



**Integrated Single Electricity Market
(I-SEM)**

**Energy Trading Arrangements
Trading and Settlement Code Amendments**

Decision Paper

SEM-17-024

12 April 2017

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EXECUTIVE SUMMARY

In September 2015, the SEM Committee published a number of papers setting out the detailed design of the energy trading arrangements (ETA) for the I-SEM. Since then, the Regulatory Authorities (RAs), working in conjunction with SEMO as per the decision on Roles and Responsibilities (SEM-15-077¹), have translated these decisions into legal drafting of the market rules via a Market Rules Working Group (MRWG) process. The output of the MRWG process was a set of proposed amendments to the Trading and Settlement Code (the TSC) comprising two new Parts of the Code and associated Glossary, Appendices and Agreed Procedures (the TSC Amendments). A consultation on the TSC Amendments was published on 15 November 2016, with a closing date for responses of 24 January 2017. Twenty four responses on the TSC Amendments were received.

This paper sets out the SEM Committee's response to the issues which were raised in the consultation paper and in respondents' comments. The paper has three main elements. First, it summarises the rules development process which led to the TSC Amendments. Second, it sets out the main issues raised by participants in their responses grouped thematically. Third, it sets out the SEM Committee decision on the TSC Amendments and sets out the next steps.

The changes to implement the I-SEM design include wide-ranging changes to the existing TSC. In addition to removing references to, or requirements relating to, trading in the gross mandatory pool, the TSC Amendments include extensive new provisions relating to:

- the creation of a balancing market and the associated methodology for the calculation of a single imbalance price;
- a range of changes to reflect the new role of ex-ante markets operated by NEMOs that must themselves be party to the TSC; and
- provisions to give effect to the settlement of Capacity Market payments.

While the TSC Amendments constitute a fundamental change to key parts of the current TSC, for significant parts of the Code the substance is very similar to the current TSC although drafting changes consequential to the move to I-SEM have been made.

Given the significant changes being made to the energy trading arrangements there has been an understandable desire from stakeholders for clarity on how the market rules will operate in practice. In particular, participants have emphasised the need for greater transparency of inputs to, and processes around, the calculation of the single imbalance price and the need for more detailed, and

¹ <https://www.semcommittee.com/publication/sem-15-077-i-sem-roles-and-responsibilities-decision>

closer to real-time, publication of market and TSO data. Concerns relating to the management of commercial risks under the new energy trading arrangements have also resulted in requests for changes to be made to the imbalance pricing methodology, variously to both dampen and amplify trading signals, and for the TSC to facilitate aggregation in ex-ante markets.

The Regulatory Authorities have engaged in detail with the SEMO and the TSOs to ensure that transparency of the imbalance pricing methodology, and more broadly of market and system data, is fit for purpose and meets the reasonable needs and concerns of participants. Changes have been made to the consultation version of the TSC Amendments in order to address these concerns and to ensure that market participants will be provided with comprehensive information and data flows on system conditions, such as up-to-date wind forecasts and detail on the operation of the imbalance price methodology. A transparent methodology for imbalance pricing will benefit market participants. The SEM Committee will keep prices under review after the energy market begins operations. The SEM Committee notes that two key inputs to the methodology, the Price Average Referencing (PAR) and the De minimis Acceptance Threshold (DMAT), are to be consulted upon in the coming months, as part of the ETA parameters consultation.

In respect of aggregation in ex-ante markets, the SEM Committee has considered the issues raised in detail and is content that there are no barriers to aggregation in ex-ante markets created by the TSC Amendments

As part of this decision document, the SEM Committee is also publishing an accompanying spreadsheet containing the detailed pro forma comments from participants, which cover a wide range of issues across all Chapters and associated documents, the associated SEM Committee responses, and the final TSC Amendments.

This decision on the TSC Amendments will be given effect under the relevant secondary legislation in Ireland by the Commission for Energy Regulation (under Statutory Instrument No. 117 of 2017) and in Northern Ireland by the Northern Ireland Authority for Utility Regulation under Condition 15 of the SONI Market Operator Licence once the change to that licence condition is in effect. These decisions are expected to come into effect on 23 May 2017. This will allow the market a full year with the amended Trading and Settlement Code in force prior to I-SEM go-live.

1. INTRODUCTION

The SEM Committee published a consultation paper on 15 November 2016, which included a draft of the amendments proposed to be made to the Trading and Settlement Code (TSC) for the implementation of I-SEM, scheduled for go-live on 23 May 2018. The consultation closed on 24 January 2017. The SEM Committee would like to thank respondents for the comments they submitted. Twenty-four responses were received, and this paper sets out the SEM Committee's thinking and decisions on a range of issues which were raised in the consultation paper and in respondents' comments. While the paper has more than ten sections, the paper has three key elements. First, the paper summarises the rules development process to date. Second, the paper sets out the main issues raised by participants in their responses grouped thematically, and sets out the SEM Committee responses to the comments received. Third, the paper sets out the SEM Committee decision on the TSC Amendments and the Next Steps.

Annex A is a list of the respondents to the consultation; Appendix A contains a spreadsheet which collates all of the comments submitted by respondents to the consultation in the consultation pro-forma as well as the SEM Committee response to each comment; Appendix B is a paper prepared by SEMO in conjunction with the TSOs on Transparency of Imbalance Pricing Process; and Appendix C contains Parts B and C (and associated documents) of the amended TSC (the "TSC Amendments") that the SEM Committee has approved for designation.

2. BACKGROUND

2.1 POLICY DECISIONS

The European Union (EU) is implementing an internal market for electricity which is underpinned by the implementation of the European Electricity Target Model (EU Target Model) arising from the EU's Third Energy Package. The EU Target Model is a set of harmonised arrangements for the cross-border trading of wholesale energy and balancing services across EU Member States. In order to take advantage of the opportunities offered by these cross-border trading arrangements the SEM trading arrangements are being changed. There is no fixed model for the pan-European electricity market, and the planned changes are aligned to the particular circumstances and needs of both jurisdictions while meeting the guidelines under which the EU Target Model operates. It is within this context that the SEM Committee committed to implementing the Integrated Single Electricity Market (I-SEM).

The process of developing the I-SEM began in July 2011 when the SEM Committee requested that the Regulatory Authorities (RAs)² lead a team for the market integration project involving the TSOs and the SEMO. Central to this has been the development of the I-SEM Trading and Settlement Code (TSC) which will be given effect on 23 May 2017, 12 months before I-SEM Go-Live, scheduled for 23 May 2018, and replacing the current Single Electricity Market (SEM) arrangements when it does so. The process of developing the I-SEM Trading arrangements, through amending the TSC, has been both lengthy and comprehensive. The main steps of the process are outlined below.

Following extensive public consultation from 2011 to 2014, the SEM Committee published its Decision Paper on the High Level Design (HLD) for the I-SEM (SEM-14-085a) in September 2014. Within the HLD Decision and in keeping with its statutory objectives, the SEM Committee sought to maximise benefits for consumers in both the short and the long term, while also ensuring security of supply and meeting relevant environmental requirements.

Subsequent to the publication of the HLD, work commenced on the detailed market design, and the project to develop the market rules and systems needed for go-live. The detailed design and implementation phase included the development of detailed market rules, implementation of central systems and services by the Transmission System Operators (TSOs (EirGrid and SONI)), and a range of further activities to ensure market readiness.

² The Regulatory Authorities refers to the Utility Regulator in Northern Ireland, and the Commission for Energy Regulation (CER) in Ireland

Following public consultation, three decision papers on the detailed design of the Energy Trading Arrangements (ETA) were published in September 2015. These three papers were as follows:

- I-SEM Aggregator of Last Resort Decision Paper (SEM-15-063);
- I-SEM ETA Markets Building Blocks Decision Paper (SEM-15-064); and
- I-SEM ETA Markets Decision Paper (SEM-15-065).

These decision papers set out the detailed design of many key aspects of the I-SEM, particularly in relation to the operation of the Balancing Market, as well as the detailed design for imbalance settlement.

The payment and charges rules for the Capacity Remuneration Mechanism (CRM) were outlined in the following decision papers:

- Capacity Remuneration Mechanism Detailed Design Decision 1 (SEM-15-103);
- Capacity Remuneration Mechanism Detailed Design Decision 2 (SEM-16-022); and
- Capacity Remuneration Mechanism Detailed Design Decision 3 (SEM-16-039).

These detailed design decisions formed the basis of the work undertaken to develop the detailed market rules to implement the energy and capacity markets. The Market Rules Working Group was established in order to develop this set of detailed market rules.

2.2 THE MARKET RULES WORKING GROUP

SEMO and the TSOs established the Market Rules Working Group (MRWG) to effect the SEM Committee's decision. The MRWG was administered by SEMO and the TSOs, with a chairperson provided by the RAs at each meeting. The remit of the Working Group was to draft the rules to implement policy decisions already taken by the SEM Committee and to identify any areas of inconsistency or uncertainty within or across these policy decisions and, where required, to formulate possible solutions.

The first meeting of the I-SEM Market Rules Working Group was held in October 2015. Subsequent meetings were held every five to six weeks thereafter, with the location of the meetings alternating between Belfast and Dublin. A total of 13 Working Group meetings (some spanning two days) were held in order to support SEMO and the TSOs in the development of draft text for the key amendments to the Trading and Settlement Code required to implement the I-SEM arrangements.

The development of the TSC Amendments went through a multi-stage process in which topics were developed, issues were identified, discussed and resolved, and legal drafting of the draft TSC Amendments was completed. While some sections of the TSC Amendments went straight to proposed legal drafting stage, the majority of areas were progressed through the following stages, or iterations thereof:

- The development of design proposal/position papers in relation to the detailed implementation of the SEM Committee decisions;
- The drafting of rules sections in initial Plain-English versions (PEVs) where required;
- The drafting of updated PEVs;
- The full initial legal drafting of rules sections, building on and developing the PEVs; and
- The finalised proposed legal drafting of rules sections.

The initial design proposal/position papers were developed by representatives of SEMO, the TSOs and the RAs.

While some of the more administrative sections of the rules proceeded directly to legal drafting, generally the rules were developed through a progression of the “Plain-English” explanatory papers, eliciting feedback on the principles and concepts, prior to developing and discussing legal drafts of the rules. These PEVs were circulated to Working Group members two weeks before the relevant meeting for their review and to aid their preparation for each meeting. After discussion at the relevant MRWG meeting, Working Group members had another week to submit any comments and feedback on the Plain-English versions. The Project Team then developed a revised Plain-English draft, incorporating, as appropriate, comments and feedback, and the same process was followed for a second, updated PEV.

When the PEV for a specified rules section was finalised, it was then used as the basis for the development of the initial legal drafting of the rules for the relevant section of the amended Trading and Settlement Code. This initial legal drafting was circulated to Working Group members two weeks prior to the Working Group meeting for their review and to aid their preparation. After discussion at the meeting, members again had another week to submit formal comments and feedback. In order to respond to issues and queries raised at the MRWG meetings or in written submissions, there were additional materials produced and presented, and a number of re-drafts of papers and legal versions of rules. A final legal draft was then developed, incorporating comments and feedback, and the same process was followed for circulation, discussion and feedback.

As finalised legal drafts of individual rules sections were completed they were incorporated into a consolidated version of the TSC Amendments which was updated and circulated to the Working Group for discussion in its later meetings. This multi-stage process under which proposed rules were developed required considerable input from both the Project Team and participants, whose input has contributed significantly to the TSC Amendments. The SEM Committee wishes to extend its thanks to all those involved for their constructive input in progressing the code drafting within the Market Rules Working Group framework.

During the Working Group process an Issues Log capturing observations, comments and queries from Working Group Members, covering both the Trading and Settlement Code and the Capacity Market Code, was maintained. The Issues Log was updated and circulated to the Market Rules Working Group periodically, with issues closed after resolution. All issues raised by participants prior to the consultation were considered before finalising the TSC Amendments that were consulted upon. The final Issues Log comments with responses was circulated a final version on 11 January 2017, by which stage 1,692 comments had been raised and responded to.

The consolidated TSC Amendments were published for consultation by the SEM Committee on 24 November 2016.

2.3 THE I-SEM TSC CONSULTATION PROCESS

The consultation on the TSC Amendments which was issued by the SEM Committee on 15 November 2016 gave all market participants and interested parties the opportunity to carry out their own detailed review of the consolidated provisions of the proposed amendments to the TSC, including the main Chapters of the Code, its Appendices and its Agreed Procedures. In parallel, the SEM Committee consulted on Supplier Charging proposals (SEM-16-060), so that stakeholders were fully aware of the issues being consulted on in each of these processes.

In the consultation paper the SEM Committee highlighted the extensive consultation undertaken on both the HLD and Detailed Design decisions, noting that the legal drafting in the TSC Amendments, as consulted on, was designed to implement the policy decisions that were made as part of the HLD and the Detailed Design Decisions. Consequently, the SEM Committee requested that respondents to the consultation focussed on the detail of the drafting, suggesting amendments where necessary, rather than re-visiting the design decisions that are captured in the drafting. The SEM Committee further noted that the TSC Amendments consulted on had been developed through the MRWG, as described in Section 2.2, above, and that it would be cognisant of this process when reaching its decisions on proposed amendments to the Code. The Consultation paper highlighted the areas of the Code that contained limited changes required to align the existing TSC with the I-SEM requirements. Where Chapters of the Code were substantially new as a consequence of the differences between SEM and I-SEM designs, these were briefly explained.

To facilitate the assessment of responses to the Consultation the SEM Committee requested that detailed comments were set out the pro-forma document provided. The consultation period closed on 24 January 2017, the original closing date having been extended by two weeks.

The SEM Committee received 24 responses to the consultation. Respondents variously submitted narrative comments, pro-forma comments, or a combination of the two. The scope of responses included:

- the identification of cross referencing errors;
- suggested changes to the drafting (both minor and more substantive) consistent with the detailed design decision;
- comment that the TSC drafting did not align to the High Level Design or the Detailed Design Decision;
- comment on suggested changes to the detailed design decisions; and,
- comment on process and implementation issues, including the robustness and timescales associated with the MRWG process, and questions of prototyping and testing.

The summary of points raised, set out in Sections 3 to 10, is intended to capture the main areas of comment made by respondents, and does not purport to reflect every individual comment. Where a specific comment was not addressed in detail in this decision paper, the SEM Committee assures all respondents that each of the individual comments made was subject to review and consideration. Appendix A of this decision paper provides responses to each comment submitted via the pro-forma. These set out how the comment has been actioned (i.e. change made as suggested, no change made or an alternative change made) and the reason for the decision. Where a particular issue was raised by multiple respondents, either a general response is provided via this Decision Paper or SEM Committee responses in the pro-forma are cross-referenced. This spreadsheet is published as an Appendix to this decision.

The SEM Committee response to the main areas of comment is also set out in Sections 3 to 10. These sections include:

- responses to a number of recurring themes made in submissions;
- responses to specific comments that led to a change being made or where the SEM Committee wishes to provide further explanation of its reasoning; and,
- responses to points raised outside of the direct scope of the TSC Amendment drafting, for example comments relating to process.

Sections 3 to 10 are intended to provide more insight into such points and set out the SEM Committee's consideration of such comments. Consequentially, it is not necessarily the case that every respondent's comment reflected in these Sections gives rise to a specific response, for example where the comment is addressed via the comments spreadsheet.

In addition to changes to the TSC Amendments arising from the responses to this consultation, further changes to the TSC Amendments have been made by the SEM Committee to correct drafting errors where such corrections do not change the meaning of the TSC, or to ensure the robustness of the legal drafting where the meaning is clearly understood. These changes can be seen in the track-changed version of the TSC that is published in conjunction with this decision paper.

Comments were received from several respondents outside the pro-forma template. These comments are summarised in Sections 3 to 10 and grouped according to the major themes of process, imbalance pricing, aggregation, capacity, credit, data publication and submission, governance and transitional arrangements, and general TSC Amendments.

