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Dear Paul, Aoife, Dermot, and Juliet,

PRINCIPLES OF DISPATCH AND THE DESIGN OF THE MARKET SCHEDULE IN THE TRADING AND SETTLEMENT CODE

The above consultation opens up a debate about a number of key design features of the Single Electricity Market (SEM) and while its is interesting to debate design features of the market, we at concerned at contingent regulatory risk given the relatively short history in the SEM. Viridian Power and Energy (VPE) acknowledges the challenge of integrating high levels of wind into the all-island market and the significant work that has gone into the consultation and the lively and constructive debate it instigated at the workshop on 28th August 2009.

In this response Viridian Power and Energy (VPE) emphasises a number of key issues that we suggest are central to the debate:

1. The revenue adequacy problem
2. Transmission constraints
3. Treatment of firm and non-firm access
4. Renewable targets and priority dispatch
5. Other suggested reforms

We focus on these in the remainder of this response but provide detailed comments in appendix I to all issues covered the consultation paper.

1. The revenue adequacy problem

VPE contend that there is a revenue adequacy problem for merchant generators currently in the SEM. The revenue adequacy problem has three components:

1. Infra marginal rent in the market has been significantly reduced for most generators because of falling fuel and carbon prices, lower demand and higher availabilities for generators that are not being tested. SMP has dropped by about 40% since last year, and Infra Marginal Rent (IMR) will drop accordingly although the exact amount of the reduction will vary from generator to generator. We note also that with falling thermal generator utilisation the total annual income from IMR is significantly reduced.

2. The capacity payment for 2010 has reduced by 14% and VPE calculate that the advent of new CCGT and increased availability of generators could result in a further reduction to individual generators of another 10%

3. The recent review of ancillary services (AS) has resulted in a reduction in AS income of about 15% for an individual generator. This factor includes the likely costs associated with the new GPI metrics.

The effect on infra marginal rent is likely to be exacerbated as increasing penetrations of wind drive down SMP (and infra marginal rents) and reduce thermal generator utilisation. Many generators in the market, including most wind generators, are protected from the effects of the above by long term contracts that recover excess costs from consumers through PSO levies but this is a real problem for many others, notably baseload plants that are not covered by support systems.

VPE contend that addressing this problem should be the key focus of any reform if security of electricity supply is to be maintained.

We propose that revenue adequacy issues are dealt with directly by a regulatory review of the total market revenues comprising Infra Marginal Rent (IMR), capacity payments, and ancillary services revenue to consider whether generator income is being driven below equilibrium levels that cover the fixed and variable costs of generation. Recent cuts in the capacity pot and ancillary services revenue, coinciding with a dramatic fall in SMP, have compounded the problem set out above.

2. Transmission constraints

The consultation paper predicts that transmission constraints will bite in 2020 because of high penetrations of wind and will ease off again by 2025 with the completion of EirGrid's Grid Development Strategy, GRID25. Instead of changing the market by introducing transmission constraints to deal with this transitional problem there is considerably more merit in bringing forward GRID25, which may require the introduction of strong incentives to complete grid developments early. This has the advantage of not altering the market significantly with unknown effects and at considerable expense.

If the investment of €4 billion in GRID25 is not to have a nugatory element, then generators need strong signals to locate in the right place. Hence they should be given a clear, upfront and unambiguous incentive to locate in areas that already have adequate transmission capacity available, or that are likely to have such capacity available in the near future with development of GRID25. If the locational signal is upfront this provides maximum effect at the time a generator decides to enter into a connection agreement. VPE suggest that if a clear distinction is made in the TSO dispatch process, where non-firm generators are only dispatched after all firm generators have been dispatched, there will hence be a strong incentive for generators to locate in areas with firm capacity. We understand that such an approach could marginally increase the short-term cost of production, but this could be far outweighed by the avoidance of nugatory grid investment costs.

3. Treatment of firm and non-firm access

As discussed above a clear distinction should be made between firm and non-firm access to induce generators to locate in the right place. The current firm access rights regime where participants are financially neutral to dispatch decisions and transmission constraints is fundamental to the structure of the SEM and to investor models used to assess it. We therefore oppose modelling export constraints in the market schedule. This would constitute a fundamental change to market philosophy, remove any effective meaning of firm access, provide much reduced incentives for generators to build in the right location and therefore undermine connection policy. Implementing this option would also incur major systems costs, both in the changes to SEMO systems and processes, and to systems developed by each market participant as part of the SEM introduction.

