



Response to

**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**

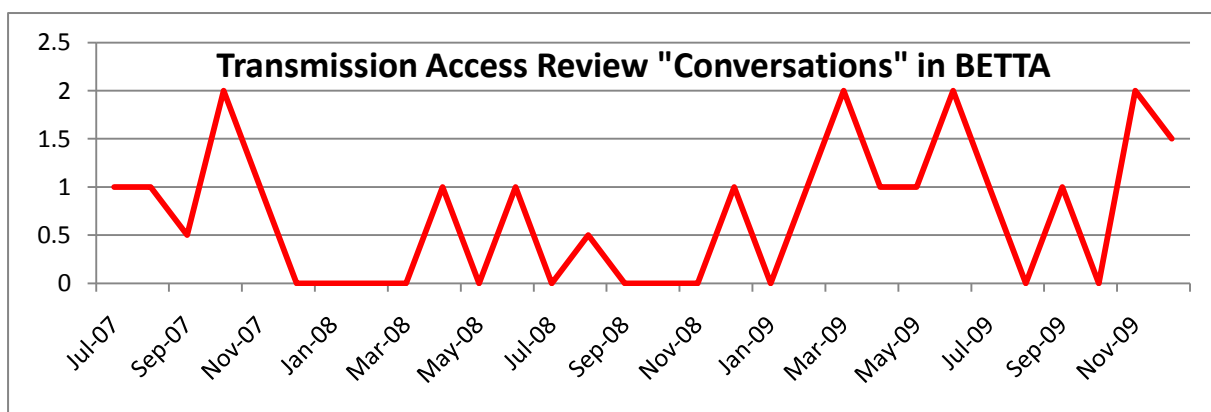
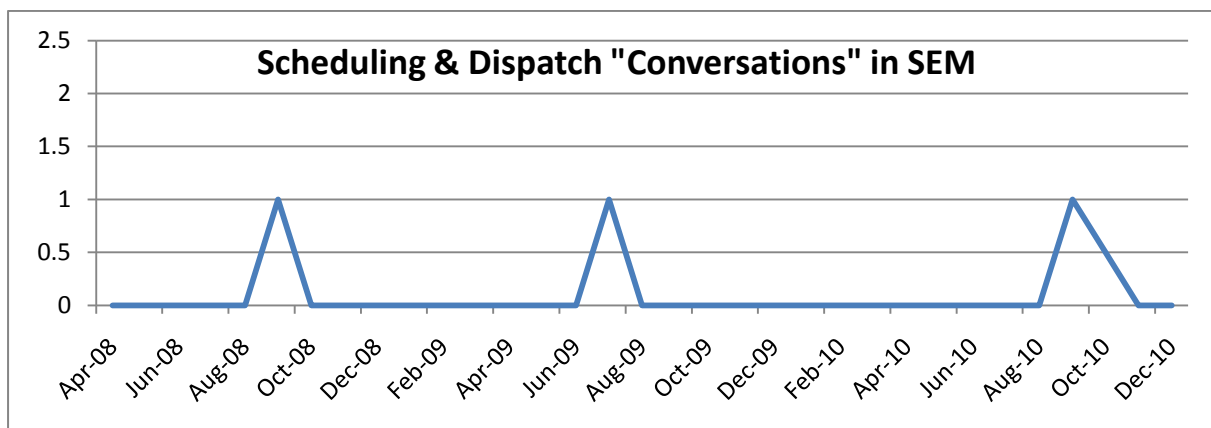
(SEM-10-060)

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Opening Comments

Change Process

The process for developing policy and addressing changing conditions within which the SEM exists and operates in is strongly driven by the consultative mechanism, which obtains industry engagement and participation in an uncoordinated manner and scattered over the development timeframes of issues under consideration. When issues are addressed in such a staccato and disengaged manner, a conclusion frequently reached is that proposals are issued 'out of the blues'. The two charts below, track in an unscientific fashion, the intensity of interactions involving the industry concerning the development of slightly related issues in the Irish and British wholesale electricity markets – Scheduling & Dispatch in SEM and Transmission Access Review in BETTA. The timeframes involved relate to roughly the first 2.5 years of the start of coordinated industry engagement on the relevant issues being progressed. The vertical axis measures 'conversation events', with publications (such as consultations and open letters) given a weighting of 1.0 and public events (such as workshops and seminars) weighted at 0.5. The selection of data employed in the charts is included in the Appendix.



