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Submission from ART Generation on SEM11019

Discussion Paper on Capacity Payment Mechanism, and Poyry Report SEM11019a

Dear Clive,

We are pleased to have the opportunity of making a submission on this important Discussion Paper.

The submission includes:

- Introductory comments of a broad or general nature
- Specific comments on the four scenarios and on a number of the specific questions posed in the Discussion Paper, and finally
- Summary comments

We look forward to seeing either a Decision or Proposed Decision on the CPM Review by early October of this year.

Yours sincerely,

Richard Walshe

1. Introductory Comments

Before addressing the specific issues raised in the Discussion Paper and accompanying Poyry Report there are a number general comments worth making; these are:

1. The CPM is in operation just over three years and changing it radically at this relatively early stage would introduce significant regulatory risk for market participants and potential new entrants, hence we urge that changes to the CPM should be largely confined to very specific corrective measures in the following areas:
 - Rewarding plant based on contribution of system security
 - Rebalancing the CPM and AS revenue pots
 - Reducing the volatility of the year-on-year CPM payments
 - Enhancing market entry and exit signals to deliver the right plant portfolio for the future, and
 - Implementing an investment bankability mechanism for required type and amount of new generation

2. The Discussion Paper makes numerous references to the Ancillary Services review and the inter-dependence and inter-relationship between the AS review and the CPM review, yet nowhere does it suggest/propose that these two reviews should be carried out in parallel. The Paper and Report address two of the revenue streams for generation plant and because of their interdependence we believe they should be carried in parallel and to the same target timeframe, e.g. both completed by early October 2011. For example, it is difficult for interested parties to comment on say the CPM ‘flexibility’ scenario in this paper when an AS consultation paper will later put forward proposals to deal with the same issue.

3. While the Poyry Report is fairly comprehensive in looking at different scenarios there are no Recommendations – even though there is a section 9.1 termed “Recommendations”; this consists of a half page of three previously stated conclusions but no recommendations. This is a major omission from the report and raises a question as to why this report was accepted in its current format; perhaps it was outside the terms of reference of the Report to make recommendations, in which case no reference should have been made to recommendations in the Report.

4. The Discussion Paper and the Poyry Report both make reference to the impact of increasing intermittency in the future arising from Government renewable targets, but neither really addresses the issue of the need for more flexible plant in the future and the high risk of market entry; this is in contrast to numerous statements/documents including Renewables Facilitation from the TSO, SEMC and RAs over the past two or three years. There seems to be a disconnect between those public statements/documents and the messages coming from the Discussion Paper and Poyry Report.

5. Another omission is that while both the Discussion Paper and Poyry Report expect a decline in energy payments for conventional generators (because of lower infra marginal rents) as 2020 approaches no remedying proposals are made. It is pointed out that the CPM may need to play a larger role to ensure that investors continue to participate in the market to provide both adequate and the right type of capacity. This raises questions not just for new entrants but also for existing plants and whether they will remain in the market. While the Discussion Paper and the Poyry Report highlight this issue, surprisingly no remedying proposals are made.
6. In reviewing the CPM it is a reasonable starting point that changes should have the impact of containing or reducing the long-term costs of electricity for customers. The CPM Review proposals should be in line with containing long term costs through supporting the facilitation of renewables and ensuring the SEM will have the appropriate plant portfolio providing the necessary capacity and AS to facilitate largescale renewables from 2015 onwards. If AS are to enjoy a much higher profile than in the past, then it seems prudent that AS Adequacy should be a determined/published characteristic of the SEM in the future - capacity adequacy alone may no longer be a sufficient measure for the SEM. We accept that this point may not fall within the remit of this consultation.

2. Specific Comments

Rebalanced Scenario:

The Consultation Paper proposes the ratio of ex-post to ex-ante capacity payments be increased from 30:70 to 50:50. The intention here is to reward those generators that actually contribute to system security when capacity margins are tight. It is worth noting the higher the percentage of ex-post payments the more volatile and unpredictable the capacity payment becomes for a generator; however, it does favour reliable generators and punishes those that are unreliable.