Another option is for the market schedule to allocate infra-marginal rents only to generators having firm access quantities. This makes sense because generators with firm access who locate in the right place and pay transmission use of system charges accordingly should receive infra marginal rents. However the distinction between firm and non-firm access is less relevant to renewables, especially wind which must locate where the wind blows, because renewables have priority dispatch in line with renewable targets and legal requirements. We therefore propose that:

1. Conventional generators with firm access and renewables with priority dispatch have access to infra marginal rents. In order to retain some concept of non-firm access for renewables with priority dispatch we suggest that the current arrangements where non-firm renewables do not receive constraint payments and that firm renewables do receive constraint payments, is maintained.
2. Generators with non-firm access would have no access to infra marginal rents until their 'Deemed Firm Access' date.

Alternatively the above could be achieved through dispatch by requiring the TSOs to respect the distinction between firm and non-firm access without compromising priority dispatch for renewables (as suggested earlier).

The third option is to allocate infra-marginal rents first to generators having firm access and then allocate spare capacity to non-firm generation which is included in the market schedule also, up to the limit of the export constraint. This option would bring additional complexity to the market, especially in the context of dynamic constraints (e.g. constraints will evolve and shift over time with the variability of wind and grid developments), and could only ever serve as a crude and subjective approximation of reality.

4. Renewable targets and priority dispatch

The consultation paper seriously undervalues the importance of renewable targets. There is a 40% target for renewable electricity in Ireland and the expectation of a similar target for Northern Ireland. These targets are based on legally binding targets for each member state as set out in recent EU directives. The SEM design should facilitate achievement of renewable targets and not frustrate that goal which have been agreed in Europe and incorporated into domestic energy policy as developed by democratically elected governments. Although primary responsibility for meeting targets rests with the relevant government departments the regulators must assume responsibility for not frustrating these initiatives. Some proposals in the consultation paper would seriously undermine achievement of renewable targets, particularly suggested interpretations of priority dispatch.

Priority access and dispatch of renewables is unambiguously a legal mandate according to EU Directive 2009/28/EC which must be transposed into national law by Member States by 5th December 2010. The only exception is where secure operation of the grid does not permit such priority access and dispatch. The notion of "qualified priority" in the consultation paper is inconsistent with legal requirements and is therefore not applicable.

5. Other suggested reforms

- Introduce 'deemed firm access' where the target date for firm access as advised by Eirgrid is used for setting firm access for the generator in the event that Eirgrid cannot deliver deep works to programme.
- Introduce more flexible trading arrangements with BETTA (particularly the ability to execute short term trades between SEM and BETTA by allowing market participants to trade with the system operator after SEM gate closure to manage interconnector flows) as this would be an effective measure for dealing with excessive generation events and in managing constraints more generally.
- Remove restrictions on variable price makers appointing an intermediary in SEM.
- Review the REFIT mechanism, as determined by CER, to allow for REFIT recovery for periods when a windfarm cannot generate because of constraints.
- With increasing levels of wind on the system, VPE have noticed that system operator forecasts of dispatch for thermal generators have become increasing inaccurate. Gas fired generators face a gas imbalance risk when the gas markets close at night and this imbalance has significantly increased recently because of the system operator forecast error. VPE suggest that the RAs review this issue and address how this risk to gas fired generators can be mitigated.

In conclusion VPE suggest that the issues identified in this response require careful consideration for the SEM to function efficiently. We would therefore encourage the regulatory authorities to actively engage with industry on these particular issues and address the problems that need to be addressed without fundamentally changing market philosophy.

Please do not hesitate to contact us if you would like to discuss these issues further or to arrange a meeting if that would be helpful.

Yours sincerely

K Hannafin

Kevin Hannafin
Senior Regulation Analyst

Appendix I - Detailed Comments:

Construction of the Market Schedule
(i) Proposal: *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.*

VPE Response:

- The SEM pays for being efficient in energy terms. It is important to maintain the purity of this market.
- Keep the market as it is and enhance the ancillary services mechanism and Grid Code instead.
- Develop GRID25 early to deal with transmission constraint problems associated with wind in 2020 and incentivise generators to locate in the right place through treatment of firm and non-firm access.
- Potentially introduce a minimum function specification (MFS) in the grid code to enhance plant capability – providing no retrospective application. The grid code should be based on the 'essential' requirements for all plant – any plant that can offer more should be incentivised within a 'desirable' category through an MFS.

Technical Constraints
(ii) Proposal*: 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. RA's looking to include additional technical constraints which are not currently primary considerations in dispatch scheduling.

VPE Response:

- We welcome increased transparency and need greater transparency on what TSOs do today.

Grid Code Compliance
(iii) Proposal*: 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.

