Single Electricity Market

Principles of Dispatch and the Design of the Market Schedule in the Trading and Settlement Code

SEM Committee Decision Paper

26th August 2011

SEM-11-062

EXCECUTIVE SUMMARY

The decisions of the SEM Committee as set out in this document are summarised below.

Principle Underlying Construction of the Market Schedule

As there is no need for immediate action on this issue, and given the developments towards agreement on a target model for a European electricity market, no fundamental changes to the SEM High Level Design are envisaged in the interim period, unless such changes become clearly warranted on grounds of material harm as determined by the SEM Committee. Meanwhile, work on the framework for assessing the material harm to customers is being progressed in that context. Should market intervention be warranted, the SEM Committee will consult with industry on possible approaches to resolve the material harm identified. Any approach implemented will be necessary, holistic and proportionate. The SEM Committee recognises that there are a range of potential drivers of any further divergence between the Market Schedule and actual dispatch including, but not limited to, delay in the delivery of network and the scale of curtailment of generation for operational reasons. If material harm to customers arises as a result of these issues or others, the SEM Committee will review the appropriate options to address this harm at that juncture. The SEM Committee notes that such options may include, but may not be limited to, those already examined in this process, including future connection offers for new plant. Options will be fully consulted upon and the SEM Committee commits to actions that are necessary and proportionate.

Allocation of IMRs behind Constraints

For the same reasons above, and subject to the same qualifications outlined, no fundamental changes to the SEM High Level Design are envisaged in the medium term. Meanwhile, the work on the framework for assessing the material harm to customers is being progressed in that context. The SEM Committee no longer has a stated preference at this juncture for any one of the alternative options advanced in earlier consultation papers, or indeed any other potential options. Again, any chosen approach will be consulted upon and will be adopted only if it is necessary, holistic and proportionate to the identified material harm.

Principle Underlying Dispatch: Least Cost Dispatch

Given that it represents the most efficient short- term use of available resources and is consistent with existing dispatch principles, the Transmission System Operators (TSOs) shall continue to dispatch the system to minimise production costs of generation, taking account of system security requirements. The concept of firmness will not be taken into account in the dispatch processes except to the extent that this is provided for in tie break situations as decided by the SEM Committee. It is noted that dispatch of priority dispatch plant is an exception to this general principle.

Priority Dispatch

- Adhere to an 'absolute' interpretation of priority dispatch whereby economic factors are only taken account of in exceptional situations.
- Priority dispatch is facilitated in the SEM by affording qualifying parties the option to register as Price Takers
- Parties with mandatory priority dispatch under EU Directives (renewables, qualifying hybrid plants, high efficiency CHP) shall be given priority over those afforded priority dispatch at the discretion of a Member State (peat).
- The approach set out in Section 4.4 below will be employed by the TSOs when dispatching relevant plant.
- The TSOs shall review the hierarchy referred to above on an annual basis and make submissions to the SEM Committee further to this review as necessary and appropriate.
- Notwithstanding the above, where a threat to public safety exists due to a flooding situation, consideration will be given by the TSOs in dispatch decisions and processes to the need to dispatch hydro electric stations in the SEM in a manner that minimise this threat to the appropriate degree. The TSOs shall consider this matter and submit proposals on this issue to the Committee.
- In the context of Article 16 of Directive 2009/28/EC the TSOs shall report on a quarterly basis to the respective Regulatory Authorities on incidences of curtailment of renewable generation in order to guarantee the security of the electricity system and security of energy supply indicating corrective measures employed to prevent inappropriate curtailments.
- The SEM Committee considers that the question of 'must run' in dispatch, which has been raised by some parties, is not a matter which is relevant to this decision.

Hybrid Plant and Priority Dispatch

- A hybrid plant will qualify for priority dispatch where it can show that its carbon emissions are lower than those of a reference thermal plant, as described in further detail in Section 4.5 below.

Deemed Firm Access

Deemed firm access whereby FAQ or MEC is allocated in advance of the completion of necessary transmission infrastructure reinforcements will not be introduced to the SEM.

Treatment of Price Takers in the Market Schedule

The TSC shall be modified to provide for revised rules to reflect the SEM High Level Design (HLD) and to align the treatment of all PTs with that of Price Makers by limiting their access to the Market Schedule to the maximum of actual output and FAQ (or MEC when infrastructure works are complete and the VPT becomes fully firm).

Grid Code Matters and Information on Technical Issues

The TSOs and asset owners shall continue to make available information relating to:

(a) their understanding of what change to the scheduling and dispatch of generation are being contemplated in light of the increasing level of renewable generation on the system, including where there may be technical limitations on the quantity of certain types of plant that can be accommodated on the system; and
(b) their view of how technical issues (for example system inertia, fault levels etc.) will be resolved.

In relation to the Grid Code:

(a) the current initiative from the TSOs to place additional emphasis on enforcing existing Grid Code obligations on incumbent and new generating units should continue; and
(b) the TSOs should also keep the Grid Code under review in order to ensure that future generation portfolios continue to support the satisfactory operation of the system.

Priority Dispatch and Tie Breaks

If, after applying the hierarchy between plant categories identified in section 4.4, for the purpose of implementing priority dispatch, the System Operators still have to choose between qualifying plants, the SEM Committee considers that it should seek to follow the principle of firm capacity having priority over non-firm capacity and, between firm capacities, date order should determine priority (i.e. earlier date preferred over later date) for price taking renewable generation in so far as this is feasible in the context of the basis for the derivation of FAQs with

reference to network delivery. A consultation paper regarding the detailed implementation of tie breaks in dispatch for price taking generation is published in parallel with this decision paper (SEM-11-063).

Determination of SMP when Demand is met by Price Takers

PFLOOR will continue to be set annually by the Regulatory Authorities following consultation with industry and to be employed in Excessive Generation Events and as a lower limit to SMP.

Demand Target and Excess Generation Events

The quantity of generation charged PFLOOR in the event of an Excessive Generation Event arising from an excess of Price Taking Generation should not exceed System Demand. The MSQs of Price Taking Generation should, in such circumstances, be reduced down so that the total quantity is equal to System Demand. The precise implementation of this principle, which will be affected by the decision of the SEM Committee on tie breaks in dispatch for price taking generation, will be dealt with in the separate consultation paper referred to above.

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1. Introduction

This paper sets out the SEM Committee's decisions regarding twelve specific matters raised in a Consultation Paper issued in July 2009 regarding principles of dispatch and the design of the Market Schedule in the Trading and Settlement Code (SEM-09-073).[1] These decisions also follow the SEM Committee's Proposed Position Paper on relevant issues published in September of 2010 and comments received from stakeholders.[2]

The background and context of the present paper have been extensively commented on elsewhere so we shall not repeat them here. Suffice to note that the issues involved are wide ranging and complex even by normal industry standards. Very briefly, the key issues included:

- the construction of the Market Schedule;
- the resulting allocation of infra marginal rents;
- principles underlying the dispatch process;
- interpretation and application of the principles of priority dispatch;
- the case of differentiating between categories of generation qualifying for priority dispatch;
- the case for 'deemed' firm access, and
- treatment of Variable Price Takers in the Market Schedule.

Any follow on work arising from decisions in this paper will be progressed by relevant SEM joint management units and plans for such work will be put in place and notified to industry in due course. A separate consultation has issued on the framework for the assessment of 'material harm' to SEM customers and a decision paper on this framework will be published shortly.[3] This issue is revisited further below. For the moment, the key point is that work on the material level of harm assessment framework will continue independently of the decisions stated in this paper.

A consultation paper on the issue of dispatch of priority dispatch price taking generation units in tie break situations and on the related issue of the approach to the reduction of the MSQs of price taking generation in EGEs is published in parallel with this paper (SEM-11-063).