In visual representation, it is evident that coordinated interactions with the industry on developing issues of broad impact occurs less frequently in SEM and at low intensities. As a result of these fewer, less intense opportunities to engage, the SEM consultative process is not only engendering frustration amongst industry stakeholders, it is leading to quite combative stances on issues.

The contextual environment within which the SEM exists and operates is progressively changing across various dimensions – legislative, technological, economic. These include issues identified in the current consultation which have a lifespan roughly until delivery of Grid25. In addition, SEM has to address ‘enduring’ issues such as the economics of a system where prices are likely to be set by zero/low marginal plant at levels that most probably will not recover plant portfolio fixed costs; technical challenges of operating within a system with high levels of distributed generation and demand response; and integration into a Single European Market in Electricity (SEM-E), wherein it may be the most remote node on the system. The imperative of an intensifying ‘networked’ world is that the human actors and agents who mediate them also need to increase the levels of their interactions, to seek in collaborative fashion the best (or least distasteful) solutions to problems that are in the most part allocation problems. This imperative requires that the regulatory change process moves the authorities into more partnering engagements with industry to broaden the base of knowledge and experience from which they make decisions.

Policy change remains within the remit of the regulatory authorities. But the expertise gained in day-to-day operations right across the electricity value chain, if fed in early and in co-ordinated, continuous manner into the policy formation and change processes, greatly strengthens that remit. On that basis we make a few suggestions under the banner of ‘Partners in Change’.

Principle – ‘Conversations’ not Consultations

As an underlying principle, the engagement with industry on issues needs to broaden out beyond consultations, which often make combatants out of stakeholders. By the term ‘conversations’, we do not mean meanderings in space, but open discussions guided by focussed terms of references. Consultations are necessary, but when embedded within the framework of ongoing conversations.

Process – ‘Working Groups’ not Workshops

Electricity is a long established and enduring industry. While changes are bound to occur in the commercial arrangements, technologies and regulatory regimes, barring catastrophic events these changes are generally evolutionary in nature, blending smoothly across seams over multi-year periods. Industry engagement by one-off workshops does not lend it self to meaningfully track and participate in this evolutionary nature of change. For example the artefacts of formally constituted and frequently meeting working groups, such as minutes and reports, over time forms a valuable knowledgebase that helps understand changes and decisions made in context.

The suggestion is not that workshops are unimportant and to be discarded. To the contrary. Workshops serve useful functions in bringing a broader stakeholder base in touch with the progress of work on issues. However the ‘work’ in the first instance will benefit from focussed, standing

groups, with relevant expertise or representing stakeholder groups, working over issues. Working groups may be of an expert nature, focussed on addressing a specific technical matter. In this regard it is worth noting the example in the Transmission Access Review referred to above, wherein an expert working group consisting of the regulatory authorities, the TSO and the transmission licensees, the Transmission System Operation Review Group (TSORG), was set up by Ofgem to assist in “completing a review of current transmission system operation measures”¹.

Furthermore, more general working groups involving broader sections of the industry around developing issues may be considered. Again the experience in BETTA is instructive where industry working groups around issues such as demand side, electricity connections, and distributed energy have been set up by Ofgem to assist its decision making. It must be stressed that these bodies are advisory only.

In SEM areas likely to lend themselves to industry working groups includes but not limited to revenue adequacy, regional integration and demand side response.

This approach will in a sense be adopting the change process that exists for the SEM T&SC, whereby the Modifications Committee sets up specific subject SEM Working Groups to work out issues with modification proposals and make recommendations to it. Given that the Modifications Committee is under the governance of the SEM Committee, these working groups are essentially advisory bodies to the SEMC.

An Example – SEM Development Forum

While the SEM T&SC change process has significantly improved by the employment of working groups, issues with longer horizons or inter-market issues, which do not involve just making incremental, optimising changes to the Code may best be addressed through an alternative mechanism to the T&SC modifications process. To illustrate a related matter, over time, the recognition that changes to the market systems which have no bearing on market rules were best served by an independent but ‘visible’ process led to the formation of the Change Control Forum (CCF). This permits change requests such as the publication of documents in different formats, say in .pdf rather than .xls, being addressed in a forum with the relevant participants.

The SEM T&SC modifications process is a ‘rules change’ process. Issues arising in areas such as regional integration and revenue adequacy in a declining cost curve market are more ‘architectural change’ matters. While the development of an intra-day mechanism is progressing through the T&SC modifications process, ideally it is part of a suite of related matters under SEM regional integration that may best have been considered through an alternative, forum focussed on developing (or evolving) the SEM, rather than a forum instituted to ‘optimise’ its operations.

