



**ENERCOMM  
INTERNATIONAL**

Energy & Management  
Consultants

Enercomm House  
Lisduff, Longford, Ireland.

Phone: +353-43-42044  
Fax: +353-43-42045  
Email: [enercomm@sol.ie](mailto:enercomm@sol.ie)

**To: Ms Aoife Crowe  
Commission for Energy Regulation  
The Exchange  
Belgard Square North  
Tallaght, Dublin 24  
18 September 2009**

**Submission in Response to the Consultation Paper ‘Principles of  
Dispatch and the Design of the market Schedule in the Trading and  
Settlement Code’ (SEM-09-073)**

Dear Aoife,

We welcome the opportunity of responding to this paper entitled “Principles of Dispatch and the Design of the Market Schedule in the Trading and Settlement Code”

This is complex consultation paper requiring considerable thought and discussion. Your recent Industry Forum in Dundalk and subsequent bilateral meeting in Belfast have enabled us gain a greater insight into the issues raised in this consultation paper. In addition, it is important for us to understand the concerns that the Regulatory Authorities have, faced with the twin challenges of maintaining competitive electricity prices on the island of Ireland and accommodating increasingly largescale wind generation between now and 2020.

If you need to clarify any point in this submission don't hesitate to contact us.

Sincerely Yours

.....  
Peter Duffy

=====  
Enercomm International  
Lisduff, Longford, Ireland  
P 00353 43 3342044  
M 00353 87 2384746  
E [peterduffy@enercomm.ie](mailto:peterduffy@enercomm.ie)  
W [www.enercomm.ie](http://www.enercomm.ie)

# **Submission in Response to the Consultation Paper ‘Principles of Dispatch and the Design of the market Schedule in the Trading and Settlement Code’ (SEM-09-073)**

## **Introduction**

This is a fundamentally important paper for the single electricity market in the years ahead and raises a wide range of issues. However, the crucial issues discussed are on what basis wind generation will be dispatched, and how will conventional generators be incentivised to build the appropriate mix of plant in the future. The paper details questions surrounding priority dispatch and the need for tie-breaker rules for wind generation, while identifying a major risk of new conventional generators building only BNE Peakers. Both of those are linked to the issues of firm access and the allocation of infra-marginal rents.

## **Consistency Across Several Consultations**

There are several consultations, both ongoing and arising in the near future, all of which relate to different aspects of the SEM and are inextricably linked. It is important that these consultations and subsequent directions are not carried out in isolation to each other. To ensure a consistent approach, all of this work should be done in accordance with an established and accepted framework, e.g. High Level Design of the SEM

## **Core Issue in this Consultation Paper**

The allocation of infra-marginal rents is a core issue in this consultation paper. In its Summary, the paper explains “that the purpose of the market schedule is to allocate infra-marginal rents to generators. In the absence of these rents, generators would have the incentive to build only the best new entrant generating unit (the “BNE Peaker”)”. Later in the Section “Role of a Market Schedule” it is stated that “infra-marginal rents therefore give incentives to build a mix of baseload, mid-merit and peaking plant that will result in a minimum cost of production which is lower than would be the case with a generation portfolio consisting of only BNE peakers. This will minimise the cost of production, not just over the short-term, but in the long run also”.

Clearly this implies that allocation of infra-marginal rents over the lifetime of a plant (particularly baseload and mid-merit plant) is a necessary requirement if developers are to build the appropriate mix of generating plant. If developers believe that this will not be the case (for example that rents will be allocated only on the basis of short-term value to the system) then most new conventional plants to be built will be BNE Peakers. This will result in an inappropriate portfolio mix and higher electricity costs for consumers over the longer-term. The RAs’ proposal to allocate infra-marginal rents to generating units that are of value to the real-time operation of the system will have the effect of incentivising generators to build BNE peakers only.

## **Proposed Solution will Paradoxically Incentivise/Exacerbate Problem**

It is strange therefore that the consultation paper, having identified a significant risk to the future mix of plant should propose a solution (namely that infra-marginal rents be allocated to generators based on short-term benefit to the system), which would incentive generators to do the very opposite to what is required.

