



**Single Electricity Market  
(SEM)**

# **Repricing and Price Materiality Threshold Parameter Decision**

**SEM-19-068  
21 November 2019**

## EXECUTIVE SUMMARY

A Consultation Paper, SEM-19-042, was published on 30 August 2019 concerning the application of repricing and the price materiality threshold by SEMO from 1 October 2018 until resettlement was due to commence in November 2019. This Consultation was prompted by the fact that the majority of Imbalance Pricing Periods (5-minute prices) and Imbalance Settlement Periods (30-minute prices) for the period from 1 October 2018 to 11 June 2019 are subject to an upheld dispute and require repricing under Section E.3.8 of the Trading and Settlement Code. The system update on 11 June 2019 addressed the issues which impacted on pricing in this period to a large extent, however a smaller number of prices between 11 June 2019 and the date of publication of this Decision Paper are also subject to an upheld dispute and this has been communicated by SEMO to market participants.

The Consultation Paper considered four options for repricing in the context of providing certainty for market participants for the period in question and the overall effect of a number of manifest errors in the pricing system on accuracy of prices. The first two options were based on the application of a 5% or 0% Price Materiality Threshold effective for repricing from 1 October 2018 (Option 1 and 2), while the second two options were based on variants of an option for repricing not to be carried out for a defined time period (Option 3 and 4).

Seventeen responses were received to the Consultation Paper and the majority of respondents expressed their disappointment with the repricing options they have been faced with. The majority of respondents support either options 3 or 4 on a pragmatic basis, which proposed to draw a line under repricing for a specified period. The key points raised in these responses have been documented in this paper and have informed the SEM Committee's decision.

A summary of the options presented in the Consultation and responses to these are outlined in Sections 2.1 and 2.2, while Section 2.3 outlines the SEM Committee's decision with respect to repricing.

It is the SEM Committee's view that the points raised by the majority of respondents provide a compelling argument as to why it is not practical or in line with the objectives of the TSC to implement either Option 1 or 2. Following consideration of the responses received, the SEM Committee is also not convinced that Option 4 (which involves a more enduring change to the requirements for repricing under the Trading and Settlement Code) is appropriate as

the key arguments which have been raised by respondents point to a number of issues in repricing the period from 1 October 2018 to 11 June 2019 in particular.

The SEM Committee has decided to approve Option 3 with a slightly modified implementation route. Following the SEM Committee's consideration of a number of responses received with respect to the method for implementation, it has been decided to give effect to this through a narrowly framed and targeted temporary amendment to Section B.14 of the Trading and Settlement Code (to be added via Section H 'Interim Arrangements') which allows the Market Operator to seek a derogation in respect of a specific obligation under Section E.3 of the Code for a limited period from the RAs.

Subject to SEMO making a successful application for a derogation, it is intended that this will have the effect of SEMO not being required to publish corrected Imbalance Settlement Prices for the period between 1 October 2018 to 11 June 2019.

In order for the RAs to monitor progress on this issue, SEMO is requested to provide monthly updates in writing to the RAs from 1 January 2019 on the number of manifest errors outstanding in pricing, the number of periods in the month due to be repriced and the expected resolution timeline for each manifest error.

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# 1. Introduction

## 1.1 Background

As outlined in SEM-19-042, an Imbalance Settlement Price is calculated as the average of each of the 5-minute Imbalance Prices within a 30-minute Imbalance Settlement Period. Between the period of 1 October 2018 to 11 June 2019 there are a vast<sup>1</sup> number of Imbalance Pricing Periods (5-minute prices) and Imbalance Settlement Periods (30-minute prices) that are subject to an upheld dispute, and therefore require repricing, as per Section E.3.8 of the Trading and Settlement Code.

The majority of these upheld disputes arose due to a number of manifest errors<sup>2</sup> identified in the pricing calculation, some of which led to rolling disputes which impacted a large number of prices over this time period. These were addressed through Software Release C, deployed by SEMO on 11 June 2019. The RAs understand that a number of manifest errors have also been identified since 11 June 2019 which impact on a subset of prices under limited scenarios.

The terms 'repricing', 'resettlement' and 'Price Materiality Threshold' are referred to in this Decision Paper and are described below.

**Repricing:** Under the Trading and Settlement Code, if as part of an upheld Pricing Dispute it is determined that there is a manifest error in the pricing calculation which leads to a change in price greater than a certain Price Materiality Threshold, the price is recalculated and included in resettlement.

**Resettlement:** Settlement refers to the financial settlement of payments and charges under the Trading and Settlement Code through the determination of payments, charges, fees and costs by the Market Operator.

Following Initial Settlement, Settlement Reruns are completed by the Market Operator in accordance with the Settlement Calendar. These are scheduled to align with the receipt of updated meter data with reference to each Imbalance Settlement Period and take account

<sup>1</sup> Between the periods 1<sup>st</sup> October 2018 to 11<sup>th</sup> June 2019 there are 72000 Imbalance Pricing Periods (5 minute prices) and 12000 Imbalance Settlement Periods (30 minute prices) that are subject to an upheld dispute, and therefore require repricing, as per Section E.3.8 of the Trading and Settlement Code.

