISEM HLD decision.

2.2 CM Difference Charge Exposures

In relation to the Capacity Market (CM) option, ESB GT supports the CM option as it reduced generators exposure to difference/non-performance charges for periods where TSO actions and current flagging and tagging methodology creates the perverse situation that a generator in merit is not selected due to transmission constraints. This was not a scenario that was envisaged when designing the CRM and one that needs to be remediated.

ESB GT believes the proposed Modification will have no impact on generators incentives to be available and to generate. During normal trading days generators are not in a position of knowing in advance if there

¹ SEM-15-026

² This was missing in this Consultation Paper as the Intra-day Market influence has not been assessed.

³ Market Operator User Group 03/04/2019

will be a constraint binding on (a) the system and (b) specific to their unit. It is not until after the pricing has been determined that generators will know if a constraint was binding on the 5 minute period. Subsequently, there is no guarantee that a constraint flag will be binding at the time of an RO and thus it is not something that generators can rely on post the RO period. Therefore, in the time frame that generators have the ability⁴ to react to future RO prices⁵ the incentive to generate is not reduced as the exposure to the difference payment is still as real as if this modification wasn't implemented.

ESB GT agrees that with the implementation of Mod_09_19 "*the likelihood of a pricing event like that which occurred on 24th January 2019 and the related RO Difference Charges are reduced*". However, this does not mean that the merits of this CM option are any less. The principle of the proposed CM option is still valid regardless of the reduce likelihood of generators being negatively impacted due to the implementation of Mod_09_19.

It was referenced in the Consultation Paper that the CM option "*could present a risk of introducing a hidden locational element to the Capacity Market by distorting the CRM auction in that the reduced risk of exposure to RO Difference Charges would, all else being equal, incrementally incentivise new plant to locate behind an export constraint instead of inside the constrained area. Further, existing units could observe a change in the competitive dynamic within the CRM, whereby units behind an export constraint would enjoy the disapplication of difference charges during these albeit rare periods, while those inside the constrained areas would not.*" As a participant with new capacity awarded in the previous T-4 auction ESB GT does not support this position. There is a significant flaw in this argument in that the investment signal could be weighted more heavily towards building a generator in the area where there are no export constraints and thus the possibility of increased physical running during periods of system stress rather than in an area where there is an export constraint, reduced physical running possibilities and instead the hope of reducing CM charges by getting a SO flag when an RO event occurs. Furthermore, there seems to be a divergence in SEMC opinion of how often RO events will occur. For example, the SEMC have highlighted that "*the likelihood of a pricing event like that which occurred on 24th January 2019 and the related RO Difference Charges are reduced*" yet it is this unlikely event that will occur enough times that it will "*incrementally incentivise new plant to locate behind an export constraint instead of inside the constrained area*". ESB GT does not agree that the proposed CM Option will drive the investment decisions for new build capacity.

The proposed CM option is a change that is built off the back of the events that occurred on the 9th of October and 24th of January. ESB GT believes this is the first of a number of minor modifications that are required to the CMC to correct undue exposure to generators and over recovery of difference/non-performance charges which are resulting in the unintended consequence of a windfall for suppliers. Something which could be in conflict with the SEMC decisions.

3. MAIN COMMENTS

This section contains the comments ESB GT has on the BM Option and CM Option proposed in the Consultation Paper. In the BM comments below, ESB GT has highlighted why it is **not in favour of the Simple NIV tagging proposal** by categorising its comments into High Level Concerns, Issues with SEMC Assessment and Imbalance Pricing Issues. Considering there were two T&SC Modifications Committee

⁴ This is one of the key problems facing generators as there is limited ability to trade ex-ante as the liquidity and cross trade functionality is poor.

⁵ Another key problem for generators is that the RO price signals are after the gate closure which severely exposes generators to the lack of a TSO action.

Workshops on the CM Option where it appeared the majority of participants were in agreement with the proposed modification, the comments in the CM Option section are **in support of the Capacity Market proposal**.

3.1 Balancing Market Options

In this section ESB GT has identified the issues it believes will arise from the Simple NIV tagging approach proposed and the reasoning for not supporting the Simple NIV tagging option. These range from compliance with Future EU Regulation to conflicts with the ISEM HLD to validity of the data set underpinning the consultation proposal to the distortion of imbalance pricing and its signals.

3.1.1 High Level Concerns:

Previous Comments SEM-15-026

ESB GT considers the comments made in relation to SEM-15-026 still stand and that Simple NIV tagging is not in line with the detailed design policy decisions. To reiterate, ESB GT considered that the Cause Based Method (“Flagging and Tagging”) was the most appropriate approach to determine the Imbalance Price in that the Imbalance Price is based on the actual actions taken by the TSO. In this way it gives a truer and fairer value of the cost of balancing on the system relative to the proposed alternative. In order to incentivise balance responsibility, the Imbalance Price needs to be reflective of the actual costs of balancing the system. Any dampening of this price will mean the true value of flexibility is not exposed and flexible generators are not properly incentivised. A period of learning is required before any major changes are made and it is not unreasonable to say that the market is still in this period of learning.

ISEM High Level Design

ESB GT has a number of concerns with the SEMC assertion that the Simple NIV tagging is in line with the HLD and would err on the side that the Simple NIV tagging does not truly comply with the ISEM High Level Design (HLD). Described below are comments and concerns on the assessment of the simple NIV tagging in relation to the ISEM HLD.

The SEMC highlighted in the Consultation Paper that the second signal sent by a Balancing Market price should be *“predicated on the price, and in particular price movements, being reflective of system fundamentals”*. However, the proposed removal of SO and NM flagging from the imbalance pricing methodology is in effect a pollution of the imbalance price by not identifying the true marginal energy action via the system fundamentals. Under the Simple NIV tagging option a unit that is operating at its minimum generation level, max generation level or constrained due to its ramp rate could now be determined to be the marginal energy action. The approach that Simple NIV tagging identifies the action below the NIV tagged volume as the marginal action is a significant step away from years of SEM experience and the SEMC decision (SEM-14-085a) where *“the marginal price reflects the cost for generating one more or one fewer MWh of electricity within the BM timeframe”*. ESB GT is strongly of the view that the imbalance price should be reflective of system fundamentals (TSO actions determined as energy and non-energy actions as per constraints binding) and without any clarification to a revised version of the marginal energy action used in SEM, ESB GT does not agree that an action which cannot provide the next MW up and down can be viewed as the Marginal Energy Action and in line with the HLD.

ESB GT would fully agree with the SEMC when it highlighted in the Consultation Paper that *“a certain amount of volatility in the Balancing Market is to be welcomed, as long as it is caused by market fundamentals, as it will encourage liquidity in the ex-ante markets and encourage market participants to be balance responsible”*.