3. TSC AMENDMENTS PROCESS

In its TSC Amendments consultation paper (SEM-16-075) the SEM Committee requested that comments focused on the detail in the Code and a vast majority of comments took this approach and suggested specific changes to the Code.

A limited number of respondents commented on the TSC Amendment process. The main areas of comment related to:

- the process followed by the working groups, in particular but not solely the MRWG;
- the complexity of the rules and aspects of the market design; and,
- concerns regarding the prototyping and testing of aspects of the market design.

3.1 WORKING GROUP PROCESS

Comments Received

A majority of responses did not comment on the process followed in developing the rules. However, of those who did respond, several respondents commented positively on the Working Group process and the work that had been done translating the detailed design into the TSC Amendments being consulted upon, and commended the approach taken by the RAs. These respondents variously commented that the MRWG process had allowed points they raised during the process to be considered, addressed and incorporated in the Amended TSC, and that the Amended TSC represented a fair reflection of the decisions agreed in respect of the Balancing Market design.

In narrative comments submitted in addition to detailed pro-forma comments, two respondents submitted detailed comments on the process by which the TSC Amendments were developed, and aspects of the design. These respondents stated that the MRWG failed to follow its Terms of Reference and that the rules development did not follow a logical sequencing, i.e. the proposed approach of developing the documentation in a sequential basis, developing Plain English documentation against which the legal drafting could be correlated, was not adhered to. These respondents also questioned whether the current draft TSC could therefore be verified to be fully aligned with the Plain English documentation and suggested that it was thus virtually impossible to assess whether the drafting has delivered the intent. These same respondents also considered that participant engagement with the MRWG was constrained, and that consideration of the intent and

drafting of the various sections of the TSC, particularly in relation to pricing and settlement, did not occur to the extent that they expected. As a consequence they are of the view that the proposed TSC is not as robustly defined as it should be or would have been, had appropriate time and resources been available to provide more thorough challenge. A third respondent addressed a number of these issues, in more general terms.

The same respondents expressed concerns that vague policy decisions in important areas allowed significant scope for interpretation. They further, considered that, as the TSC Amendments were being drafted by the TSOs, with oversight by the RAs, this gave rise to potential conflicts of interest that were not obviously managed.

Respondents also commented that the TSC Amendments were incomplete, notably some of the settlement algebra was not finalised. It was suggested that such sections, once completed, should be subject to further consultation.

SEM Committee Response

The SEM Committee acknowledges the range of comments provided concerning the process to draft the TSC Amendments, and notes that of those respondents that commented more expressed positive views on the process than criticisms.

The Market Rules Working Group Terms of Reference were presented to, and developed in response to industry feedback in late 2015. They set out the process to be followed in developing the I-SEM rules, specifically the sequential development of the TSC Amendments from Position Papers (where required) to an outline of the content of each section, Plain English Versions (PEVs) and finally proposed Legal Drafting papers. The Terms of Reference also set out timelines for the issuing of papers that were to be circulated two weeks in advance of the relevant MRWG, and timelines for the submission of comments after each MRWG. Participant comments were captured in the Issues Log for response. The Issues Log set out the Project Team's response on how these comments were taken forward, or reasons why proposed changes would not be adopted in the next stage of the rules development.

The SEM Committee considers that the MRWG Terms of Reference provided participants with an understanding of the process that the rules development would follow, notably the timelines for meetings, the publication of material in advance of meetings and the timescales for providing feedback on issues. Regarding adherence to the Terms of Reference for the MRWG, the SEM Committee wishes to be clear that these were not specified in an SEM Committee decision, and thus should not be interpreted as having commensurate status to, for example, the Terms of Reference for the development of the Balancing Market Principles Statement that was specified by the SEM Committee in SEM-16-058. While there were divergences from the process and timelines set out,

the SEM Committee considers that rather than demonstrating failings in the process these instead highlight some of its strengths, as the amount of time that some items were afforded for consideration due to the complexity of the issue was considerably longer than that set out in the Terms of Reference. For example, the MRWG spent at least three more working group cycles on imbalance pricing issues than originally envisaged. The SEM Committee considers that this flexibility of approach, and responsiveness of the project team to addressing issues that were encountered in developing that aspect of the TSC with the MRWG was central to arrive at a solution that had broad agreement and understanding at the time the TSC Amendments went out to consultation.

Regarding the comments that the PEVs were not updated, the SEM Committee agrees that some aspects of the I-SEM rules evolved significantly after the final PEV had been presented. The development of the TSC Amendments was incremental, and once the PEV stage was completed and the legal drafting commenced, then the PEVs were not updated. In some sections of the draft TSC Amendments, and the section on Imbalance Pricing is a notable example of this, there were significant changes made to the approach between the final PEV and the draft TSC Amendments that have been consulted on. The SEM Committee considers that the intent of the MRWG process was to provide for a sequential and progressive development of the TSC Amendments. Consequently, issues were identified and refined through various stages, rather than iterative. The PEVs, which have no legal status, were intended to be stepping stones in this process, allowing concepts to be discussed with participants at the MRWG. On-going changes to the legal drafts of the TSC Amendments were presented to MRWG and were reflective of the thinking of the RAs, TSOs, SEMO and participants. Consequently, the SEM Committee does not consider that the on-going update of PEVs was intended, necessary, or would have been an effective use of Project Team resources. Significant volumes of new and complex material was developed in challenging timescales, and the SEM Committee notes the considerable efforts made by the RAs, TSOs, SEMO and market participants in advancing the I-SEM TSC's development during the MRWG process. The SEM Committee considers, particularly given the extensive debate that has taken place at the MRWG on these issues, that market participants have sufficient understanding of the content of the TSC Amendments in order to understand the intent of the drafting and make appropriate comments on the proposed TSC Amendments during the consultation period. The SEM Committee considers that, in the light of consultation responses, this view is shared by a majority of the organisations that commented on this matter.

The SEM Committee notes the comments saying that vague high-level policy decisions had given rise to considerable scope for interpretation in how the TSC Amendments were drafted. The SEM Committee is clear that the HLD and Detailed Design were the starting point for the implementation phase and notes that it was recognised that key aspects of the design required further development in the implementation phase of the project. As noted above, MRWG involvement (by participants) was an important aspect of this development process. The RAs have been cognisant of the need to ensure alignment of the TSC Amendment with the detailed design. The SEM Committee considers

that this has been achieved and that the detailed design has been satisfactorily implemented, and notes that the RAs and participants provided on-going checks during the process in this regard.

The SEM Committee does not agree with the comment that there was too little meaningful discussion at the MRWG, and that debate was constrained, although it does acknowledge that the workload faced to meet the project deadlines posed challenges to all involved.

Participants previously raised these concerns during the discussions preceding the publication of the SEM Committee Stocktaking Report. Commenting on these matters, ESP stated that *“the design was developed in consultation with industry, who have been part of the Rules Working Groups scrutinising the design – albeit recent workload of the Rules Working Groups has inevitably impacted the level of scrutiny of rules by participants, and hence the level of comfort that can be derived from this process.”*³ The SEM Committee accepts the comment by participants that the workload faced by them was considerable. However, as ESP noted, *“no assurance effort will absolutely guarantee the detection with all issues of the design. Increasing the time and money spent on assurance will find more issues, but does suffer from the law of diminishing returns”*⁴. The SEM Committee considers that progressing the MRWG work plan in line with the set out work schedule required a balance of progressing the work plan and providing sufficient participant input and scrutiny. As part of this process, the MRWG meetings had clear objectives to present the necessary TSC Amendments, and provide explanation for the drafting, and respond to participant questions. The SEM Committee considers that, on balance, over the course of the process this balance was struck. The MRWG process, while challenging, allowed reasonable time to review and prepare for meetings, for discussion to occur at the meetings themselves, and for feedback of comments afterwards, and that this conclusion is supported by the overall ESP Stocktake Report.

The SEM Committee notes the comment that the TSOs’ leading role in drafting gave rise to possible conflicts of interest. The SEM Committee considers that it was appropriate and necessary that SEMO and the TSOs had a central role in developing the Code as the primary expertise and resources to deliver the project resided there and there were also synergies with the design and procurement of the systems to implement I-SEM. The RAs, in both their input to and oversight of the Code development and in formulating their decision on the TSC Amendments, have been cognisant of potential conflicts of interest, and are confident that no undue commercial advantage arises to Eirgrid as TSO, or asset owner, or SEMO, as a consequence of the I-SEM rules. The SEM Committee would like to clarify that while the TSOs and SEMO were involved in drafting the TSC Amendments, the SEM Committee is responsible for the final review and approval of the TSC, taking into account its statutory objectives.

³ ESP Stocktaking Report S4.3 page 24

⁴ ESP Stocktaking Report S4.3 page 24

The SEM Committee notes the comments that some sections of the draft TSC Amendments were incomplete in the version published with the Consultation Paper and that these should be separately consulted on. The SEM Committee does not accept this comment. The SEM Committee clearly identified in both the consultation on the Supplier Charges (SEM-16-060) and in the consultation on the TSC Amendments published in November 2017, that these processes were operating in parallel. The TSC Amendments reflect the SEM Committee decision on Supplier Charging (SEM-17-010). The SEM Committee does not consider that further consultation on these matters is required.

3.2 COMPLEXITY AND DESIGN INTERPRETATION

Comments Received

The participants that expressed concern about the MRWG process also commented that the market design was more complex than necessary, and that the consequent algebraic complexity of the rules will make commercial outcomes difficult to predict. The interaction of the Balancing Market (BM) and Intraday Market (IDM) when there is an early acceptance of a generator's offer/bid in the BM was cited as an example. It was argued that the mixed reference pricing of reliability options adds further complexity. One participant also expressed that the interaction of the forwards market and capacity market with the energy trading arrangements had not been considered holistically, in part because of delays in these workstreams.

Some respondents suggested that the complexity of the detailed design or the way in which it was interpreted could give rise to unintended consequences, with examples cited being the approach to Imbalance Pricing and the calculation of five minute prices. However, it was also recognised that some changes made to the Imbalance Pricing approach through the MRWG process reflected participant concerns, for example the adoption of NIV tagging.

SEM Committee Response

Regarding the comments that there was no holistic approach to the development of the trading arrangements, specifically between the Energy Trading Arrangements and the capacity market and forwards market arrangements, the SEM Committee notes participant concerns. However, the SEM Committee disagrees and is of the view that all aspects of the market design have been considered together and are internally consistent. Moreover the project teams drafting the TSC and the Capacity Market Code (CMC) worked closely together and the MRWG was used as a forum for consultation on the development of both the TSC and CMC. The SEM Committee also notes that the independent ESP Stocktake Report, which covered the I-SEM as a whole and not just the matters covered by the TSC, finished with a conclusion that, having considered concerns regarding the overall design of the I-SEM ".....the design of the I-SEM is sound. We note, however, there is concern from participants over

some areas of the new market. In most cases, participants acknowledged this as nervousness relating to the transition to a new market". Further, the ESP Stocktaking Report clearly stated in regard to the market design that, "The SEM and I-SEM governance already included independent scrutiny of the market design."⁵

Regarding the comments made that the market rules are excessively complex and unorthodox, the SEM Committee considers that the main elements of the design that have been cited as examples of this view have been known since the detailed design decisions were made, before the MRWG commenced work. For example, the Detailed Design included the parallel opening of the IDM and the BM, the use of both simple and complex bids in the BM, and the use of open dispatch instructions all of which have been identified by respondents as areas of undue complexity in the I-SEM. The SEM Committee accepts that some aspects of the design are complex, but considers that the TSC reflects the Detailed Design and these design choices were made by SEM Committee and decided upon at the time of that decision.

The SEM Committee does recognise that some aspects of the TSC Amendments were only developed during the MRWG process, and that some participants consider some aspects of the drafting in these areas as unduly complex. One example cited was the use of a five minute pricing period in the calculation of imbalance prices. The SEM Committee considers that the approach taken was not inconsistent with the Detailed Design Decision, and has set out more detail on the rationale for the approach taken to setting the Imbalance Pricing Period (IPP) in Section 4.2.

The SEM Committee recognises the need for further information to be made available to participants to allow them to develop their own systems, particularly in respect to complex areas of the Code. In particular the SEM Committee understands that participants have faced difficulties in developing their own systems that can replicate the use of open dispatch instruction.

The SEM Committee notes the difficulties which some participants advise they are encountering with their system vendors in understanding the more complex areas of the Code and in translating those more complex rules into system requirements and system designs. In particular, the SEM Committee understands that participants have faced difficulties in developing their own systems that can replicate the use of open dispatch instructions. It has therefore investigated with SEMO what further information can be made available to participants to provide additional insight and improve understanding.

In response, SEMO has advised that there is no readily accessible documentation available which would provide the information which participants seek. At the SEM Committee's request, SEMO is considering whether it could organise a one-off workshop of the I-SEM Technical Liaison Group

⁵ ESP Stocktaking Report S4.3 page 24

(TLG), whereby participant clarifications may be considered and addressed by its Subject Matter Experts. The SEM Committee therefore suggests that a discussion is held at a forthcoming meeting of the TLG, where participants can explain the insights they seek and next steps can be determined.

The SEM Committee rejects the suggestion that further review to ensure alignment with the detailed design is required at this stage. Such review has been part of ongoing input from RAs and participants into the development of the TSC Amendments and has formed part of this decision.

3.3 PROTOTYPING AND TESTING

Comments Received

Comments on prototyping and testing fell into two general categories: what respondents considered should have been done during the development of the market design to date; and, suggestions on what should be done in the run up to go-live.

Regarding the historic validation of the market design, concern was expressed by one respondent that there had been insufficient analysis undertaken during the development of complex aspects of the rules, such as imbalance pricing and the settlement algebra. Consequently, it was considered by this respondent that the veracity of the rules was untested. Reference was made to the Long Notice Adjustment Factor (LNAF) and System Imbalance Flattening Factor (SIFF) and their impact on security constrained outcomes, noting that these have not been thoroughly tested as part of the rules development programme. Respondents referred to the recommendations of the ESP “Stocktaking Report” that was produced for the RAs. In particular they highlighted comments in the report regarding the need to prototype aspects of the market rules, and sought undertakings from the RAs that the ESP recommendations would be followed.

Participants that commented on the process leading up to go-live emphasised the need for robust testing during the market trials. Another participant suggested that Price Average Referencing (PAR) and Net Imbalance Volume (NIV) tagging be thoroughly assessed, although it was also accepted that market testing is a challenging process.

SEM Committee Response

The SEM Committee notes concerns expressed by respondents about both the level of testing and prototyping undertaken during the design and rules implementation phases of the I-SEM, and the upcoming market trialling and testing process, including the setting of the LNAF and SIFF parameters.

However, the SEM Committee considers that the process of rules development through working groups was similar in extent to that adopted when developing the SEM and that the testing and prototyping of the I-SEM design to date has not been unusual when compared with market design implementation elsewhere.

The SEM Committee also acknowledges participant concerns regarding the upcoming market trialling and testing process. The SEM Committee considers it important that a robust market trialling process take place before I-SEM go-live.

The SEM Committee notes participant comments regarding the need for robust testing of the market systems and also the need to ensure the provision of an extensive period of operational trialling of the I-SEM arrangements before they go-live. In this context, the SEM Committee acknowledges that the TSOs/Market Operator are undertaking a detailed programme of system testing, certification testing, and participant interface testing. This will follow a clearly defined, structured approach to test planning, preparation and execution, in accordance with established industry practice. Further, as detailed in the Market Trial Plan, the TSOs/Market Operator will facilitate an extended period of market trialling across the various markets in order to provide all participants with an opportunity to bed-down their operations prior to market commencement, by exercising their systems and processes in a risk-free environment. Similarly, the Interconnector Owners will be facilitating mock auctions for Financial Transmission Rights (FTRs) across two trialling periods. This said, it should be noted that the purpose of the Market Trial is not to act as a detailed simulation or assessment of the numerical outcomes that I-SEM will produce: such numerical values will be assessed only to the extent necessary to show the appropriate processes/systems have been executed as expected.