<sup>2</sup> A list of the manifest errors detected in the calculation of the Imbalance Price from 1<sup>st</sup> October 2019 to 11<sup>th</sup> June 2019 is published on slide 99 of the [Market Operator User Group Presentation](#) from May 2019.

of increases and decreases in demand and generator output and all applicable charges and payments for each Participant.

The aim of such Settlement Reruns is to adjust the financial positions of Participants to reflect any differences between the data used for Settlement and any updated data received. Settlement Reruns are scheduled to take place in the 4<sup>th</sup> month after Initial Settlement (M+ 4) and in the 13<sup>th</sup> month after Initial Settlement (M+ 13).

**Price Materiality Threshold:** The Price Materiality Threshold refers to the threshold which is approved from time to time by the Regulatory Authorities under paragraph B19.3.1(b) of the Trading and Settlement Code, which is applied in the event of a Pricing Dispute or where a manifest error is identified by the Market Operator for the purpose of Repricing.

The Price Materiality Threshold tests when a change to input data as a result of an upheld dispute causes a change in the price greater than a certain threshold. If the threshold is exceeded, the price is recalculated and included in a Settlement re-run. For the purpose of the new market arrangements, which went live on 1 October 2018, in SEM-17-046 the SEM Committee decided to set the Price Materiality Threshold at 5%.

Under Section E.3.8 (b) of the Trading and Settlement Code, SEMO is required to publish corrected Imbalance Settlement Prices within 1 Working Day of making a correction to a manifest error (which also requires correction of 5-minute Imbalance Prices), subject to the approved Price Materiality Threshold being applied. The RAs were informed that SEMO's current repricing solution can only apply the Price Materiality Threshold as approved by the SEM Committee in SEM-17-046 on a manual basis. At the time of the Consultation, the commencement of repricing by SEMO was also dependent on successful testing of Software Release D.

In this context, The RAs consulted on a number of options to address this issue with a view to striking the correct balance between accuracy of prices and certainty of settlement outcomes for the period since market go live.

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## 1.2 Responses Received

The consultation (SEM-19-042) closed on 27 September 2019. Seventeen responses were received to the Consultation Paper, from;

- Bord Gáis Energy
- Bord na Mona
- Budget Energy
- Cenergise Limited
- Cenergise Trading Limited
- Electricity Association of Ireland
- Enerco Energy
- Energia
- ESB GT
- Go Power
- SSE Airtricity
- Irish Wind Energy Association
- Panda Power Limited
- Power NI
- Power NI PPB
- SEMO
- SSE Airtricity
- Confidential Respondent

The key points raised within these responses are reflected in Section 2 of this paper together with the responses being published with this Decision Paper.

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## 1.3 Additional Information Provided by SEMO in Relation to Repricing

SEMO's response to the Consultation provides an overview of the issues including system capabilities that have impacted on pricing since go-live of the new market arrangements. SEMO states that the issues that may result in repricing are varied in nature and affect different parts of the Central Market Systems. These are summarised in Table 1.

<b>Repricing Issue</b>	<b>Affected Parts of the Central Market System(s)</b>
Determination of Non-Energy Flags	RTD <sup>3</sup> Operational Schedule
Instruction profiling	BOA (Bid Offer Acceptance) Calculation
Determination of QBOA (Bid Offer Acceptance Quantity) initial conditions	BOA (Bid Offer Acceptance) Calculation
Availability of input data	BOA (Bid Offer Acceptance) Calculation, 5-minute Price Calculation
Price Calculation	5 min Price Calculation, 30-minute Price Calculation

**Table 1**

SEMO has noted that there is no straight forward solution which allows the recalculation of flags, as these are calculated in the RTD Operational Schedule. This software is not designed to be re-run in a manner which enables new data to be derived for use in downstream operations; primarily as such updated data could have serious impacts on future LTS (Long Term Scheduling), RTC (Real Time Commitment) or RTD Operational Schedules (which have dependencies on each other). As a result, SEMO has informed the RAs that there is no system solution for recalculation of flags to support repricing where required.

SEMO has grouped manifest errors identified to date which relate to this as follows;

- The Imbalance Price calculation.
- The data SEMO receives (TSO Non-RTD Data Errors);
- TSO calculations (RTD – Non-Energy and Non-Marginal Flagging); and
- The application of that data by SEMO (incorrect application of correctly calculated SO flags)

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<sup>3</sup> The Real Time Dispatch (RTD) tool creates a schedule every 5 minutes, 10 minutes before real time and at 5-minute granularity, which is used by the TSOs to inform their dispatch instructions to generator units, DSUs, etc. System Operator (SO) Flags and Non-Marginal Flags, which are very important inputs to the imbalance pricing process, are also outputs from the RTD schedules. The Real Time Commitment tool (RTC) is used to make unit commitment decisions, it runs occur every 15 minutes at a 15-minute resolution for the period 30 minutes ahead over an optimisation horizon of up to 3.5 hours.



It is the RAs' understanding that on the basis of this information, SEMO will be unable to reprice any manifest errors associated with RTD Non-Energy and Non-Marginal Flagging, regardless of the SEM Committee Decisions outlined in this paper. The RAs have concerns with this issue and request that SEMO communicates this clearly to market participants as it may impact on future pricing disputes.