### **Five Key Factors Driving the Least Cost of Production and Security of Supply**

It is our considered view that the least cost of production of electricity, not just over the short-term, but in the long run also, results from consistent enduring market signals to both renewable and conventional generation. We strongly argue that this least cost of production results from the following five key factors, namely that:

1. Firm access is of paramount importance in the market, and is allocated on a first-come-first-served basis in accordance with gate numbers or the ITC (or other relevant) programme
2. Infra-marginal rents are allocated on the basis of firm access
3. Qualified priority dispatch applies in the market
4. Tie-breaker rules based on firm access, when all things are equal, determine dispatch
5. Deemed firm access should play an important role in the SEM

#### **1. Allocation of Firm Access**

This is key to maintaining an attractive investment environment so that generators will build the right capacity and right type of plant in the right locations. The TSO has invested enormous time, effort and resources in developing the GDS and ITC programme. These should provide the bedrock for future grid development and the orderly connection of generators to the grid.

This approach would underline the importance of firm access and would incentivise an orderly building of new generation in line with their deemed firm access dates. In addition, it is also important that existing generation with firm access maintain and enjoy their firm access rights; this will signal to the market and potential new entrants that rights and hence financial stability are not overturned to meet some short-term gain. We therefore urge that firm access should play a key role in the SEM.

#### **2. Allocation of Infra-Marginal Rents**

There should be no competition for infra marginal rents behind constraints – rather the principle of firm access should take precedence. In practice there will be times when non-firm generation is co-located with firm access generation behind the constraint, and where the non-firm generation is dispatched ahead of the firm access generation (lower marginal cost); in these circumstances the firm access generation should receive the infra-marginal rent (assuming it was in the merit order) and the non-firm generation should receive infra-marginal rent only for the spare capacity, even though the non-firm generation has been dispatched above that level. This means a conventional plant will receive only its bid price above the spare capacity level (same as constrained on) while non-firm intermittent generation in the same situation would have to rely on payments through the REFIT process. Both conventional and intermittent non-firm generation should continue to qualify for CPM payments based on availability.

The allocation of infra-marginal rents over the lifetime of a plant (particularly baseload and mid-merit plant) is a necessary requirement if developers are to build the appropriate mix of generating plant. If developers believe that this will not be the case (for example that rents will be allocated only on the basis of short-term value to the system) then most new conventional plants being built will be BNE Peakers. This will result in an inappropriate portfolio mix and higher electricity costs for consumers over the longer-term.

### **3. Qualified Priority Dispatch**

We support qualified priority dispatch, at a price to be decided, without contravening the spirit of the EU renewables directive. There is an argument that this price should be minus VOLL but this seems excessive. The Value of Lost Load is linked to the LOLE standard adopted in a modern economy, which is fundamental to our society. It is not clear that priority dispatch falls into the same bracket, and therefore it seems prudent to set an intermediate price such minus €1,000 (the inverse of the ceiling bid price).

### **4. Tie-Breaker Rules and Dispatch**

We support this proposal but with the caveat that that firm access allocated under the ITC programme should be the determining factor in tie-breaker situations – all other things being equal – within dispatch

### **5. Deemed Firm Access**

Deemed Firm Access dates enable generators to finance and build their projects in a manner that is aligned to the TSO's construction timetable. It may be argued that where the TSO encounters unforeseen delays then customers are left to bear any resultant constraint costs; however, it can equally be argued that if there are no deemed firm access dates then generators will not build new plant until the transmission infrastructure is in place and the resultant delay in bringing the new plant on-stream will have attendant (lost opportunity) costs for electricity customers.

While the matter of TSO incentivisation is being consulted on separately, which may include Deemed Firm Access, it is worth pointing out here that Deemed Firm Access dates incentivise the TSO to plan and build grid reinforcements in an orderly and sustained manner. In addition, the formality of these dates lends credence to the GDS and to the commitment of the TSOs to delivering their side of the electricity assets. The absence of Deemed Firm Access dates in the SEM would have the effect of transforming the TSOs from committed industry players to interested bystanders only – which they TSOs are not.

### **Intermediate Paper as Next Step**

Because of the range and complexity of issues raised in this consultation paper and which have far-reaching effects, we urge that the RAs prepare and publish a second paper, having listened to the feedback and perused the submissions received.