4. TSC AMENDMENTS RELATING TO IMBALANCE PRICING

4.1 GENERAL COMMENTS ON IMBALANCE PRICING

Comments Received

Respondents were variously concerned that imbalance prices would be volatile and/or unpredictable, or, conversely, that imbalance prices were likely to be suppressed relative to prices in the ex-ante markets.

Several respondents noted that concerns were raised regarding the potential volatility of the imbalance pricing during the detailed rules development and that there was discussion about possible mitigations if there were unexpected outcomes from the pricing software. Four key points were raised surrounding this issue. Firstly, what constitutes “unexpected outcomes” needs to be defined. Secondly, a review and assessment of imbalance pricing should be built into the transitional arrangements for I-SEM to ensure that the imbalance pricing is as intended. Thirdly, the market should be able to act quickly to resolve so-called unexpected outcomes around the time of market go-live if they occur. Fourthly, there should be a further work-stream on balancing market pricing outcomes with market participant involvement equivalent to the EUPHEMIA trials.

There was concern that it will not be possible to either shadow settle or forecast the imbalance price and that errors in central market systems will be unidentifiable. This would adversely impact the efficiency of the market and there was a request for the SEM Committee to investigate whether the imbalance pricing process could be clarified and simplified.

A further concern was that a lack of liquidity in the IDM and that volatile imbalance prices could combine to negatively impact wind generators. One respondent requested that the RAs examine closely the levers at their disposal to ensure that there is a sensible transition from the current market arrangements to I-SEM, and that PAR and DMAT be set at a level that prevents extreme volatility in imbalance prices.

On the other hand, several respondents were concerned that the imbalance price could be suppressed relative to the prices in the ex-ante markets. The possible reasons proffered for this view were aggressive System Operator (SO) flagging and NIV-tagging, the mandating of below cost three part offers, and the failure to include fixed costs from early balancing actions in the imbalance price. These respondents argued that it is important that prices be internally consistent across the different

market timeframes as imbalance prices will influence trading strategies and hence liquidity in the ex-ante markets.

In addition to changes to parameters specified in the TSC, concerns were raised that the governance arrangements for the Flagging and Tagging Rules were inadequate. It was suggested that the rules and functionality of Flagging and Tagging need to be clearly documented and that changes should only be implemented after a rigorous process to determine the impact. It was also suggested that the governance of operational reserve requirements was unclear, and, more broadly, that reserve management policies were unclear.

One respondent pointed out that a key tenet of the recent EU Winter Package is that the short term energy market is allowed to function efficiently, and that in the revised internal electricity market Regulation it is explicitly stated that *“it is therefore critical to ensure that, as far as possible, administrative and implicit price caps are removed to allow scarcity prices to increase up to reflecting the value of lost load”*. This respondent was of the view that the combination of aggressive NIV-tagging and what they described as “draconian bidding controls” could possibly result in an implicit price cap in I-SEM. The respondent was of the view that these measures have been implemented to address non-energy actions but that their reach is much wider.

SEM Committee Response

In general, in relation to the Imbalance Price methodology, the SEM Committee is satisfied that the approach set out in the TSC aligns with the decisions taken to date in this regard both in the HLD and in the detailed design. Furthermore, the SEM Committee is encouraged by the significant level of debate and discussion that took place with regard to Imbalance Pricing during the MRWG and considers the fact that the approach has withstood such vigorous debate as an indication of the robustness of the approach proposed.

The SEM Committee understands the concerns expressed by respondents about the potential volatility of imbalance prices. However, it notes that the TSC Amendments provide a number of potential mechanisms available in the event that imbalance prices were to be unduly volatile to the extent of negatively affecting efficient trading across market timeframes. One such mechanism is the PAR parameter, which could be set to a larger value in order to produce a less volatile imbalance price. Another is the ability to turn off the SO-flagging and Non-Marginal flagging steps of the Flagging and Tagging process, which would lead to a greater level of NIV-tagging of expensive actions in order to reach the NIV. Thus, whilst appreciating the concerns expressed, the SEM Committee is satisfied that adequate measures are built into the design to address issues that might arise.

Likewise, the SEM Committee also acknowledges concerns expressed by other respondents that imbalance prices could be suppressed relative to prices in the ex-ante markets. The SEM Committee

agrees that prices should be consistent across the different market timeframes, but disagrees that imbalance prices are likely to be suppressed. Firstly, the SEM Committee disagrees with the view that the Flagging and Tagging process will lead to significant over-tagging. This is discussed further in Section 4.3. Secondly, the SEM Committee disagrees with the comment that below-cost three-part offers will be mandated, as it has no intention to make such a direction; rather, the SEM Committee's objective in formulating the Balancing Market Principles Code of Practice (BMPCOP) will be to require market participants to submit three part offers that reflect their Short Run Marginal Costs (SRMC), thereby replicating competitive market behaviour. Thirdly, the SEM Committee notes that while all market participants are required to submit three-part offers, their use is limited to specific actions. For example, significant effort is being made to avoid early balancing actions, which some respondents said they believed could suppress imbalance prices. The LNAF and SIFF parameters are being introduced to the scheduling systems to this end, whilst the SEM Committee notes that participants will also be able to include fixed costs in their simple bid-offers to the Balancing Market, which will ensure that fixed costs associated with balancing actions can be reflected in imbalance prices.

The SEM Committee notes the concerns regarding transparency and governance of the Flagging and Tagging Rules and the suggestions that they needed to be clearly documented. The SEM Committee shares concerns regarding the transparency of these processes but is satisfied that the measures that are being taken, including the Balancing Market Principles Statement (BMPS) that has now been published for consultation by the TSOs, and the Transparency of Imbalance Pricing Process paper that is being published alongside this Decision, will address these concerns.

The SEM Committee acknowledges the comment regarding the EU Winter Package and the removal of administrative and implicit price caps to allow scarcity prices to increase up to reflecting the value of lost load. The SEM Committee notes that the EU Winter Package is still in draft form and therefore is non-binding. Further, the Capacity Market has been designed with features that explicitly value scarcity, and also that a price cap (PCAP) and price floor (PFLOOR) are features of the Balancing Market design. The SEM Committee is also cognisant that discussions are ongoing at an all National Regulatory Authority (NRA) level regarding the appropriate harmonised minimum and maximum price for both day ahead, and separately, intra-day cross-zonal markets. Proposals submitted by the NEMO Committee as required by CACM to the European RAs, suggest a range of -€500 to €3,000 for the DAM, and a much wider range for the single IDM coupling of -€9,999 to €9,999. Mindful of these draft proposals submitted by the NEMO Committee, and cognisant of the Capacity and Balancing market designs, the RAs will be consulting on the appropriate levels of the Balancing Market PCAP and PFLOOR in May 2017.

4.2 IMBALANCE PRICING PERIOD

Comments Received

Concerns were expressed by some respondents regarding the implementation of a five minute Imbalance Pricing Period (IPP). One respondent stated that the implementation of automated ex-post flagging and tagging is likely to make it difficult to accurately forecast the imbalance price, and five minute imbalance pricing will add further to this difficulty. Another respondent stated that it will inevitably result in many small Bid-Offer Acceptances (BOAs) in each five minute window, and that the effect of this is unclear.

SEM Committee Response

The SEM Committee acknowledges the comments regarding the five minute imbalance pricing period. The SEM Committee decision on the detailed design stipulated, firstly, that the imbalance pricing process should be as automated as possible and, secondly, that imbalance prices should reflect the marginal costs of balancing the system. Automation of the process minimises the extent to which imbalance prices can be affected by subjective judgements and ensures that imbalance prices can be determined as soon as possible after the relevant imbalance pricing period. Both of these things improve the ability of participants to make well-informed trading decisions.

In order to give effect to the first part of the SEM Committee decision, imbalance pricing will utilise information from the real-time dispatch system regarding both what actions have been taken and which of those actions are non-energy actions. This information is at a five minute resolution. Moreover, the identification of actions and their contribution to the development of imbalance prices at the five minute resolution contributes to the second part of the SEM Committee's decision, i.e. that the imbalance price should reflect the marginal cost of balancing the system, albeit in manner which is proportionate to the duration of any such actions.

The SEM Committee does not agree with concerns that determining imbalance prices in the manner proposed will make imbalance price forecasting more difficult. The SEM Committee considers that the alternative of allowing short actions to set the price for the full 30 minute period would be likely to lead to higher volatility. Whilst it is the view of the SEM Committee that the introduction of Continuous Acceptance Duration Limit (CADL) flagging, as implemented in GB, would remove very short duration actions from the price setting process, the SEM Committee considers that this would still leave participants with the problem of forecasting which actions were likely to have durations that fall just short or just over the CADL. The SEM Committee understands that identifying balancing actions at a five minute resolution will result in a large number of smaller BOAs, but does not believe

that this should have an adverse impact on the pricing. The SEM Committee recognises that the larger number of smaller BOAs needs to be taken in consideration when setting the values for De Minimis Acceptance Threshold (DMAT) and PAR.

4.3 FLAGGING AND TAGGING METHODOLOGY

Comments Received

There was concern regarding the extent to which system constraints could influence the imbalance price in I-SEM. In particular, it was stated that the system on the island of Ireland is highly constrained and an imbalance pricing mechanism which is significantly influenced by system actions may produce volatile prices which are difficult for market participants to forecast, which in turn may lead to inefficient trading in ex-ante markets and increases costs to consumers. It was stated, for example, that balancing actions which have a low cost may be attributed to system causes, leaving the cost of energy balancing to be met by actions which have a higher cost, resulting in more volatile imbalance prices than in the situation where the system actions were not required.

Other comments related to more detailed aspects of the Flagging and Tagging process. One respondent pointed out that where one action on a unit is SO-flagged then all actions on that unit in that IPP are SO-flagged and therefore not considered in price setting. They stated, firstly, that this detail was introduced quite late in the rules drafting process by the TSOs and, secondly, that it would likely lead to significant over tagging of units. Another respondent expressed the view that NIV-tagging may inadvertently lead to many energy balancing actions being treated as non-energy actions (and therefore subject to bidding controls as per the SEM Committee decision on market power in May 2016 (SEM-16-024)). This respondent stated that it believed that the recent proposals from the SEM Committee aim to significantly limit what costs can be included in three part offers and believe that this will result in generators being required to offer below cost.

It was also highlighted that all BOAs in the opposite direction to the Net Imbalance Volume (NIV) in a five minute IPP are NIV-tagged and that the imbalance settlement calculations (Section F.3.3) state that if any BOA on a generator unit is NIV-tagged in any five minute IPP, then all the BOAs for that unit in the half-hour imbalance settlement period (ISP) are settled as non-energy actions subject to bidding controls. It was argued that the NIV will evolve over the course of an ISP and that there will be some ISPs in which the direction of the NIV changes from one component IPP to another. There was a concern that, in this scenario, every BOA may be NIV-tagged for at least one five minute IPP, leading to all BOAs on all generator units in the half-hour ISP being treated as non-energy actions and subject to bidding controls and it was strongly questioned whether this was the intention of the SEM-16-024 decision.

One respondent was of the view that the definition of non-marginal actions should be included in Appendix N (Flagging and Tagging), and argued that said definition of non-marginal actions should be limited to those actions constrained by units' Minimum Stable Generation and Maximum Generation, and should not include actions constrained by units' ramp rates. It argued that the inclusion of ramp rates and pricing breakpoints in the definition of non-marginal would introduce considerable difficulties in the calculation of an imbalance price in a timely fashion, would increase the number of tagged actions and would make it more difficult for traders to predict the imbalance price with any accuracy. It also argued that instruction profiling and settlement would be made more difficult.

Finally, one respondent considered it unclear whether or not actions taken on non-priority dispatch units to accommodate priority dispatch will be flagged.

SEM Committee Response

The SEM Committee recognises the concerns that SO-flagging could lead to significant over-tagging of units. The SEM Committee notes that this risk was identified early in the development of the flagging and tagging methodology and that, consequently, care has been taken to avoid the problem occurring in practice.

The Flagging and Tagging methodology uses information from the Indicative Operations Schedule (IOS) to identify both system actions and non-marginal energy actions. Units are SO-flagged on a unit basis, but as the Indicative Operations Schedule is determined by a constrained optimisation, there will always be at least one unconstrained unit, which will hence be un-flagged (except where the solution falls on a constraint, which is extremely unlikely). The un-flagged unit, or units, will then be subject to Non-Marginal flagging at an individual BOA level, where only the last action taken by the TSOs on each of the un-flagged units, is left un-flagged. Thus, the Flagging process identifies the marginal energy action and sets the Price of the Marginal Energy Action (PMEA), which then sets a bound on Bid Offer Prices at the PMEA before proceeding to the Tagging phase.

This process ensures that there will not be over-flagging of actions, and that to the extent that the dispatch aligns with the Indicative Operations Schedule, non-energy actions will be prevented from setting the Imbalance Price. In the event that there are equal volumes of SO-flagged actions in both directions, up and down, then the volume of remaining actions by definition will equal to the NIV, and only the SO-flagged actions will be tagged out. In this case, all those remaining actions would be considered in the calculation of the Imbalance Price. Conversely, in the event that the volume of SO-flagged actions is insufficient to meet the NIV, then the NIV-tagging process is applied to the remaining volume in order to reach the NIV. The rationale for NIV-tagging is that if the remaining volume does not meet the NIV then some of those remaining untagged actions must have been taken for system reasons, and must be tagged out in order to exclude those actions from setting the

price. In this scenario the SO-flags have been exhausted and there is no longer any targeted, accurate information available regarding whether an action is non-energy, and therefore assumptions need to be made about which actions were taken for non-energy reasons. The assumption inherent in NIV-tagging is that it is the most expensive actions to the system that were taken for non-energy reasons.

The application of SO-flagging and NIV-tagging ensures that non-energy actions are excluded from the calculation of the Imbalance Price and are settled at their complex offers under the market power mitigation rules for the Balancing Market. The SEM Committee thus considers that this will provide a robust and reliable Imbalance Price and disagrees with the view that NIV-tagging may deem actions as non-energy when they were in fact energy actions, and that therefore NIV-tagging may have unintended consequences for market power mitigation and imbalance pricing. Moreover the SEM Committee notes that the Flagging and Tagging approach was discussed extensively at the MRWG, with NIV-tagging being introduced as a consequence of these discussions in order to identify non-energy actions that SO-flagging may miss.

The SEM Committee notes the comment to the effect that if a BOA on a Generator Unit is NIV-tagged in one five-minute IPP then it will be unable to set the price in that IPP and all BOAs on that Generator Unit will be deemed as non-energy for the purposes of the market power provisions in the ISP which contains the IPP. However, the SEM Committee does not view this as a concern, as BOAs on that Generator Unit can still set the imbalance price in other IPPs within that ISP, provided they are not also tagged in those IPPs.

The SEM Committee notes the comment that the definition of non-marginal actions should not include those actions constrained by a unit's ramp rate, and should be limited to those actions constrained by a unit's Minimum Stable Generation and Maximum Generation. However, the SEM Committee disagrees with this view. A unit operating at its maximum ramp rate cannot meet both the incremental and decremental MWh of demand, and as such correctly falls under the definition of non-marginal.

The SEM Committee notes the comment from one respondent that it is unclear whether or not actions taken on non-priority dispatch units to accommodate priority dispatch will be flagged. Based on the rules set out, units will be flagged where they are bound by operational or unit constraints. As priority dispatch is not an operational or unit constraint, it will not result in a unit being flagged. If the priority dispatch unit is scheduled to its availability, it will be non-marginal flagged and the unit that is dispatched down to accommodate the priority dispatch unit will be the price setting unit. If, on the other hand, units are dispatched down to their Minimum Stable Generation, which necessitates a small amount of curtailment to maintain a secure system, the units at their Minimum Stable Generation will be flagged and the curtailed priority dispatch will be the price setting unit.

Moreover, the proposed methodology for determining System Operator and Non-Marginal flags will provide further detail on the Flagging process.