In the RAs' view, SEMO should consider the need to clarify this via a TSC Modification as the RAs are concerned that failure by the TSOs to correctly calculate flags is not under the governance of the TSC or its associated dispute resolution processes.

Issue Type	Count of Issues	Issue ID
Imbalance Price Calculation	10	5739; 5737; 5831; 5806; 5875; 5817; 5929; 5957; 112877; 6076
TSO (Non-RTD) Data Errors	4	Rpc3; Rpc4; Rpc1; Rpc2
RTD – Non-Energy and Non-Marginal Flagging	2	6105; 6003
Incorrect Application of correctly calculated SO Flags	2	5720; 5973

**Table 2**

## 2. Summary of Options, responses to Consultation and SEM Committee Decision

A summary of each option presented in the Consultation Paper and the responses received to each is outlined in Sections 2.1 and 2.2 of this paper. Section 2.3 then outlines the SEM Committee's decision and the basis for this following consideration of the responses received.

The SEM Committee acknowledges the shorter than usual consultation period for addressing this issue and thanks respondents for providing their views within this timeline.

### 2.1 Options 1 and 2: Application of repricing based on a 5% or 0% Price Materiality Threshold

As Option 1 and Option 2 were set out in the Consultation on the basis of repricing being carried out by SEMO for the full period from 1 October 2018, these are dealt with together.

#### Summary of Option 1

Option 1 is based on the application of repricing as currently set out in the Trading and Settlement Code using the approved 5% Price Materiality Threshold. The Consultation Paper noted that the current Market Operator solution for repricing recalculates and publishes Imbalance Prices automatically regardless of the materiality of the change, overwriting previously published reports in the system and website as part of this process. This means that any application of the 5% Price Materiality threshold would need to be carried out manually which would be a time-consuming process with the risk of manual errors arising as part of this.

This would involve a significant delay to repricing which would not be completed until after M+13 resettlement. The RAs outlined their view that the application of the 5% Price Materiality Threshold from 1 October 2018 is not an appropriate way forward due to the time this process would take to complete and the impact on certainty for market participants. Respondents' views on this issue were invited.

## Summary of Option 2

Section B.19.3.1(b) of the Trading and Settlement Code requires SEMO to propose a Price Materiality Threshold from time to time to be approved by the Regulatory Authorities. On 1 August, SEMO submitted a report to the Regulatory Authorities recommending that the Price Materiality Threshold should be changed to from 5% to 0% on a temporary basis, until such time as an I.T solution that can calculate materiality is delivered. The SEMO submission, published with the Consultation Paper, set out the rationale for this proposal based on the volume of upheld disputes that require repricing and the design of the current system solution for repricing.

The RAs set out their view that while this may be a practical approach to enable repricing to conclude as soon as possible, trading decisions between 1 October 2018 and 11 June 2019 were made based on balancing market prices at the time and a longer than expected period of time has passed without repricing being carried out by SEMO. The application of a 0% Price Materiality Threshold may also impact Market Participants in terms of the time required to review and verify past time periods and settlement outcomes. The RAs also outlined their concern that setting the Price Materiality Threshold to 0% until an appropriate I.T. solution is delivered would remove the behavioural effect of the Threshold which attempts to disincentivise minor disputes being raised by market participants.

## Summary of Responses

Respondents' views in relation to both Option 1 and 2 are summarised here, as both options involve repricing for the full period of market operation from 1 October 2018, based on either the existing 5% Price Materiality Threshold or an amended 0% parameter.

The majority of respondents raised similar issues in relation to both options. The RAs note that nearly all respondents also highlighted their concern and disappointment with the extent of issues experienced in the market systems to date. Respondents also commented that sufficient testing may not have been conducted due to the number of manifest errors identified. A number of respondents are also of the view that SEMO's solution for repricing and application of the approved 5% materiality threshold should have been implemented in systems prior to go live of the new market arrangements. Some respondents have suggested that once the repricing solution with 5% materiality is operational, this should be subject to certification and independent testing in order to provide confidence to market participants.

In their response to Option 1, SEMO state that the existing Central Market Systems are not capable of determining if the materiality threshold of 5% has been reached and an automated

solution to determine the repricing materiality will not be delivered until the end of 2020 at the earliest. The response notes that SEMO has a solution for mass repricing which is currently in test and is due for deployment to production in 2019. This solution enables batch repricing but will not automatically apply the approved 5% Price Materiality Threshold in order to determine which prices should be applied. In SEMO's view under this approach, it is unlikely that repricing would be completed before the end of Q3 2020.

In response to Option 2, from SEMO's perspective applying a 0% Price Materiality Threshold on a temporary basis is pragmatic in that it is currently deliverable by the Central Market Systems. However SEMO did note that this approach still subjects the market to potentially numerous iterations of repricing, and on that basis SEMO is of the view this Option 2 does not provide a realistic or pragmatic solution for market participants.

SSE Airtricity is not in favour of the proposal to apply a 0% Price Materiality Threshold as this would impact on market participants in terms of resource burden to verify past time periods and certainty of settled prices. In their view the volume of pricing disputes before 11 June 2019 partially reflects poorly functioning systems.