A key issue that will have a bearing on the evolution of the SEM and the decisions set out in this paper is the advent and pace of regional

[1] Principles of Dispatch and the Design of the Market Schedule in the Trading and Settlement Code: A Consultation Paper, July 8th 2009, SEM-09-073

[2] Principles of Dispatch and the Design of the Market Schedule in the Trading and Settlement Code: SEM Committee Proposed Position Paper and Request for Further Comment, September 2nd 2010, SEM-10-060

[3] Monitoring the Divergence of the Market Schedule from Dispatch and the Impact on Consumers, Consultation Paper, January 18th 2011, SEM-11-002

integration. Given the above, and in the interest of regulatory stability, no fundamental changes to the SEM High Level Design are envisaged in the interim period, unless such changes become clearly warranted on grounds of material harm as determined by the SEM Committee. Work on the framework for assessing the material harm to customers is being progressed with a decision due shortly. Should market intervention be warranted, the SEM Committee will consult with industry on possible approaches to resolve the material harm identified. Any approach implemented will be necessary, holistic and proportionate.

2. Responses to Proposed Position Paper

Fifty four responses were received to the proposed position paper and these are published in tandem with this decision paper except in cases where the respondent requested that the response be treated as confidential. A separate paper 'Overview of Key Responses to SEM-10-060' is also published alongside this paper.

Section 3 of this paper provides context while Section 4 sets out the issues consulted upon, and the SEM Committee's decisions. EirGrid's submission to the SEM Committee regarding their view as TSO of the principles to apply to the dispatch of priority dispatch plant in the context of the SEM Committee's interpretation of that requirement is set out in Appendix A to this paper. Guidance from the EU Commission regarding the treatment of High Efficiency CHP plants is attached in Appendix B.

3. Context Update

As stated in the introduction we will not be revisiting the already well documented background and context to this lengthy consultation exercise. It is worthwhile, however, to single out a few key developments since the exercise began in July 2009 which have a bearing on the present decision paper.

Firstly, Member States now have binding renewable energy targets under the 2009 Renewables Directive that replaces and repeals the 2001 Directive. All Member States have, as required under the 2009 Directive, submitted a National Renewable Energy Action Plan to the EU Commission in 2010 setting out how they will meet these targets. In Ireland, the Government has committed to 40% of electricity consumed coming from renewable sources in 2020. In Northern Ireland, the Department of Enterprise, Trade and Investment has set a similar target for 2020. In addition, elements of Directive 2009/28/EC have been transposed in Ireland and the Department of Enterprise, Trade and Industry in Northern Ireland has recently consulted upon transposing regulations.[4] The SEM Committee has acknowledged from the outset that the scale and timing of some of the key challenges in this area – for example a growing mismatch between the Market Schedule and dispatch as more intermittent generation comes on to the system – is uncertain. This is still the case. In some respects, in fact, the uncertainty may now be even greater given the investment climate, financial market difficulties and planning issues for example. Other things being equal, this would warrant a relatively cautious approach by the SEM Committee to contemplating material changes to the SEM High Level Design at least in the short to medium term.

Turning to the wider SEM context, the SEM Committee has also published a paradigm for decision making in the SEM for the near, medium and longer term.[5] It has become apparent that they key factors that will impact on and shape the SEM in the medium to longer term are considered to be the drive towards a European wide electricity market facilitated by adoption of a target model, continued management of market power and associated liquidity challenges, delivery of the necessary grid infrastructure on the island in order to ensure continued secure supply to customers and the increase in renewables (intermittent generation).

Undoubtedly the move towards increasingly integrated European electricity markets is of major significance for the SEM and must be borne in mind

[4] http://www.dcenr.gov.ie/NR/rdonlyres/C42ACBC8-61DE-4A10-9B59-2395CB7DDE2C/0/SI147of2011.pdf *and* , http://www.detini.gov.uk/consultation_on_priority_dispatch_under_the_renewable_energy_directive

[5] Ref: SEM Committee Annual Report 2008, SEM-09-022, 24th March 2009 *and* SEM Committee Annual Report 2009, SEM-10-127, 11th March 2010 *and* SEM Committee Strategy Day Information Paper, SEM-09-013, 12th March 2010

when contemplating the strategy for the development of the SEM in the medium term. Given the potential for fundamental changes to the SEM arising from the above in the stated timeline, this would warrant a ‘steady as she goes’ approach to the SEM in the interim period. The focus must be on continuing to achieve the key SEM objectives by addressing issues that are a ‘must do’ in the medium term.

In particular, the SEM Committee wishes to highlight efficient and timely delivery of the infrastructure to support the continued provision of a secure supply and notes comments from industry throughout this consultation process and others on this matter. The SEM Committee also highlights the need to ensure that priority matters arising from the findings of the Facilitation of Renewables Studies are addressed in the appropriate timeline again to ensure continued secure supply to electricity customers.

4. Issues and SEM Committee Decisions

The issues consulted upon previously are examined below in turn in the order presented in the 2010 proposed position paper. Readers are directed to the 2008 discussion paper, the 2009 consultation paper and the 2010 proposed decision paper for background to these issues. In addition, responses to those papers are available on the All Island Project Website.

4.1 Principle Underlying Construction of the Market Schedule

Background

The construction of the Market Schedule and its role in the SEM were extensively discussed in Section 4.2 of the 2009 consultation paper. In that context, the SEM Committee proposed that *'the RAs should seek to ensure that the construction of the market schedule is such that infra marginal rents are allocated to generating units that are of value to the real-time operation of the system and, where deemed appropriate, the RAs will make the necessary changes'.* This did not mean that the SEM Committee would make changes to the Market Schedule in all circumstances where differences arise between the construction of it and actual dispatch rather that the SEM Committee would need to take account of the materiality of any deviation and the costs of any reforms to correct that deviation.

Post receipt and consideration of responses to the 2009 consultation paper, the SEM Committee published its proposed position on this issue, namely the progression of an assessment framework evaluating the material harm to customers which would potentially arise in the future as a consequence of the degree of alignment between dispatch and the Market Schedule, such framework to assess the material harm against the following objectives:

- protection of end customers, the need to ensure costs are appropriate being noted in this regard;
- security of supply, and
- sustainability and facilitation of renewable targets.

The SEM Committee also proposed that if and where the need for change was determined, options for change would be appropriately assessed in accordance with the decision making framework set out previously by the Committee. (Please refer to Section 5.1 of the 2010 proposed position paper.) A consultation paper on the assessment framework for material harm has been published, responses received

and reviewed and a decision paper on the assessment framework will be published shortly.[6]

SEM Committee Decision

The key message from response on this issue is the view that the market is currently working quite well and that the SEM Committee should only consider change where necessary and appropriate and any such change should be the subject of full regulatory impact assessment. The need for holistic examination of issues in the SEM was stressed to ensure consistency and to maintain the integrity of the overall design of the market and the balance of different revenue streams under that design. A number of respondents commented on the assessment framework for material harm against key SEM objectives. Some welcomed the concept, noting that it should not be limited to assessing such harm arising in defined circumstances but rather should take a holistic approach as a vehicle to assess the overall health of the SEM. The importance of giving due consideration of the drivers of any divergence between the Market Schedule and actual dispatch was emphasised by some respondents, with the case of TLAF splitting mentioned as a case where a regulatory decision, if made, would drive that divergence.

The SEM Committee has reviewed the responses received to the proposed position paper and takes account of these and of key strategic issues facing the SEM and the external climate in reaching its decisions. The SEM Committee notes that this issue is not a matter that merits immediate action given that the SEM is working well in the context of key legal objectives. The SEM Committee wishes to emphasise the importance of the evolving European electricity target models for influencing potential changes which may be required to the SEM High Level Design in the medium term. In that context, the SEM Committee is of the view that no fundamental changes to the SEM High Level Design are envisaged in the intervening period, excepting those which are clearly warranted on grounds of material harm as determined by the SEM Committee post consultation on appropriate and proportionate options to address this.