VPE Response:

- We generally support the current initiative by the TSOs to enforce Grid Code compliance providing it is proportionate and measured.
- We suggest potentially introducing a minimum function specification (MFS) in the Grid Code to enhance plant capability – providing no retrospective application. The Grid Code should be based on the 'essential' requirements for all plant – any plant that can offer more should be incentivised within a 'desirable' category through an MFS

<u>Allocation of Access Rights</u>
(iv) Proposal: *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.*

Option (i) - market schedule allocates infra-marginal rents to the correct quantity of generation behind each export constraint by modelling export constraints in the market schedule.

VPE Response to Option (i):

- This option removes any effective meaning of firm access for market participants.
- This could have serious financial and legal implications for incumbent generators with signed connection agreements.
- This option provides much reduced incentives for generators to build in the right location and therefore undermines connection policy.
- The fundamental principle that firm access generators are only commercially exposed to market risk would be violated by this option.
- Implementing this option would incur major system costs as it would require significant changes to UUC.

Option (ii) – market schedule allocates infra-marginal rents only to generators having firm access quantities.

VPE Response to Option (ii):

- This option comes closest to what might work. We suggest a variation that respects the priority status of renewables (in line with renewable targets and legal requirements). Under this option (detailed more fully in our cover letter) conventional generators with firm access and renewables with priority dispatch would have access to infra marginal rents. Generators with non-firm access would have no access to infra marginal rents until their ‘Deemed Firm Access’ date. Alternatively the same effect could be achieved through dispatch by requiring the TSOs to respect the distinction between firm and non-firm access without compromising priority dispatch for renewables.

Option (iii) - market schedule allocates 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

VPE Response to Option (iii):

- Under central allocation this approach may not be fair for all contingencies
- It is difficult to envisage bilateral trading working in a day ahead market
- This option would bring additional complexity to the market, especially in the context of dynamic constraints (e.g. constraints will evolve and shift over time with the variability of wind and grid developments), and could only ever serve as a crude and subjective approximation of reality.

<u>Deemed Firm Access</u>

(v) Proposal: *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.*

VPE Response:

- The key principle to consider is that risk should be allocated to the party best able to manage it. Generators cannot continue to take on the third party risk associated with grid delivery.
- The concept of Effective Firm Access Dates should be introduced in order to assign this risk appropriately and to ensure any development is left financially neutral where grid delivery does not proceed according to schedule.

- The suggestion that the presence of a deemed firm date "will lead to incentives to invest in generation ahead of the capability of the transmission system to support it", is a misunderstanding of the potential form and application of such a provision, and misses the opportunity available to properly incentivise the timely delivery of assets, having regard for national energy policy.

- Firm access TUoS charges should apply from 'Deemed Firm Access' date.

<u>Dispatch Principles:</u>
***(vi) Proposal**: 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.*

VPE Response:

- This would be not be favoured unless our version of option 2 in respect of access rights is adopted.

<u>Priority Dispatch</u>
(vii) Proposal: 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.

VPE Response:

(a) Notion of 'absolute' and 'qualified' priority seems theoretical in light of clear legal requirements for priority dispatch of renewables.
(b) As above
(c) No comment
(d) Detailed implementation of a hierarchy merits further consultation

Hybrid Plant

(viii) Proposal: *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.*

VPE Response:

- More detail is required on the type of plant that would be likely to come under this definition – e.g. waste, biomass etc?
- It is too complicated to require the renewable and non-renewable parts of a hybrid plant to be treated separately in the schedule.
- Priority dispatch should not be allowed unless there is a clear majority from renewables (e.g. 70%).

The Treatment of Variable Price Takers with Non-firm Access

(ix) Proposal: *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 being 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).*

VPE Response:

- Priority plant with non-firm access should have potential for infra marginal rents because there is a legal mandate to use it. However there should be a distinction in constraint payments between firm and non-firm access.

Determination of SMP when demand is met by price-takers.

***(x) Proposal*:** *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.*

VPE Response:

- We welcome acknowledgement of this potential problem but need to consider that variable price takers includes a whole range of plant and prices (e.g. wind and peat) and therefore it is not clear what the marginal price would be.

- We suggest that the highest bid price of VPTs that are run be used in an EGE (does this require a change in the decremental price?) and argue against option 2(a) above (dispatching purely on economic merit) because the implied bid price according to this could be lower than PFLOOR.

- TSC limits decremental price to zero. Do we want this changed?

Quantity of Generators receiving PFLOOR

(xi) Proposal*: *The 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.

VPE Response:

- We generally consider this a sensible approach.

Tie-Breaks

(xii) Proposal*: *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.

VPE Response:

- A transparent, published methodology is needed (that is subject to market audit) especially if the TSOs influence market outcomes and prices.