Fixed, Variable and ex-Post Allocations

Considerable thought and analysis went into the current allocations of 30%, 40%, 30% during the design of the SEM. In looking for guidance on how this aspect of the CPM performed we note the Poyry Report states “a greater weighting for ex-post availability should address the dilution in the relationship between payment for reliability and value, and should help to remedy higher levels of payments to less firm generation”. We favour moving to a 50:50 ex-ante ex-post regime with a split of 20%, 30%, 50% and a Flattening Power Factor of 0.5. A step change from the current FPF value of 0.35 to say 1.0 will, we believe, introduce significant volatility in the CPM payments and hence increase revenue risk.

Capacity Credit Scenario

The proposal under this scenario includes the 50:50 split between ex-ante and ex-post allocations outlined above; a capacity credit mechanism would better recognise the different contributions of generation plant to system security. Each generation plant or type would be given a ‘capacity credit factor’ through which the ex-ante payments would be adjusted to take account of the firm capacity provision of generators, i.e. a de-rated capacity credit specific would be applied to each technology for the ex-ante payments. The ex-post payments would be split to generators based solely on availability as per the status quo.

Should the RAs look more closely at a Capacity Credit scenario for the payment of different generation types?

Is a Capacity credit methodology appropriate for the CPM?

We believe the RAs should look more closely at a Capacity Credit scenario and that such a methodology is appropriate to the CPM.

In principle it is a useful approach provided it is implemented in a manner that does not involve a high level of complexity and bureaucracy; for example different capacity credits for pumped storage, conventional thermal, CCGT, OCGT, MMGT (multi-mode GT), hydro and wind would differentiate between plant types but without drilling down into individual plants. Such an economic signal would incentivise the type of plant that contributes most to system security and reliability in the future. In addition, generation plant would receive ancillary service payments in accordance with their capability to deliver the appropriate services, while ensuring that payment duplication does not occur.

Does the current mechanism fairly reward wind or does it need to be revised?

Should there be a separate stream of capacity payments for wind?

We believe there should not be a separate stream of capacity payments for wind. The current mechanism over-rewards wind; reward should be based on the technology’s contribution to system security and reliability. However, it should be pointed out that the REFIT mechanism, for those with a REFIT contract, renders such windfarms indifferent to changes in this area as REFIT will compensate for any CPM loss incurred here.

Flexibility Scenario

While Poyry has found that the “Payments for Flexibility” scenario provides the most improvements, the SEM Committee believe that the CPM is not an appropriate mechanism to incentivise generator flexibility and that the best long term signals for conventional generators and new flexible generators is the development of new or modified Ancillary Services. The SEM Committee is therefore not actively looking to pursue this option.

Stated Need for Flexible Plant

ART's view is that while the SEM Committee is not actively looking to pursue this option it must be cognisant of the issues surrounding flexible plant. For example, in recent years there have been numerous statements on the need for an increase in flexible plant on the system to support the planned growth of wind generation and facilitate the achievement of Government renewable targets. These statements have emanated from several reports including from the SEM Committee, the Regulatory Authorities and EirGrid

- “ ... with the increase in renewables, the requirement for more flexible plant will increase” - SEM Committee paper on ‘Scope of the CPM Medium term Review’ March 2009
- “A further concern raised in the Feb 2008 discussion document was that additional flexible plant would be required to support the operation of the system with materially increased levels of wind generation, and that this plant was not being adequately rewarded in the SEM” - RAs’ consultation paper SEM-09-073
- “Grid 25 ... will also require flexible conventional generation, as well as market structures and networks that encourage competition” - EirGrid’s GRID25 Strategy Document

Need to Define Flexible Plant

While recognising the need for flexible plant there is considerable confusion as to the nature of what constitutes flexible plant. The general umbrella term of flexible plant is used in a wider context but does not actually technically describe the performance characteristics, particularly in the context of the new services required as outlined in EirGrid’s Renewables Facilitation Report. Furthermore there is little visibility for developers to adequately demonstrate that such projects are financially feasible and to therefore incentivise their participation. There is a disconnect between the SEM and the market mechanisms to make flexible plant feasible. It seems the plant portfolio for the future requires not just flexibility in terms of ramp rates and start-up times but also minimum load, minimum down times, inertia, fault current supply, enhanced fault ride-through and greater system-responsiveness.