The assessment framework in relation to the material harm to customers is being progressed separately. [7] Comments on this issue submitted to the proposed position paper will be considered in that process. However, the SEM Committee agrees with respondents that it is important that this matter is viewed in a holistic fashion, that drivers of any divergence causing material harm in the future are identified and that solutions appropriate to the cause of any material harm are

[6] Monitoring the Divergence of the Market Schedule from Dispatch and the Impact on Consumers, Consultation Paper, 18th January 2011, SEM-11-002, http://www.allislandproject.org/GetAttachment.aspx?id=d6d0be14-2b2b-40c2-bcec-3c1f7f3e04f4

[7] Ibid.

considered fully and consulted upon should it arise. The SEM Committee recognises that there are a range of potential drivers in this regard including, but not limited to, delay in the delivery of network and the scale of curtailment of generation for operational reasons. If material harm to customers arises as a result of these issues or others, the SEM Committee will review the appropriate options to address this harm at that juncture. The SEM Committee notes that such options may include, but may not be limited to, those already examined in this process, including future connection offers for new plant. Options will be fully consulted upon and the SEM Committee commits to actions that are necessary and proportionate.

4.2 Allocation of IMRs behind Constraints

Background

The 2009 consultation paper identified the potential for the market schedule to over allocate infra-marginal rents (IMRs) behind an export constraint where generator units that are 'fully firm' and units that are 'non firm' or 'partially firm' are co-located behind that constraint. Where the volume of generation that is in merit nationally behind the constraint and included in the market schedule exceeds what can be accommodated in physical dispatch, over-allocation of IMRs occurs. It is noted that the current arrangements provide for payments under the Market Schedule and constraints that, in principle, serve to remunerate generators that are in merit nationally and reflect FAQs whilst allowing new, cheaper, non firm generation access to the scheduling when dispatched, promoting competition whilst reflecting access arrangements and protecting generator units from system operator decision market processes to a degree. [8]

A number of options were set out in the 2009 consultation paper that would serve to address the potential issue reflecting access arrangements to varying degrees. Further background on this issue can be found in Section 4.5 of the 2009 consultation.

In the 2010 proposed position paper the SEM Committee advised that a framework for assessing the material level of harm to customers was being progressed in this context and that, if and when the need for change is determined options for change will be appropriately assessed in accordance with the decision making framework set out previously by the SEM Committee. The SEM Committee also indicated that, at that stage it was drawn to Option 1 (ending firm access) as a possible preferred route.[9]

[8] Please note that under the current TSC, FAQs have no impact on remuneration under the market schedule of generator units that are registered as Variable Price Takers. This has been discussed in previous papers.

[9] Under Option 1, export constraints are modelled in the MS resulting in generators now competing for IMRs behind export constraints rather than on a system wide basis, Here export constraints means constraints arising from lack of infrastructure rather than more transitory drivers such as transmission

SEM Committee Decision

Respondents commented that the current market arrangements are working well and there is no requirement to change them. Almost all expressed strong disagreement with the SEM Committee's stated position regarding Option 1 in particular (please see Overview of Key Responses to SEM-10-060).

The SEM Committee notes that this issue is not a matter that merits immediate action. The SEM Committee has reflected further on this issue. A review of the fundamental design features of the SEM may take place at some stage in the medium term in light of European electricity market target model progression. This may come about earlier than had been envisaged if the current drivers towards greater EU regional integration of wholesale electricity markets gather pace. Overall, however, no fundamental changes to the SEM high Level Design are envisaged in the medium term regarding the issue under consideration here as stated earlier.

Regarding the SEM Committee's statement that it is drawn to Option 1 as a solution should material harm arise, following review of responses on this point, and given that the SEM Committee has decided that no change is required at present, this stated preference is no longer the Committee's position. The Committee has no stated preference at this stage for any particular possible option but it should be proportionate, holistic and necessary.

4.3 Principle underlying Dispatch: Least Cost Dispatch

Background

The role and construction of the Market Schedule were discussed in the 2009 consultation paper where the complementary role of dispatch and remuneration under the market arrangements was recognised. The overall objective of meeting demand for electricity at least cost to consumers on the island (subject to system security and reliability requirements) requires that the portfolio provided by generators (and demand as appropriate) is efficient and that that portfolio is then used efficiently. Least cost dispatch is considered as the method by which the latter, short term requirement is achieved. The former is delivered by sending appropriate incentives to developers via the remuneration

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faults or outages. This option ignores access arrangements. Please refer to Section 5.2 of SEM-10-060 and Section 4.5 of SEM09-073.

mechanisms in the market.[10] In that context it was proposed that the TSOs should continue to dispatch the system to minimise production costs of generation, taking into account system security requirements and, as now, disregarding any concept of firmness in the dispatch process as this would represent the most efficient short-term use of available resources. This was also proposed in Section 5.3 of the 2010 proposed position paper.

SEM Committee Decision

The majority of respondents who commented on this issue agreed with the principle proposed in the 2009 consultation paper and subsequently in the proposed position paper. Some added that there is a need to bring greater transparency to the dispatch processes and decision making. One party stated that, where transmission constraints are active, firm generators should be dispatched ahead of non firm generators except in cases where priority dispatch determines otherwise. Another responded that firmness and precedence should be respected in the dispatch process.

The SEM Committee concurs with the majority of respondents as it considers that dispatching to minimise the cost of production is generally the appropriate way to incentivise the delivery of the most efficient portfolio of generation. The SEM Committee does not favour a general underlying dispatch principle that respects 'firm' as this would not achieve the above and would result in increased costs to customers where bid prices are used to determine the dispatch merit order. Also, this approach assumes that 'firm' relates to a *right* to dispatch which is not the case. Finally, it is clarified that the issue here is *least cost of production* and that it was never intended that in dispatching the system the TSOs should seek to minimise deviations from the Market Schedule or other costs to consumers arising from the market construct. Related matters of principles underlying the dispatch of plant that qualifies for priority dispatch and those to apply in certain 'tie break' situations are discussed in Sections 4.4 and 4.9 below and the SEM Committee decisions on these issues should be read together.

4.4 Priority Dispatch

Background

In addition to the legal basis as set out in earlier documents regarding priority dispatch, readers are advised that since the publication of those papers the Irish government has transposed certain aspects of

[10] Readers are referred to Section 4.7 of the 2009 consultation paper for further discussion on this issue.

Directive 2009/28/EC, including Article 16.[11] In Northern Ireland, a consultation on the proposed approach to transposition has now closed and it is understood that DETI NI will soon be transposing Directive 2009/28/EC.[12] Finally, guidance has been received from the EU Commission regarding the treatment of high efficiency CHP. This guidance was issued in advance of an Interpretive Note from the EU Commission on this issue and is attached in Appendix B. The above are taken into account in reaching the decisions set out in this document.

Section 4.8 of the 2009 consultation paper examined this issue and set out five options for the treatment of qualifying plant. Appendix 1 to that paper set out how qualifying plant are treated in dispatch in the SEM at present where relevant plant entitled to priority dispatch exercise the option available to them to register as Price Takers in the SEM.[13] Readers are directed to Section 5.4 of the 2010 proposed position paper where the SEM Committee's proposed position in relation to this issue is set out.

SEM Committee Decision

The SEM Committee has decided to adhere to an 'absolute' interpretation of priority dispatch whereby economic factors are only taken account of in exceptional situations and where this can be done in a manner that does not threaten the delivery of renewables targets. In addition, parties with mandatory priority dispatch under EU Directives (renewables, qualifying hybrid plants, high efficiency CHP) shall be given priority over those afforded priority dispatch at the discretion of a Member State (peat). The SEM Committee has also determined that priority dispatch is facilitated in the SEM by affording qualifying parties the option to register as Price Takers.