To date the market data (volumes traded in the markets presented in MOUGs) has shown a strong Day-ahead Market (DAM) and Intraday Market (IDM) as the majority of volume is traded through these markets. The reason for this could arguably be due, at least in part, to the signals being sent from the BM incentivising balance responsibility. ESB GT would be concerned with the potential dilution of the balance responsibility signals that the Simple NIV tagging proposal could have, as highlighted in table 1 of the Consultation Paper where the standard deviation is reduced from 89.70 to 61.37. The unintended outcome could be a shift away and a reduction in liquidity in the DAM. Furthermore, the absence of an Long Notice Adjustment Factors (LNAFs) combined with the absence of any uplift for the start costs associated with early actions will result in a market which is not the one envisaged in the HLD. This could significantly erode liquidity in the IDM and will likely pull volumes from the DAM over time further reducing market efficiency. The importance of effective price signals in electricity wholesale markets cannot be underestimated. The balancing market, as the market of last resort, so to speak, influences all wholesale markets before it (forward, DAM and IDM) and the retail market after it. If the balancing price is artificially depressed at peak times or periods of system stress and artificially increased at shoulder times (which the consultation paper suggests will happen) there are several potential or indeed likely impacts.

ESB GT agrees that if items, such as the removal of Decremental Bids from Priority Dispatch Units, of the HLD were omitted during ISEM implementation they should be progressed through the Modifications Committee. However, ESB GT would request further clarification to the point raised in the Consultation Paper that the units “*dispatched to their lower operating limits are not automatically precluded from setting the price*”. The issue with setting the PBOA of the actions on the priority dispatch units to zero is that these actions are still in the imbalance price stack and can still set the imbalance price. Thus, the current modification and comments in the consultation Paper appear to be only implementing half of the SEMC decision. As highlighted by the SEMC, the Simple NIV tagging process fails to implement the full decision as the actions still have some impact on setting the price e.g. if it is not the marginal action at €0/MWh it is contributing to the NIV tagged volume and thus pushing the marginal action further up the stack. A further impact assessment reviewing the removal of the related QBOA from the imbalance price stack would be warranted.

In terms of Market Power Mitigation, ESB GT agrees with the SEMC that the events on the 24th of January highlighted a short coming in the imbalance pricing methodology that was inferring a market power advantage on units (ROI or NI) behind the N-S tieline constraint depending on the direction of the flow once at its maximum capacity. However, the application of Mod_09_19 has subsequently reduced this market power advantage. After a period of implementing Mod_09_19 if it is determined that the N-S tieline constraint is still inferring an advantage on units in a jurisdiction depending on the direction of the flow, the next step should be to perform a review of the SO flagging methodology to determine if it is possible to create a SO flag that would be enabled whenever events like the 24th of January occur. Considering the rigors that were applied to the market power mitigation consultation and in the interest of good governance and due process, ESB GT would expect a similar consultation to be re-held to review if the current market power mitigation measure (option 2B) is still valid for the Simple NIV tagging option when assessed on being Effective, Targeted, Flexible, Practical and Transparent.

Even with the eight months of the revised SEM arrangements operational experience where there have been some serious imbalance pricing short comings, RO pricing in non ASP events, ESB GT remains supportive of the market fundamentals (identification of TSO actions as energy and non-energy) determining the imbalance price. Throughout the operation of the revised SEM arrangements ESB GT has continually sought to identify what was driving the imbalance price to outturn unintuitive RO prices in an attempt to fine tune the existing rules.

Electricity Regulation - Commission impact on removal of Priority Dispatch

Article 12/13 of the recast Electricity Regulation, which refer to dispatch and re-dispatch, will remove the priority dispatch for renewables greater than 500kW once the Electricity Regulation comes into force. The removal of priority dispatch for all renewables above this threshold will place a greater importance on how they can hedge their position forward. As most current forward positions are defined off the DAM the future hedging will require a strong IDM and DAM. The weakening of the imbalance price, as shown by the reduction in the volatility on table 1 of the Consultation Paper, through the Simple NIV tagging approach will only weaken the IDM and DAM as spillage into the BM will naturally occur as the creation of a strong BM signal to be balance responsible will have been diluted. The consequences of diminishing the imbalance price signal and subsequent influence on the balance responsibility of market participants needs to be fully assessed before any such dramatic change, such as Simple NIV tagging, is truly considered.

Decarbonisation

Electrification will be a key part of the transition to a low carbon society; almost all decarbonisation plans including the European Commission's and the UK Governments, foresee significant electricity use in transport and heating. Deep electrification requires effective price signals. Distorted price signals such as those likely to result from the Simple NIV tagging proposal in this consultation will likely frustrate decarbonisation efforts. One specific example of this would be higher overnight prices and lower peak prices distorting the charging patterns of electrify vehicles and potentially encouraging their charging across the peak. This has significant impact including on the level of network congestion and investment required to alleviate it.

Electricity Balancing Guidelines – Marginal Pricing

ESB GT is concerned that a move to the proposed Simple NIV tagging option is a step away from the EBGL which states the methodology for determining the price for balancing energy shall, *inter alia*, give correct price signals and incentives to market participants. As discussed in more detail later in this response, the Simple NIV tagging could distort the investment signals for faster ramping units (removal of NM flagging signals), pollute the imbalance price (no longer based on system fundamentals as identified by the SO and NM flagging) and incentivise market participants to no longer be balance responsible (weaker BM prices).

Known Issues (Settlement & Repricing)

At the recent Market Operator User Group meeting in June 2019 the issue of the repricing of the data used in this Consultation Paper was raised. The RAs acknowledged the point but highlighted that this concern was recognised in the Consultation Paper and that the RAs were aware of it when drafting the Consultation Paper. One of the issues ESB GT has with the Consultation Paper is the lack of detail on the number of times the perceived issue of Imbalance Price not following the NIV direction when compared to the DAM price. Considering the dramatic change this Simple NIV tagging proposal will have on the market it would have been appropriate to identify how often this pricing scenario occurred. Subsequently, if it was found that it was or wasn't at a level that required this change, the question of whether the repricing have changed this mind set is a valid question that needs to be answered. Considering the root cause of the SEMC's issue has not been identified in the Consultation Paper, ESB GT believes the assessment of Simple NIV tagging should have been delayed until the re-pricing and imbalance price fixes were implemented so to truly identify if there is a mistake in the correlation of DAM price, BM price and NIV direction and to what level.

Impact on other SEMC Decisions

The Consultation Paper fails to identify the full consequential impact of the BM option on previous SEMC decisions, for example, setting of QPAR to 10MWh and implementation of a bidding code of practice on complex offers. The decision to implement a QPAR of 10MWh (Imbalance Price Period) was considered in light of the interaction with the current flagging and tagging methodology and it's the potential to dilute incentives for flexibility. ESB GT believes a more targeted approach to solving any imbalance pricing issues could be achieved without the need to do a complete review of previous SEMC decisions which were based on the current flagging and tagging Imbalance pricing methodology.

3.1.2 Issues with SEMC Assessment:

The introduction of the Consultation Paper provides a detailed assessment of the events that resulted in the RO prices for the 24th of January and the 9th of October identifying the issues with RTD flags and actually physical operation. Unfortunately, from ESB GT's perspective, no further assessment of the imbalance price methodology shortcomings is performed and the issue of DAM prices, BM prices and NIV direction correlation is raised as a problem that Option 1: Simple NIV tagging can address without any data to quantify the problem. This section of the response highlights comments and issues around the SEMC assessment performed in this Consultation Paper.

