CPM Medium Term Review Work Package 6 Onwards

Discussion Paper SEM-11-019

Viridian Power & Energy Response

4 July 2011

Executive Summary

Viridian Power and Energy (VPE) welcomes the opportunity to respond to above discussion paper SEM-11-019 and accompanying Poyry report.

Without necessarily concurring with the detailed proposals, approach or analysis it is clear from this and previous discussion and information papers of the CPM medium term review that the regulatory authorities (RAs) have expended considerable time, effort and resources in the review process[1]. It is also very evident that the context of the review, which began over two years ago with a primary focus on the 'new wind environment'[2], has changed dramatically – high wind penetration is no longer the immediate issue. This could not have been foreseen by the RAs but now needs to be taken into full consideration In light of the new context, characterized by the the delayed penetration of renewables, the emerging European Target Model, and the depressed economic conditions, we strongly caution against any change to the capacity payments mechanism (CPM) at this time, notably:

- There is no compelling need to change the current mechanism which is broadly considered to be working well and fit-for-purpose in light of its competing objectives, even with higher penetrations of wind.

- No convincing evidence or analysis has been presented demonstrating that any of the proposed changes to CPM are necessary and would effectively improve the functioning of the CPM in line with its competing objectives. Indeed, many of the proposed changes (e.g. more ex post weighting) in our view would have significantly negative consequences and would deliver questionable benefits.

- The possibility that significant market change will be required in future as a result of compliance with the European Target Model should be a key consideration. It would not be prudent to make changes at this time, which may well have to be reversed in future, especially without a clear and demonstrable interim benefit. It is also important to be conscious of the direction of change in this regard such that it is not contrary to the emerging European Target Model. We note for example that increasing the ex-post weighting and the flattening power factor would make firm day-ahead market coupling even more difficult.

Rather than change the CPM we suggest instead that it would be more appropriate to focus on the European Target Model and understand its implications for the single electricity market (SEM).

[1] See SEM-10-046, SEM-10-068, SEM-09-035, SEM-09-085, and SEM-09-105.

[2] SEM-11-019 and the accompanying Poyry report refer to the 'new wind environment' in the context of 40% renewable targets. SEM-09-105 refers to the report published on 5th December 2008 by Douglas McIldoon regarding a review of the tariff setting process in Northern Ireland.

We also suggest there is scope for improving the functioning of the CPM without changing the CPM design, notably:

- We suggest there is immediate scope for improving the effectiveness of the existing methodology by more accurately capturing underlying fundamentals and prevailing market conditions in deriving the best new entrant (BNE) price and capacity requirement. We refer specifically to the proposed calculation for 2012 and note the unrealistic assumptions made with respect to the weighted average cost of capital (WACC) and generator transmission use-of-system (TUoS) charges applicable to a peaking investment located in Northern Ireland, and the capacity requirement to meet the stated loss of load expectation on the island of Ireland. Although we have responded separately on this issue the credibility of the CPM is driven by the assumptions used in the calculations. Incorrect assumptions used in the 2012 BNE will undermine the credibility of any future mechanism[3].

- There is a need to test low-merit order plant more frequently to ensure they are capable of reliably providing the capacity declared. Base-load and mid-merit plant are frequently run and it is clearly evident when they are not available when dispatched. Low-merit order plant are typically dispatched (less predictably and within tight timelines) when system margins are tight and / or due to network constraints and therefore if they are not able to run when called this immediately presents a security of supply risk. This should be addressed.

The remainder of this response discusses in more detail the new context noted above and considers its implications for the CPM medium term review. Related compatibility and timing issues are also discussed following by more a detailed consideration of the high level options for change identified in discussion paper SEM-11-019. Annex 1 contains VPE's response to the detailed questions raised in the paper.

Finally, as noted in responses to previous medium term review consultations the sequenced, piecemeal approach of the review process means that the preliminary views express here are necessarily '*conditional and subject to change*' once all information and proposals have been made public.

[3] In Fitzgerald, 'A Review of Irish Energy Policy', it is stated on page 20 that "the success of the Irish [electricity] market depends on the credibility of the regulatory regime and the market structure that it supports. Companies are investing in Ireland because the capacity payments regime and the market design as a whole have credibility".

The New Context

Whilst there is always uncertainty about the future we now know for certain there are key challenges ahead associated with the European Target Model and we look forward to working with the RAs in addressing them. We also know that the roll-out of renewable resources, notably wind, has not materialised as expected and is even less likely to keep pace with aspirations in light of changes to and uncertainties[4] associated with renewable support mechanisms on the island of Ireland and the delayed roll-out of necessary grid infrastructure. Another key consideration is the adverse economic climate, for investors and consumers alike, which brings into sharp focus the cost-benefit case of changing a mechanism that is considered by many observers, including Poyry and ESRI, to be working reasonably well[5].