In the context of Article 16 of Directive 2009/28/EC the TSOs shall report on a quarterly basis to the respective Regulatory Authorities on incidences of curtailment of renewable generation in order to guarantee the security of the electricity system and security of energy supply indicating corrective measures employed to prevent inappropriate curtailments.

Regarding the question of 'must run' status as, the SEM Committee is of the view that the question of 'must run' in dispatch is a separate issue from the question of priority dispatch under law and see this as

[11] Statutory Instrument No. 147 of 2011, European Communities (Renewable Energy) Regulations 2011

[12] http://www.detini.gov.uk/consultation_on_priority_dispatch_under_the_renewable_energy_directive.pdf

[13] Where such generators opt to register as Price Makers in the SEM, they are dispatched on the basis of the price bid into the market.

primarily a technical matter that is therefore best addressed in the context of relevant Grid Code requirements.

Regarding the points raised in relation to Intermediaries, the SEM Committee has consulted upon the Intermediary issue since the publication of the proposed position paper (SEM-10-060) and a decision has issued to allow for Intermediaries to be appointed under new criteria.[14]

The SEM Committee has requested that the TSOs advise of their proposed approach to dispatch of generation plant qualifying for priority dispatch when there are choices to be made between such plant. The SEMC Committee expressly asked that the following factors be considered by the TSOs when making their submission:

- the requirement to maintain the reliability and safety of the system;
- security of supply;
- costs to customers, including constraint costs and costs arising from the application of losses, and
- the requirement for transparency and objectivity.

The TSOs submission is attached in Appendix A.

Having considered the responses to the proposed position paper, and taking account of the guidance from the EU Commission regarding high efficiency CHP and the response from the TSOs, and subject to sight of the Northern Ireland legislation transposing Directive 2009/28/EC, the SEM Committee has reached decisions on this issue. The SEM Committee notes at the outset that in the SEM priority dispatch is facilitated through the option for qualifying generators to register as Price Takers. This is considered an appropriate vehicle for the facilitation of priority dispatch in the SEM. The remainder of this section and the SEM Committee's decision on priority dispatch matters should be read in that context.

The Committee is adhering to its general policy on priority dispatch as set out in the Proposed Position Paper, subject to the following:

It is necessary to give priority to renewable generators and to high efficiency CHP generators who are afforded priority dispatch under mandatory EU requirements over plant afforded priority dispatch by the exercise of discretion by a Member State in the context of EU provisions and this will be reflected in dispatch decisions and processes of the TSOs.

[14] Extension for the Criteria for Approval of Intermediary Applications Under the Trading and Settlement Code, Decision Paper, SEM-11-014, 30th March 2011, http://www.allislandproject.org/en/TS_Decision_Documents.aspx?article=f4caafdb-13e8-4710-9ba7-f980d50aadff

The hierarchy proposed by the TSOs is considered by the SEM Committee to be pragmatic and a reasonable balance of the various requirements on the TSOs under the governing framework and the specific matters that the SEM Committee requested be factored into their proposed approach given the matters set out in the TSOs submission (please see Appendix A).The approach takes account of the previous points above and will be as follows:

1. re dispatch price making generation and SO counter trading on the interconnector after Gate Closure;
2. re dispatch price taking generation:
    a. Peat
    b. Hybrid Plant
    c. High Efficiency CHP/Biomass/Hydro
    d. Windfarms, and within windfarms
        i. windfarms which should be controllable but do not comply with this requirement/are not derogated from same;
        ii. windfarms which are controllable;
        iii. windfarms which are not required to be controllable/are derogated from this requirement/those in commissioning phase.
    e. Interconnector re-dispatch;
    f. Generation the dispatch down of which results in a safety issue to people arising from the operation of hydro generation stations in flooding situations

Where a threat to public safety exists due to a flooding situation, consideration will be given by the TSOs in dispatch decisions and processes to the need to dispatch hydro electric stations in the SEM in a manner that minimises this threat to the appropriate degree. The SEM Committee requests that the TSOs consider this matter and bring forward proposals relating to this issue.

Regarding the issue of the treatment of the interconnector and interconnector trades, given the requirements under Regulation 714-2009 and potential for tension to arise between this and the requirements pertaining to priority dispatch, the SEM Committee notes that this is as yet an infrequent event at present and that no guidance on this matter has been provided by the EU Commission or by the governments. The TSOs proposed approach on this matter is considered appropriate given the above and that the price of relevant counter trades is subject to approval by the Regulatory Authorities.

It is noted that the above hierarchy does not apply where there is a need to address a specific issue in dispatch to maintain the secure operation of the electricity system that requires the dispatching down of a specific generator/generators.

The above approach will be reviewed annually by the TSOs and re-submitted to the SEM Committee for consideration where changes are proposed.

The SEMC Committee position as set out in the above bullet points will be kept under review in light of forthcoming transposition of Directive 2009/28/EC into domestic law in Northern Ireland post completion of the current consultation process on this issue.

4.5 Hybrid Plant and Priority Dispatch

Background

The question of how 'hybrid' plant would be treated in the context of priority dispatch requirements was raised in Section 4.9 of the 2009 consultation paper. Hybrid generating units were described therein as units which have a proportion of their output which is classed as renewable. This is in the context of the potential for units to co-fire renewable and non renewable fuel sources. The options set out in the consultation paper were in the context of proposals on the previous issue, given the link between the two issues. The SEM Committee questioned if there was a legal basis for the provision of priority dispatch for hybrid plant as defined but that this would be monitored and the forthcoming transposition of Directive 2009/28/EC was noted. The above was reflected in the Proposed Position Paper.

In their comments on the proposed position paper, respondents focused on the apparent legal uncertainty regarding the status of hybrid plant both at EU and domestic level as well as on some very practical commercial aspects of operating such plants. For example, that waste to energy operators cannot control the level of renewable fuel in their fuel mix. Also, parties commented that that these plant have technical limitations which merit them being treated as 'must run'.

SEM Committee Decision:

The SEM Committee has reconsidered the legal issue and has engaged with other regulators in the EU on this issue. The SEM Committee considers that priority dispatch should be afforded to qualifying hybrid plant to the extent that this is consistent with the spirit and intention of the Directive. The definition/application of 'hybrid' here should not serve to result in generators using minimal amounts of renewable fuel to secure priority dispatch status and a perverse incentive in this regard. Rather the threshold for qualification for priority dispatch for hybrid plant should be set a sufficiently high level such that

parties genuinely committed to using renewable fuel sources in the context of Directive 2009/28/EC attract the benefit of priority dispatch.

In addition, the SEM Committee is of the view that the approach to qualification for priority dispatch for hybrid plant should take account of the environmental impacts of the operation of such plant and that, in accordance with the spirit and intent of Directive 2009/28/EC, such plant should impact positively on the greenhouse gas emissions, specifically CO) arising from generation. Specifically, the approach favoured by the SEM Committee is to base a hybrid plant's entitlement to priority dispatch on the estimated impact of a given plant on emissions (CO2) from power generation over a defined period. This will be implemented as follows:

A hybrid plant will be considered eligible for priority dispatch when it can be shown to emit fewer carbon emissions (tCO2/MWh) than an appropriate reference thermal plant deemed to be displaced by the qualifying hybrid plant. The SEM Committee considers that a mid merit plant operating in the SEM is the appropriate reference plant in this context.

In particular, the following principles will apply to this method:

- The actual carbon emissions for the reference plant are available through work already carried out by the RAs on an annual basis. The ex-post, actual carbon emissions information available for the reference plant must be for the most recent full twelve months of operation for which the RAs have all appropriate information.