With that in mind we believe it is crucial that the following issues must be clarified;

1. Define the specific requirements of the flexible plant
2. Incentivise investment in same

Until such visibility on future system requirements and hence plant requirements are defined then it is difficult for developers to propose plant with the right features and characteristics to meet the system’s future needs. At this time there needs to be sufficient visibility of the payment mechanism over an appropriate timeframe, to allow such projects to be financed. There is huge uncertainty about the future requirements of plant, their worth and hence project bankability. Both the Discussion Paper and the Poyry Report frequently use the generic term of *flexibility* without any attempt to spell out what precisely this entails.

The CPM and the AS revenue payment streams have two separate objectives and it is the RAs view that these should remain separate. Should the CPM offer payments for Flexibility?

This question crystallises the dilemma posed by reviewing the CPM and AS in separate processes and in separate timeframes. It is difficult to comment on the CPM without referring to AS, as they inextricably linked in revenue terms and market signals. It is our stated view that these should be carried out in parallel, to the same target timeframe and with considerable linkages between the two processes. It must be difficult for the TSOs in drafting a new AS regime when the rewarding of a central pillar, namely plant flexibility, is to be made through the CPM, the AS payments mechanism or both. There is of course a linkage between the two revenue streams in that the overall pot of money is limited.

The following is our answer to this question:

- **Capacity Credit Basis**
The CPM payment for plant would be computed on capacity credit basis, which rewards flexibility.
- **Rebalanced CPM and AS Pots**
The AS payments pot would be increased with a corresponding decrease in the CPM pot; this would have the effect of placing greater emphasis on system value on the AS without reducing the overall remuneration to generators. The split between these two pots is currently approx 9 to 1 (i.e. CPM to AS). With increasing emphasis on AS required in the future for the safe and secure operation of the system with largescale wind build (particularly from 2015 onwards) there seems to be a compelling argument for altering this 9:1 split. The TSOs have access to very sophisticated modeling and attendant resources and can model the future operation of the system to determine the optimum split. ART is suggesting a 4:1 split approx, and emphasise that this is a guesstimate rather than the result of any modeling.
- **Change in CPM Impacts on AS Payments and Vice-Versa**
Because of the manner in which the CPM payments are calculated, a change in the split of the CPM and AS pots will not result in any significant change in the revenue streams to different power plants, and so they may not see a significant incentive to undertake plant modifications to provide other AS; furthermore new plant projects will not be incentivised to build-in the necessary capabilities to provide the AS required in the future. For this reason we propose it is necessary to skew the AS payments structure such that plants that can provide the system-defined AS for the future will be incentivised and adequately rewarded for doing so; in effect this a market entry signal for the right type of plant for the SEM in the coming years as largescale wind build comes on stream.

New Entrant Scenario

Should New Entrants be treated differently to incumbents in the CPM?

The RAs welcome comments on the feasibility of introducing a new entrant guarantee.

If the SEM Committee believes there is a need for particular types of new plant then the answer should be yes – incentives should be implemented to deliver such plant (and only the correct amount) in the coming years. Curtailing new entry may appear to be contrary to EU Competition Rules; however, we already have curtailed entry through the ITC firm capacity allocation out to 2023, so developing and implementing a mechanism that delivers both the right type and amount of flexible plant should be possible.

A 5-year guarantee for new entrants would probably be of little value in the current financial climate; we suggest a prudent investor would want to see a minimum of a 10-year capacity payment guarantee; in this regard we urge the SEMC to seriously consider the following two points:

1. Bankability of Investments

Bankability of investments for new projects or existing plant modifications is a key element in ensuring that the right capacity and AS are brought on stream in a timely manner. The TSOs have flagged their understanding and concern in this regard. The 10-year CPM proposal (aka Option 6 earlier CPM review documentation) has huge merit but should be considered only in very limited circumstances to deliver the right amount and type of flexible plant – if this is required – and from all the statements/documents in recent years this would seem to be the case. Having said this, bankability proposals should be to the benefit of the system, the end-user and the plant owner/investor. Such a mechanism would be the awarding of an RFC – described in the next paragraph - to specific new entrants.