4.4 TRANSPARENCY

A number of respondents emphasised the role that TSO scheduling and dispatch systems will have in imbalance pricing. They stated that it had originally been understood that the published list of operational constraints would be the exact constraints in SCUC⁶ and SCED⁷ but that it is now apparent that the TSOs would instead consider the latest constraints used in their most recent SCUC iteration. They were of the view that, while participants will see the outputs of those SCUC runs through the published operational schedules, it will not be possible to understand the specific constraints that led to the expected actions, and they believe that this lack of transparency and information on specific constraints will create an issue for participants in forecasting the Imbalance Price. They thus argued that the final framework for I-SEM must address this transparency and governance issue. It was suggested that the operational constraints report be grounded in the regulatory framework through the licence, the TSC, the Grid Code or the Balancing Market Principles Statement (BMPS). It was suggested that there could be a requirement to publish an operational constraints report with any updates published more frequently where changes to constraints happen in between publication dates. Furthermore, it was also suggested that the TSOs should be required to signal to the market when and where constraints are used in the imbalance pricing process which are different to the constraints contained in the most recent published list.

There were calls from some respondents for further detail on the content, publication and governance of the System Operator flagging rules, the Non-Marginal flagging rules and the Indicative Operations Schedule.

There was also a call for emergency procedures for altering the SO-flagging and Non-Marginal flagging processes in the event of unexpected outcomes. One respondent was of the view that the Indicative Operations Schedule should be published in a timely manner so as to assist in predictions of Administered Scarcity Pricing. They went on to state that it should ideally be a data transaction provided by the TSOs to SEMO and ideally should be published as soon as it is received.

One respondent stated that the flagging and tagging methodology is opaque with results emanating from a so-called “black box” which gives market participants little scope to query or challenge it. They considered that the rules and functionality of this methodology should be formally baselined and documented and that assurance should be provided that the system is functioning in accordance

⁶ Security Constrained Unit Commitment

⁷ Security Constrained Economic Dispatch

with these rules. They also considered that change control must be locked down such that changes can only occur having followed a rigorous process.

SEM Committee Response

The SEM Committee notes requests for further detail on the content, publication and governance of the SO-flagging and Non-Marginal flagging rules; the determination of the Indicative Operations Schedule; and the determination of emergency procedures for altering the SO-flagging and Non-Marginal flagging processes in the event of unexpected outcomes.

The SEM Committee also acknowledges the view that the rules and functionality of the Flagging and Tagging methodology should be formally base-lined and documented, and that changes should only be made to these rules after having followed a rigorous change control process.

The SEM Committee shares the concern underlying these requests. Accordingly, changes have been made to Chapter E and Appendix N in order to increase transparency of the roles of the TSOs and of SEMO in the Flagging and Tagging process and of the information and data being used. The changes reflect the fact that the Flagging and Tagging process applies information from the Indicative Operations Schedule to the Accepted Bids and Offers and, while the TSOs provide the Indicative Operations Schedule, it is SEMO that determines the Accepted Bids and Offers.

Regarding the comment that the Flagging and Tagging methodology is a 'black box', the SEM Committee does not agree that this process is opaque or a 'black box'. Transparency of this Flagging and Tagging process will be provided through the rules set out in the Code, in the new Flagging and Tagging methodology provided for under Appendix N, and the BMPS. In addition, in the light of the comments received on the transparency of Imbalance Pricing the SEMO was asked to consider what measures can be taken to ensure adequate transparency to participants, and has provided a paper on Transparency of Imbalance Pricing Process, which is included as Appendix B of this decision and provides further information on this matter.

In relation to the proposal that the Flagging and Tagging rules should be baselined, the SEM Committee considers that the TSC is the best approach to baselining of the Flagging and Tagging rules that is available. The SEM Committee also draws participants' attention to the oversight role the RAs have in respect the different phases of the system testing and market trial.

The SEM Committee notes that providing for the Indicative Operations Schedule in the TSC would be overly complex, as the Indicative Operations Schedule involves many aspects of the scheduling system which is defined in the Grid Code and not defined in the TSC. Accordingly, the more straightforward approach is for the TSOs to be responsible for SO-flagging under the auspices of the Grid Code and pass the results of this process to SEMO. The TSOs will determine SO-flags at a

Generator Unit level and pass them to the SEMO, which will then identify individual Bids and Offers. The TSC Amendments now provides greater clarity with regard to where processes take place, and of the transactions that take place between the TSOs and SEMO in order to calculate the Imbalance Price. The SEM Committee notes also that the scheduling process is governed by the Grid Code and that transparency around this process will be provided by the BMPS. To ensure transparency of the Flagging and Tagging process, the TSOs will be required to publish a detailed Flagging and Tagging methodology and to update it as necessary.

The SEM Committee considers that the total suite of information provided under the TSC, Grid Code and BMPS will thus afford participants with adequate transparency of the overall imbalance pricing methodology.

5. AGGREGATION

Comments Received

Many respondents were of the view that the High Level Design of the I-SEM allowed for the aggregation of variable renewable generators which are above the de minimis threshold and stated strongly that this should be facilitated through the TSC. These respondents considered that such aggregation would deliver significant benefits to the entire market, and to all market participants, by allowing more efficient trading in the ex-ante markets. Further, a number of respondents flagged the SEM Committee decision that aggregation should be facilitated for 'some' renewable generation in the HLD Decision (SEM-14-085a).

Moreover, these respondents argued that unit-based bidding is impractical for variable renewable portfolios, which need to update small positions close to delivery as they receive up-to-date forecasts, and that entering trades for each individual unit in a portfolio will create unnecessary operational intensity and significant participation costs. They further considered that it will be difficult for individual variable renewable units to match small orders in the IDM, and so the lack of the possibility to aggregate will result in a less efficient IDM for all market participants.

More generally, they argued that the lack of the possibility to aggregate places additional barriers to small generators finding a route to market, although some respondents acknowledged that this issue is more pertinent to the ex-ante markets and the design of the SEMOpx.

SEM Committee Response

The SEM Committee notes the wide range of responses requesting measures to facilitate aggregation of renewables (in particular wind), and arguing for drafting changes to the TSC to be made to provide for portfolio bidding in ex ante markets. The SEM Committee notes that the HLD addresses the context of aggregation in the ex-ante markets (DAM and IDM), while the TSC covers the Balancing Market. The SEM Committee further notes that the HLD envisaged that all market time-frames would be unit-based, in general, with aggregation arrangements for DSU, demand and (some) variable renewable generation.

This issue has been raised at a high level (rather than with reference to specific approaches or solutions) at a range of industry fora including Rules Working Groups, Registration BLGs and SEMOpx BLGs. In all cases, the RAs have understood that participants are seeking a solution to allow them to aggregate a number of small units into a single unit in ex-ante markets, and for these volumes to be subsequently allocated to individual units in the BM. Following requests for guidance from SEMO on

this issue through the MRWGs, the RAs invited comment on this through this consultation process to inform them of possible approaches to aggregation, including the exact areas of benefit that aggregation would provide, for example, operational efficiency, reduced SEMOpx transaction charges and opportunities for more efficient collateralisation in ex-ante markets.

Having considered the matter further, the SEM Committee is of the view that aggregation can be achieved by allowing any aggregator to register an Assetless Unit, which it can then use to make sales in the ex-ante markets for the portfolio of Generator Units that it is aggregating. Both the aggregator's Assetless Unit and the Generator Units being aggregated will receive or make imbalance charges. A commercial arrangement between the aggregator and the individual units would determine how these revenues and costs are shared. The SEM Committee recognises that the obligation linking ex-ante trades and Physical Notifications (PNs) has to be relaxed for the Generator Units being aggregated. The SEM Committee also recognises that, in the event that a Generator Unit being aggregated is dispatched down, the lack of any ex-ante contract position would limit the potential for the Generator Unit to receive any discount to the imbalance price. This problem could be solved by making, in respect of each Generator Unit being aggregated, an ex-ante trade equal at least to the expected output of the Generator Unit. The Assetless Unit could then be used to make an 'adjustment' trade, such that the sales associated with each Generator Unit individually and the Assetless Unit purchase, taken together, will equal the desired sale for the portfolio as a whole.

The SEM Committee recognises that this approach would entail each participant with a Generator Unit being aggregated being a member of the NEMO (although it could be the aggregator submitting the necessary bids on the NEMO) and incurring NEMO charges.

A consultation has recently been published on the appropriate approach to the revenue regulation of SEMOpx (SEM-17-018) as the designated NEMO for Ireland and Northern Ireland. Depending on the outcome of that consultation, the SEM Committee may have a greater or lesser level of direct involvement in the design of SEMOpx charges, though it will have an approval role under any price regulation framework. Regardless, of the level of direct involvement in SEMOpx charges, the SEM Committee would take this issue into account in its deliberation as part of the approval process of SEMOpx charges.

The SEM Committee recognises that there are other possible approaches that could be taken to facilitate aggregation in the ex-ante markets, and is not proposing that any changes to the TSC are explicitly required to facilitate aggregation at this point in time. The SEM Committee will keep the issue under review as to the engagement of renewables in the ex ante markets, and will take this into account when reviewing any proposals for amendment to the TSC in future.

6. TSC AMENDMENTS RELATING TO CAPACITY

This section addresses comments to aspects of the TSC Amendments relating to aspects of the capacity market.

6.1 ADMINISTERED SCARCITY

Comments Received

Several respondents had concerns about the triggering of Administered Scarcity and that the drafting in the TSC would allow this to occur for transient events, local events or as a consequence of errors made by the TSOs.

One respondent criticised the definition of the reserve scarcity price curve, with concern that full administered scarcity would be triggered before operational reserves reached zero. This would lead to a jump in the level of administered scarcity price.

Two respondents were concerned that wind was particularly exposed to administered scarcity pricing and linked this to the introduction of the Capacity Market. One respondent stated that wind was unable to participate in the capacity market and so was unable to manage this risk. They felt that units with awarded capacity in the Capacity Market had their exposure capped by the application of stop-loss limits.

SEM Committee Response

The SEM Committee notes respondents' concerns about local or transient events triggering administered scarcity pricing. However, the SEM Committee does not share these concerns. Such concerns were raised during the TSC Amendment drafting through the MRWG process, and resulted in the proposed "double lock" trigger for administered scarcity. This "double lock" requires both a demand control event (as defined under the Grid Codes) and depletion of operational reserve which cannot be covered using replacement reserve to occur at the same time. While short-term or local events may cause a demand control event, this alone could not trigger administered scarcity pricing unless there was a SEM-wide depletion of operational reserve. Moreover, the drafting of the TSC Amendments concerning the triggering of administered scarcity, including concerning the definition of reserve being depleted, has been further clarified.

The SEM Committee recognises that there remains a residual risk that administered scarcity could be triggered as a result of a significant error by the TSOs. This was recognised in CRM Decision 2 (SEM-16-022) where the RAs committed to investigate any incidents of administered scarcity.

The SEM Committee is fully cognisant of the fact that demand control events may be triggered before operational reserves reach zero and this situation is covered by the TSC Amendment drafting. The exact point at which a demand control will be triggered will depend on real-time events and cannot be defined ahead of time. In CRM Decision 2 (SEM-16-022), the SEM Committee decided that the reserve scarcity price curve would be static and believes that the basis of this decision remains sound.

The SEM Committee notes that, while the introduction of administered scarcity pricing was addressed in CRM Decision documents (SEM-15-103 and SEM-16-022), it is primarily part of the energy market. Administered scarcity exists to ensure that there is a clear price signal in the energy market at times of scarcity. Such a price signal rewards flexible capacity and provides a signal from the energy market that new capacity may be required.

Any unit with an ex-ante trade in the energy market which fails to deliver in line with that ex-ante transaction will be exposed to imbalance settlement and at times of scarcity, the imbalance will be priced at least at the level of the administered scarcity price. If the unit also has been awarded capacity in a capacity auction, a failure to deliver its capacity obligation will trigger uncovered difference payments. It is these uncovered difference payments which are capped by the stop-loss limits, there is no protection from imbalance charges arising from failure to deliver in the energy market. In consequence, the SEM Committee does not agree that the existence of stop-loss limits creates a different energy market position for units with or without awarded capacity.

The SEM Committee notes that intermittent renewable generation can participate in the capacity market and has the freedom to do so at any level between 0MW and its de-rated capacity, whereas other types of generation capacity is required to participate at its de-rated capacity. In addition, intermittent renewable generation units of any size can be aggregated together or with other units to help to manage the delivery risk.

The SEM Committee continues to believe that the balance of measures set out in CRM Decision 1 (SEM-15-103) are sufficient to allow wind to participate in the Capacity Market, and is not proposing to make any changes to the TSC Amendment in this context at this time.

6.2 CRM PARAMETERS SET OUT IN TSC

Comments Received

Some respondents were concerned that CRM Parameters set in the TSC, i.e. relating to the strike price used for determination of difference payments in the Capacity Market and administered scarcity, could change between making an offer into a Capacity Auction and delivery of capacity.

SEM Committee Response

The SEM Committee recognises concerns that the parameters relating to administered scarcity and the strike price could change between offering into a Capacity Auction and the delivery of capacity. However, in the case of material changes to these parameters, the SEM Committee would carry out a consultation process and would take account of the impact on market participants in coming to its decision. Such changes are expected to be infrequent.

6.3 FIRST CAPACITY YEAR

Comments Received

One respondent noted the impact on CRM parameters arising from having a first capacity year which is not 12 months in duration.

SEM Committee Response

The SEM Committee is aware of the impact of its decision, within the CRM Parameters Decision Paper (SEM-17-022), to use an approximately 16 month period as the first Capacity Year. In the normal course of events, total annual Capacity Payments (€/year or £/year) to a Capacity Market Unit are based on the product of its Capacity Quantity (in MW) and the Capacity Payment Price (in €/MW per year or £/MW per year). This is paid out evenly across all Imbalance Settlement Periods in the Capacity Year by dividing this value by the number of Imbalance Settlement Periods in the Capacity Year (17,520 for a normal year, 17,568 for a leap year).

For a normal year or leap year, this works as intended; however, as the first Capacity Year will be approximately 16 months in duration, the number of Imbalance Settlement Periods in the Capacity

Year is approximately 33% greater than would be the case if it were a 12-month Capacity Year. All other things being equal, this would result in an annual payment that is approximately 75% of a payment that would take place for a 12-month Capacity Year. This issue can be avoided if rather than spreading the ISP-based Capacity Payments evenly across the number of periods in the roughly 16 months of the first capacity year, the payments are spread across the number of periods in a normal Capacity Year (i.e. 17,520, as 2018 is not a leap year). In this way, the Annual Capacity Payment received in the partial year 2017/18 will be roughly 4/12 of the normal annual payment and that received for the full year 2018/19 will be the normal Annual Capacity Payment for a 12-month Capacity Year.

To address this issue, for the first Capacity Year, additional drafting has been provided in Chapter H of the TSC Amendments to cover this first year and the impact on the CMC will be dealt with in the CMC Decision due in June 2017.

6.4 SCHEDULING AND DISPATCH RISK

Comments Received

One respondent raised concerns about the scheduling and dispatch risk which capacity providers face. It noted that there were a number of circumstances in which a capacity provider would be unable to meet its capacity obligations due to circumstances outside its control. These included:

- Mandatory unit testing;
- Force Majeure on the gas network; and
- Inability to access the energy markets during events of “out-turn availability”

They were also concerned that the need to make difference payments could be triggered by unpredictable short-term spikes in commodity prices, especially gas, pushing the Market Reference Price above the strike price.

Through the MWRG process and an escalation notice, concerns were raised that mid-merit or peaking units holding reserve may also be unable to meet their obligation to deliver capacity.

SEM Committee Response

The SEM Committee notes the comment that a capacity provider could be unable to fulfil its obligation to deliver capacity as a result of mandatory unit testing. However, the SEM Committee

considers that, in general, mandatory unit testing would not be scheduled to occur at times when scarcity is probable and so this is unlikely to create a substantial risk exposure for capacity providers.

The SEM Committee acknowledges but does not agree with comments to the effect that capacity providers should be exempted from their obligations to deliver capacity at times of force majeure or other issues affecting the delivery of gas. These times are when suppliers need a guarantee that physical capacity will be delivered and for which the market is purchasing a hedge through the Capacity Market.