- The timeline for the assessment will be driven in principle by the timeline for the publication of audited emissions (CO2 in t/MWh) figures regarding the power generation sector by the Environmental Protection Agency (EPA) in Ireland and by the Department of the Environment (DoE) in Northern Ireland. On that basis, the assessment will taken place in the second quarter of each year.

- For the first assessment for an applicant hybrid plant, an assessment using estimated information can be carried out. Parties with no past information can qualify for priority dispatch for the next defined period based on a modeled estimate of their running for the subsequent period coupled with estimates of the associated average carbon emissions associated with that modeled running. The model used to calculate estimates of Dispatch Balance Costs (DBCs) by EirGrid will be employed to model estimated running by relevant plant for the period in question. For this modeling exercise average emissions figures for existing hybrid plant will be based on available verified figures from the EPA and the DoE. Where such verified figures are not

available, the applicant plant shall provide its best estimate of carbon emissions setting out the basis and rationale for this estimate.

- Parties that have past information for less than one defined period can qualify on the basis of a combination of actual information and estimates.

- For subsequent assessments actual operational information for the relevant twelve month period will be used.

- Carbon emissions arising from the renewable fuel inputs to such plant will be deemed to be equal to zero. This is considered appropriate given the treatment of CO2 emissions from biomass by the EU.[15]

- Where parties are shown, on the basis of audited ex-post information submitted to the RAs for review not to have reached the qualifying threshold for a defined period they forego qualification for priority dispatch for the next defined period.

- In addition to the above, the SEM Committee is of the view that a reasonable 'de-minimis' threshold of 10% renewable electricity should be produced from the hybrid plant for the defined period in which it wishes to avail of priority dispatch in order to ensure a minimum contribution of renewable electricity from the hybrid plant. This also ensures minimum contribution to RES-E targets is being made by such plant.

Further information on the process for applying for qualification for priority dispatch for hybrid plants will be published by the Regulatory Authorities in due course**.**

4.6 Deemed Firm Access

Background

The issue of deemed firm access was raised in responses to the 2008 discussion paper in the context of discussion in that document regarding compensation for non-firm constraints and in light of the queue for connection to the grid in Ireland and Northern Ireland. Deemed firm assess was further discussed in the 2009 consultation

[15] Please refer to Section 5.5 of Commission Decision of 18 July 2007 establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council.
Ref: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:229:0001:0085:EN:PDF

and in the 2010 proposed position paper. In both of these papers the SEM Committee proposed that deemed firm access whereby FAQ or MEC is allocated in advance of the completion of necessary transmission system infrastructure reinforcements in order to provide financial firmness under the TSC in this context should not be introduced to the SEM given the fact that this would serve to incentivise investment in generation ahead of the capability of the transmission system to support it, leading to an over allocation of IMRs behind constraints and, ultimately, having knock on effects on the type of plant entering the market.

SEM Committee Decision

The SEM Committee does not consider the introduction of deemed firm as defined in the 2009 consultation paper as necessary for appropriate incentivisation of network delivery.

The SEM Committee notes that previous papers characterised the issue of deemed firm in the context of provision of financial firmness under the TSC. The SEM Committee remains of the view that the introduction of deemed firm as set out in those papers is not appropriate as it would serve to incentivise investment in generation ahead of the capability of the transmission system to support it, leading to an over allocation of infra marginal rents to plant behind export constraints and an under allocation to those plant on the other side of the constraint needed to meet demand. This has knock on effects for decisions regarding type of new entry and would shift the balance towards low capital high operating cost plant, ultimately increasing cost in the longer term. The SEM Committee, therefore, considers that allocation of FAQ or MEC in advance of actual completion of necessary deep reinforcements in this context is inappropriate given the potential costs it may impose on customers in the long term.

The SEM Committee recognises the imperative to deliver the underlying infrastructure to support the SEM in a timely and efficient manner. The SEM Committee concurs with respondents that appropriate incentivisation is necessary in that context. In Ireland, this matter is being progressed in the context of the CER's decision on the PR3 (Price Review 3) for TSO and TAO revenues for the period 2011-2015[16] and the incentive programme and capital expenditure approvals and monitoring programme which is currently being put in place. A full consultation on the PR3 review was carried out in 2010 prior to decision while the CER is currently considering the responses received to its transmission incentives consultation (December 2010)[17]. Incentivisation

[16] CER Decision on TSO and TAO Transmission Revenue for 2011-2015, November 19th 2010, CER/10/206, Section 8.0
[17] Consultation on 2011/2012 Transmission Incentives, December 6th 2010, CER/10/220

options will be considered by the NIAUR in the forthcoming price control for NIE T&D for the period 2012 onwards. [18] Incentivisation schemes are designed on a jurisdictional basis and therefore, take account of different arrangements that exist regarding provision of infrastructure in Ireland and Northern Ireland.

The SEM Committee notes that the key issue emerging from the responses to the consultation paper is one of risk management for developers where there is undue delay regarding provision of infrastructure and associated compensation. Where parties have concerns regarding the terms and conditions being offered to them under connection agreements by licensed monopolies these concerns should be raised with the relevant Regulatory Authorities in that context.

4.7 Treatment of Price Takers in the Market Schedule

Background

It was acknowledged in the 2008 wind discussion paper that the rules set out in the TSC result in any generator registered as a Variable Price Taker (VPT) being treated in the market schedule as if it is fully firm. This differs from the treatment of Price Makers as here access to the market schedule is limited to the greater of Dispatch Quantity or FAQ with constrained down payments only accruing to the extent of the FAQ of the Price Making generator unit. The latter is consistent with the SEM HLD. In that context, the SEM Committee stated its intention to amend the Trading and Settlement Code to ensure that all Price Takers (Variable and Predictable) only receive constraint payments to the extent that they are constrained down below the level of their firm access. The 2010 proposed position paper reflected the above.

Almost all respondents on this matter agreed with the SEM Committee's proposed position that the treatment of Variable Price Takers should be aligned with the treatment of Price Makers. Some respondents did note the financial impact on Price Takers as a result of this change.

SEM Committee Decision

[18] Strategy Paper on Northern Ireland Electricity plc Transmission and Distribution Fifth Price Control (RP5), July 2010, Section 6.4

The SEM Committee concurs with the majority of respondents on this matter and in that context, a modification to the Trading and Settlement Code to reflect the SEM High Level design and to align the treatment of PTs with that of Price Makers by limiting their access to the Market Schedule to the maximum of actual output and FAQ (or MEC when infrastructure works are complete and the PT becomes fully firm) has been approved by the SEM Committee and will be implemented in the intra day release of the market systemsTrading and Settlement Code Modification.

The SEM Committee also notes the need for consistency of approach to the derivation of Firm Access Quantities in Ireland and Northern Ireland in the context of the SEM High Level Design. This issue will be considered further by the Regulatory Authorities.

4.8 Grid Code Matters and Information on Technical issues

Background

This issue of Grid Code requirements and compliance with same first raised in Section 4.2.4 of the 2008 discussion paper. Subsequently these issues were noted again in the 2009 consultation paper in the context of the potential change in the typical technical characteristics of generation given the advent of large quantities of wind generation on the island system.[19] The 2010 proposed position paper set out proposals regarding the continued making available of relevant information by the TSOs, the continued emphasis on requirements for Grid Code compliance and the need for the TSOs to keep the Grid Code under review as appropriate.

SEM Committee Decision

Respondents who commented on this matter welcomed the principle of provision of information by the TSOs noting that this should be adequate, accurate and timely. It was also noted that following from the publication of the Facilitation of Renewable Studies report, clarify and updates on the TSOs work plans and analysis of constraints, curtailment and losses should be provided on an ongoing basis to the market. Respondents also supported appropriate review and enforcement of the Grid Code. A number of respondents called for more transparency in relation to dispatch processes.