SEMC HLD Decision

In the review of the 24th of January, the Consultation Paper identifies the sequence of events which led to the RO prices. One of the steps that could have been critical to the RO pricing was the SEMC decision to not allow the recovery of start-up costs on TSO actions determined to be simple. The direction⁶ to generating units was to structure simple bids in a manner that will recover all their costs in a single 30 minute period over their minimum generation output. This resulted in the potential for more RO events than was expected during the design of the CRM and ISEM.

Outside of the Market Contracts

At the start of the revised SEM arrangements there were a number of out of market contracts⁷ awarded. The information provided to the public was limited in terms of the potential impact these contracts could have on the both the ex-ante markets (DAM, IDAs and IDC) and the Balancing Market. Without transparency of these contracts market participants are unable to determine if these contracts have added to the SEMC issue of DAM price, BM price and NIV direction correlation. Further transparency of the contracts should be provided to assist in developing T&SC modifications that will ensure an efficient market that is providing the correct signals through transparent pricing.

Average Simple NIV tagging option v Average Current Method

Figures 9 and 10 illustrate the average profile of NIV v Demand v Original/Simple NIV Price. As highlighted by the SEMC "[b]oth the original imbalance prices and the Simple NIV prices are lower than the DAM price over the peak hours despite the fact that the NIV is positive. Again this is not as expected but there have been instances of very high imbalance prices over these hours and this has likely sent a signal back to the DAM". From the Consultation Paper it appears that the main objective is to align the DAM price, BM price

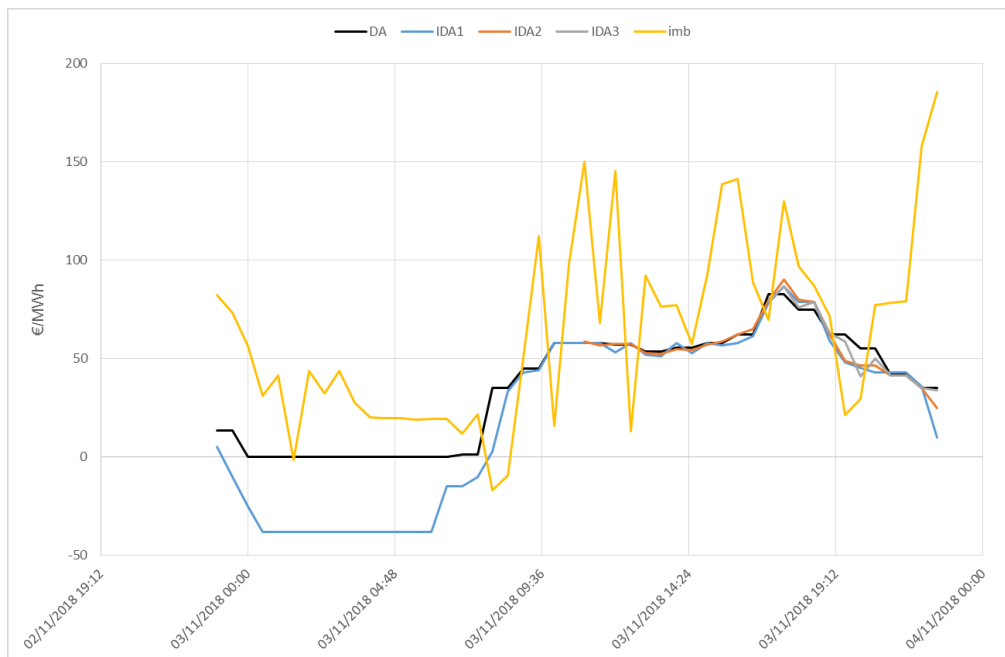
⁶ Pg 66 of SEM-15-065 "The most conservative method to do this is to spread a unit's start cost across its minimum on time and minimum stable generation."

⁷ LRSA awarded by CRU and system support services contract awarded by UREGNI

and NIV direction and notwithstanding that averaging effects will have a significant effect within these average profiles, the data provided in section 2.3 rightfully raises questions if the Simple NIV tagging will achieve its objective.

Assessment of IDA impact

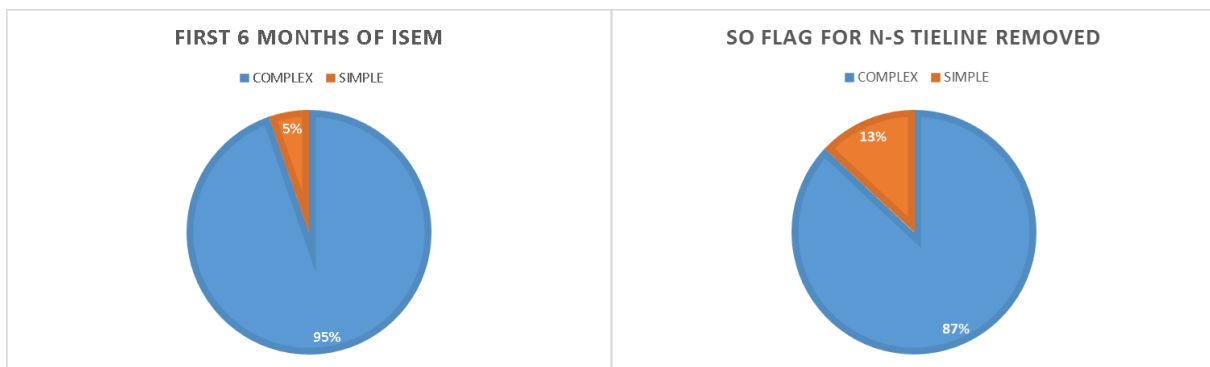
The DAM results (price and cleared volumes) are determined and published 10 hours in advance of the start of the trading day. The IDA1 auction is held later in the day with results determined and published 5 hours in advance of the trading day. The IDA prices (from all three auctions) include more market fundamental (wind, demand, outages etc) pricing than that of the DAM yet in the Consultation Paper there is no reference to the IDM. The analysis of the IDM is necessary to determine the full impact of the success of Simple NIV tagging. For example, the figure below illustrates the ex-ante prices and the BM price for the 11th of November. On this day the IDA1 auction cleared at a price below €0/MWh from 00:00 to 06:00. The Simple NIV tagging option produces imbalance prices of €0/MWh even though in this example the NIV was negative. The figure below illustrates the need to identify the activity in the market across the Intraday auctions as the fundamentals that are driving the price can change and impact the correlation between the NIV and the Imbalance Price. The ability to perform more detailed assessment on the IDA impact has been limited due to the time restrictions. If possible ESB GT will try to provide supplementary analysis of this at a later date.



Driver of NIV? TSO actions/flagging?

One of the key steps in the imbalance pricing methodology is the step after the Initial NIV is calculated when the Residual Tagged Quantity (QRTag) is calculated. This QRTag step is driven by the number of SO and NM flags created. It should be noted that the NM flags are meant to be drawn from the technical capability of the plant and therefore shouldn't have any issues with being correctly identified whereas the SO flags are determined via a set of rules that determine if a constraint is binding and whether or not that unit was bound by the constraint. Essentially, it is this QRTag step that makes it possible for the TSO to rectify if the methodology has over or under tagged actions inappropriately.