We note from SEM-11-019 that the main purpose of the CPM medium term review was to examine if its design could be further improved to meet its original objectives in light of the expected dominance of renewable resources, particularly wind, given 40% renewable targets in the Republic of Ireland (RoI) and Northern Ireland (NI) by 2020. Whilst these targets remain, the emerging trajectory towards them is heavily back-ended and challenging.

In light of the above, VPE would seriously question any change to the status quo of CPM methodology and design when future market requirements remain uncertain and the existing mechanism is deemed to be working reasonably well. Whilst the CPM medium term review may have been appropriate when it was initiated over two years ago in the context of 40% renewable targets and an aggressive trajectory towards that goal the impetus for change is now far less certain or apparent. Indeed it would be highly inadvisable in the dramatically new landscape characterized by the emerging European Target Model, the depressed economic conditions, and the delayed penetration of renewables to revise the CPM at this time.

Compatibility and Timing Considerations

In considering any revisions to CPM the RAs have previously acknowledged in information paper SEM-09-105 the importance of potential dependencies with other work streams. We understand there is now an active work steam on European market integration as communicated to industry at the information workshop in Dundalk on 3rd June 2011. We expect this will critically interact with many aspects of

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[4] EMR for NI renewables and REFIT 2 for ROI renewables.

[5] According to Fitzgerald, 'A Review of Irish Energy Policy', the CPM "has basically met its design requirements". See http://www.esri.ie/UserFiles/publications/RS21.pdf.
According to the Poyry Report accompanying SEM-11-019, "the overall performance of the current CPM design appears satisfactory when considered in the context of its competing objectives". See 'Capacity Payments Mechanism – A Medium Term Review', available on the AIP website http://www.allislandproject.org/en/cp_current-consultations.aspx?article=31822151-f6da-4f5a-9fba-61739dd35f98

the CPM review. One area of dependency in particular stands out relating to the options for rebalancing the distribution of the capacity pot in favour of more ex post weighting. Whilst this might be relatively inexpensive to implement from a market systems perspective a move in this direction is likely to frustrate day-ahead coupling of the SEM and neighbouring markets and would be clearly damaging to efficient interconnector trades by increasing the 'dead-band' in which trades do not occur because of the price differential traders require to compensate for the greater risk of uncertain ex post capacity payments and charges[6].

We also understand that a new work stream on the future of ancillary services (AS) is forthcoming. Whilst CPM should not reward flexibility there are other interactions between AS and CPM that need to be considered and discussed with industry, recognising that CPM is compensatory for all generation in the context of SEM design and SRMC bidding principles.

In terms of timing it is noted in information paper SEM-11-019 that any changes to the CPM as a result of the medium term review will not be effective until January 2013. Since that paper was written a major work stream has taken place to facilitate intra-day trading in the SEM in compliance with the European Congestion Management Guidelines. The high level design of intra-day trading has already been approved by the SEM Committee and now the detailed design is being progressed through a Working Group of the Modifications Committee. Implementation of intra-day trading over the next 12 months will require significant modifications to the trading and settlement code and will cost approximately €13 million on central market system changes. It is unlikely that other modifications of substance, particularly requiring a change to central markets systems, can be progressed in parallel given resource constraints. This in all likelihood means that any significant changes to CPM can only be implemented from January 2014 at the earliest. These timing considerations are important in the context of a European Target Model that Member States may need to comply with, or at least demonstrate progress towards compliance, by end of 2014.

Specific Comments Regarding Work Packages (WP) 6, 8, 9 and 10

WP6 – Treatment of Generator Types in CPM

This work package considers: (1) Applying capacity credits to all generators; and (2) The treatment of interconnectors and energy limited units

(1) The application of capacity credits in the CPM would be very complex and expensive to implement without providing clear benefits. There is no compelling

[6] Any shift towards more ex post weighting also has other distinct disadvantages which will be discussed later in this response.

need to change the existing approach and we suggest it would be imprudent to do so in light of the comments made earlier in this response. Implementing the capacity credit scenario would also undermine the principles of simplicity and transparency in the current CPM design.

(2) There is no compelling need to change the treatment of interconnectors and energy limited units under CPM.

WP8 – Incentives for Generators

This work package considers: (1) The interaction between ancillary services and CPM; (2) The introduction of capacity penalties imposed on generators for being unable to run when dispatched; and (3) Options for the separate treatment of new entrants.

(1) The CPM should not offer payments for flexibility and VPE would agree with the SEM Committee in this regard. CPM and AS have two separate and distinct objectives and that should remain. Adding greater complexity to the current design would be unhelpful and inconsistent with CMP objectives. On this note VPE does not do not consider the CPM an appropriate mechanism to incentivise generator flexibility. We do however recognise this is an important issue to address with increasing penetrations of wind going forward and suggest that it can be more easily achieved with greater transparency and focus through the ancillary services mechanism. Reform of the ancillary services mechanism needs to be measured and we would suggest an evolutionary approach in line with the actual trajectory of renewables.