The SEM Committee supports transparency in relation to decision making regarding TSO dispatch processes and decisions. Indeed, the decisions in this paper seek to increase transparency in this regard by setting out underlying principles in relation to dispatch in the SEM. In

[19]Ref: Section 4.4.

addition, the role of industry participants in relation to the evolution of the Grid Codes and the TSC is secured via the operation of the Grid Code Review Panels and the Trading and Settlement Code Modifications Committee. These groups serve to ensure that industry participants' views on potential amendments to the Codes are discussed and considered.

The SEM Committee notes the publication of the findings of the Facilitation of Renewables Studies and notes the importance of this publication. The SEM Committee previously requested a report from the TSOs to set out their proposed priorities and work plan in relation to the next steps arising from that report. This report was received by the SEM Committee in May of 2011 and communication and consultation with industry on relevant issues will follow in due course.

The need for an increased emphasis on compliance monitoring and enforcement of Grid Codes is recognised by the SEM Committee. This requirement is further endorsed in the findings of the Facilitation of Renewables Studies. The SEM Committee welcomes the increasing focus on these areas by the SOs, notably in Ireland, and notes the complementary role that GPIs developed under the Harmonised Ancillary Services (HAS) work stream have to play. In addition, the SEM Committee recognises the need for further harmonisation of Grid Codes.

The SEM Committee reiterates that Grid Codes must evolve to the necessary degree with technological developments and the changing portfolio of generation on the island. In addition, whilst it is recognised that the Irish system may have specific requirements given its size and ambitious renewables targets, requirements must be technically achievable. It is noted that it is open to industry participants and the SOs to propose amendments to the Grid Codes via the Grid Code Review Panels. Additional information now available to the Regulatory Authorities, industry and the TSOs arising from the Facilitation of Renewables Studies provides a better understanding of technical characteristics that will become increasingly important in coming years. This has fed into recent advice to the SEM Committee from the TSOs regarding future system needs and will also feed into future work regarding ancillary services and associated rates and charges as above.

4.9 Tie Breaks

Background

The question arises as to the basis for decision making by the TSOs when there is a requirement to dispatch down plant and the plant

available is seen as equal by the TSOs, i.e. no deciding indicator, including a bid price differential, exists to support such a decision. The interaction with the decisions regarding treatment of priority dispatch plant was noted. In the Proposed Position Paper, the SEM Committee proposed that, *ceteris paribus*, where tie-break rules are required post application of the principles underlying dispatch of plant qualifying for priority dispatch de-loading should be instructed on a pro-rata basis in a manner determined by the TSOs. The SEM Committee also requested comments regarding the treatment of renewable generators in tie break situations in dispatch (post application of the order of re-dispatch of priority dispatch plant).

SEM Committee Decision:

The key concerns emerging in the responses were:

- the issue of bankability and the ability to continue to finance existing renewable projects or those under development that have previous secured finance;
- the need for regulatory consistency and stability, and
- the impact of an alternative approach to pro rata on later renewable projects.

The Committee has reflected further on this issue and in particular on the case for moving away from a pro rata approach as advocated by most respondents who addressed this issue in their submissions.

Giving preference in tie breaks in dispatch, for example, to developers with firm connection offers or who are earlier in the 'connection queue' should help the bankability and likely delivery of these projects. Inevitably, however, this will be at the expense of other 'later' developers and could even give rise to higher curtailment, depending on various technical factors. Nevertheless, the Committee can see the argument that such an approach should enhance investor confidence and help delivery of renewable projects and, by extension, progress on achieving our renewable obligations, at least in the short to medium term.

If this principle is to be implemented, however, it must be feasible to do in a timely and cost effective manner and possible to model (if it is to be useful) and transparent.

The SEM Committee is of the view that in principle, efficient market outcomes based on the competitive interaction of market participants is most appropriate and should always be pursued where possible. However, the SEM Committee, following due consideration of response received on this issue , is of the view that there is merit in this particular instance in taking an approach that provides for consistency in decision making that will better facilitate the continued operation and delivery of

renewable plant who have or are in the process of securing finance. The SEM Committee highlights that the generators who are the subject of this discussion are Price Takers and that, therefore, a tie break exists from a price perspective. However, the SEM Committee also notes that firmness, whilst having a financial meaning in the SEM, is derived with reference to the physical ability of the network to accommodate output under normal circumstances and not with reference to system operator decisions regarding 'curtailment'.

In consideration of the above, the SEM Committee has decided that if, after the application of the principles set out in Section 4.4 above regarding priority dispatch a tie break situation still needs to be resolved, the TSOs shall seek to apply the following principle in so far as it is feasible to do so for renewable generation units, firm capacity should have priority over non firm capacity and, between firm capacities, date order should determine priority (i.e., earlier date preferred over later date).

This principle is to be applied in relation to network issues, consistent with the derivation of FAQs and, in that sense, should remain in place until such time as the backbone of the all island network is completed.

Given the practical challenges associated with strictly adhering to this principle in practice as advised by the TSOs, the SEM Committee recognises that a proxy for firm and then date order needs to be used. This must be as reasonable a proxy as possible and must be one that can be implemented in a transparent manner and modeled in the context of investment decisions.

Given the above, the SEM Committee considers that it is appropriate that this matter is examined further with appropriate consultation on the detailed implementation of tie breaks in dispatch for priority dispatch price taking generation. A consultation paper on this issue is published in parallel with this decision paper (SEM-11-063).

The SEM Committee notes the issue of regional integration and treatment of interconnector trading and the potential impacts on the SEM as stated at the start of this paper.

The SEM Committee also notes the need for consistency of approach to the derivation of Firm Access Quantities in Ireland and Northern Ireland in the context of the SEM High Level Design.

4.10 Determination of SMP when Demand is met by Price Takers

Background

The 2009 consultation paper examined the issue of the setting of PFLOOR in the context of the options set out therein for the treatment of qualifying priority dispatch plant. Given that relevant options which, if implemented, would result in a differing approach to the determination of SMP when demand is met by Price Takers were not proposed by the SEM Committee in the 2010 proposed position paper, no change to the current approach was proposed in that document.

SEM Committee Decision

Given the approach to priority dispatch that the SEM Committee has determined (see Section 4.3 above), the SEM Committee is of the view that no change to the status quo is needed and that PFLOOR will continue to be set annually by the Regulatory Authorities following consultation with industry and to be employed in Excess Generation Events and as a lower limit to SMP. The SEM Committee also notes that, at time of writing, the ex-post market price had not been set at PFLOOR in the SEM for an Excessive Generation Event.

4.11 Demand Target and Excess Generation Events

Background

The question as to which generation units are charged PFLOOR in an Excess Generation Event (EGE) was examined in Section 4.12 of the consultation paper. At present, Price Taking generating units are charged on the maximum of their availability and actual output and, hence, PFLOOR is charged to more generation units than there is demand. This results in generation units effectively being penalised for being available at times of an EGE. It was proposed in both the consultation and the proposed position papers that in an EGE arising from excess Price Taking generation, the quantity of generation charges PFLOOR should not exceed System Demand. It was also proposed that in such circumstances, the MSQs of Price Taking Generation should be pro-rated down so that the total quantity is equal to System Demand.

SEM Committee Decision:

The SEM Committee considers that it is necessary to address the fact that VPTs can be penalised for being available in EGEs under the current TSC. The SEM Committee considers that it is necessary for the decision on this issue to reflect its decision regarding tie breaks as set out in Section 4.9 above. Therefore, the SEM Committee determines that the quantity of generation charged PFLOOR in the event of an EGE arising from an excess of Price Taking generation should not exceed System Demand and that, in such circumstances, the MSQs of

Price Taking generation should be reduced so that the total quantity is equal to System Demand.