¹ Transmission System Operation Review Group (TSORG) Report, p.51
(<http://www.ofgem.gov.uk/Networks/Trans/ElecTransPolicy/TAR/Documents1/071005%20TSORG%20Final%20Document.pdf>)

Responses to the Consultation Issues

Principle Underlying Construction of the Market Schedule

In principle, seeking “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” is an ideal. In practice however, the decision of SEM HLD to adopt “a single unconstrained marginal pricing structure” evidently made a trade off of this principle against the principles of “simplicity and transparency”. As a result the changes implied by the statement that “where deemed appropriate, the RAs will make the necessary changes”, while introducing a regulatory uncertainty overhang as is identified by other respondents such as IWEA and NEAI, will necessitate a counter trade off to greater complexity in SEM market scheduling.

A market may accrue some degrees of complexity as it matures. On this basis it is useful to develop metrics to monitor the dynamics of the SEM architecture, such as the degree of alignment between the market and dispatch schedules proposed by the SEMC. As increase in generation, both non-firm and intermittent/variable, leads upgrading of the network, the indications are indeed that the degree of this alignment will widen. What however is not clear is whether such an indicator necessarily points to ‘material harm’, marking a juncture to make changes to the market’s high level design principles such as introducing network constraints into the construction of the market schedule.

It must be recognised that there is a ‘normal’ level of constraints baked into the SEM by design by the adoption of “a single unconstrained marginal pricing structure”. This ‘normal’ level of constraints must be considered the baseline for determining any measure of ‘material harm’ under the prevailing market design. In developing such a framework as has been proposed by the SEMC we would argue that the following steps must be achieved.

1. Identify the makeup of and overall level of ‘normal’ constraints

While the bulk of constraint costs arise from transmission constraints, as the TSO noted at the consultation workshop, other contributory factors are involved. These include the ex-post pricing feature, market modelling assumptions and reserve requirements of the market. It is necessary to comprehensively identify the factors that makeup up this ‘normal’ level of constraints, determine their relative contributions, and hence establish a baseline (normalised ‘zero’) level for constraints.

Furthermore, in disaggregating constraints, it will be necessary as well to differentiate transmission constraints into those arising from local, export constraints and those arising from system links. It is our understanding that the bulk of transmission constraints arise from the insufficiency in links between the NI and RoI systems, which often leads to system separation. If this is case, then the case that ‘harm’ arises as a result of export constrained areas is significantly weakened. Furthermore it underscores the need to appropriately target

the sources of these system constraints (such as the North-South tie-line) and progress delivery on them.

2. Track deviations away from the baseline, on a disaggregated basis

Having determined the makeup and overall level of constraints as above, only then can measuring deviations be truly meaningful, as such a mechanism will provide better indication of the drivers of constraints, indicate more appropriate and targeted remedial action, in addition to showing whether and how far away from the design baseline constraints have been driven.

3. Account for the ‘material benefit’ obtained from lowering energy payment levels

In making a determination as to ‘material harm’, it must be recognised that under the unconstrained market model constraints do not only increase; rather on the flip side, as more wind farms are connected to the system, the level of energy payments is progressively also being lowered. This surely counts as a ‘material benefit’. Not only is this a benefit to electricity consumers that must be taken into account, but a mere calculation of the ratio of constraint to energy, without accounting for a lowering of energy levels will overstate any case for ‘material harm’.

Furthermore, as constraint costs are in the form of discrete payments made to specific generating plant, while the benefit from lower energy price levels results in across the board (system-wide) reduction in infra-marginal rent to all generating plants on the market schedule at any time, the value of this ‘benefit’ in lowering energy prices far outweighs the counter-balancing of constraint cost. This benefit that accrues under an unconstrained market model should not be ignored in developing any framework for ‘material harm’.

4. Compare against an alternative constrained market model

Finally, to appropriately evaluate ‘material harm’ it may be necessary to compare the metrics derived from the prevailing unconstrained market to an alternative constrained model. This will help confirm the weigh-off in relative benefits and/or harm that may occur under either model.