We suggest that this should not be termed a 'Draft Direction' as this implies that the content is >95% complete and set out. It seems more likely that it should be termed a 'Refined Paper' so that the options and proposals are significantly narrowed. This is one paper where it is prudent to take a little extra time.

## **Response to 12 Proposals (for convenience these are numbered here)**

### **Proposal 1**

**It is 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 to make the necessary changes.**

We do not support this proposal. With regard to the market schedule, this consultation paper states ‘that the purpose of the market schedule is to allocate infra-marginal rents to generators. In the absence of these rents, generators would the incentive to build only the best new entrant generating unit (the “BNE Peaker”)’. Clearly this implies that allocation of infra-marginal rents over the lifetime of a plant (particularly baseload and mid-merit plant) is a necessary requirement if developers are to build the appropriate mix of generating plant. If developers believed that this would not be the case (for example that rents would be allocated only on the basis of short-term value to the system) then most new conventional plants being built would be BNE Peakers. This would result in an inappropriate portfolio mix and would be contrary to what the RAs are seeking to achieve for customers.

### **Proposal 2**

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

- (a) their understanding of what changes 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.**

We support this proposal, as there will be new and developing situations in the years ahead in the operation of the system with largescale intermittent generation. For example, system inertia and the rate of frequency decay may seem unimportant today in view of no major blackouts in the past fifty years. This will undoubtedly be important in the future, as the rate of system frequency decay in severe fault conditions will impact on governor response and under-frequency relays to assist in system recovery. All information made available will enable players to understand the developing system dynamics and respond accordingly. This should have a long-term positive impact on reliability of supply for both Ireland and Northern Ireland.

### **Proposal 3**

**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.**

We support this proposal, but caution on the cost of policing Grid Code obligations in excess of what is required. There may be some obligations that are managed more efficiently through the Ancillary Services contracts or market.

#### **Proposal 4**

**The RAs would welcome views on how access to the market schedule for plant situated behind export constraints should be limited and on the options described in this Section 4.5. Respondents are also invited to propose alternative options to those presented in the above section.**

We support Option 3 in section 4.5.2 whereby the market schedule would allocate infra-marginal rents first to generators having firm access. In the event this allocation leaves spare capacity on any “export constraint” and there is in-merit non-firm generation behind that boundary, this generation is then included in the market schedule also, up to the limit of the export constraint.

In practice there will be times when non-firm generation is co-located with firm access generation behind the constraint, and where the non-firm generation is dispatched ahead of the firm access generation (lower marginal cost); in these circumstances the firm access generation should receive the infra-marginal rent (assuming it was in the merit order) and the non-firm generation should receive infra-marginal rent only for the spare capacity, even though the non-firm generation has been dispatched above that level. This means a conventional plant will receive only its bid price above the spare capacity level (same as constrained on) while non-firm intermittent generation in the same situation would have to rely on payments through the REFIT process. Both conventional and intermittent non-firm generation should continue to qualify for CPM payments based on availability.

This approach underlines the importance of firm access and incentivises the orderly building of new generation in line with their deemed firm access dates.

#### **Proposal 5**

**The RAs propose that “Deemed Firm Access”, whereby FAQ or MEC is allocated in advance of the completion of necessary transmission system infrastructure reinforcements, should not be introduced to the SEM.**

We do not support this proposal for the following three reasons:

- Deemed Firm Access dates enable generators to finance and build their projects in a manner that is aligned to the TSO’s construction timetable. It may be argued that where the TSO encounters unforeseen delays that customers are left to bear any resultant constraint costs resulting in higher electricity prices; however, it can equally be argued that if there are no deemed firm access dates in the SEM then generators will not build new plant until the transmission

infrastructure is in place and the resultant delay in bringing the new plant on-stream will have attendant (lost opportunity) costs for electricity customers.

- Deemed Firm Access dates incentivise the TSO to plan and build grid reinforcements in an orderly and sustained manner.
- Finally, Deemed Firm Access dates lend credence to the GDS and to the commitment of the TSO to delivering their side of the electricity assets. The absence of Deemed Firm Access dates in the SEM would have the effect of transforming the TSO from a committed industry player to an interested bystander only – which the TSO is not.