The detailed implementation of this principle will be affected by the decision of the SEM Committee on tie breaks in dispatch for price taking generation as addressed in Section 4.9 above and therefore is included in the consultation paper (SEM-11- 063).

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Appendix A

Priority Dispatch Implementation

EirGrid and SONI (the TSO license holders in Ireland and Northern Ireland) welcome the opportunity to respond to the SEM Committee's request for advice on fulfilling the legal requirement to ensure that certain types of generating units are afforded priority dispatch. This paper outlines an option for a priority dispatch hierarchy which can be implemented in the operation of the power system.

Priority dispatch status is an instrument to try and achieve broad energy policy outcomes (e.g. increasing the share of renewable generation on the power system, maintaining a degree of indigenous non- competitive fuel sources). The TSOs consider that, at a high level, implementation of priority dispatch is easily achieved for different types of generating technology (priority dispatch units are afforded special consideration in dispatch than those who are not). However, given that the TSOs may not always be able to run all eligible priority dispatch units in real time operations for system security reasons, some qualification on the running order for priority dispatch is required. This raises the prospect of conflict between, and within, categories of priority dispatch units which should ultimately be resolved in the policy arena. Nevertheless, without this clarity, it is incumbent on the TSOs to have a predetermined hierarchy with respect to priority dispatch units to manage the power system even in the absence of appropriate clarifying policy.

The TSOs would like to emphasise to the Regulatory Authorities (RAs) that there are multiple possible priority dispatch hierarchies that could be implemented to meet the requirements and intent of the directives and legislation enforced at this time. However, the priority dispatch hierarchy outlined in this paper is based on the best information available to EirGrid and SONI at the time of writing and includes a consideration of appropriate legislation, regulation and licence duties and the recent SEM Committee's request to consider only specific criteria in our consideration.

Legislative and Regulation Context

As TSOs, EirGrid and SONI are bound to legislation, licence requirements and regulatory direction. Together, these obligations form the framework within which the TSOs consider dispatch decisions.

In Ireland, the principle legislation act is S.I.445, 2002. Further relevant acts include S.I.217, 2002, S.I.499, 2009 and the recent transposition of the Climate Change package S.I.147, 2011. These Statutory Instruments arise directly from European directives 96/92/EC, combined heat and power 2009/72/EC (and the variant high efficiency co-generation 2004/8/EC) and the renewables directive (2009/28/EC). The legislation is further reinforced in licence or as directed by the Commission for Energy Regulation (CER). Specifically, EirGrid has a role "*to operate and ensure the maintenance of and, if necessary, develop a safe, secure, reliable, economical and efficient electricity transmission system"* in both law (Clause 8, S.I. 445 2000) and licence (TSO licence Condition 3). It also has to ensure *"when dispatching generating units…. " to "…. give priority to generating units using energy from renewable sources in so far as the secure operation of the electricity system permits"*

(S.I.147,2011). This is further augmented by the requirement to *"ensure that the transmission system operator …. takes appropriate grid and market related operational measures in order to minimise the curtailment of electricity from renewable sources on the electricity system."* Finally, EirGrid will have to consider the European regulation on cross border trading (Regulation on the Congestion Management Guidelines No. 714-2009) in its operational rule set with the introduction of the East West Interconnector in 2012.

SONI receives its authority through licence. In particular the licence obligates SONI to enter into a System Operator Agreement (SOA) with EirGrid which will *"facilitate the development, maintenance and operation of the transmission system as part of efficient, economical, co-ordinated, safe, secure and reliable All-Island Transmission Networks"* while at all times acting in the interests of the Northern Ireland consumer. The licence also obligates the TSO to schedule generation in ascending order of relevant prices and dispatch subject to maintaining an appropriate margin of reserve taking into account a variety of factors. The mandatory renewable directive has not yet been transposed into law or licence condition. However, this is being presently worked on by the Northern Ireland Department of Enterprise, Trade and Investment (DETI) who have recently completed a consultation on the implementation of same. There is some confusion about whether the European regulation on cross border trade currently applies to the Moyle HVDC interconnector. However, the recent infringement notices from the EU would suggest that it is deemed an interconnector with respect to that regulation and this also needs to be considered.

In summary, the TSOs in both jurisdictions have a primary obligation to operate a safe, secure, reliable, efficient and economical power system. In addition, the TSOs have an obligation to ensure priority dispatch for appropriately designated plant in Ireland, and shortly in Northern Ireland, irrespective of the economic costs incurred. The TSOs' efficient and economical control of the power system is primarily managed by keeping an appropriate Merit Order and dispatching using this taking into other factors including reserve and security constraints. Also, the System Operator Agreement (SOA) specifically mentions the minimisation of production costs (SOA S 12.3.3) and not overall market costs (something outside the control of the TSOs) or constraint costs (not all the contributing factors under the control of the TSOs). This responsibility has been reinforced in the proposed SEM Committee decision on least cost dispatch under the "Dispatch and Scheduling" consultation.

The TSOs' view on system security matters is influenced by our experience to date, the nature and the level of the portfolio mix and the performance capability inherent in categories of generation. Another key consideration in security of supply is the timeframe. In this discussion, the focus has been on security of supply in short timeframes – minutes to hours, which is appropriate for determining real time operational rule sets. Where system security issues over longer timeframes are considered, differing hierarchies could emerge.

It is in the light of these duties and assumptions that EirGrid have considered the recent SEM Committee request to use the following four criteria in determining an operational rule set;

- maintaining the reliability and safety of the system;

- ensuring security of supply;
- minimising costs to customers, including constraint costs and costs arising from the application of losses; and
- ensuring transparency and objectivity.

The operational practice outlined here should allow a pragmatic balance between conflicting policy requirements, including minimising curtailment of generation from renewable resources, to be achieved and result in a scheme that could be implemented in each control centre.

It is important to note that the priority dispatch hierarchy outlined in this document does not apply where there is a security of supply risk or issue on the power system. For example, the TSOs have presently in place a 50% limit on the instantaneous penetration of non synchronous generation for system security reasons. Above this limit, the TSOs will adopt appropriate measures to ensure the continued security of the system which would include dispatch down of windfarms and HVDC interconnector imports but which would not, for example, impact biomass/high efficiency CHP.

Priority Dispatch Hierarchy

Following a consideration of the above an option for the priority dispatch hierarchy is as follows:

1. Re-dispatch of conventional generation and SO counter trading on the interconnector after Gate Closure;
2. Peat Stations;
3. Hybrid Plant[20];
4. High Efficiency CHP / Biomass / Hydro
5. Wind
    a. Windfarms which should be controllable but do not provide this (no such windfarm expected until 2013)
    b. Windfarms which are controllable
    c. Windfarms which are exempted or are not expected to be controllable
6. Interconnector; and
7. Generation the dispatch down of which results in a safety issue to people

The above hierarchy is consistent with the various legislative requirements, policy and directives concerning Priority Dispatch in Ireland, Northern Ireland and at EU level

[20] Assumes certification by relevant competent authority that specific plant qualifies for priority dispatch and renewable status. Also, it is assumed that the technology will be in line with Grid Code requirements for generators.

and overall, it represents a transparent and non-discriminatory approach to the practical implementation of priority dispatch.

1. RE-DISPATCH OF CONVENTIONAL GENERATION AND SO COUNTER TRADING ON THE INTERCONNECTOR AFTER GATE CLOSURE will be considered on an all island basis before any priority dispatch unit is instructed to reduce output from its desired or expected market output. This may also include the re-dispatch of tie line phase shifting transformers. Conventional generation moved to their minimum generation levels in line with the market expectations can be de-committed to facilitate priority dispatch units provided this action does not endanger the security of the power system. For example, the security of the power system could be endangered if the de-committed unit is likely to be required again within the minimum down time of the unit based on forecasts of demand, wind and generator availability. SO-SO counter trading on Moyle can only occur within an hour of an event.