Allocation of Infra-Marginal Rents behind Constraints

On the issue of distributing infra-marginal rents behind constraints such that over allocation is eliminated, SSE Renewables very strongly disagrees with the SEM Committee’s proposed position to adopt Option 1, whereby access arrangements are ignored. On this point we would like to note, and echo, the views expressed within both the NEAI and the IWEA responses, to wit that ignoring firm access throws into considerable confusion the standing of commercial arrangements in the Irish electricity market.

Furthermore, given that the proposal to adopt any of the prescribe options is predicated on the event that 'material harm' is reached, we wish to examine its likelihood of occurring in the near-term to mid-term. Taking into account the benefit to consumers procured by the lowering in overall energy price, we would argue that 'material harm' would not become a factor for a further two to three years beyond the next couple of years over which the TSO have indicated that the degree of alignment between the market schedule and dispatch is manageable. This puts us mid-decade, at which points presumably the North-South interconnector, an identified major source of network constraints, should have been completed leading to a decongestion of the network and lowering of constraint cost levels. Beyond that point, the level of network constraints should progressively diminish if deployment of Grid25 is progressing in timely fashion.

On that note, and as has been noted even the SEMC, we wish to highlight again that network delivery is the key linchpin to a most of the issues under consultation in this process. Yet, rather than addressing grid delivery squarely, the efforts so far have been aimed at reorganising commercial arrangements; in so doing significant uncertainties have been introduced into them. Again pointing to the NEAI response, while the progress of the East West Interconnector is published frequently, nothing of the sort can be said of Grid25. And while the CER notes the development of incentives for grid delivery through the transmission revenue process, this addresses only the period 2011 to 2015. This appears a fragmentary approach to developing this key infrastructure.

Echoing the recommendation in the NEAI response, it is imperative that a more comprehensive programme is put in place to progress Grid25.

Principle Underlying Dispatch: Least Cost

On face value the principle of obtaining least cost in dispatch, taking account of only system security is reasonable; ideally this would be the approach recommended for adoption by the TSOs. In the ideal, market participants would be financially neutral to the decisions made in dispatch. However this not the case, as decisions made in dispatch affect not only the market schedule, but also the support mechanisms for renewable generation. In the context of the overall commercial framework existing in SEM, this principle does not come off as 'pure' as cursory examination indicates. Consequently our view is that least cost production should not be based off a commercial framework exhibiting "missing money" problems.

While the least cost dispatch principle should remain a stated aim and target to be progressively approximated towards, as long as the commercial issues arising out of the operation of the support schemes remain outstanding as well as the disregard of firm financial rights in the market arrangements, the dispatch process should take account of those revenue adequacy failures. Else the achievement of least cost dispatch would in part have being obtained as a result of the absence of legitimate revenue streams. On this matter we concur with the IWEA view "that firmness and precedence must be respected in the dispatch process".

Applying Priority Dispatch

The proposed treatment of priority dispatch, particularly emphasising the primacy accorded renewable generators under mandatory EU requirements, is welcome. The hierarchy outlined in the paper as specific guidelines to the TSO is equally very useful. Regarding potential flooding situations arising from the dispatch of hydro stations, it is only reasonable that public safety issues are taken into account in dispatch decisions.

On the question of price making generator units having the ability to appoint intermediaries in the SEM, taking into account the potential for heightened market power such ability may confer, our view is that blanket provisions are unhelpful in addressing the matter. Any consideration to become a price maker by a wind generator is pre-empted by the inability to operate via an intermediary. This removes the element of choice on the matter, making price taking the de facto classification of such plants.

In the broad discussion about aligning market mechanisms with dispatch and support schemes, true choice between price making and price making should be made possible for wind generators. Permitting them to retain operation via intermediaries in all cases enables reasoned commercial considerations and judgement.

Regarding the concerns about market power, it will be more useful to examine the particularities of such possibilities and develop conditional rules that may become activated where market power is threatened. Such a rule may be related to generation portfolio concentration as is the case for the directed contracts mechanism.

Hybrid Plant and Priority Dispatch

SSE Renewables agrees with the SEMC's view that "any definition/application of 'hybrid' should not serve to result in generators using minimal amounts of renewable fuel to secure priority dispatch status". Furthermore, as the Committee notes, given the legal uncertainty surrounding the concept of hybrid plant, we support the conclusion reached that no legal basis exists to support the claims of hybrid plant to priority dispatch. However in "the context of the forthcoming transposition of Directive 2009/28/EC into domestic law", it is necessary as the Committee notes to keep this matter under review.