The SEM Committee notes the concern that exposure could arise as a result of “out-turn availability” and the potential exclusion of a unit from energy markets for five days following Planned Outage. Arrangements that are being put in place for secondary trading, both interim (as required) and enduring, should help facilitate the management of any exposure in this regard. However, in this context, the SEM Committee will continue to monitor the development and functioning of the secondary trading arrangements for the Capacity Market.

The drafting of the TSC has been updated to better implement CRM Decision 1 (SEM-15-103) to ensure that units unable to deliver their capacity obligation as a result of being held for reserve are not exposed to difference payments.

Overall, with the exception of the changes in respect of units holding reserve and out-turn availability mentioned above, the SEM Committee is of the view that the delivery obligations under the Capacity Market offer an appropriate balance of risk and responsibilities between capacity providers and suppliers.

6.5 DETERMINATION OF DIFFERENCE QUANTITIES

Comments Received

One respondent was concerned that the use of QEX (Ex-Ante Quantity) in paragraph F.18.4.2 would enable a Participant to avoid its obligation to deliver capacity by using the Intraday Market. They were concerned that a unit with a traded position in the DAM that then traded out of that position in the IDM would retain protection from uncovered difference payments and this would contribute to the “hole-in-the-hedge”. They believed that the algebra did not comply with mixed reference price decision set out in SEM-15-103.

SEM Committee Response

The SEM Committee has looked in detail at the algebra for determining difference quantities. The QEX term was introduced into F.18.4.2 (and also F.18.4.5 and F.18.5.5) explicitly to prevent units from avoiding capacity obligations through trading in the IDM. The SEM Committee also notes that CRM Decision 1 (SEM-15-103) is clear that reference prices are applied to volumes sold (i.e. obligations to deliver taken on) and not those bought and also that Day-Ahead volumes are considered first and then Intraday volumes.

The SEM Committee is satisfied that the drafting in F.18.4 and F.18.5 correctly implements the mixed reference price decision set out in SEM-15-103.

6.6 LOAD FOLLOWING

Comments Received

One respondent noted that load following was more beneficial to base-load capacity than to mid-merit capacity. Load following was set out in CRM Decision 1 (SEM-15-103) and means that the capacity a unit is required to deliver in the Capacity Market will, for the purposes of difference payments, vary with the actual need for capacity – up to a cap of the level stated. This variation in contracted quantity allows the aggregate contracted capacity to reduce and track the quantity needed to cover demand and associated reserve requirements at any given time. This is achieved by reducing each capacity providers contracted quantity pro-rata to the extent required.

SEM Committee Response

The SEM Committee notes the comment that load following was more beneficial to base-load capacity than to mid-merit capacity. The SEM Committee does not agree with this view, however. At times of low prices, mid-merit plant may not have a physical position that matches their obligation as adjusted for load following, but this has no impact as difference payments do not arise unless the market reference price rises above the Strike Price. The SEM Committee notes that at times when difference payments are payable, prices will be high and a mid-merit plant should be delivering on its obligation to deliver the hedge to suppliers.

6.7 ALLOCATION OF EX-ANTE TRADES

Comments Received

One respondent observed that ex-ante trades are treated differently in the imbalance settlement and capacity settlement algebra. Imbalance settlement adds together the hourly position from the DAM and IDM and then splits this total into each ISP. For capacity settlement, the price for each trade is important and so it has to treat the trades in the DAM and IDM separately.

SEM Committee Response

The SEM Committee agrees with the comment that ex-ante trades are treated differently in imbalance and capacity settlement. This reflects the need for capacity settlement to process each trade individually. The SEM Committee does not agree that this difference will produce a material impact in settlement and/or create exposures to uncovered difference payments. Nevertheless, the SEM Committee will keep this issue under review after go-live.

6.8 SETTING OF STOP-LOSS LIMITS FOLLOWING SECONDARY TRADE

Comments Received

Some respondents stated that the re-setting of the stop-loss limit on the basis of the maximum of the primary and secondary trade prices was incorrect.

SEM Committee Response

The SEM Committee notes respondents' views that using the secondary trade price to increase the level of the stop-loss limits is inappropriate. However, the SEM Committee considers that this implementation of the stop-loss limit does not contradict the policy set in CRM Decision 2 (SEM-16-022), but that setting the stop-loss limit purely on the basis of the primary trade price may be sufficient to protect the hedge to suppliers. Moreover, it is not possible to implement a change to the algebra to remove the use of secondary trade price when setting the stop-loss limit before the enduring secondary trading platform goes live. However, once that platform is in place the SEM Committee would consider any Modification raised under the TSC to make such a change in the future.

6.9 SOCIALISATION FUND

Comments Received

Several respondents were concerned about the operation of the socialisation fund set out in the draft TSC Amendments. The primary concern was the ability of the Market Operator to reset the Tracked Difference Payment Shortfall Amounts: both automatically to zero at the end of the year or, and with the approval of the RAs, to another amount at other times. Respondents pointed out this was not in line with the SEM Committee decision on the Socialisation Fund.

Some respondents noted that the requirement on the Market Operator to forecast the Socialisation Fund recovery factor ahead of time could, at times, lead to under-recovery and the need for additional charges on Suppliers through an adjustment to the recovery factor mid-year.

One respondent questioned the status of the option for the Market Operator to use borrowing to smooth the shortfalls and surpluses that will arise within the Socialisation Fund.

One respondent proposed levying of a charge on Suppliers prior to I-SEM to build up a positive balance in the Socialisation Fund prior to go-live.

One respondent proposed extending the socialisation fund to cover other classes of payments unrelated to CRM, e.g. imperfections charges, which could also experience under- or over-recovery requiring mid-year changes to supplier charges. Their expectation was that surpluses in one area would net against deficits in another.

SEM Committee Response

The SEM Committee agrees with respondents that the reduction in Tracked Difference Payment Shortfall Amounts set out in the draft TSC was inconsistent with previous decisions and, in particular, with the Suspend and Accrue approach set out in CRM Decision 3 (SEM-16-039). At the same time, the SEM Committee has been sensitive to the concerns of the Market Operator that these tracked shortfall amounts should not create a liability on the Market Operator: they are future obligations on Suppliers to make payments. Accordingly, the TSC has been re-drafted to ensure that all difference payments due to suppliers, including those which cannot be made at the time they are originally due, are made at some future time in line with the Suspend and Accrue approach. A new paragraph (F21.1.2) has been inserted to ensure that the accrued amounts do not become a liability on the Market Operator.

The SEM Committee notes the concerns that the possibility exists to modify the Difference Payment Socialisation Multiplier in the middle of the year, if the degree of under-recovery in the Socialisation Fund were to become severe. The SEM Committee believes that this capability is needed in the TSC to manage the consequences of extreme events, but would anticipate that exercise of this power would be rare. The SEM Committee will be cognisant of the impact on Suppliers when deciding whether to exercise this feature. The SEM Committee continues to be of the view that provision of some form of borrowing facility by the Market Operator is desirable to smooth the shortfalls and surpluses that will arise in the Socialisation Fund. It will pursue this option through further discussions with the TSOs and MO.

The SEM Committee recognises that there could be benefits from using the existing tariff to build up a positive initial balance for the Socialisation Fund. However, the SEM Committee's view is that the practical issues and risks involved in setting up such a charge on suppliers, given the backdrop of the work needed to deliver I-SEM go-live, outweigh the benefits. The SEM Committee notes that with go-live for CRM delivery set in summer 2018, a positive balance is expected to be built up in the Socialisation Fund before there is likely to be any needed to make difference payments.

The SEM Committee notes suggestions that the Socialisation Fund be extended to cover payments from outside the CRM. However, at this point, the SEM Committee does not view it as appropriate to extend the Socialisation Fund to cover payments from outside the capacity mechanism. This would extend its scope substantially beyond that set out in CRM Decision 1 (SEM-15-103). The SEM Committee does recognise that there may be some benefit from allowing an accumulated over-recovery of another TSC-determined charge calculated by reference to a parameter or price set by the Regulatory Authorities on the basis of expected costs to be used to make a positive adjustment the Socialisation Fund balance. Clearly, such a transfer into the Socialisation Fund should not be carried out if it were expected to lead to a future under-recovery of the affected charge. The possibility to transfer over-recovery from one charge into the Socialisation Fund has been included in the TSC as paragraph F.21.1.3 (b).

7. TSC AMENDMENTS RELATING TO CREDIT

7.1 CONTRACT REFUSAL

Comments Received

Some respondents disagreed with the proposition in the proposed TSC drafting that a previously executed ex-ante contract could be refused in the Balancing Market. They stated the contract would have been conducted with an unknown counterparty and that the consequences of its refusal are unclear, with some requesting further detail on how this would operate. These respondents did not understand how the contract could be repudiated in a different market (i.e. DAM or IDM) that has already facilitated the trade and may have adjusted interconnector flows to reflect the transaction, which in turn will have affected the potential for subsequent trades to occur on the relevant interconnector. They doubted that the repudiation of a trade is legally possible, and even if it is they believe that it would leave two parties out of balance and would frustrate and/or distort other potential trades that could have occurred.

One respondent supported the principle that a generator that sells in the ex-ante markets needs to post collateral in the Balancing Market for event of non-delivery, and that a supplier that purchases in the ex-ante markets would have its collateral reduced in the Balancing Market in the event of non-consumption. However, it believed that it would be unreasonable that a failure to have sufficient ex-ante collateral would lead to a trade being instantaneously rejected in the Balancing Market. It pointed out that, although they expected the Credit Assessment Price to be stable, if there were to be a material increase in the “dynamically determined” Credit Assessment Price then contracts could be rejected instantaneously and, thus, that there needs to be a period of grace that would provide participants with the opportunity to rectify matters. This respondent argued that the rejection of ex-ante trades could otherwise lead to a situation where a supplier purchased power under the NEMO rules, had that trade rejected by the Balancing Market, and then had to purchase that power again under the Balancing Market rules. Hence, they argued that there should be an opportunity within the TSC for a supplier to resolve any such credit requirements before the ex-ante trade is refused. One respondent also suggested that credit assessment should be undertaken more frequently than once per day.

SEM Committee Response

The SEM Committee notes the responses disagreeing with the process under which the notification of ex-ante contracts by a Scheduling Agent could be refused by the SEMO due to a lack of collateral in the Balancing Market, on the basis that such provisions would be not be possible and that the consequences of refusal would be unclear. The SEM Committee considers that these concerns are misplaced. To the extent that ex-ante contracts are contracts for the sale and purchase of energy, the mechanism for the 'completion' or 'delivery' of those contracts is the notification to the Balancing Market (and non-rejection) of those contracts on behalf of participants to the Scheduling Agent. Any contract notifications rejected by SEMO in the Balancing Market remains "valid" in the ex-ante market, and subject to the relevant NEMO's rules, but have no effect in the Balancing Market.

The SEM Committee understands that there will be a forward looking trading halt applied by the SEMOpx, as explained to stakeholders at the BLG on 9 March 2017. Another NEMO entering the market may, or may not, take a similar approach. Any generator participant whose Contracted Quantities are being rejected is not prevented from submitting PNs or generating. The notification of a contract for the sale of energy by a participant increases the imbalance liabilities of the participant. If such a participant does not have sufficient collateral in the Balancing Market then this creates a risk of non-payment, and rejecting future Contracted Quantities protects other participants against this risk. Thus, the SEM Committee agrees that the SEMO does not have the power to "cancel" or "repudiate" any ex-ante contract arranged by a NEMO. Furthermore, the SEM Committee confirms that in "rejecting" or "refusing" ex-ante contracts the SEMO is simply deeming the Contracted Quantities to be zero for the purposes of calculating the relevant participants' imbalances.

The SEM Committee also notes comments that the effect of contract refusal is unclear in relation to the DAM and IDM. The SEM Committee does not agree with these comments and notes that the counterparty for any exchange-based trade is a NEMO's central counterparty. Hence the counterparty is not unknown and the rejection of any contract will therefore result in an imbalance for the central counterparty (in addition to the participant with insufficient collateral).

The SEM Committee notes the comment that material increases in the Credit Assessment Price could result in contract rejection with no opportunity for rectification, and the suggestion that there should be the opportunity to resolve credit requirements before ex-ante trades are rejected. The SEM Committee agrees that a time to rectify any insufficiency of collateral is desirable and the TSC Amendments now include a number of changes to provide for this. Specifically, the TSC Amendments now include a "Response Period", whereby participants will have a period during which they can take steps to increase their Posted Credit Cover or reduce their Required Credit Cover, e.g. by making ex-ante purchases. The refusal to accept contract notifications will: commence

at next Credit Assessment following the end of this Response Period; carry on only so long as the insufficiency of collateral endures; applies only to contracts that would lead to an increase in Required Credit Cover, i.e. ex-ante contracts for the sale of energy; and will not apply retrospectively to previously submitted Contract Quantities. The duration of the Response Period is a TSC parameter, and the initial duration will be consulted upon in May 2017.

The SEM Committee notes the concern that a Supplier would have to “re-purchase” energy due to a rejected purchase. The SEM Committee considers that this concern is unfounded as the proposed TSC drafting only provides for refusal of contracts that increase Required Credit Cover above the Posted Credit Cover and, as such, ex-ante purchase contracts by a participant would never be rejected within the Balancing Market.

The SEM Committee notes the concern that credit checking would be daily, and the suggestion that it should be more frequent. The SEM Committee agrees that credit checking should occur more frequently than once a day. Consequently, APO9 now requires the SEMO to undertake credit assessment three times each working day at 09:00, 12:00 and 15:30, with these times aligning to the receipt of data related to various gate closures within the ex-ante markets.

7.2 LEVEL OF COLLATERALISATION

Comments Received

There was general concern among respondents that each market has separate collateralisation requirements with only limited scope for credit netting between the DAM and IDM markets and with no credit netting between the ex-ante markets and the Balancing Market. Many respondents noted that the introduction of both NEMO and CRM collateral requirements, in addition to the existing collateral requirements for the Balancing Market, will increase the financial burden on market participants. Several respondents also noted that the credit provisions for generators in the Balancing Market are not assessed on the same basis as the credit provisions for suppliers and highlighted that this reduces the netting capability of participants.

Respondents noted that participants will need to have active credit management processes in place to manage costs and trading foreclosure risks and urged the SEM Committee to take every step possible to reduce the collateral burden on market participants, especially given that these requirements will, on many occasions, relate to the same quantity of physical energy. It was suggested that a single administrator of credit, and single collateralisation across all markets, would streamline collateral arrangements for participants, reduce the financial and administrative burdens on market participants, and provide more opportunity for participants to avail of netting benefits. One respondent suggested that the credit burden on participants could be reduced by implementing

settlement systems for the Balancing Market that are based on a trading day rather than a trading week.

It was highlighted that the undefined exposure in the Balancing Market for a supplier is based upon historical assessments of 100% of supplier net demand and does not make any assessment of the allocation of demand purchases across ex-ante markets and BM, and that this could lead to an excessive credit requirement. One respondent proposed that if a supplier is regularly trading in the ex-ante markets, its credit cover should recognise that default in the ex-ante markets is likely to be spotted earlier than in the Balancing Market, arguing that this would allow (beyond the benefit of G.14.13 Volumes Traded not Delivered for such a supplier) having a shorter undefined credit exposure period. If such a supplier stopped trading in the ex-ante markets, it would have an increased level of exposure in the Balancing Market, not only because of the operation of G.14.13, but also, under this proposal, due to having a longer undefined credit exposure period.

Respondents, while acknowledging that the credit and collateral provisions in relation to NEMO markets are outside the intended scope of this consultation, believed that a comprehensive holistic review of credit and collateral arrangements across all markets is required so that an impact assessment and informed evaluation can be undertaken.

A number of respondents also commented on the positive impact that allowing payments in advance would have on the required credit cover for units that are regularly constrained down. They noted that such payments were not being provided for under the TSC Amendments.