What happened on the 9th of October was an alignment of a number of events that on a normal day wouldn't have occurred. At 16:40 on the 9th of October the QNIV was in the positive direction but the QRTag was negative. This meant that there were too many SO flags on the inc actions and therefore the next step was to unflag the cheapest inc actions that had been Initially NIV tagged. As a result, instead of NIV tag tagging out the expensive in actions taken by the TSO for system reason the methodology untagged a number of cheaper actions that had been over tagged and the RO price occurred. So rather than looking at the imbalance price methodology the point of focus should be on the over flagging of actions. The following figures highlight the percentage of TSO actions flagged as complex or simple over (1) the first 6 months of the year and (2) over a period when the N-S tieline constraint was removed. If further time was available an assessment of the impact the S_MWR flag had on the QRTag volumes might provide insight into the efficient flagging of actions.



The RO prices on the 24th of January clearly highlighted the issue with application of the N-S tieline constraint and subsequent SO flagging methodology. As highlighted in the Consultation Paper it in effect inferred a market power advantage on units in the jurisdiction in the direction of the flow of the N-S tieline. Subsequently, the SO flag for the N-S tieline constraint was removed. The removal of the SO flag had the impact of reducing the number of actions that were SO flagged and thus allowed a dec action to set the PMEA.

SEM is a different market to others (Heavily Constrained)

The ISEM Balancing Market is not like other electricity markets in that it is a small market that is heavily constrained (~95% of TSO actions in the first six months were complex) and the effects of generator lumpiness is more prominent. The lumpiness impact of constraining a unit on/off and subsequent TSO actions to balance the system cannot be ignored. Consideration of this issue needs to be weighed when reviewing the system fundamental and resulting imbalance price.

Benefit to the Consumer

From the assessment in the Consultation Paper the benefit to the consumer from the Simple NIV tagging approach is questionable. It appears the only benefit the consumer will receive from the Simple NIV tagging is the removal of nearly all RO/ASP events. However, it is likely the consumer will see this benefit as it would require a number of RO events in a month to balance the increase of €6/MWh in the average imbalance price. Something that the SEMC do not envisage as per the DSU Compliance with State Aid Decision Paper⁸

⁸ SEM-19-013 2.3.23

that states “the RAs estimated that there would be three hours of scarcity or partial scarcity in that capacity year”.

Considering all of the issues highlighted in this response with the Simple NIV tagging option (e.g. HLD design issues, weakening of the DAM, pollution of imbalance price and subsequent weakening of the balance responsibility signal and further unintended consequences) and the fact that the option appears to increase the cost on the consumer, ESB GT does not believe the Simple NIV tagging option should be implemented.

NIV v PMEA Action

The RO events on the 24th of January were prime examples of where the Price of the Marginal Action (PMEA) was from an action in the opposite direction of the NIV. For example, at 13:15 on 24/01/2019 an inc action at the top of the stack (€6,341.65/MWh) was the only action that had an Imbalance Price Flag (FIP) of 1 and was determined to be the PMEA, as per section E.3.4 of the T&SC. It was this price that was then used, as per the Replaced Bid Offer Prices calculation section E.3.4.3, to replace the dec prices that were untagged and subsequently set the imbalance price.

Without any SEMC assessment of the periods that the DAM price, BM price and NIV quantity correlation were deemed to be unintuitive, ESB GT believes the quirk in the PMEA and PRBO determination, as highlight above, might be one of the main drivers of inefficient imbalance prices.

ESB GT has assessed that the PMEA is determined from an action in the direction of the NIV 83% of the time and that it is only from an action in the opposite direction of the NIV 17% of the time. This at first may seem to be inappropriate too often, however, as shown by the SEMO training slides (imbalance pricing) it is possible for an action which is in the opposite direction to the NIV to set the imbalance price as it is the marginal action. For example,

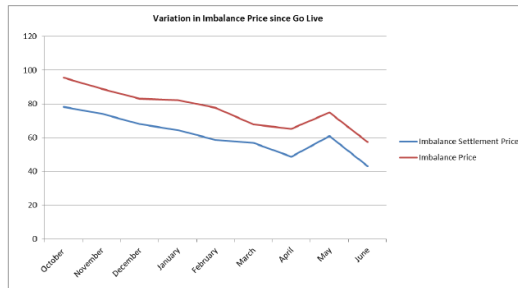
- If there was a need for additional generation and the only way to meet it was to turn on a unit, the minimum stable generation of that unit may be too much energy for the additional required, so that unit would be switched on to its MSG and another unit would be turned down to maintain the balance – the units which was turned down is the marginal action in this scenario.

ESB GT acknowledge that there appears to be an error in the PMEA and PRBO calculation, however, as shown above not all scenarios where the PMEA is determined from an action opposite the NIV are incorrect. ESB GT believes further assessment is required on the section E.3.4 of the T&SC and that a targeted modification to this section of the T&SC is the appropriate process to addressing this issue.

BM Volatility Reducing

SEMO presented at a recent MOUG that imbalance price volatility is reducing month on month. Considering the figure below, ESB GT would consider it to be more prudent to wait until the market has transitioned from the learning state and the market is in a more stable position before implementing such a radical change as Simple NIV tagging. The SEMC assessment reviewed from October 2018 to February 2019, which as shown below, where the months with the highest volatility. An assessment of the SEMC issue for the following months might provide different results. Unfortunately with the time restriction ESB GT was not in a position to provide this analysis. ESB GT would suggest the SEMC review the additional data before making any decision.

Balancing Market: Imbalance Price



*Excludes high prices on the 24th of January

May 11th to June 18th



	5 Minute	30 Minute
No of Prices Available	10,443 /10,994	1,733 /1824
No of Backup Prices Used	NA	103
Minimum Price €	-€451.06	-€219.60
Max Price €	€491.98	€482.09
Standard Deviation	71.04	55.87
Rolling Average €	€38.85	€39.02
Average Imbalance Price YTD	€58.08	€57.96

5.01% 4.99%

67

3.1.3 Potential Changes to the Imbalance Pricing Methodology

Unforecastability is a concern and at the time of writing this response, some of the main drivers of unforecastability identified are:

SO Flag creation of the RTD instead of MG

The SEMC has rightly highlighted that the non-marginal flagging element of the imbalance pricing process is creating undue and unintuitive volatility in pricing outcomes. Although it is not just the non-marginal flags it is also the System Operator flags that could be contributing to the creation of undue and unintuitive volatility in pricing outcomes. It is a peculiar scenario where the RTD schedules which often widely differ to the actual physically running of a plant produces the SO and NM flags. ESB GT agrees that this aspect of imbalance pricing is creating unintuitive pricing and that it is one of the key areas that needs to be addressed to improve the consistency of SO flagging across the trading day and remove the incorrect Non-Marginal flagging.