2. Proposed RFCs (Renewables Facilitation Contracts)

In the absence of a 3rd market namely AS (currently capacity and energy only) the SEM Committee and TSOs must seriously consider granting a very limited number of 10-year Renewables Facilitation Contracts (RFCs) to new flexible plants where there is a clear defined need for these, e.g. pumped storage (PS), open cycle gas turbines (OCGT) and multi-mode gas turbines (MMGT). The financial structure of these would be: CPM + AS = RFC

SOCAP Model (System Operator Capacity Allocation Programme)

This is a 100% ex-post model with floors, i.e. all capacity payments would be paid on an ex-post LOLP basis with minimum floor payments to protect generators getting little or no capacity payments. Throughout the year generators would be paid provisional payments that are then ‘washed up’ at end of the year.

While the SOs should be complimented for thinking outside the box in proposing this new approach there is an unacceptable level of uncertainty surrounding it and therefore we believe would introduce an unacceptable level of regulatory risk – this would be a major change to the CPM in less than four years from the introduction of the SEM. It would seem the proposal introduces additional layers of administration with reduced transparency. We suggest passing up on this proposal for now.

Flattening Power Factor (referred to under Capacity Credit Scenario)

We favour moving to a 50:50 ex-ante ex-post regime with a split of 20%, 30%, 50% and a Flattening Power Factor of 0.5. A step change from the current FPF value of 0.35 to say 1.0 will introduce significant volatility in the CPM payments and hence increase revenue risk.

Appropriate Mechanism for Penalising Generators

We agree that with the SEMC that an appropriate mechanism for penalising generators for not providing capacity when they have declared that they would, would increase the incentive to encourage the availability of generators when actually needed.

Such a mechanism should be fair and reasonable and not one that would place a generator in financial difficulty for a ‘normal’ number of failures as will happen with all plant from time to time; however it should be sufficient to ensure that plant reliability is at the heart of plant operation and maintenance.

We favour the proceeds of penalties being divided up proportionally with generators based on their respective contribution to system security.

3. Summary Comments

We propose there should be no radical changes to the overall design of the CPM but rather specific corrective measures implemented. The CPM is in operation just over three years and changing it radically at this relatively early stage would introduce enormous regulatory risk for market participants and potential new entrants, hence changes to the CPM should be confined to very specific corrective measures; we suggest the following namely:

- Rewarding plant based on contribution of system security is a strong message coming through from the Discussion Paper and Poyry Report; this is very welcome and is the key criterion in reviewing the CPM.
- Rebalancing the CPM pot with the AS revenue pot to incentivise the provision of appropriate ancillary services for increased wind penetration out to 2020, but without increasing the overall cost of electricity to end customers. We propose moving from an approx 9:1 payments pot ratio (CPM:AS) to approx 4:1.

- Year-on-year CPM volatility reduced in a manner that gives a degree of certainty for both existing generators and for appropriate type and number of new generators. A 5-year rolling timeframe seems more appropriate to existing plant with a 10-year CPM guarantee for new entrant generation of the type and amount required.
- There should be appropriate market entry and exit signals to ensure a plant portfolio mix that is fit-for-purpose to meet the needs of the system in the future. The proposed date for the implementation of such signals would be from October 2015. This would enable new plant to respond in that timeframe. Similarly, a well sign-posted market exit signal would enable plant under threat to plan its exit or adopt corrective measures.
- The reviewed CPM should dovetail with or incorporate a bankability mechanism in conjunction with the AS payments for new plant of the type and quantity the system requires. If this bankability element is not included in entry mechanism for new plant (of the type and amount required) then there is a risk the island of Ireland will finish up with a plant portfolio that is not fit-for-purpose and a broken industry. An example of such a bankability mechanism would be a 10-year Renewables Facilitation Contract (RFC), where $CPM + AS = RFC$. Considerable skill is required to ensure this delivers only the required quantity and type of power plant – no one in the industry wishes to see ghost power plants.

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