SEM Committee Response

The SEM Committee notes that a number of respondents requested that SEMO facilitate cross-collateralisation between the Balancing Market and the ex-ante markets operated by SEMOpx and any other NEMOs that may choose to offer services related to the I-SEM. The SEM Committee notes that Nord Pool have made an application to the CER⁸ and UR⁹ requesting to operate as a NEMO for the day-ahead and intraday timeframes in the I-SEM in accordance with the guidelines on Capacity Allocation and Congestion Management (CACM). The implementation of cross-collateralisation across markets within the TSC would need to be bespoke, essentially a form of credit pooling, and it would be complex to implement given that a range of detailed interactions would be required, e.g. rules and processes to cover the extent of prioritisation for payment defaults across the Balancing Market and ex-ante transactions across various NEMOs. There would also be the need for each

⁸ <https://www.cer.ie/document-detail/Information-Note-on-Arrangements-concerning-more-than-one-NEMO-in-one-bidding-zone/1143>

⁹ <https://www.uregni.gov.uk/news-centre/information-note-arrangements-concerning-more-one-nemo-one-bidding-zone>

NEMO to interface with the credit pooling regime. As NEMOs are typically in partnership with a clearing house, the SEM Committee considers that a requirement to enter into bespoke I-SEM credit pooling arrangements would be a material deterrent to any additional NEMO coming forward to offer services in the I-SEM based on their existing regime. Hence, the SEM Committee will not be bringing forward a change to facilitate cross-collateralisation between the Balancing Market and the ex-ante markets.

The SEM Committee notes the concern expressed that undefined exposure in the Balancing Market is based on historical assessment of supplier net demand and does not account for expected demand purchases across the ex-ante markets. In the Balancing Market any notified ex-ante demand purchase contracts will reduce imbalance risk in the Balancing Market, and this is reflected in the calculation of Required Credit Cover. However, any future expectation of trading ex-ante is not considered when the Market Operators determines the level of exposure to be covered given that a participant is free to trade solely in the Balancing Market. The actual outturn level of credit collateral for each participant is driven by a range of credit related parameters and these will be decided upon by the SEM Committee consultations prior to I-SEM implementation.

With respect to comments from participants seeking to be permitted to make payments to the Market Operator for settlement days for which Settlement Documents have not issued ('payment in advance'), the SEM Committee requested the SEMO to review the provisions of the TSC Amendments to assess what changes could be made to facilitate this. As the SEM Account is a trust account held for the monies relating to all participants, it is not appropriate for payments in advance to be made to this account and, as such, the requirement on the Market Operator to refund any over-payment to this account has been retained. However, the Collateral Reserve account for the participant can be used instead to enable participants make payments in advance. This solution allows for:

- the participant to make any payments in advance to their Collateral Reserve account;
- after the issue of Settlement Documents, the participant to contact the Market Operator and advise that it wishes to transfer funds from its SEM Collateral Reserve account to cover monies owed under the Settlement Documents; and,
- the Market Operator to confirm that sufficient funds are in place and to make the transfer.

This approach has adopted the provisions of the existing TSC whereby a participant may use excess Cash Collateral to make payments against invoices, albeit with a number of detailed changes to the Code and Agreed Procedures being required. Specifically, the sections of Agreed Procedure 9 which were titled "Using Excess Cash Collateral to Pay Settlement Documents" have been amended, while further amendments have been made to the Code in paragraphs G.1.6.6(d) and G.2.5.4(c).

The SEM Committee notes also the suggestion that the I-SEM should require daily settlement by the SEMO as is undertaken in some other markets as a way to reduce credit cover costs. However, the SEM Committee does not consider this to be a change to the trading arrangements that is consequential to the I-SEM arrangements, and notes that the SEM has operated successfully with weekly settlement since 2007. It is not clear that moving to daily settlement would reduce costs overall given the scope for cost increased resulting from daily, rather than weekly, settlement transactions and there could also be an increase in working capital requirements. Finally, given that the TSC will allow for participants to make payments in advance, participants will be able to use payments in advance to create an outcome equivalent to daily settlement.

7.3 CREDIT PARAMETERS AND METHODOLOGY

Comments Received

A number of respondents, acknowledging that there will be a parameter consultation phase, strongly recommended that the credit parameters are appropriately reviewed so as to ensure that credit requirements are not excessive and that the assumptions used in the proposed parameters are valid.

More specifically, it was stated that the level of credit cover required from suppliers is heavily driven by the Supplier Suspension Delay Period (SSDP), which is currently set at 14 days. The SSDP is based around the length of time it may take to transfer a defaulting supplier's customers to a new supplier and it was pointed out that, with advances in IT systems (and with those to come from smart metering), it should be possible to undertake this transfer well within a two week timeframe. It was also suggested that a reduced SSDP could deliver considerable cost savings to participants (and ultimately consumers).

Respondents also questioned whether it is appropriate to carry over the methodologies for assessing Undefined Potential Exposure from the existing SEM credit cover processes. They noted that the application of the Analysis Percentile Parameter (AnPP) effectively assumes a normal distribution over the Historical Assessment Period. They argued that, while this may be a reasonable approximation for the price and demand components of the suppliers' Undefined Potential Exposure calculations, it may be less appropriate for generators' cashflows, as these would be expected to show significant variation, depending on the incidence of such factors as forced outages, RO difference charges and system balancing actions.

SEM Committee Response

The SEM Committee notes that respondents acknowledge that a separate consultation is being undertaken on I-SEM parameters. The first consultation (of two) was published on 3 February 2017, and encompassed parameters that relate to credit cover and imbalance settlement. The SEM Committee recognises that the SSDP has a significant effect on the levels of collateral required of Suppliers. This is a non I-SEM issue but, nevertheless, the SEM Committee are keen to explore this issue further and intend to undertake a separate consultation on this aspect in the coming months.

The SEM Committee notes comments concerning the methodologies for assessing Traded Not Delivered Quantities and Undefined Potential Exposure, and concerning the assumptions implicit in the use of the Analysis Percentile Parameter. In principle, it is not inherently unreasonable to assume that data will be normally distributed and many mathematical analysis techniques are reliant on this assumption. However, real life data is almost never 'normal' in a mathematical sense. Based on an assumption that the SEM data is normally distributed, the Analysis Percentile Parameter approach has been utilised successfully within the SEM since 2007. The SEM Committee has received no evidence to suggest it would be imprudent to retain this approach for the I-SEM. The SEM Committee expects that both SEMO and participants will keep matters related to credit requirements under close review during the early operation of the I-SEM and bring forward Modifications as and when they are considered appropriate based on actual market experience post go-live.

7.4 SUSPENSION AND TERMINATION

Comments Received

Several respondents considered it inappropriate for the TSC to include cross-default provisions whereby the Market Operator should automatically suspend or terminate a participant in the Balancing Market if that participant is suspended or terminated from the ex-ante markets. These respondents argued that a clear evidential breach of the TSC itself should be necessary for suspension or termination to occur in the Balancing Market. They further argued that registration in the ex-ante markets is not mandatory as part of the I-SEM design and therefore it is permitted for participants to participate solely in the Balancing Market and, therefore, where a participant is suspended from the NEMO market, it should be permitted to continue participating in the Balancing Market, so long as it continued to comply with all TSC obligations. One respondent stated that the NEMO should be allowed to have an objective mechanism to reassess the credit worthiness of each Balancing Market participant in the event that the participant is suspended or terminated in the ex-ante markets.

Respondents also requested clarity of the resultant impact to legal entities in NEMO where a participant defaults in the Balancing Market, taking into account that credit in NEMO is assessed at a legal entity level whilst, in the Balancing Market, the same legal entities for the purposes of credit can be netted under one participant.

SEM Committee Response

The SEM Committee notes the concerns of several respondents concerning the inappropriateness of the Market Operator suspending or terminating a participant in the Balancing Market as a consequence of suspension or termination in the ex-ante markets. The SEM Committee agrees with the concern that that such suspension and termination should not be automatic but notes that, in the TSC Amendments, suspension is not automatic, with the Market Operator requiring prior written approval from the Regulatory Authorities before any suspension or termination can occur. Moreover, in practice, the Regulatory Authorities are highly likely to seek to engage with the relevant participant as part of the process of determining whether any suspension or termination of the participant should be approved and, as such, the SEM Committee does not consider that additional process steps on the Market Operator are necessary or appropriate.

The SEM Committee notes that some respondents questioned, more broadly, whether cross default should lead to suspension or termination in the balancing market. The SEM Committee disagrees that the principle of cross-default is inappropriate. The SEM Committee considers that a participant's financial difficulty in ex-ante markets would be a potential warning sign that should not be disregarded. Moreover, there are already a range of possible indicators of potential financial distress set out in the TSC which reflect the current SEM regime, and these are being prudently supplemented for the I-SEM.

The SEM Committee also notes the request for clarity regarding the impact on a Balancing Market default with regard to the NEMO given that for the purposes of credit several BM units can be netted under one participant in the NEMO. However, the SEM Committee considers this is not a TSC matter and, in relation to SEMOpx, is being considered within the NEMO rules in the BLG forum.

7.5 SETTLEMENT REALLOCATION AGREEMENTS

Comments Received

One respondent raised a detailed drafting point regarding the determination of an end date for a Settlement Reallocation Agreement (SRA) as expressed as DEDARA in G.14.15.3, which conflicted with their understanding from the MRWG where it was proposed that an SRA could be evergreen. The respondent suggested that the formula in G.14.15.3 be reviewed to allow for an enduring SRA.

SEM Committee Response

The SEM Committee notes the comment relating to the reallocation of credit cover requirements due to Settlement Reallocation Agreements (SRAs) and the comment that SRAs could be evergreen. In the light of this, the approach in G.14.15 has been amended such that, during commencement and termination of an SRA, a participant will now receive credit for any Settlement Reallocation Agreements that are in place during the Settlement Risk Period, by calculating the amounts that would be included on any Settlement Documents that are due to be issued relating to dates that fall within the Settlement Risk Period, albeit these calculations are made more complicated by having to accommodate the differing billing cycles for capacity and imbalance settlement.

8. TSC AMENDMENTS RELATING TO DATA PUBLICATION AND SUBMISSION

8.1 Data Publication

Respondents made a number of suggestions regarding the scope of data that they believed should be published, and made a number of suggestions regarding the timing of publication of such data, in order to enable participants to make informed decisions and support the efficient functioning of the Balancing Market.

8.1.1 Scope and timing of data publication

Comments Received

Respondents were of the view that Balancing Market information, including system and pricing data, should be published as close to real time as possible to all market participants in order to ensure that all participants are trading based on the same information and in order to allow participants to effectively manage their positions, reduce distortive early TSO actions and ultimately balance the market more efficiently. Respondents stated that the timely publication of data will help participants determine the supply/demand balance of the market, maximise their trading opportunities, and also gauge the possibility of Administered Scarcity Price (ASP) events occurring. Furthermore, it was suggested that certain data, such as Unit-by-Unit Physical Notifications; Unit-by-Unit Forecast Availabilities; and any early Bid-Offer Acceptances (BOAs), which is currently due to be published after Gate Closure, should instead be published before Gate Closure. It was pointed out that this data is published for the GB market well in advance of Gate Closure on the BM reports website, and contributes to the efficient operation of the GB market. It was also argued that any TSO actions, whether occurring before or after gate closure, taken through BOAs should be published to the entire market within 1-2 seconds of being sent to the unit.

Confirmation was requested by some respondents that wind forecasts will be published on a rolling basis, either by SEMO or the TSOs. More regular updates on rolling generator outages were also requested and it was proposed that such updates be published “periodically” as such information changes. Information was requested on how constraints, operating reserve and capacity shortfall updates would be considered through existing TSO publications and market messages.

Finally, the SEM Committee was urged to carry out a high level review of the overall suite of data publications and to decide on the appropriate level of transparency for a competitive market, with this review taking a holistic view and considering the ex-ante markets in addition to the BM.

SEM Committee Response

The SEM Committee notes the comments on the publication of market data and the requests for specific data items to be published, or for data items to be published in different, shorter, timescales. The SEM Committee notes also that much of the comment on the scope of data publication was associated with the calculation of imbalance prices, and the inputs into the SO flagging process. Responses requested that further information be made available on operational constraints that are inputs into the calculation of the imbalance price, and that this information be as current as possible, e.g. updating operational constraints when they change after their periodic publication and indicating as early as possible whether they are system constraint related and hence likely to lead to units being flagged out. The SEM Committee notes also the importance to participants of up-to-date wind forecasts and generator outage information, the clarity sought on the processes through which information on constraints, operating reserves and capacity shortfalls would be made available and, requests for the SEM Committee to conduct a high level review of the overall suite of data publications and of the appropriate level of transparency for a competitive market. The SEM Committee agrees that up-to-date operational constraint information, and other data affecting the calculation of imbalance prices, should be published in a timely manner, thus allowing participants to trade both ex-ante and in the Balancing Market on the basis of the best information. In principle, the SEM Committee considers that data inputs into the determination of the imbalance price, the processes and methodology used to flag and tag units, and the outputs of these should be published. This will include information such as wind forecasts, plant availability and constraint information that feeds into the determination of the Indicative Operations Schedule. Delivering this requires that information is made available through a number of routes, including, but not limited to, the TSC.

The SEM Committee has considered the approach to market transparency and the level of market information provided. Its considerations on imbalance pricing transparency, and details of the specific measures that are being put in place to deliver this, are set out in Section 4.4. Additionally, Appendix E of the TSC Amendments has been updated from the version consulted on and this should be read in conjunction with the pro-forma response spread sheet published in Appendix A.

8.1.2 Consistency of Data Publication provisions

Comments Received

Some respondents considered that the approach to timings of publications and reports is not always consistent across the TSC, Appendix E and AP6. For example, they pointed out that Tables 5, 6, and 7 of Appendix E fail to provide a specific timing for key pricing information. Although the TSC states that the imbalance price must be published within 30 minutes of the end of the trading period this is not supported in Appendix E. Similarly, the Data Reports section in AP6 has specific timings for some reports and not for others. It was argued that this should be addressed in the finalisation of the suite of documents to ensure that there is no ambiguity for the market.

Finally, some respondents stated that the approach to publication of the Market Back-Up Price is not clear. Section E.5 of the TSC requires the MO to calculate a Back-Up Price for each ISP and Paragraph E.2.2.4 of the TSC states that the Imbalance Price will be set to the Back-Up Price if the MO hasn't been able to publish within 30 minutes. The Back-Up Price is not mentioned in Appendix E or AP6 and so it appears to these respondents that the MO would calculate a price for each trading period but only publish it in the event of failure to publish the primary price. They also noted that there is no timing for when said Back-Up Price will be published and suggested that, given that the MO will calculate the Back-Up Price for each ISP, it should be published for each trading period regardless of whether the primary imbalance price was published on time, and that amendments to this effect should be made in Appendix E and AP6.

SEM Committee Response

The SEM Committee notes that respondents commented on both the timing of specific data items and the consistency of data publication, stating that these were inconsistent across various parts of the TSC, Appendix E and AP6. SEMO has conducted a review of the consistency and timing of data publication across the TSC, Appendices and Agreed Procedures and it is believed that these matters are now resolved. These changes are identified within the red-lined version of the Amended TSC that is published alongside this Decision Paper. However, the SEM Committee also notes that the TSC currently states that where there is any inconsistency between the main body of the Code and the Appendices that the body text takes precedence and this will continue to be the case under the amended TSC.

The SEM Committee notes the comments that the approach to the publication of the Market Back-Up Price is not clear. The Market Back-Up Price will be calculated for each ISP, and will be published for each ISP as part of the Imbalance Pricing Report, published in line with the requirements of Appendix E.

8.2 Data Submission

8.2.1 General

Comments Received

One respondent requested greater clarity as to how it is determined that a generator has “zero marginal costs” in D.4.4.11. They stated that their members are dispatchable, have priority dispatch, and have non-zero marginal costs. They suggested assigning “zero marginal cost” by technology class or some other objective criterion.