As a general comment in their responses, both IWEA and Enerco Energy have expressed their concern in relation to the delays in repricing and resettlement and emphasise that trading decisions were made during these months based on the imbalance prices published at the time. They state that if participants are faced with potentially large and undefined liabilities under repricing for this period, it may damage investment and undermine credibility in the market. IWEA also state that failure to resettle on time has had undesirable effects on existing renewable projects associated with the submission of REFIT data to the CRU as part of the process for calculating the PSO levy. Under either Option 1 or 2, data submitted may change substantially due to repricing and resettlement which may lead to an incorrect calculation of the PSO levy. Both respondents state that they do not support Options 1 or 2 as they may leave market participants open to large undefined liabilities and risks damaging the credibility of the market and the investment signal for new entrants.

Energia, Bord na Mona, Cenergise Trading Limited and Cenergise Limited also raise the issue of financial certainty in their responses. Energia state that it is imperative that the financial and legal responsibilities of market participants are considered in the context of this issue, in terms of preparation of financial statements and reporting to investors and shareholders. Due to the delay in repricing, significant uncertainty could exist for several months or years after financial reporting for this period has closed. Energia does not support Option 1 on the basis that this would result in unacceptable delays and uncertainty for market participants. They also do not support Option 2 as in their view it requires the Price Materiality Threshold to be amended and

applied retrospectively. Energia also notes that participants have no way to forecast the impact of this on their financial performance. Bord na Mona have a strong preference not to reprice for the period from October 2018 to June 2019 as this could create an unknown level of financial exposure and would create challenges for participants' systems and processes. In their view, SEMO's resources could be better applied to more pressing market developments. Without certainty of the alignment between the timing of repricing and M+13 resettlement under Option 2, in Bord Na Mona's view this also carries significant commercial exposure.

Cenergise Trading Limited and Cenergise Limited state that they do not agree with repricing being carried out for the period 1 October 2018 to 11 June 2019 using either a 5% or 0% Price Materiality Threshold. Market participants made trading decisions based on balancing market prices during this time and as the acceptance times of bids and offers have not been published by SEMO, it is not possible to model the impact of defects on potential repricing outcomes.

Of Options 1 and 2, Go Power's preference is to proceed with a price materiality threshold of 5% based on this parameter being approved by the RAs. The 5% threshold also deters participants who may be incentivised to raise minor disputes which may impact on costs of applying minor repricing. Budget Energy are of the view that Option 1, involving manual processing of a high number of reprices could lead to extensive delays in publication of recalculated prices and agree with the view that it is not an appropriate way forward. If repricing was to take place from 1 October 2018, Budget Energy support Option 2, for a 0% Price Materiality Threshold to be implemented until such time as an updated repricing solution to manage the 5% Price Materiality Threshold can be delivered. In BGE's view, Option 1 is not practical, as market participants cannot be reasonably asked to continue to account for this type of uncertainty and risk. As Option 2 does not give certainty that knock-on resettlement will be conducted before M+13 for all months, BGE also does not support this approach.

A number of respondents have also raised additional issues in relation to retrospective modifications to the Trading and Settlement Code and the potential introduction of RO prices. In EAI's view, both Option 1 and 2 could have potential unintended consequences in terms of increasing the potential for further RO events to occur. In their view, if repricing is to occur for this period, the issue of liability of difference charges for RO prices must be addressed. The design of the new market was intended to create prices as close to real time as possible in order for participants to trade based on such information and exposure to difference charges 12 months after the trading period appears to be in direct conflict with the intention of the market design.

In their response, ESB GT raise the issue of the interaction between the energy and balancing markets and that, if a participant's revenue was materially different in the market, different

actions might have been taken at the time to manage risk. Repricing at either a 0% or 5% threshold could also potentially introduce RO prices for the time period in question, months after the event. They are also concerned that Option 2 represents a retrospective change to a TSC parameter and may set an unwelcome precedent.

Power NI's response states that in principle, Option 1 is the appropriate and expected approach, however as such functionality is not available in Central Market Systems, the associated timescales render this option infeasible. Power NI does not support Option 2 as in their view the price materiality threshold is set in advance and any change to this would be retrospective. PPB state that under normal circumstances, they would also consider that repricing in accordance with the TSC under Option 1 would be the only acceptable approach, however they recognise that a significant problem exists whereby repricing for this period cannot occur in accordance with the TSC. PPB do not support Option 2 as in their view it is a retrospective change to the TSC. They are also concerned that if the Price Materiality Threshold was changed, there is a risk that it would lessen the incentive to deliver IT systems that are fully compliant with the original TSC requirements.

A confidential respondent's preference is for repricing commencing in Q4 2019 to have a temporary value of 0% as this introduces little regulatory uncertainty as repricing has not commenced yet. In their view, an argument could be made that this is a forward-facing change as repricing has not yet commenced. In their response, they suggest that the threshold should be set to 0% until November 1<sup>st</sup> 2020 to ensure that repricing is completed within the current proposed timelines.

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## 2.2 Options 3 and 4: Amendment to Section E.3.8 of the Code

As Option 3 and Option 4 were set out in the Consultation based on variants of an option for repricing not to be carried out for a defined time period, these are dealt with together.