2. PEAT STATIONS as discretionary priority dispatch units under the indigenous fuel S.I.217, 2002 peat is afforded the lowest form of priority.

3. HYBRID PLANT are afforded priority dispatch if they are considered renewable. Certification of renewable hybrid plant by the relevant competent authority will determine this status. As such, this type of plant is by definition partially renewable and so, lies between peat and CHP, Biomass, Hydro in terms of priority dispatch hierarchy.

4. CHP (HIGH EFFICIENCY CO-GENERATION), BIOMASS, HYDRO

Biomass and hydro are defined as renewable per the RES Directive and are therefore afforded mandatory priority dispatch. Following recent communications from the EU Commission to the DCENR, high efficiency co-generation has also been classed as mandatory priority dispatch similar to other renewables. Regarding the treatment of high efficiency CHP, biomass and hydro with respect to windfarms, all other things being equal, where there is no security threat to the system (as otherwise priority dispatch no longer applies) and a choice of priority dispatch units has to be made, this hierarchy is considered to be marginally more secure. This is because not utilising the CHP, biomass or hydro resource allows for it to be used later (as against wind where utilisation of the resource cannot be deferred) thereby increasing the security of supply of the system in a small way.

In considering CHP, Biomass and Hydro the TSOs are of the opinion that there are insufficient security grounds to materially distinguish between this generic class of units, particularly since CHP is considered at the same priority as renewable. The TSOs do note that an individual generator technology may provide such grounds but would caution of a practice that distinguishes on a case by case basis.

5. WIND

- **WINDFARMS WHICH SHOULD BE CONTROLLABLE BUT DO NOT PROVIDE THIS TO THE CONTROL CENTRE** There are a number of windfarms who currently do not have sufficient control of their units to the

control centres. Work is underway to address these non-control issues which partly arose due to poor signals commissioning procedures. Subsequent to these units commissioning, EirGrid and SONI have clarified and updated these procedures in both jurisdictions with the agreement of industry. EirGrid consider that acting in a manner consistent with existing contractual arrangements and practice, a reasonable period of time (end of 2012) is required to facilitate retrospective commissioning of the necessary signals to the control centres before this policy is implemented in practice. In this time period, the TSOs do not consider that the lack of control on these windfarms will pose a material threat to the security of the system. However, it is noted that this practice will impact on the running levels of currently controllable windfarms;

- **WINDFARMS WHICH ARE CONTROLLABLE FROM THE CONTROL CENTRE** Due to the level of controllable windfarms with respect to non-controllable windfarms, the TSOs consider that controlling of windfarms down will provide improved security by converting a variable source to a constant source of generation output while providing up and down ramping capability at the same time;
- **WINDFARMS WHICH ARE NOT REQUIRED TO BE CONTROLLABLE FROM THE CONTROL CENTRE** Opening circuit breakers of windfarm units who are exempted or derogated from the requirement to be controllable.

6. HVDC INTERCONNECTOR In the event that dispatching down priority dispatch and counter trading on the Moyle is unable to alleviate the security issue, dispatching the interconnector will be considered. To date, this has not happened and would impact trading quantities on the interconnector. This order is aligned with the SEM trading rules today and consistent with the European Regulations on cross border trade. However, the TSOs acknowledge that there is no clear policy directive on the relative priority of renewables and interconnection.

7. GENERATION THE DISPATCH DOWN OF WHICH RESULTS IN A SAFETY ISSUE TO PEOPLE. Irrespective of the obligations to afford priority dispatch to eligible units, where there is a risk to public health and safety, this hierarchy will not be followed. A recent example of this was in the flooding in Cork last year.

Regarding the hierarchy outlined above, renewable technologies and high efficiency CHP are afforded a higher ranking in the hierarchy than other technologies, reflecting the importance of sustainability and the renewable targets in each jurisdiction in line with the relevant European directives and transposition. However, the TSO advise that the operational rule set outlined above be reviewed on a periodic basis. This allows for an evolving portfolio mix, actual evidence of complications in operation of the ranking or the emergence of unintended consequences from the rule set. In addition, changing legislation can materially impact on this order.

The hierarchy refers to dispatching and not re-scheduling or de-committing plant. Specifically units in a distinct grouping within the hierarchy are dispatched to their minimum load level before moving onto the next distinct grouping in the hierarchy (e.g. all peat stations to minimum load before moving to dispatch down CHP/Biomass/Hydro). This is consistent with the European directives, and further it is likely that security considerations would impact the efficacy of a priority dispatch hierarchy that did include de-committing as part of the first aspect of the order. For example, de-committing a number of units might materially impact on the system inertia or result in a requirement to need to start multiple units in a short space of time during the following morning's load rise.

Appendix B

EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY
DIRECTORATE C - New and Renewable Energy Sources, Energy Efficiency & Innovation
Director

Brussels,
ener.ddg1.c.3(2010)1063703

Ms Sara White,
Deputy Secretary and Director of Energy
Department of Communications,
Energy and Natural Resources,
29-31, Adelaide Road,
Dublin 2, IRELAND.

Dear Ms White,

The European Commission has received a number of queries on grid system issues regarding electricity from high efficiency cogeneration. These questions have been raised following the amendment of Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources (2001 Renewable Electricity Directive)[1] and the amendment of Directive 2003/54/EC concerning common rules for the internal market in electricity (2003 Electricity Directive)[2]. These directives are referenced in Directive 2004/8/EC on the promotion of cogeneration based on a useful heat demand in the internal market (Cogeneration Directive).[3]

Grid system and tariff rules for electricity from high efficiency cogeneration are defined in Article 8(1) of the Cogeneration Directive. This Article by a reference makes applicable Article 7(1), (2) and (5) of the 2001 Renewable Electricity Directive[4], as well as the relevant provisions of the 2003 Electricity Directive[5].

In 2009, some provisions of the 2001 Renewable Electricity Directive were deleted with effect from 1 April 2010 as a consequence of the entry into force of the new Renewable Energy Directive 2009/28/EC[6] while the 2003 Electricity Directive was repealed by the new Electricity Directive 2009/72/EC with effect from 1 March 2011. The Commission intends to issue an Interpretative Note to provide more transparency and ensure the continued correct implementation of the Cogeneration Directive following these amendments. The Commission however would like to provide a preliminary clarification

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[1] OJ L 283, 27.10.2001, p. 33.
[2] OJ L 176, 15.7.2003, p. 37.
[3] OJ L 52, 21.2.2004, p. 50.
[4] OJ L 283, 27.10.2001, p. 33.
[5] OJ L 176, 15.7.2003, p. 37.
[6] OJ L 140, 5.6.2009, p. 16.

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of the main rules in view of the national transposition of the 2009 Renewable Energy Directive that in many Member States is linked to the implementation of the electricity grid system rules under the Cogeneration Directive.

Against this background it is important to point out that the Cogeneration Directive remains in force and applies fully as intended by the legislator. This means that the key rules remain the same before and after the legislative change. These rules include an obligation for Member States to guarantee access to the grid system, transmission and distribution, as well as the priority dispatch by transmission system operators of electricity from high efficiency cogeneration. The latter is subject only to what is necessary to ensure the secure, reliable and efficient operation of the national electricity system. These mandatory requirements do not allow Member States to exercise discretion as regards the grid access and system rights of electricity from high efficiency cogeneration and should not be confused with the discretion Member States may have for granting the same rights for electricity from cogeneration not meeting the criteria of high efficiency cogeneration.

Yours sincerely,

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