### **Proposal 6**

**Given that it would represent the most efficient short-term use of available resources, and is consistent with existing dispatch processes, the RAs propose that the TSOs should continue to dispatch the system to minimise production cost of generation, taking into account system security requirements and, as now, disregarding any concept of firmness in the dispatch process.**

We support this proposal but with the caveat that that firm access allocated under the ITC programme (and Gate numbering regime) should be the determining factor in tie-breaker situations – all other things being equal – within dispatch

### **Proposal 7**

**The Regulatory Authorities welcome comments from interested parties on the options for priority dispatch, as presented in this Section 4.8. Specifically the RAs seek comments on:**

- (a) The case for affording absolute priority or qualified priority to plant having priority dispatch;**
- (b) In the event that qualified priority were to apply, the relative merits of the alternatives posed for the purpose of attaching an effective price or other objective measure for use by the SOs when making dispatch decisions taking account of the proportionality principle;**
- (c) Whether a distinction is to be drawn between the priority to be applied when making a decision to place a generating unit in the dispatch schedule as distinct from subsequently dispatching that unit away from that level of output in real time;**
- (d) The extent to which non-renewable plant (e.g. peat) who are afforded priority dispatch present particular issues which might require that they are treated in an alternative way to renewable generators.**

We support qualified priority dispatch, at a price to be decided, without contravening the spirit of the EU renewables directive. There is an argument that this price should be minus VOLL but this seems excessive, i.e. that costs up to the level of VOLL should be incurred in order to effect priority dispatch. The Value of Lost Load is linked to the LOLE standard adopted in a modern economy, which is fundamental to our society and our standard of living. It is not clear to us that priority dispatch falls into the same bracket, and therefore it seems prudent to set an intermediate price such as minus €1,000 (the inverse of the ceiling bid price).

### **Proposal 8**

*The RAs propose that the rules applying to hybrid plant should depend upon which of the options for treatment of priority dispatch plant are eventually chosen. The RAs welcome views on how the principles of priority dispatch should be extended to hybrid plant as part of the response to this consultation.*

Without engaging with the details of this proposal, we suggest that the rules for priority dispatch (and tie-breaking) should be applied to that portion of the hybrid plant that qualifies for priority dispatch. The remaining plant should be subject to the same rules applying to similar plant.

### **Proposal 9**

**If any of the options in Section 4.5, for allocating infra-marginal rents behind export constraints, is adopted then that option should apply also to Variable Price Takers. If none of these options is adopted and the existing arrangements for allocating infra-marginal rents behind export constraints retained, then Variable Price Takers should be limited in the market schedule to the maximum of actual output and FAQ (or MEC when infrastructure works are complete and the VPT becomes fully firm).**

We support the proposal that Price Takers should be treated in a similar manner as Price Makers regarding firm access.

### **Proposal 10**

**The RAs propose that if Option 2(a) or 2(c) in Section 4.8 is adopted, SMP should be set using the effective bid prices of the marginal Variable Price-Taking generation, rather than at PFLOOR, in the event that the quantity of price-taking generation exceeds demand and reflecting any external subsidies received by the plant (i.e. it should reflect the price used in the dispatch of the plant by the TSOs). PFLOOR would still be used as a lower limit to SMP**

No comment on this proposal

### **Proposal 11**

*RAs propose that the quantity of generation charged PFLOOR (or paid at the revised SMP set out in proposal 4.11) 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 pro-rated down so that the total quantity is equal to System Demand.*

We support this proposal that the quantity of generation charged PFLOOR (or paid at the revised SMP set out in proposal 4.11) in the event of an Excessive Generation Event arising from an excess of Price Taking Generation should not exceed System Demand.

We also support the proposal that the MSQs of Price Taking Generation should, in such circumstances be pro-rated down so that the total quantity is equal to System Demand, but that this is done in a manner that respects firm versus non-firm access

and first-come-first-served within firm access. With modern computer systems these algorithms should not pose any serious difficulty for the TSO.

**Proposal 12**

*The RAs propose that where tie-break rules are required, de-loading should be instructed on a pro-rata basis in a manner determined by the TSOs.*

We support this proposal but with the same caveat as in the previous proposal, i.e. that the tie-break rules respect firm versus non-firm access and first-come-first-served within firm access – all other things being equal.

=====