### Summary of Option 3

The Consultation Paper proposed that an Urgent Modification could be raised to the Trading and Settlement Code in accordance with Section B.17.16 to remove the requirement for repricing to be conducted for the period from 1 October 2018 to 11 June 2019. The rationale for such an approach would be based on the fact that for the period from 1 October 2018 to 11 June 2019, a number of defects associated with the go-live of the new market arrangements were present in the pricing calculation which would not be present under an

enduring business as usual period of market operation. The RAs proposed that such an approach would also take account of the context of the continued uncertainty for market participants associated with any further delay to repricing and the fact that a number of manifest errors were present in Imbalance Prices during this period on which trading decisions are already long made.

#### Summary of Option 4

The Consultation Paper proposed that an Urgent Modification could be raised to the Trading and Settlement Code in accordance with Section B.17.16 to amend Section E.3.8 on an enduring basis in order to require any repricing to be completed by the 13<sup>th</sup> month of the Settlement Calendar at the latest. This would have the immediate effect of SEMO not carrying out repricing for the period before M+13 resettlement commences in 2019 (i.e. for the period between 1 October 2018 and November 2019).

In future, if any repricing due to an upheld dispute or identified manifest error was not completed within the timelines specified in the Modification, the Market Operator would be required to write to the RAs setting out the reason for the delay and requesting approval not to carry out repricing for the time period in question. Based on such a change, SEMO would not carry out repricing for the period before M+13 resettlement commences in 2019 for the entire period from 1 October 2018.

The RAs noted that this change would still require the Market Operator to correct any manifest error associated with the requirement for repricing and publish the corrected Imbalance Settlement Price within 1 Working Day of making the correction as per the current drafting of Section E.3.8.2 of the TSC. However, it would provide a mechanism to account for any unanticipated market issues which may delay repricing for a longer time period, either due to a delay in correcting a manifest error or due to an issue which delays the publication of a corrected Imbalance Settlement Price past M+13.

#### Summary of Responses

Respondents' views in relation to both Option 3 and 4 are summarised here, as both options involve an Urgent Modification to the Trading and Settlement Code being raised in order for repricing not to be carried out either from 1 October 2018 to 11 June 2019 or from 1 October 2018 to October 2019 (and potentially for other exceptional periods in future under Option 4). The majority of respondents have expressed a preference for either Option 3 or 4 over Options 1 or 2, while some have suggested amended versions of Options 3 or 4.

The majority of respondents have also highlighted that their responses are premised on the basis of identifying a practical solution to the issue of repricing due to the number of manifest errors before 11 June 2019 and with the intent of business as usual processes for repricing and resettlement being in place in future. A number of respondents have requested that repricing corrections take place in a timely manner in future and in line with the TSC and that participants have certainty of their financial position as required under the TSC and that retrospective regulation is avoided by the RAs.

In their responses, SEMO, SSE Airtricity, Go Power and Bord na Mona propose a combination of Options 3 and 4 being applied.

SEMO is of the view that a distinction should be drawn between business as usual Central Market Systems operation in an established market and the period following go-live and stabilisation of the market, from 1 October 2018 to 11 June 2019. In their view, Option 3 represents a pragmatic way forward and provides certainty for market participants. Provided that the number of periods for which repricing is required post 11 June 2019 remains low, in their view it may be possible to carry out a manual set of materiality checks and repricing calculations well in advance of the M+13 resettlement timelines for these instances.

SEMO are of the view that Options 3 and 4 are intended to be considered together and not as independent options. In their view, the potential continued existence of some software issues suggests that in the short-term, the TSC may require numerous iterations of re-pricing. They state that a pragmatic approach is important to ensure price certainty and prioritisation of system issues in the short term to make way for a business-as-usual approach in the longer term. They also suggest that potentially, where repricing is not achievable by M+13 using the existing Price Materiality Threshold of 5% (as is currently the case from a Central Market System perspective), then no re-pricing should occur either (a) at all or (b) until such time as a market solution is in place in late 2020 or 2021.

In SSE Airtricity's view, a modification under Option 3 or 4, or a combination of both, is the only way to address the risk of reopening all prices, in the context of levels of system defects which would lead to multiple complex settlement reruns in the same trading periods. They are also in favour of Option 3 and 4 being applied together, if appropriate. In their view, repricing should not occur until the system is capable and has demonstrated through certification that it can deliver 5% materiality. While SSE Airtricity agrees that repricing should not be carried out before 11 June 2019 as per Option 3, SSE is concerned with how repricing will be conducted in the interim period between June 2019 and when IT systems to apply 5% materiality are implemented. In SSE's view, Option 4 creates an enduring solution and provides a longer timeframe to deliver 5% materiality. SSE highlight the fact that Option 4 is a



feature of other established market although they note that if the time window for repricing is too narrow it could be an incentive for repricing incidents to be delayed so that they time out after the 13<sup>th</sup> month.

While Option 3 is Go Power's preferred approach, in their view it only addresses the issue for the period up to 11 June 2019 and they believe an enduring solution would be to apply both Options 3 and 4 in order to achieve price certainty and for no repricing to be carried out after M+13 occurs on an enduring basis. If repricing were to result in significantly different prices, there would be no scope to bill their customers differently for the period. This could detrimentally impact on retail suppliers' businesses.