Rather than the Simple NIV option ESB GT believes this is one of the key steps in the imbalance pricing methodology that should be assessed in relation to addressing the unintuitive imbalance prices.

Further Analysis of PMEAs is required

There are instances where the NIV is positive and there are a number of inc and dec actions with FIP of 1 meaning it can set the price. Through E.3.4.2 the maximum price of these actions is determined as the PMEA. So for some periods even though there is an inc action that could be the PMEA as the NIV is positive the dec action would be selected. For example, on 20/05/2019 13:20-13:25 period:

- the NIV was 12.423
- there was an inc action with a price of €34.83/MWh with a FIP of 1

- there was a dec action with a price of €37.02/MWh with a FIP of 1
- the PMEA was set at €37.02/MWh
- The PRBO didn't replace any inc actions with the PMEA as the QRTag calculation did not result in an inc action greater than €34.83/MWh being unflagged.
- In this instance the imbalance price was set at the inc price of €34.83/MWh rather than the PMEA. However, if the QRTag had identified that an inc action higher in the rank set than €34.83/MWh the imbalance price would have been set of a dec price even though there was an marginal inc action in the direction of the NIV.

As discussed above there are instances where the PMEA is from an action in the opposite direction however it does seem counterintuitive that these kind of rare examples could occur as well. Further analysis is required to determine if the outcome of this is intuitive and creating the correct signals and whether or not a small change to E.3.4.2 is necessary.

Flagging Assessment

Market Participants are still in a stage of learning on what the real signals are from the Imbalance Price. For example, it was only after a number of months that participants truly understood how the N-S tieline constraint flag and were in a position to fully understand the modification_09_19. The second example of a SO flag change was the removal of the IARAMP constraint. This was a welcome change as the constraint was binding way too frequently and also not representative of real operations. The prime example of this was the 9th of October where IARAMP was binding through the RO events yet the N-S tieline was not constraint by the ramp rate physically.

The second part of the flagging methodology, Non-Marginal flags, is one that has not been analysed in significant detail in terms of the signals it is sending to the market. The NM flag is binding whenever a unit is at its maximum generation level, minimum generation level and at its max ramp rate. In terms of this Consultation Paper, a piece of analysis that is critical is how often are we seeing the NM flag binding for ramp rate constraints and the subsequent imbalance price reaction. This would be a clear signal to the market that there is a need for faster ramping units. To implement the Simple NIV tagging option would at least distort or if not remove this crucial signal to the market. Considering the desire to move to a market with even higher renewable penetration, the need for faster and flexible units is essential and the Simple NIV tagging option will distorted the investment signal.

3.1.4 Assessment of Consultation Paper Sample Days

03/10/2018

The N/S tieline constraint (S_MWR) and the N/S tieline ramp rate constraint (IARAMP) have all been removed following operational experience. The events that occurred on the 3rd of October may have occurred differently if these constraints were not applied. Therefore, to use this date as an example may not be the most appropriate.

The biggest issue that occurred on the 3rd of October was a unit that was running at its minimum generation (QBOA represented output at minimum generation) however the RTD was scheduling the plant to run above

minimum generation, thus creating a SO flag and NM flag of 1 and allowing it to set the price. This gap between the RTD and physical running created the perverse situation when a TSO action was deemed to be the marginal action even though it was running an output level that was non-marginal i.e. it couldn't provide the a MW downwards. As per the comments in the "SO Flag creation of the RTD instead of MG" section of this response if the SO and NM flags were created of the Metered Generation or Dispatch Quantity it would have prevented the RO pricing from occurring on this date.

A further complication to this date that should be considered when assessing this particular date is the potential impact the LRSA could have had. Further SEMC assessment of the potential impact of the LRSA on the imbalance price could assist in determining the root causes of RO imbalance prices on this particular trading day.

09/10/2018

At the MOUG where the events on the 9th of October were discussed, it appeared that one of the key issues market participants had with interaction between the TSO actions and imbalance price was that the TSOs had identified that the actions they took were for system reasons (frequency). From analysing the RO period it can be seen that:

- The removal of the N-S tieline constraint has no impact on the imbalance pricing of the 9th of October as there wasn't a constraint on the tie line.
- The IARAMP constraint was binding too often. This was removed later due to operational experience. However, the prices would still have out-turned even if it wasn't applied.
- There was no issue with the PMEA as the NIV is in the right direction.
- There was no SO flag for requiring a unit for frequency.

For ESB GT there were two key finding from the 9th of October:

1. The fact that the Balancing Market is a heavily constrained market (95% complex actions during this period before the removal of the S_MWR constraint flag) coupled with the over reliance on NIV tagging to catch any missed actions that should be SO flagged highlights in this case that an SO flag should have been created for the non-energy actions taken on the day. The SEMC identified in the Market Power mitigation section of the Consultation Paper that "*MW transmission constraints are not explicitly System Operator flagged in the Real Time Dispatch schedule, so actions on units that have local market power due to such constraints are not automatically being flagged as non-energy actions (for MW transmission constraint reasons, although they could be flagged for some other reason)*". It would appear that the flagging and tagging methodology was designed in line with a system that was operating under normal conditions where all the system constraints are being solved. However, the 9th of October the system was not under normal conditions as some of the NI constraints were not being met. ESB GT would suggest that further consideration is required to determine what the appropriate measure would be to address the rare periods when the system is not under normal operation.
2. The SEMC decision to not allow the recovery of start-up costs on TSO actions determined to be simple and thus the direction (SEM-15-065) to generating units to structure simple bids in a manner that will recover all their costs in a single 30 minute period over their minimum generation output,

has resulted in the potential for more RO events than was expected during the design of the CRM and ISEM.

Considering the two findings highlighted above, the first step should be to perform a review of the SO flagging methodology to determine if it is possible to create a SO flag that would be enabled whenever events like this occur.

03/11/2018

During the period from 01:00 to 09:00 there is (1) a significant amount wind curtailed, (2) a number of thermal units constrained on for system reasons and (3) priority dispatch units GU_401230 and GU_402030 constrained down. From an initial review it would appear that non marginal flags were created for both GU_401230 and GU_402030 even though they were not physically running at the level identified in the RTD. This had the effect of creating a FIP of 0 and not letting the actions on these units from setting the PMEA. If the NM flags were taken from physical output rather than the RTD the imbalance price would have been priced of an action in the direction of the NIV.

26/12/2018

The assessment of this date and in particular the 10:30 imbalance settlement period when the imbalance price is approximately €200/MWh needs to be completed in light of Mod_09_19. For example, If Mod_09_19 had be implemented during this period the S_MWR_ROI constraint would not have been binding and the PMEA for the imbalance pricing period 10:30-10:35 would have been set at €22.2/MWh rather than €217.51/MWh. The figure below illustrates how a SO flag of 0 was created for a dec action on unit GU_400363 however under the new rules a SO flag of 1 would have been produced and this coupled with the NM flag of 1 would have set the PMEA. This scenario can be seen for all the five minute periods in the 10:30 imbalance settlement period. So rather than an ISP of ~€200/MWh it should have been ~€22/MWh which was more in line with what would have been expected. This issue highlighted on this day of a jump to €200/MWh for a half hour when the NIV was negative has already been addressed through Mod_09_19.