Deemed Firm Access

It is our view that it is quite unreasonable for plant developers to face the entire risks of delays in upgrading the network, where in practically all cases they have no contributory roles to such delays. As IWEA notes in its response, "deemed firm dates should be introduced to better align risk with the

party that may control it". To this end it may be useful to examine the case in the GB Transmission Access Review (TAR) which is progressing a 'Connect and Manage' mechanism, a mechanism that in other words is a Deemed Firm mechanism.

Treatment of Variable Price Takers in the Market Schedule

To maintain consistency with SEM High Level Design principles it is only reasonable to amend the T&SC to reflect the originally stated intentions that Price Takers receive constraint payments only to the extent that they are firm.

However we wish to draw out from this proposal the consistent theme that must be recognised and respected throughout the market arrangements which is that 'firmness' confers rights.

Grid Code Matters and Information on Technical Issues

SSE Renewables welcomes the proposed positions set out in this area of the consultation. For further details we would refer to the IWEA response on these matters.

Tie Breaks

We would refer to the IWEA response on Tie Breaks.

Determination of SMP when Demand met by Price Takers

As we noted earlier, the 'freedom' granted variable generators to become price makers and bid negatively in SEM is highly constrained by the inability to maintain the ability to operate in the market via intermediaries if such a choice was exercised. Furthermore, the misalignment of support schemes further constrains this 'choice'.

This issue constitutes an area of significant interaction between various aspects of the broader market framework, including regional market integration, renewable support schemes, the classification scheme of plant units, but most importantly the system mix of plant with high capital but low marginal costs and those with relatively lower capital and higher marginal costs. This is not a side issue. It should be pointed out that since the publication of this consultation, the SEM has

experienced negative pricing. While this is a design intention, it will become quite significantly deleterious were it to become a dominant price setting condition. On that basis it is a useful subject to form a working group around in a form as we have suggested in our opening comments.

Demand Target and Excess Generation Events

SSE Renewables agrees with the SEMC's proposal that in the event of Excessive Generation Events arising from an excess of Price Taking Generation, the quantity of generation charged PFLOOR should not exceed System Demand.

To discuss this document please contact:
Emeka Chukwureh
emeka.chukwureh@sserenewables.com

Appendix

Feb-08	Consultation on Large-Scale, Intermittent Non-Diverse Generation (SEM/08/002)
Sep-08	Initial Response to Large-Scale, Intermittent Non-Diverse Generation (SEM/08/127)
Jul-09	Consultation on Principles of Dispatch and the Design of the Market Schedule in the TSC (SEM/09/073)
Sep-10	Proposed Position on Principles of Dispatch and the Design of the Market Schedule in the TSC (SEM/09/073)
Oct-10	Workshop on Proposed Position on Principles of Dispatch and the Design of the Market Schedule in the TSC (SEM/09/073)

Scheduling and Dispatch Consultation timeline (SEM)

Source: All Island Project²

Jul-07	Open Letter & TOR
Aug-07	Call for Evidence
Sep-07	1st Stakeholder Event
Oct-07	TSORG Report; STAG Report
Nov-07	2nd & 3rd Stakeholder Event
Apr-08	Analytical Discussion Document
Jun-08	Final Report
Aug-08	Dissemination Event
Dec-08	Initial Consultation on enhanced transmission incentives
Feb-09	Enhanced Investment Incentives Open Letter: Consultation on Short Term Measures
Mar-09	Derogations to facilitate earlier connection of generation – proposed interim approach; Transmission Owner (TO) Incentives Licence Modification
Apr-09	2nd Progress Update
May-09	Derogations to facilitate earlier connection of generation – decision on interim approach
Jun-09	Letter to CEOs from Alistair Buchanan on Transmission Access; 3rd Progress Update; Report on enduring transmission access reform
Jul-09	Open letter to the Connection and Use of System Code (CUSC) Panel Chair on CUSC amendment proposals
Sep-09	Enhancement investment incentives: Update and consultation on further measures
Nov-09	Enhanced transmission investment incentives: Initial Proposals; An Assessment of the potential impact on consumers of connect and manage access proposals (a report prepared by Frontier Economics)
Dec-09	TO Incentives: Stakeholder Workshop; Ofgem's Response to DECC's Consultation on "Improving Grid Access"

Transmission Access Review timeline (BETTA)

Source: Ofgem³

² <http://www.allislandproject.org/>

³ <http://www.ofgem.gov.uk/Networks/Trans/ElecTransPolicy/TAR/Pages/Traccrw.aspx>