Bord na Mona supports Option 3 as it provides security for participant's financial positions to date and provides certainty that repricing will occur in the future when systems are fully developed and appropriately tested. In their view, it provides a good compromise between accuracy of data and commercial exposure for market participant. Bord na Mona also supports Option 4 as in their view it provides a more robust and transparent approach in the longer term.

In their response, Enerco Energy state that they strongly favour Option 3 as it addresses the issues they have highlighted in relation to Options 1 and 2, however they request that steps are taken to prevent such a situation reoccurring. They have significant concerns over option 4 as in their view the period between 1 October 2018 and 11 June 2019 is exceptional and must not happen again. IWEA also favour Option 3 and note their concern in relation to the repeated delays in resettling the market on time. IWEA state that it would be preferable for SEMO to deliver on the provisions of the Trading and Settlement Code in a reasonable timeframe but given the current position they are willing to accept the need for pragmatic options for progressing the issue and in this basis are in favour of Option 3, on the basis of SEMO taking steps to prevent this situation reoccurring.

In their response, Energia state that while Options 3 and 4 are not strictly in line with the TSC, there are extenuating circumstances that could justify this course of action on a one-off basis for practical purposes. These include the fact that having manifest errors present in Imbalance Prices for almost nine months is a unique situation, that the current timelines for repricing will result in uncertainty for industry over a prolonged time period, that participants are unable to forecast how repricing is likely to impact them and that the delay in repricing to date could also impact on other areas of participants' businesses. Energia's preferred option to address these issues is Option 3 as it recognises that the errors during this period are unique and should not be present under enduring and business as usual market operation. Energia's view is that an enduring amendment under Option 4 may not be the appropriate solution.

In Power NI's view, Option 3 is arguably retrospective regulation but perhaps strays more towards a regulatory approved derogation. Power NI understand why there would be support for this approach as it would provide certainty to participants and allow SEMO to focus on improving the Central Market Systems. Power NI does not support Option 4 as it facilitates the ongoing avoidance of repricing and gives no certainty to participants that errors will be corrected. In PPB's response, it is stated that while they do not support retrospective changes to the TSC, it is perhaps more arguable that Option 3 is less of a retrospective change and more of a waiver to address the fact that pricing remains incorrect more than a year after the event. A derogation from repricing for a specified period could be a pragmatic solution in these circumstances. PPB would strongly support Option 3 on the basis that it is the least obtrusive option and creates certainty. PPB note that as manifest errors have been identified after 11 June 2019, there may be some merit in the Modification under Option 3 providing some time-limited flexibility over the end date to extend the period without the need for a further Modification. PPB do not support Option 4 and do not see a need for an enduring provision as a position must be reached where there are no doubts over the Balancing Market and where repricing is only in exceptional circumstances.

In their responses, Cenergise Trading Limited and Cenergise Limited state that their preference is to apply Option 4 as they expect that further price affecting defects will be discovered and this removes the risk of a similar issue arising again. Panda Power is also in support of Option 4. Uncertainty of imbalance settlement prices represents both trading and financial risks which are of concern for Budget Energy. In order to ensure timely remedy of such errors, Budget Energy are also of the view that Option 4 is prudent.

In BGE's view, Option 3 provides certainty to market participants, but would prevent information relating to prices for trading periods between October 2018 to June 2019 being made available to the market for modelling purposes. BGE does not support Option 4 as such an exception should not be applied on an enduring basis for the market operator. BGE would support an alternative option whereby prices for October to June 2019 are repriced, but that a modification to the TSC is raised and approved which provides that these prices are not fed into any related resettlement for those months. This could potentially be implemented by an insertion into Section 6 of the TSC relating to Settlement Reruns to exclude the period for 1 October 2018 to 11 June 2019.

In ESB GT's view, Option 3 represents a retrospective change to the TSC and cannot be justified, while in their view it is not appropriate to have an enduring modification under Option 4. In their response they propose a revised version of Option 4, with a temporary Modification to be raised to Section E.3.8 via Chapter H of the TSC applicable for the period from October

2018 to October 2019, to require any repricing for this period to be completed by the 13<sup>th</sup> month of the settlement calendar at the latest.

In a confidential response, the respondent notes their concern that Options 3 and 4 have been presented as both options introduce regulatory uncertainty to the Market which may impact on investment. If repricing was not carried out for the proposed period, it could be seen to break the principle of no retrospective changes to the Code which may substantially affect investor confidence in the market. While in the short term not repricing for this period would provide financial security for participants, in the long term it will introduce significant regulatory uncertainty as the principle of no retrospective changes to the code would have been breached.

EAI does not have a single consensus opinion from its members on which of the options presented amount to the least-worst approach to repricing. In their view, the options presented have been influenced by the vendor and it would be more appropriate if the approach was defined by the demands of participants and the system operator.

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## 2.3 SEM Committee Response and Decision

The SEM Committee shares the concerns raised by participants in relation to the broader system defects which have impacted on the performance of the Central Market Systems for the initial months since go live of the new market arrangements and the delays to repricing and resettlement experienced to date. The SEM Committee's intent in this Decision Paper is to focus on the resolution of the main issue identified in the Consultation concerning the application of repricing for the period between 1 October 2018 and 11 June 2019.