StartTime	EndTime	ParticipantName	ResourceName	PBOA	QBOA	ConstraintId	Rank	SoFlag	Emerge	NonMa	Imbala	NetImt	Imbala	PriceA	NetImt	NonEn	yt
26/12/2018 10:30	26/12/2018 10:35	PT_500027	GU_500131	52.66	-1.819	S_PRR_NI	24	0	1	0	0	1	1	1	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	51.28	-2.083	S_MWR_ROI	23	0	1	0	0	1	1	1	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	51.28	-2.083	S_NBMIN_Roimin	23	0	1	0	0	1	1	1	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	49.77	-2.083	S_MWR_ROI	22	0	1	0	0	1	1	1	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	49.77	-2.083	S_NBMIN_Roimin	22	0	1	0	0	1	1	1	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	48.26	-1.932	S_MWR_ROI	21	0	1	0	0	0.338	0.34	1	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	48.26	-1.932	S_NBMIN_Roimin	21	0	1	0	0	0.338	0.34	1	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400041	GU_400530	48.03	-2.5	S_MWR_ROI	20	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	46.75	-1.214	S_MWR_ROI	19	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	46.75	-1.214	S_NBMIN_Roimin	19	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	46.75	-0.869	S_MWR_ROI	18	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	46.75	-0.869	S_NBMIN_Roimin	18	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	45.24	-0.409	S_MWR_ROI	17	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	45.24	-0.409	S_NBMIN_Roimin	17	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	45.24	-1.674	S_MWR_ROI	16	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400035	GU_400480	45.24	-1.674	S_NBMIN_Roimin	16	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400041	GU_400530	44.83	-3.09	S_MWR_ROI	15	0	1	1	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400041	GU_400530	44.83	-5.243	S_MWR_ROI	14	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400030	GU_400850	44.01	-3.908	S_MWR_ROI	13	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400030	GU_400850	30.43	-5	S_MWR_ROI	12	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400030	GU_400850	26.74	-2.618	S_MWR_ROI	11	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400030	GU_400850	26.74	-3.215	S_MWR_ROI	10	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400037	GU_400500	22.35	-5.895	S_MWR_ROI	9	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400030	GU_400363	22.2	-0.417	S_MWR_ROI	8	0	1	1	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400030	GU_400240	0	-1.21	S_MWR_ROI	7	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_400030	GU_400240	0	-1.2	S_MWR_ROI	6	0	1	0	0	0	0	0	-22.458	0	
26/12/2018 10:30	26/12/2018 10:35	PT_500027	GU_500140	-374.02	-2.523	NULL	5	1	1	0	0	0	0	0	-22.458	NULL	
26/12/2018 10:30	26/12/2018 10:35	PT_500027	GU_500140	-374.02	-0.688	NULL	4	1	1	0	0	0	0	0	-22.458	NULL	
26/12/2018 10:30	26/12/2018 10:35	PT_500027	GU_500140	-374.02	-0.575	NULL	3	1	1	0	0	0	0	0	-22.458	NULL	
26/12/2018 10:30	26/12/2018 10:35	PT_500027	GU_500140	-374.02	-1.013	NULL	2	1	1	0	0	0	0	0	-22.458	NULL	
26/12/2018 10:30	26/12/2018 10:35	PT_500027	GU_500140	-374.02	-0.452	NULL	1	1	1	0	0	0	0	0	-22.458	NULL	

3.2 Capacity Market Options

In this section ESB GT has identify the basis for supporting this proposed Capacity Market Option and provided responses to comments in the Consultation Paper on the potential weakening of generator incentives, likelihood of RO events and investment signal.

3.2.1 Unfair exposure to charges

ESB GT supports the CM option as it reduces generators exposure to difference/non-performance charges for periods where TSO actions and current flagging and tagging methodology creates the perverse situation that a generator in merit is not selected due to transmission constraints. This was not a scenario that was envisaged when designing the CRM and one that needs to be addressed.

3.2.2 Incentive on Generators

ESB GT does not support the position that “[t]he implementation of this proposal may change the short-term performance incentives for RO holders, with generators covered by certain Operational Constraints possibly facing reduced exposure for non-performance.”

During normal trading days generators are not in a position of knowing in advance if there was a constraint binding on (a) the system and (b) specific to their unit. It is not until after the pricing has been determined that generators will know if a constraint was binding on the 5 minute period. Subsequently, there is no guarantee that a constraint flag will be binding at the time of an RO and thus it is not something that generators can rely on prior to the RO period. Therefore, in the time frame that generators have the ability⁹ to react to future RO prices¹⁰ the incentive to generate is no way reduced as the exposure to the difference payment is still as real as if this modification wasn't implemented.

Considering the above comments, ESB GT believes the proposed CM Option will have no impact on generators incentives to be available and generate.

3.2.3 Data

The Consultation Paper highlighted that “[w]hile it is difficult to fully assess the effects of [reduced generator incentives to generate] without further market experience, the reduced exposure to difference payments by RO holders would map over to a widening of the ‘hole in the hedge’ – that part of the demand base not covered by difference payments – and a potential associated impact on the Capacity Market Socialisation Fund. This Fund is by design a backstop only and not intended to be called upon regularly.”

It was identified in the Working Group that some of the data presented needed to be update and unfortunately it has not been updated for this Consultation Paper. Further testing of different scenarios is required to determine the impact on the socialisation fund not the proposed waiting for market experience.

⁹ This is one of the key problems facing generators as there is limited ability to trade ex-ante as the liquidity and cross trade functionality is poor.

¹⁰ Another key problem for generators is that the RO price signals are after the gate closure which severely exposes generators to the lack of a TSO action.

ESB GT does not agree with the potential suggestion to wait for further RO events that result in generators being unfairly penalised before implementing this proposed change.

3.2.4 Likelihood of future RO events

ESB GT agrees that with the implementation of Mod_09_19 “*the likelihood of a pricing event like that which occurred on 24th January 2019 and the related RO Difference Charges are reduced*”. However, this does not mean that the merits of this CM Option are any less. For example, the likelihood of a negative price from a priority dispatch unit is lower if Simple NIV tagging is implemented but this doesn’t mean that mod_10_19 should be rejected. For the same reason, the principle of the proposed CM option is still valid regardless of the likelihood due to the implementation of Mod_09_19.

Before the start of ISEM the market was told the likelihood of an ASP/RO event was extremely low and this was factored into the CM BNE and ECPC. As can be seen from the first six months of ISEM and the basis for this consultation, RO prices have occurred. ESB GT believes this CM option should be implemented as the principle of the CM option should not be influenced by the likelihood of RO events occurring.