Another respondent highlighted that the TSC adjusts commercial offers with break points below the actual availability of a unit based upon the average availability of the unit in the settlement period and not the maximum availability of the unit.

SEM Committee Response

The SEM Committee notes the request for clarity regarding how it is determined whether a generator has zero marginal cost, and the suggestion that it could be defined by reference to technology class or other objective criterion. However, the SEM Committee considers that the clause, as drafted, is sufficiently general to implement the decision that zero marginal cost units have a deemed decremental price of zero, and allow for it to be established outside of the Code whether a unit has zero marginal costs.

With regards to the adjusting of commercial offer data with break points below the actual availability of a unit, the SEM Committee agrees that this should be based on the maximum availability of the relevant unit in the settlement period rather than on the average availability, and the Code has been changed to give effect to this.

8.2.2 Generator Mode Changes

Comments Received

There was a general view that multi-mode capability of generator units should be facilitated in the BM. Some respondents argued that the DAM and IDM will facilitate trading of units using mutually exclusive bids for each operating mode, but when trading the units in the BM participants will be forced to select an operating mode with no scope to select an alternative approved TOD data set over the course of the day following Gate Closure 1. It was argued that the facilitation of multi-mode capability in the BM would, as has been demonstrated in GB, allow generators to both offer the full

flexibility already inherent within the existing fleet and inform the TSOs of their actual operational capabilities near real-time, significantly increase market flexibility and make it easier for the TSO to balance the system.

SEM Committee Response

The SEM Committee notes the general view that multi-mode capability of generator units should be facilitated in the BM, allowing generators to both offer their full flexibility and inform the TSO of their actual operational capabilities near real-time. Whilst the SEM Committee agrees on the desirability of maximising the flexibility of generators in this way, particularly in view of the increasing penetration of intermittent renewable generation, the SEM Committee understands that a core process in the system, which is used to determine the trajectory of a dispatch quantity / instruction profile, requires a single set of Variable Technical Offer Data (VTOD) for the Trading Day in order to track between the MW output value at the Instruction Effective Time and the target MW level of each instruction in sequence, considering a single set of “increasing operation characteristics” and “decreasing operation characteristics” across the day. Any change to this would not be possible by I-SEM go-live.

8.2.3 Offers and Bids

Comments Received

One respondent noted that the ex-ante markets and the BM trade at different notional points on the transmission system, i.e. the ex-ante markets trade at the trading boundary and the BM trades at the station gate and that this increases the complexity of the trading arrangements.

One respondent argued that the implementation of dual order formats in the BM, combined with parallel opening of the IDM and BM, results in a requirement for dispatchable gas-fired generation units to submit a large volume of orders to the IDM and BM in order to manage their commodity risk.

SEM Committee Response

The SEM Committee acknowledges the comment of one respondent that the ex-ante markets and the BM trade at different notional points on the transmission system, i.e. the ex-ante markets trade at the trading boundary and the BM trades at the station gate. There is no difference in the commercial outcomes between pricing balancing market trades at the station gate and pricing them at the trading boundary. Despite an initial view that pricing at the station gate would offer the easiest implementation, during the development of the rules it was concluded that persisting the current arrangements and pricing at the trading boundary would provide a more convenient implementation

as well as being consistent with the expressed preferences of a number of participants. Accordingly, the TSC has been developed, with extensive consultation with the MRWG, on this basis

The SEM Committee notes the comment that the requirement to submit complex offers (with start-up and no load costs) and, optionally, simple offers (incremental offers / decremental bids only), combined with the parallel operation of the intraday and balancing markets, would require gas-fired generation units to submit a large volume of orders in the IDM and BM. However, parallel operation of the IDM and BM was decided in the I-SEM HLD and Detailed Design Markets Decision Paper. The SEM Committee's view was that TSOs need to be able to take dispatch actions prior to IDM gate closure to maintain system security. Whilst in other markets, such as BETTA, the BM does not run in parallel with the IDM, the TSO enters into out-of-market contracts that oblige participants to behave in the BM in accordance to instructions that may be given in advance of IDM gate closure. Additionally, the issue of order formats was also consulted on and decided as part of the decision on the Detailed Design. The SEM Committee's view was that this issue was an inevitable consequence of the re-dispatch market (non-energy) and balancing market running concurrently. The SEM Committee considered that the best way to address this issue is to acknowledge that the two markets run concurrently and allow for the possibility for different bid-offer formats in both. If the I-SEM were to have had separate re-dispatch and balancing markets they would likely have different requirements; even if the two markets were separate, the issues under consideration would still have arisen.

9. GOVERNANCE AND TRANSITIONAL ARRANGEMENTS

9.1 GENERAL

Comments Received

One respondent was of the view that it was inappropriate for the TSC to place obligations on the Regulatory Authorities, as such obligations would not be enforceable. There was further comment from another respondent that, where SEMO is required to fulfil obligations placed on it by the RAs, then such obligations should be set out in the MO licence rather than the TSC, which should merely set out the actions consequently undertaken by the MO. Respondents also commented on the need for greater clarity regarding the roles of the NEMO and TSO in Section B of the TSC.

A number of concerns were also raised regarding any potential conflicts of interest associated with EirGrid providing recommendations to the RAs on key commercial parameters given its roles as both SEMO and TSO. In the context of the information imbalance charge it was pointed out that should that parameter be set at a value other than zero, which is the level at which it will be set at go-live, Eirgrid may be asked to recommend a value to the RAs. It was suggested that this could give rise to a conflict of interest as setting a value that improved the accuracy of Physical Notifications (PNs) and “made dispatch easier”, which may be in EirGrid’s interest, may be detrimental to ex-ante market efficiency.

SEM Committee Response

In relation to the comment that it is inappropriate for the TSC to place obligations on the RAs, the SEM Committee agrees with this view and this has been considered in the finalisation of the TSC Amendments, at least in respect of obligations that over and above those in the existing TSC. This is not to say that certain roles cannot be attributed to the RAs in the Code. However, the purpose of doing this is not to seek to place formal obligations on the RAs which could not be enforced (as the RAs are neither party to the Framework Agreement nor bound by the licences that require compliance with the Code) but to indicate how the RAs will exercise their powers under the Code, such as describing what sort of thing the RAs are doing when they set a certain parameter, or decide upon a Modification to the TSC. While not bound by the provisions of the TSC, the SEM Committee is, however, conscious that the current TSC and the TSC Amendments contemplate the RAs having an important decision making role in a number of key areas, particularly in relation to parameter setting.

The SEM Committee notes but disagrees that it is necessary or appropriate to capture all MO obligations in the MO licence. The MO licence obliges the MO to comply with the TSC, so obligations in the TSC have the same force as obligations in the MO licence. The only difference lies in the governance of changes, and obligations on the MO that need to be consistent with obligations on other parties in the TSC will be far more easily changed if they are part of the TSC rather than separately stated in the MO licence and therefore subject to a separate governance process.

The SEM Committee agrees with the comments from respondents stressing the need for clarity between NEMO and TSO roles, and notes that there may be more than one NEMO operating in the I-SEM. While acknowledging the comments received, the SEM Committee does not view the current drafting as lacking clarity with regard to what obligations ought to be placed on the NEMO and System Operator that are not specifically stated at various points in the Code, or stated in the relevant licences or other codes that may apply to them. The SEM Committee, therefore, is not proposing to make any changes to the TSC in this regard, at this time.

In relation to the suggestion that conflict of interest issues arise in the TSC Amendments in the context of the process of setting the Information Imbalance charge, the SEM Committee does not agree with this comment. Noting that this will be set to zero for Go-Live and kept under review, the SEM Committee draws attention to the fact that a proposed methodology for how to set the Information Imbalance Charge has been published as part of the Tranche 1 ETA Parameters Consultation (SEM-17-009). This consultation invited comment from industry on the suitability of the methodology should the charge be considered to be required by the SEM Committee. In addition to the opportunity to comment on the methodology provided, any future decision to implement the Information Imbalance charge will be subject to further consultation and decision by the SEM Committee. On this basis, the SEM Committee does not agree that there are unresolved or unconsidered conflicts of interest that need to be addressed as part of the TSC Amendments.

9.2 RELEVANCE OF PARTICULAR PARAMETERS

Comments Received

A number of respondents expressed concern about the inclusion of the Information Imbalance charge parameters in the TSC. Notwithstanding that the Information Imbalance charge will be set to zero at go-live, respondents considered that it should be removed altogether, as they were concerned regarding the impact of such a parameter should it be set in the future to a value other than zero. It was suggested that should the information imbalance charge be set to any value other than zero it would penalise generators for changes to their PN relative to their final PN for reasons beyond the control of generators. Responses referred to the behaviour of other participants, variations in wind forecasts or changes in demand forecasts by way of examples. These respondents contended that the

imposition of a non-zero information imbalance charge would merely increase risks to generators which would ultimately be reflected in higher costs to customers.

One respondent raised concerns regarding the use of the Long Notice Adjustment Factor (LNAF) and System Imbalance Flattening Factor (SIFF).

SEM Committee Response

The SEM Committee notes the comments raised on the appropriateness of including specific parameters in the TSC, specifically the Information Imbalance charge parameter and LNAF and SIFF. The specific values of these parameters, and the effects thereof, will be subject to consultation as part of the consultation on parameters to be issued in May 2017.

The SEM Committee intends to set the Information Imbalance Price to zero at go-live. Before any potential change to the value of this parameter - if it were proposed to be set at a non-zero value - the RAs would consult on any proposed change.

9.3 PARAMETER SETTING PROCESS

Comments Received

Several respondents commented on the parameter setting process, on the governance of price-affecting parameters not specified in the TSC, and on the notice that participants would receive of changes to parameters.

Concern was expressed by one respondent regarding the process of the setting of key TSC parameters (the example provided being PAR) and the governance of future changes, specifically the level of consultation that the respondent believed would be appropriate before any changes were made to that parameter. Another respondent suggested that the procedure for setting TSC parameters had not been followed, although the respondent recognised that the process may have been difficult to follow given the level of workload being undertaken by the MRWG. Another stated that the process for setting commercially significant parameters in the capacity market had not been defined and that mechanisms to ensure consistency between energy and capacity market codes had not been set out.

There was comment in regard to a number of parameters that participants would receive only five Working Days' notice of a change coming into effect after the RAs had determined the value of the parameter, and that such limited notice would be unacceptable. The setting of parameters required to inform bidding into the capacity auction sufficiently in advance of the auction (three months was

suggested) was also raised, with examples cited being the Administered Scarcity Price and the Reserve Scarcity Price Curve.

SEM Committee Response

Regarding the governance of parameters outside of the TSC, the SEM Committee notes the concerns raised with regard to both those parameters associated with the Flagging and Tagging process and those parameters associated with reserve treatment. The setting of parameters for the calculation of Imbalance Prices are variously provided by, or approved by, the RAs, and are set out in Appendix E of the TSC. The governance of change to these parameters is detailed in the TSC. The determination of the Imbalance Price is, however, also influenced by system operation policies and procedures, which are governed by both the respective TSO Licences and Grid Codes.

The SEM Committee acknowledges the concern of respondents that the operating methodologies and practices of the TSOs used in determining the Indicative Operations Schedule are not subject to the similar governance and transparency arrangements as TSC parameters. In light of this, the SEM Committee has taken steps in the TSC Amendments to increase the transparency of the roles and responsibilities associated with the Flagging and Tagging process. These roles and responsibilities are now more clearly set out in the Chapter E, Appendix N and Appendix K and consequentially subject to the TSC's governance arrangements. The SEM Committee considers that this, in addition to the information that will be provided in the BMPS, will provide significant assurances to participants on the inputs, processes, and outputs of the imbalance pricing methodology. It will, however, be the case that, in complying with their statutory duties, the TSOs may introduce changes to certain inputs into the Indicative Operations Schedule. In such circumstances Licence and Grid Code Governance will apply. The SEM Committee considers that the BMPS will provide significant visibility of the inputs into the scheduling and dispatch process and the application of market-impacting parameters, and this visibility will provide greater confidence in the TSO processes. The transparency of the calculation of Imbalance Prices is discussed in more detail in Section 4.4.

The SEM Committee notes the comments stating that the process for the setting of the parameters presented at the June 2016 MRWG meeting was not followed. The SEM Committee understands that a number of presentations were made at the MRWG relating to the issue of parameter setting but stresses that the SEM Committee's process of consultation and decision is not dependent on any other process being followed. Further, the SEM Committee notes that these presentations, and the idea of channelling some of the work on parameters through the MRWG was a positive step to prepare participants for the SEM Committee's formal consultation process, not a substitute for it. The SEM Committee draws participants' attention to the Parameters Consultation issued on 3 February 2017, and a second consultation to be issued in May 2017.

The SEM Committee notes the concern that, for a number of parameters, participants would receive only five Working Days' notice of changes coming into effect. The SEM Committee does not share this concern and notes that the TSC provides only for the timescales within which the Market Operator must publish parameter changes of which it has received notice. The notice period given to participants will depend primarily on the process followed by the RAs for determining new values. In this regard, the RAs will use best regulatory practice and provide appropriate notice when determining the date on which a parameter will be given effect to. The SEM Committee also notes that the provisions in relation to the setting of parameters and the provision of notice to participants of changes to parameter values applied in the TSC satisfactorily for the past ten years.

The SEM Committee notes the comments relating to the importance of certain parameters that would impact on participants' capacity auction bids. The SEM Committee is cognisant of the need for notice of these parameter values in advance of a capacity auction and this is reflected in the SEM Committee's efforts at ensuring that all relevant parameters are published in advance of the first capacity auction.

9.4 TRANSITIONAL ARRANGEMENTS

Comments Received

Comments on transitional arrangements related to the transition of the trading arrangements between SEM and I-SEM, specific transitional considerations regarding the credit arrangements at I-SEM go live, and aspects of the Modifications process.

One respondent suggested that, as some aspects of the rules were recognised as being interim at go-live, there should be an explicit schedule of these items captured in the TSC in order that they can be addressed post go-live. There was specific recognition that specific arrangements to minimise collateral requirements during the transition between the SEM and I-SEM arrangements need to be developed, noting that this point has been raised through the MRWG process.

Several respondents commented that they did not believe that the Interim Modifications provisions set out in H.2 of the TSC Amendments were appropriate, or required. Respondents suggested that the Urgent Modifications process could effectively deal with any rapidly required changes to the I-SEM TSC, while one participant was concerned that the Interim Modifications might not only be used in "exceptional circumstances". There was no support for the Interim Modifications provisions as drafted, although an alternative approach to "fast track" Modifications was suggested, under which participants, rather than just the RAs as set out in the amended TSC, would be able to raise Modifications.

Respondents also commented on the membership of the Modifications Committee, with the suggestion being made that members of the Modifications Committee should not be required to resign after one year. It was proposed that rather than switching between the existing market rules (Part A) and the I-SEM rules (Part B) it would be simpler to maintain the existing process whereby half of the Modifications Committee members' terms expire each year with subsequent new appointments or re-elections.

SEM Committee Response

The SEM Committee acknowledges the concerns about the Interim Modification arrangements, including the suggestion that such provisions should only be used in exceptional circumstances. The SEM Committee notes that, during the implementation of the original Trading and Settlement Code in 2007, over 70 Urgent Modification Proposals were progressed successfully in the six months between the Code "Go-Active" and "Go-Live". The Urgent Modification process is retained in Part B of the TSC. In addition modifications have been made to Condition 3 of the EirGrid Market Operator licence and Condition 15 of the SONI Market Operator licence respectively. These modifications oblige the Market Operator to adopt amendments made to the TSC, as directed by the CER or the Utility Regulator in the relevant jurisdiction. Combined with a Statutory Instrument (SI No 117 2017) in Ireland, these legal instruments provide the necessary authority for the adoption of the TSC Amendments and give each of the Utility Regulator and CER the power to make further changes to the TSC up to the end of December 2018.

The SEM Committee anticipates that required changes to the TSC may be identified through testing and trialling and through detailed consideration of TSC provisions in a nearly live environment. However, given the above noted concerns and the alternative methods for effecting modifications to the TSC, the SEM Committee does not believe that the provisions of Section H.2 are needed and they have therefore been removed.