The SEM Committee is also of the view that regardless of the outcome of this Consultation, the issues concerning SEMO's compliance with Section E.3.8 of the TSC need to be addressed as a priority. The requirement in the Code is clear in that if the Market Operator identifies a manifest error in a published Imbalance Settlement Price, the Market Operator is required to correct the manifest error either within 5 Working Days of its publication or as part of the resolution of a Pricing Dispute. Once a manifest error is corrected, SEMO is required under the Code to publish a corrected Imbalance Settlement Price within 1 Working Day of making the correction.

## Options 1 and 2

The SEM Committee notes that broadly, sixteen of seventeen respondents to this Consultation are not in favour of Options 1 or 2. A number of important issues have been raised by respondents concerning;

1. The risk of errors arising in repricing if a 5% Price Materiality Threshold is applied manually by SEMO for the period between 1 October 2018 and 11 June 2019.
2. The timelines associated with repricing under both options which would see repricing being completed a number of months later than the timelines which are envisaged in the TSC. No firm timeline is clear to the SEM Committee under either Option 1 or 2 at this point.
3. The impact of repricing the majority of Imbalance Pricing Periods (5-minute prices) and Imbalance Settlement Periods (30-minute prices) for the first nine months of the new market, which is not in line with the intention of the market design whereby prices should prompt commercial decision making from participants and act as a reference price for forwards trading<sup>4</sup>. A number of respondents have argued that commercial trading decisions were made based on prices at the time and participants' approach to risk may have been different based on different price signals at the time.
4. That there is currently no visibility for participants on the potential outcome of repricing and how it will impact them financially.
5. The broader financial impact for the market if repricing were to occur many months after the fact in terms of investor certainty, financial reporting and the calculation of the PSO levy.
6. Where repricing for this period is carried out, the potential for introduction of additional RO price events for an unknown number of periods in the past which participants would have no ability to manage.
7. The risk that Option 2 would represent a retrospective change to the TSC, as the Price Materiality Threshold is intended as a forward-looking parameter.

It is the SEM Committee's view that each of these points provides a compelling argument as to why it is not practical or in line with the objectives of the TSC to facilitate the efficient,

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<sup>4</sup> For example, SEM-14-085a on the SEM High Level Design stated that; '*Although participation in the Day Ahead Market will not be universally mandated, the SEM Committee expects there to be a very high level of liquidity in that market. Indeed, the HLD of the I-SEM has been chosen to promote liquid and transparent trading arrangements accessible by market participants of all technologies and sizes. Transparency of data will facilitate competition enabling participants and interested stakeholders to understand the price formation process and relevant market signals.*'

economic and coordinated operation, administration and development of the Single Electricity Market in a financially secure manner to implement either Option 1 or 2.

The SEM Committee is concerned with the points raised by a number of participants in terms of the broader impact of repricing for the first nine months of the market on financial certainty and the unintended consequences this could have including the potential for additional RO events, the calculation of the PSO levy and broader investment signals.

It is the SEM Committee's view that the provisions for repricing which are outlined in the TSC did not envisage the situation which has arisen between 1 October 2018 and 11 June 2019. Section E.3.8 was drafted with the intention that repricing would be limited and capable of being carried out quickly after the error was confirmed in order to align with resettlement and the broader market design.

### Options 3 and 4

In terms of the responses received to Options 3 and 4, the majority of respondents support either the implementation of Option 3 by itself or in tandem with Option 4. Following consideration of the responses received, the SEM Committee is not convinced that Option 4 is appropriate as the key arguments which have been raised point to a number of issues in repricing the period from 1 October 2018 to 11 June 2019 in particular. The SEM Committee is also not convinced that an enduring amendment to the Code is necessary and as expressed above it is imperative that SEMO is incentivised to resolve these issues and to fully comply with Section E.3.8 the Code as a matter of urgency.

The SEM Committee notes the concerns raised by respondents that if only Option 3 is implemented, there may be a risk that further manifest errors arise which delay any repricing required from 11 June onward and lead to further unmanageable levels of repricing for SEMO. On the basis of these concerns, and irrespective of the implementation of an IT solution that can apply non-zero materiality automatically as part of the repricing process in Q4 2020, the SEM Committee expects that following publication of this Decision Paper:

- SEMO will work to achieve a position where it can comply with the timelines specified in the TSC in order to ensure that such a situation will not arise again; and
- SEMO shall provide monthly updates in writing to the RAs from 1 January 2019 on the number of manifest errors outstanding in pricing, the number of periods in the month due to be repriced and the expected resolution timeline for each manifest error. If it is expected that corrected Imbalance Settlement Prices will not be published within 1 Working Day of making the correction to the manifest error, the reason for this must be outlined by SEMO and a timetable should be provided of

when this will be achieved. SEMO should also indicate the likely impact of the change on prices where possible; and

- the RAs may consider publishing this information on a quarterly basis in order to provide greater transparency to market participants until SEMO's enduring repricing solution is implemented.

The SEM Committee's view, based on further consideration and a review of the responses received, is that not carrying out any repricing for the period 1 October 2018 to 11 June 2019 is the most appropriate way forward. In particular this acknowledges the context and importance of the seven issues highlighted by respondents which mean that repricing before 11 June 2019 is not practical and would detrimentally impact the market. The following paragraphs outline the SEM Committee's Decision in terms of implementation of Option 3.