3.2.5 Investment Signals

It was referenced in the Consultation Paper that “*this option could present a risk of introducing a hidden locational element to the Capacity Market by distorting the CRM auction in that the reduced risk of exposure to RO Difference Charges would, all else being equal, incrementally incentivise new plant to locate behind an export constraint instead of inside the constrained area. Further, existing units could observe a change in the competitive dynamic within the CRM, whereby units behind an export constraint would enjoy the disapplication of difference charges during these albeit rare periods, while those inside the constrained areas would not.*” As a participant with new capacity awarded in the previous T-4 auction ESB GT does not support this position. There is a significant flaw in this argument in that the investment signal could be weighted heavier to building a generator in the area where there are issues and thus the possibility of increased physical running rather than in an area where there is no constraints and reduced physical running possibilities in the hope of getting a SO flag when an RO event occurs. Furthermore, there seems to be a divergence in SEMC opinion of how often RO events will occur. For example, the SEMC have highlighted that “*the likelihood of a pricing event like that which occurred on 24th January 2019 and the related RO Difference Charges are reduced*” yet it is this unlikely event that will occur enough times that it will “*incrementally incentivise new plant to locate behind an export constraint instead of inside the constrained area*”. ESB GT does not agree that the proposed CM Option will drive the investment decisions for new build capacity.

3.2.6 Future Changes

The proposed CM option is a change that is built of the back of the events that occurred on the 9th of October and 24th of January. ESB GT believes this is the first of a number of small tweaks that are required to the CMC for undue exposure to generators and over recovery of difference/non-performance charges which are resulting in the unintended consequence of a windfall for suppliers. Something which could be in conflict with the SEMC decisions.

4. QUESTIONS

This section contains the comments ESB GT has on the questions in the Consultation Paper.

2.1) Do you support this Simple NIV tagging option and its implementation in the SEM?

ESB GT does not support the Simple NIV tagging option. A sharp balancing market price, based on system fundamentals and reflective of the energy and non-energy actions taken by the TSO, is crucial to an efficient ISEM that (1) incentivises investment in the right technology and (2) encourages participants to be balance responsible and it is through the implementation of a number of small targeted T&SC fixes that the consistency and intuitive volatile imbalance price can be achieved while retaining all the constructive work that has been applied to implementing the ISEM HLD decision.

2.2) Do you have any concerns regarding moving to Simple NIV tagging in the Balancing Market, including the risk of unintended consequences? If so, please explain these concerns.

It appears the main driver for the Simple NIV tagging is a perceived issue with the correlation of the DAM price, BM price and NIV direction. However, the Consultation Paper does not address what is causing the difference. ESB GT has tried to delve deeper into the issues and assess if there are any underlying issues in an attempt to assist the SEMC in defining its concerns. However, with the time limitation ESB GT is unable to fully understand what the underlying drive of the issue is. Therefore, ESB GT would request the SEMC to delay any decision on this Consultation and work with industry, through a forum to identify the root cause of the issue to determine a path forward that is suitable for all market participants.

Non-Marginal flags have yet to be analysed in significant detail in terms of the signals it is sending to the market. The NM flag is binding whenever a unit is at its maximum generation level, minimum generation level and at its max ramp rate. In terms of this Consultation Paper, a piece of analysis that is critical is how often are we seeing the NM flag binding for ramp rate constraints and the subsequent imbalance price reaction. This would be a clear signal to the market that there is a need for faster ramping units. To implement the Simple NIV tagging option would at least distort if not even remove this crucial signal to the market. Considering the desire to move to a market with even higher renewable penetration and the Clean Energy Package drive for flexibility, the need for faster and more flexible units is essential and the Simple NIV tagging option will distort the investment signal.

The weakening of the imbalance price, as shown by the reduction in the volatility on table 1 of the Consultation Paper, through the simple NIV tagging approach will only weaken the IDM DAM as spillage into the BM will naturally occur as the creation of a strong BM signal to be balance responsible will have been diluted. The consequences of the diminishing the imbalance price signal and subsequent influence on (1) the balance responsibility of market participants and (2) weakening of the DAM in light of the removal of priority dispatching needs to be fully assessed before any such dramatic change as simple NIV tagging is truly considered.

ESB GT would be concerned with potential dilution of the balance responsibility signals the simple NIV tagging could have, as highlighted in table 1 of the Consultation Paper where the standard deviation is reduced from 89.70 to 61.37. Furthermore, the absence of an LNAFs combined with the absence of any

uplift for the start costs associated with early actions will result in market which is not the one envisaged in the HLD or indeed the one notified under state aid for the CRM. This will end the IDM and will likely pull volumes from the DAM over time further reducing efficiency.

Considering the root cause of the SEMC's issue has not been clearly identified in the Consultation Paper, ESB GT believes the assessment of simple NIV tagging should have been delayed until the re-pricing and imbalance price fixes were implemented so to truly identify if there is a mistake in the correlation of DAM price, BM price and NIV direction and to what level.

2.3) Do you agree or disagree that Simple NIV tagging meets the I-SEM High Level Design, the I-SEM Detailed Design and the I-SEM market power mitigation decision? If you disagree, please explain why.

ESB GT does not believe the proper due process has been applied or the necessary consultations have been to allow participants to be able to fully answer this question. Therefore, ESB GT has to disagree that Simple NIV tagging meets the I-SEM High Level Design, the I-SEM Detailed Design and the I-SEM market power mitigation decision. In relation to the Consultation Paper, ESB GT has some comments on the HLD assessment and Market Power Mitigation.

The SEMC highlighted in the Consultation Paper that the second signal sent by a Balancing Market price should be "*predicated on the price, and in particular price movements, being reflective of system fundamentals*". However, the proposed removal of SO and NM flagging from the imbalance pricing methodology is in effect a pollution of the imbalance price by not identify the true marginal energy action via the system fundamentals. Under the Simple NIV tag option a unit that is operating at its minimum generation level, max generation level or constraint from its ramp rate will now be determined to be the marginal energy action. The approach that Simple NIV tagging identifies the action below the NIV tagged volume as the marginal action is a significant step away from years of SEM experience and the SEMC decision (SEM-14-085a) where "*the marginal price reflects the cost for generating one more or one fewer MWh of electricity within the BM timeframe¹¹*". ESB GT agrees that the imbalance price should be reflective of system fundamentals (TSO actions determined as energy and non-energy actions as per constraints binding) and without any clarification to a revised version of the Marginal Energy action used in SEM and I-SEM, ESB GT does not agree that an action which cannot provide the next MW up and down can be viewed as the Marginal Energy Action and in line with the HLD.

ESB GT agrees that if items, such as the Decremental Bids from Priority Dispatch Units, of the HLD were omitted during ISEM implementation they should be progressed through the Modifications Committee. However, ESB GT would request further clarification to the point raised in the Consultation Paper that the units "*dispatched to their lower operating limits are not automatically precluded from setting the price*". The issue with setting the PBOA of the actions on the priority dispatch units to zero is that these actions are still in the imbalance price stack and can still set the imbalance price. Thus, the current modification and comments in the consultation Paper appear to be only implementing half of the SEMC decision. As highlighted by the SEMC, the Simple NIV tagging process fails to implement the full decision as the actions still have some impact on setting the price e.g. if it is not the marginal action at €0/MWh it is contributing to the NIV tagged volume and thus pushing the marginal action further up the stack. A further impact assessment reviewing the removal of the QBOA from the imbalance price stack would be warranted.