In relation to the proposal that a schedule of interim measures or drafting should be included in the TSC Amendments, the SEM Committee does not agree with this proposal. Chapter H, and to some extent, Part C of the TSC Amendments, are designed to provide clarity on any areas of the TSC that will change, or that require transitional arrangements. The SEM Committee is satisfied that these parts of the TSC Amendments provide this comfort to participants.

The SEM Committee acknowledges the comments of several respondents concerning the proposed arrangements for the Modifications Committee pointing out that proposals would be difficult to manage and to control both for the Secretariat and for the members. Having considered these arguments, and the matter having been discussed at the Modifications Committee, the SEM Committee agrees with the concerns and has, accordingly, amended the approach. The approach in the TSC Amendment now clarifies that the Modification process shall apply to all three Parts of the

Code from the point where the three part TSC comes into effect to ensure that Modification Proposals which impact more than one Part can be dealt with efficiently. In addition the revised approach maintains the current approach of replacing elected members to ensure that there is not any point where all members need to be elected.

With respect to the suggestion that a transitional measure is required to manage the transition of credit cover between the SEM and the new arrangements, the SEM Committee is sympathetic to this proposal. This said, the SEM Committee is cognisant that a review of this was done arising out of an action at the I-SEM BLG in October 2016, which raised a number of legal concerns with such an arrangement. This said, The SEM Committee also notes that this problem is relatively short-lived and that its affects are to some extent mitigated given that as the collateral requirements for the I-SEM ramp-up, those for the SEM will be wound down.

10. GENERAL TSC AMENDMENTS

10.1 Curtailment

Comments Received

Several respondents commented that the SEM Committee decision to remove compensation for curtailment actions for wind generators from 1 January 2018¹⁰ should be revisited immediately based on the draft EU Clean Energy Package which states that curtailment of renewable generation should be compensated.

One respondent stated that curtailment is neither defined in the TSC Amendments nor in the proposed Grid Code. It also noted that the TSC treats all curtailment in the same manner, giving the effect of no compensation for curtailment, while SEM-13-010, which sets out the rules for non-compensation for curtailment, outlines that non-compensation for curtailment occurs only in tie-break situations. In this respondent's view, therefore, the provisions of F.8 of the TSC should only apply for curtailment in tie-break situations, and the flagging of said dispatch instructions needs to be so defined in F.2.4.1 with proper definition of curtailment in tie-break situations relating back to SEM-13-010.

Some respondents considered that the methodology for the calculation of the curtailment price set out in section E.6 is incorrect. These respondents argued that the curtailment price for a unit should be the average price of the trades for that specific unit, given its use in the later settlement algebra to avoid imposing financial exposures.

SEM Committee Response

The SEM Committee notes the view of several respondents that decision to remove compensation for curtailment should be revisited. However, the SEM Committee notes that, whilst the EU Clean Energy Package contains proposals concerning compensation for curtailment, at this stage, these proposals are only in draft form. In the meantime, the SEM Committee decision still stands.

The SEM Committee notes the comment of one respondent that non-compensation for curtailment occurs only in tie-break situations. The SEM Committee's view is that this is not correct. The decision was that, pre January 2018, compensation for curtailment would be pro-rated between

¹⁰ "Treatment of Curtailment in Tie-break situations. Decision Paper", SEM-13-010, 1 March 2013, SEM Committee.

generators that were in tie-break situations, and was not that compensation would apply only to generators in tie-break situations. As regards the comment that curtailment is not defined, the derivation of curtailment quantities is made in Section F.8 by reference to dispatch instructions that have been labelled with the relevant Instruction Combination Code by the System Operator. In parallel with the February 2013 decision on payment of compensation for curtailment, the SEM Committee published 'Definition of Curtailment and Constraint' setting out the methodology for distinguishing between events of constraints and curtailment¹¹ which defines the circumstances under which the curtailment Instruction Combination Code will be used.

Finally, the SEM Committee disagrees with the views of some respondents that the methodology in Section E.6 for calculating the Curtailment Price is incorrect, and that the Curtailment Price for a unit should be the average price of the trades for that specific unit given its use in the later settlement algebra to avoid imposing financial exposures. However, the SEM Committee notes that the Curtailment Price for a given Generator Unit in a given Imbalance Settlement Period, calculated in Section E.6, is an average price of the day-ahead and intraday trades made in respect of the given Generator Unit and Imbalance Settlement Period, weighted by the absolute MW quantity of each trade, which the SEM Committee considers to fulfil the purpose the respondents described.

10.2 SO-SO TRADING

Comments Received

A number of respondent expressed concern about the lack of transparency regarding SO-SO trading under I-SEM and its impact on the imbalance price and uncertainty over how SO-SO trades are addressed.

One respondent argued that SO-SO trades should not be conducted on more preferential terms than can be accessed by I-SEM participants and that there should be restrictions on TSO actions to ensure SO-SO trading does not trigger Administered Scarcity Pricing (ASP) or increase prices over what they would have been had no SO-SO trading occurred.

SEM Committee Response

The SEM Committee recognises the concerns expressed regarding the lack of transparency of SO-SO trading under I-SEM and its imbalance pricing methodology, and acknowledges the comment that trades should not be treated preferentially, and that SO-SO trading should not trigger ASP or

11 "Definition of Curtailment and Constraint. Version 1.0", SEM-13-011, 28 February 2013, SONI and EirGrid.

increase prices over what they would have been had no SO-SO trading occurred. It is the SEM Committee's intention that SO-SO trades will be treated in the same manner as other balancing market actions, in terms of their role in setting the imbalance price and in respect of the provisions for data publication. In this regard, the SEM Committee believes that it would be inappropriate to ensure that SO-SO trading can never trigger ASP or increase prices, any more than it would be appropriate that bids and offers provided by participant could never trigger ASP or raise prices; equitable treatment between SO-SO trades and other balancing actions would imply that triggering ASP and/or raising of prices as a result of SO-SO trades could sometimes happen.

10.3 MAKE WHOLE PAYMENTS

Comments Received

A number of respondents expressed concerns regarding the Fixed Cost Payments and Charges in Section F.11. Some respondents believed that the current Fixed Cost Payments and Charges wording will unfairly disadvantage units which are constrained off while benefitting units which are constrained on. Another respondent argued that the proposed methodology, as drafted, is contrary to the HLD, as this decision and subsequent detailed design decisions reinforced the concept that constraints should not have an impact on the market. It highlighted that Section F.11 as currently written fails to pay and recover Start-Up Costs across different billing periods and this disadvantages units which are constrained off.

SEM Committee Response

The SEM Committee acknowledges the concern expressed regarding the recovery of fixed costs. It is understood that the concern being raised in this regard is primarily due to energy market settlement and invoicing being based on calculating all payments and charges from information arising in a Billing Period (i.e. a week).

To accurately assess the impacts of start-up costs at any given moment in time, would require knowledge, at the point in time when the calculation is being carried out, of all information about a generator unit's market stops and starts, and physical stops and starts in the past and into the future. At any point in time the available information is of course limited to the past; it cannot be known whether there will be a stop or a start in the market or physical operation of the unit sometime in the future.

This gives rise to questions over what period of time should the assessment of start-up costs be undertaken, and needing to know the start and end times of periods of market or physical operation that span the end of a billing period.

The concern that has been raised by the respondent highlights issues arising when a Period Of Market Operation (POMO) or Period Of Physical Operation (POPO) appears to have started at the Billing Period boundary, resulting in payment or recovery outcomes which would not have arisen if the actual periods, not split up by Billing Period boundaries, could have been taken into account. In fact, this issue only affects assessment of costs payable and recoverable for the first POMO or POPO in the Billing Period; all following periods of operation would be adequately assessed using the remaining logic outlined in the proposed TSC amendments.

A way of addressing this issue has been developed, while maintaining the approach of basing the settlement on a Billing Period Basis, and ending and starting the periods at the Billing Period boundary and this has now been incorporated in a revised Section F.11 of the TSC amendments.

10.4 PRIORITY DISPATCH

Comments Received

One respondent commented that it considered that there is no differentiation in the TSC between dispatchable generators with priority dispatch and standard conventional dispatchable generators. It argued that priority dispatch plant should have a right to submit a technically feasible Final Physical Notification (FPN) which deviates materially from their ex-ante position, that this right should be reflected in Generator Licences and, further, that all priority dispatch plant should be exempt from Information Imbalance charges.

SEM Committee Response

The SEM Committee notes the comment that there is no differentiation in the TSC between dispatchable generation with priority dispatch and standard conventional dispatchable generators, and the argument that priority dispatch plant should have the right to submit technically feasible FPNs that deviate from ex-ante positions and be exempt from Information Imbalance charges.

The treatment of priority dispatch plant was addressed in the Detailed Design Markets Decision Paper. The SEM Committee's decision was that the current policy for priority dispatch will remain in I-SEM. This means that, in the BM, the concept of price-making and price-taking generation is being maintained i.e. priority dispatch generation will be price-taking, and can:

- a. run at its FPN (or, for wind, at its maximum availability) so far as the safe secure operation of the system allows;
- b. be settled at the imbalance price for any volumes not sold ex-ante; and
- c. not be able to set the imbalance price with its priority dispatch volume.

That non-priority dispatch generation may enjoy similar treatment is not relevant.

Moreover, the SEM Committee decided to retain the concept of “absolute” priority dispatch whereby the TSOs will consider accepting bids from Balancing Service Providers to increase demand and hence reduce the levels of curtailment.

10.5 SUPPLIER CHARGING

Comments Received

Several respondents expressed concerns regarding the ability of the MO to manage cash flow risk under the TSC by changing supplier charges within year. They argued that suppliers often estimate tariffs year ahead and must give at least 30 days’ notice of a change in tariff to customers, and thus urged continued reliance on the k-factor rather than allowing charge factors to change within year, as the latter could create financial exposure for suppliers. If within year changes are allowed, they proposed, firstly, a quarterly review of all actual charges to be levied with the predicted charges and, secondly, the setting up of a socialisation fund to protect suppliers.

Another respondent, on the other hand, accepted that the Market Operator is taking on a series of cash-flow considerations, including but not limited to the Imperfections Charges, Capacity Charges, Currency Adjustment Charges, Residual Error Volume Charges, potentially some Difference Payments (after the exhaustion of the Difference Payment Socialisation Charge) and Market Operator Charges.

This respondent acknowledged that most of these are not within the MO’s control, and are impacted by Market Participant, System Operator and Meter Data Provider behaviours, along with currency exchange rates. It agreed that, consequently, the MO should have a within year mechanism to alter its revenue recovery as required, with RA approval. It went on to argue, however, that obligations should be inserted in the TSC to provide adequate notice to market participants affected by any change to these charging parameters, in particular so that suppliers can reflect those changes as necessary in retail tariffs with appropriate notice. It pointed out that this would not prevent the RAs from directing a change to a parameter in extremis, and would provide consistent regulation from the wholesale sector through to the retail sector. It requested that the MO publish (in summary format, with confidential detail of the submission removed as required) any request to change a charging parameter, including at a minimum the new value of the charging parameter and the proposed date from which it is to take effect, and that the SEM TSC be amended to state that no approved change to a charging parameter will take effect for two months from publication of the RA decision, unless specifically required earlier by the RA decision.

SEM Committee Response

The SEM Committee recognises the concerns of participants regarding the ability of the Market Operator to change supplier charges within year and notes the comments urging continued reliance on the k-factor and the comments recognising the cash-flow issues for the Market Operator but arguing that adequate notice should be given for changes. However, the SEM Committee is of the view that the arrangements under I-SEM in this regard will be no different to the arrangements that have applied under the SEM. Section F.12.1.4 includes "*and such under recovery is such that it is not appropriate to include as an adjustment in subsequent Years*", which requires that the charge can be changed only where necessary and where the RAs agree. The SEM Committee is satisfied that, given that the SEMO does not have infinite cash facilities, these arrangements continue to be necessary and appropriate.

The SEM Committee acknowledges the comment that supplier charges should not be imposed on an Autoproducer operating within a Trading Site when it is exporting. The SEM Committee agrees with this comment and can confirm that Trading Sites will not pay supplier charges when exporting.

10.6 INSUFFICIENT LIQUIDITY

Comments Received

One respondent highlighted that the Common Rules for an Internal Electricity Market (Directive 2009/72/EC) require sufficient liquidity to be present before balancing markets are introduced and stated that this issue has yet to be addressed by the RAs tasked with delivering a fit-for-purpose I-SEM design. It was of the view that the I-SEM will not contain sufficient liquidity to deliver a properly competitive BM and hence believed that the RAs must re-examine the introduction of balance responsibility through the BM.

SEM Committee Response

The SEM Committee notes the comment from one respondent that the Common Rules require sufficient liquidity and that the I-SEM will not contain sufficient liquidity to deliver a properly competitive BM. The SEM Committee does not agree with view expressed. Participation in the BM will be mandatory and hence the issue of insufficient liquidity will not arise, as all available resources will be obliged to participate.

11. SEM COMMITTEE DECISION

Having evaluated all the responses to this consultation, and in the context of applicable statutory obligations and duties, the SEM Committee considers that the amended Parts B and C of the SEM Trading and Settlement Code in the form attached:

- (a) reflect the SEM Committee's previous decisions in relation to I-SEM to the extent appropriate and practical; and
- (b) take full and proper account of the responses received during the extensive consultation process; and
- (c) are necessary or desirable in view of the revised SEM arrangements and the Electricity Market Regulation revisions for the purposes of the Electricity Regulation Act 1999 (Single Electricity Market) (No 2.) Regulations 2017 ("Regulations").

The SEM Committee therefore:

- (a) approves Parts B and C of the SEM Trading and Settlement Code (as amended following the consultation) in the form attached; and
- (b) recommends to the Utility Regulator and to the Commission for Energy Regulation that they should take the necessary steps under Condition 15 of SONI's Market Operator Licence and Condition 3 of EirGrid's Market Operator Licence and the Regulations (SI No. 117 2017) respectively to direct or to determine amendments to the Trading and Settlement Code to insert a new Part B and Part C in the form attached; and
- (c) further recommends that such amendments should be directed or determined to take effect on the agreed date of Tuesday 23 May 2017.

12. NEXT STEPS

This process has led to the SEM Committee approval of changes to put in place a new Part B and a new Part C for the SEM Trading and Settlement Code. The changes to the current TSC to put into place Part A for the new three Part Code are the subject of Mod_01_17 under the TSC Modification Process. The Modifications Committee has now submitted its Recommendation Report to the RAs and a decision will be forthcoming in early May 2017.

On the basis of that report, the SEM Committee will direct changes to the TSC to convert it into Part A of the new three Part Code. These changes will be directed to come into effect on the same date that the CER and the Utility Regulator separately direct the implementation of Part B and Part C under powers provided (respectively) by SI No. 117 2017, and Licence Condition 15 of the SONI Market Operator Licence.

On that date the new three Part TSC will come into effect but, as Part C sets out, the current Pool trading and capacity payments mechanism will continue in effect until a date and time which the RAs determine to be the “Cutover Time”. It is expected that this will be 23 May 2018. After the new TSC comes into effect, it will be necessary for all Parties to enter into a new Framework Agreement. Part C of the Code sets out the process that the Market Operator will manage to give effect to all the necessary Deeds.

ANNEX A LIST OF RESPONDENTS

24 non-confidential responses were received to the consultation. Responses were received from:

- AES;
- Aughinish;
- Bord Gais Energy;
- Bord na Mona;
- Brookfield;
- CEWEP;
- EAI;
- Eirgrid/SONI
- Electric Ireland;
- ElectroRoute;
- Energia;
- ESB GWM;
- ESBN;
- Gaelectric;
- IWEA;
- Lumcloon;
- Moyle;
- NIE Networks;
- Power NI;
- PPB;
- PrePayPower;
- SSE;
- Tynagh Energy Limited (TEL); and.
- Vayu.

There were no confidential responses.