The Consultation Paper suggested that in order to give effect to Option 3, an Urgent Modification could be raised to Section E.3.8.1 of the Code in order to remove the requirement for to the Market Operator to publish corrected Imbalance Settlement Prices for the period between 1 October 2018 to 11 June 2019. As currently drafted, this Section of the Code states;

*'E.3.8.1 If the Market Operator identifies a manifest error in a published Imbalance Settlement Price:*

- (a) within 5 Working Days of its publication (whether or not as a result of a Settlement Query or a Pricing Dispute); or*
- (b) as part of the resolution of a Pricing Dispute as per paragraph B.19.2.2 (a) the Market Operator shall correct the manifest error and shall publish the corrected Imbalance Settlement Price as soon as possible and within 1 Working Day of making the correction.'*

Some respondents have raised a concern in relation to the approach presented for the implementation of Option 3 being incompatible with Section B.17.24 of the TSC, which states;

*'For the avoidance of doubt, a Modification shall have effect as and from the date specified by the Regulatory Authorities or, where applicable, the Modifications Committee and in no event shall that date be earlier than the date on which the Modification is approved by the Regulatory Authorities, or, where applicable, the Modifications Committee. Under no circumstances shall Modifications have retrospective effect.'*

Section B.17.24 does not explicitly account for such an issue (i.e. where it is proposed that a modification is raised on an exceptional basis for a specific time period, as opposed to a rule change which applies to prior trading days). The drafting of the Code in terms of publication of corrected Imbalance Settlement Prices for a period did not contemplate the current situation in terms of the volume of corrections required and the unmanageable delays which have impacted on timelines for repricing. The SEM Committee's Decision is based on the balance of these issues and the SEM Committee's role in promoting effective competition for the sale and purchase of electricity in the SEM.

The SEM Committee acknowledges the concerns raised in terms of regulatory certainty for any future modifications to the Code. It is important to note that the period in question is being treated as separate to the business-as-usual operation of the market and in the SEM Committee's view represents an unprecedented situation which it does not expect to arise again under the current market arrangements. As such, the SEM Committee's Decision is based on a particular set of circumstances which cannot be allowed to occur again. The SEM Committee considers that regulatory certainty both in the long and short term is important and that allowing the current situation to progress without any intervention until at least Q4 2020 would affect both.

Based on these considerations, the SEM Committee has decided to give effect to Option 3 through an Urgent Modification to the Trading and Settlement Code which would temporarily amend Section B.14 of the Code (via an amendment to Section H 'Interim Arrangements') in order to allow for the Market Operator to seek a temporary derogation in respect of a specific obligation under Section E.3 of the Code from the RAs. This interim provision would be placed in Section H of the Code until 1 January 2021.

Such a derogation would only be granted if a number of requirements are met and if deemed appropriate by the RAs. The intention of this Modification is to allow for resolution of this issue through a narrowly framed and time limited derogation mechanism targeted at the current situation, while providing regulatory certainty to market participants around the market rules.

In any request for derogation from an obligation under Section E.3 of the Code (within which Section E.3.8.1 relates to the obligation for repricing), SEMO would be required to write to the RAs to seek a derogation in respect of any obligation(s) placed on it under Section E.3 of the Code where it:

- (a) has been, is or reasonably expects to be unable to meet such obligation(s) under the Code; and

(b) can show that meeting such obligation(s) would place an undue burden on its operations and

in each case, can show that compliance with such obligation(s) would have a material detrimental impact on the achievement of the Code Objectives.

An Urgent Modification has been drafted by the RAs and will be submitted to the Modifications Committee Secretariat in line with Section B.17.6 of the Code following publication of this Decision Paper. The SEM Committee's decision on this matter is summarised below.

**SEM Committee Decision:** The SEM Committee has decided to give effect to Option 3 through implementing an Urgent Modification to the Trading and Settlement Code.

This Modification will be narrowly framed and targeted at the current situation and will be raised to temporarily amend Section B.14 of the Code (via an amendment to Section H 'Interim Arrangements') in order to allow for the Market Operator to seek a derogation in respect of a specific obligation under Section E.3 of the Code from the RAs for a limited time period.

This interim provision would be placed in Section H of the Code until 1 January 2021.

In the case of repricing, if SEMO applied for and was granted a derogation from its obligation to publish corrected Imbalance Settlement Prices under Section E.3.8.1 between 1 October 2018 and 11 June 2019, this would have the effect of repricing no longer being required under the Code for this period.



### 3. Next Steps

Following this Decision, an Urgent Modification will be raised by the RAs as described in Section 2.3. Once this Modification becomes effective and subject to SEMO making a satisfactory application for, and being granted, temporary relief from its obligation under Section E.3.8.1 of the Code, repricing will not be carried out between 1 October 2018 and 11 June 2019.

SEMO will be required to report to the RAs on a monthly basis from 1 January on;

1. The number of manifest errors outstanding in pricing
2. The number of periods in the month due to be repriced
3. The expected resolution timeline for each manifest error.

In order to ensure that a similar issue does not arise until the enduring solution for repricing is implemented by SEMO, the SEM Committee will closely monitor progress towards implementing this change by Q4 2020 at the latest.