¹¹ Point 4.5.14

In terms of Market Power Mitigation, ESB GT agrees with the SEMC that the events on the 24th of January highlighted a short coming in the imbalance pricing methodology that was inferring a market power advantage on units (ROI or NI) behind the N-S tieline constraint depending on the direction of the flow once at its maximum capacity. However, the application of Mod_09_19 has subsequently reduced this market power advantage. After a period of implementing Mod_09_19 if it is determined that the N-S tieline constraint is still inferring an advantage on units in a jurisdiction depending on the direction of the flow, the next step should be to perform a review of the SO flagging methodology to determine if it is possible to create a SO flag that would be enabled whenever events like the 24th of January occur. Considering the rigors that were applied to the market power mitigation consultation and in the interest of good governance and due process, ESB GT would expect a similar consultation to be re-held to review if the current market power mitigation measure (option 2B) is still valid for the Simple NIV tagging option when assessed on being Effective, Targeted, Flexible, Practical and Transparent.

Even with the eight months of ISEM operational experience where there have been some serious imbalance pricing short comings, RO pricing in non ASP events, ESB GT is still supportive of the market fundamentals (identification of TSO actions as energy and non-energy) determining the imbalance price. Throughout the operation of ISEM ESB GT has continually sought to identify what was driving the imbalance price to outturn unintuitive RO prices in an attempt to fine tune the existing rules.

2.4) Do you agree or disagree with SEM Committee's assessment that the pricing outcomes under Simple NIV tagging are preferable, given market fundamentals? If you disagree, please explain why.

ESB GT disagrees with the SEMC's assessment that the pricing outcomes under Simple NIV tagging are preferable. One of the main issues ESB GT has with this consultation paper is the lack of detail on what the root cause of the SEMC issue is. It appears the SEMC have an issue with the correlation of the DAM price, BM price and NIV direction. However, the Consultation Paper does not address what is causing the difference. ESB GT has tried to delve deeper into the issues and assess if there are any underlying issues in an attempt to assist the SEMC in defining its concerns. However, with the time limitation ESB GT is unable to fully understand what the underlying driver of the issue is. Therefore, ESB GT would request the SEMC to delay any decision on this Consultation and work with industry, through a forum, to identify the root cause of the issue to determine a path forward that is suitable for all market participants.

Furthermore, the ISEM Balancing Market is not like other electricity markets in that it is a small market that is heavily constrained (~95% of TSO actions in the first six months were complex) and the effects of generator lumpiness is more prominent. The lumpiness impact of constraining a unit on/off and subsequent TSO actions to balance the system cannot be ignored. Consideration of this issue needs to be weighed when reviewing the system fundamental and resulting imbalance price.

Figures 9 and 10 illustrate the average profile of NIV v Demand v Original/Simple NIV Price. As highlighted by the SEMC "[b]oth the original imbalance prices and the Simple NIV prices are lower than the DAM price over the peak hours despite the fact that the NIV is positive. Again this is not as expected but there have been instances of very high imbalance prices over these hours and this has likely sent a signal back to the DAM". From the Consultation Paper it appears that the main objective is to align the DAM price, BM price and NIV direction and notwithstanding that averaging effects will have a significant effect within these average profiles, the data provided in section 2.3 rightfully raises questions if the Simple NIV tagging will achieve its objective.

Another issue that could be affecting the market fundamentals are the number of contracts outside¹² of the market that were awarded at the start of ISEM. The information provided to the public was limited in terms of the potential impact these contracts could have on the both the ex-ante markets (DAM, IDAs and IDC) and the Balancing Market. Without transparency of these contracts market participants are unable to determine if these contracts have added to the SEMC issue of DAM price, BM price and NIV direction correlation. Further transparency of the contracts should be provided to assist in developing T&SC modifications that will ensure an efficient market that is providing the correct signals through transparent pricing.

As discussed in the answer above, the proposed removal of SO and NM flagging from the imbalance pricing methodology is in effect a pollution of the imbalance price by not identify the true marginal energy action via the system fundamentals. Under the simple NIV tag option a unit that is operating at its minimum generation level, max generation level or constraint from its ramp rate will now be determined to be the marginal energy action. The approach that simple NIV tagging identifies the action below the NIV tagged volume as the marginal action is a significant step away from years of SEM experience where the marginal unit is one that can go up and down a MW and an imbalance price systematically determined by energy and non-energy actions. ESB GT agrees that the imbalance price should be reflective of system fundamentals and without any clarification to a revised version of the Marginal Energy action used in SEM and I-SEM, ESB GT does not agree that an action which cannot provide the next MW up and down can be viewed as the Marginal Energy Action.

3.1) Do you support this Capacity Market option and its implementation in the SEM?

ESB GT supports the Capacity Market option and its implementation in SEM. The CM option reduces generators exposure to difference/non-performance charges for periods where TSO actions and current flagging and tagging methodology creates the perverse situation that a generator in merit is not selected due to transmission constraints.

3.2) Do you have any concerns regarding the removal of Difference Charges where Operational Constraints are binding, including the risk of unintended consequences? If so, please explain these concerns.

Further analysis of potential scenarios would provide greater clarity on the potential unintended consequences. The assessment to date is on a fairly small subset of data that needs to be reviewed following the resettlement.

3.3) Do you consider this proposed change is in keeping with the broader CRM detailed design? Please explain your view.

Yes.

¹² LRSA awarded by CRU and system support services contract awarded by UREGNI

3.4) *Do you have any views on this option from a consumer perspective?*

N/A

3.5) *Do you have a strong view regarding an alternative option which could be implemented, i.e. preferably requiring only a configuration change rather than a system change?*

As of writing this response, there are a view alternatives that should be reviewed before any dramatic changes like the proposed Simple NIV tagging option.

The SEMC has rightly highlighted that the non-marginal flagging element of the imbalance pricing process is creating undue and unintuitive volatility in pricing outcomes. Although it is not just the non-marginal flags it is also the System Operator flags that is contributing to the creation of undue and unintuitive volatility in pricing outcomes. It is a peculiar scenario where the RTD schedules which often widely different to the actual physically running of a plant produces the SO and NM flags. ESB GT agrees that this aspect of imbalance pricing is creating unintuitive pricing and that it is one of the keys areas that needs to be addressed to improve the consistency of SO flagging across the trading day and remove the incorrect Non-Marginal flagging. Rather than the Simple NIV option ESB GT believes that flags being produced from MG/DQ instead of the RTD is an alternative that should be review. This would address the issue of the 3rd of October.

There are instances where the PMEA is from an action in the opposite direction however it does seem counterintuitive that these kind of rare examples could occur as well. Further analysis is required to determine if the outcome of this is intuitive and creating the correct signals and whether or not a small change to E.3.4.2 is necessary. In conjunction with Mod_09_19 a review of the PMEA calculation would be a step to addressing the 24th of January.

Another alternative would be to perform a review of the SO flagging methodology to determine if it is possible to create a SO flag that would be created for units that are required for system reasons outside of the monthly operational constraints. This would address the issue of the 9th of October.