(2) For the avoidance of doubt, flexibility incentives are the purview of the ancillary services mechanism and incentives to be available when declared (through the CPM), whilst important, need to be proportionate and reasonable. Having said this we believe an appropriate mechanism for penalising generators for not providing capacity when they have declared they would should be considered further. It does not seem necessary to change CPM design per se to ensure that generators actually have the ability to provide the capacity they are being paid for. More regular and frequent capacity testing restricted to plant with low-load factors would seem appropriate combined with non receipt of capacity payments for the interval between a failed test and the next successful test. This approach would need to be applied in a proportionate manner allowing for more than one attempt to start up when called and ensuring that the interval between tests was not overly long. In the event of a specified number of failed starts per annum, the generator should be prepared to pick up (some of) the costs of testing.

(3) The separate treatment of new entrants would be unduly discriminatory and would undermine the universal, non-discriminatory nature of the CPM. This precedent would clearly introduce an open-ended risk for future investors of any

kind and would need to be coupled with grandfathering provision or some opt-in provisions for existing generators to participate in the scheme available to new entrants. There is no difference in the capacity provided by existing and new generators. If existing generators cannot reliably provide capacity this is a different matter that should be determined through regular testing as discussed under (2) above and in the executive summary.

WP9 – Timing & Distribution of Capacity Payments

This work package considers: (1) If the weightings of the three capacity payment streams (fixed, variable & ex post components) should be rebalanced in favour of a more ex post weighting[7]; (2) Whether amendments are needed to the flattening power factor (FPF) which tends to dampen the volatility of capacity payments that are related to LOLP; and (3) The radical 100% ex post with floors SOCAP model.

(1) There is, as the consultation documentation suggests, a balance to be struck between stability/certainty of participant revenues as provided by ex-ante weighting of payments and appropriate incentivisation of participants to be available at times of tight margin. The existing weighting between ex ante and ex post payments is overly ex post weighted. This view is consistent with historic responses to the annual consultation on this issue. We therefore suggest that current weightings be rebalanced towards more ex ante payment streams and would especially caution against any move to increase the ex post weighting of capacity payments on the following grounds:

- It would be clearly and visibly inconsistent with ex-ante market coupling at the EU level.
- It would be clearly damaging to efficient interconnector trades by increasing the 'dead-band' in which trades do not occur.
- It would significantly increase the potential for gaming which would be very difficult to monitor and police and would particularly benefit portfolio players, hence discouraging new entry.
- It is likely to be very contentious in the context of scheduling generator outages and would give the TSO, via the power to schedule outages, undue influence over matters of a commercial nature. This is of particular concern as the TSO is soon to be an asset owner.
- It would significantly increase generator risk and hence cost of capital[8]

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[7] Currently 70% of the capacity pot (30% fixed + 40% variable) is determined on an ex ante basis year ahead and month ahead respectively and the remaining 30% is based on the loss of load probability (LOLP) calculated after the event.
[8] Given the capital intensity and irreversible nature of generation investments minimising the cost of capital is crucial if the overall cost of the system is to be minimised.

- It would not result in any behavioural change – indeed no evidence has been presented to convincingly show that ex post capacity payments based on relative LOLP actually increases availability.

If anything the distribution allocation should be more heavily ex ante weighted because generators are unable to respond to an ex-post pricing signal, it would reduce the potential for gaming, and it would also be in keeping with the need for day-ahead coupling of the SEM and neighbouring markets under the emerging European Target Model.

(2) For the same reasons stated above in relation to ex post weighting no amendments should be made to the flattening power factor (FPF).

(3) It is our considered view that a fully ex-post mechanism, such as the proposal espoused in the SOCAP model is entirely inappropriate for reasons stated above and also unworkable from a cash flow and retail perspective. On the latter note for example it is our experience that customers like straight pass-through of capacity costs in contracts, and it would be impossible to accommodate this in the context of the SOCAP model. More certainty rather than less is needed from a retail perspective and this is further reason to increase the ex ante weighting of capacity payments. .We entirely disagree that the SOCAP Model is the scenario which has the most improvements with the status quo mechanism and would also note that investors would bank on the model's price floor and disregard the upside hence increasing the cost of capital.

WP10 – Impact of CPM on Suppliers

This work package considers: (1) Aligning capacity charges to suppliers with payments to generators.

(1) Our experience is that customers want more certainty over costs in the current difficult trading environment. More ex ante weighting of capacity payment streams would help to provide this.

Whilst theoretically desirable to match payment profiles, it is difficult to see the practical benefits of doing this for the foreseeable future given the cost and complexity involved and the general inability of customers to respond to the signal.

Annex 1 – VPE response to questions in SEM-11-019

WP6 – Treatment of Generator Types in CPM

Q1. Should the RAs look more closely at a Capacity Credit scenario for the payment of different generation types?

VPE Response

No, this would constitute major change to CPM which is unnecessary and inadvisable in the context of the comments in the main body of our response.

It is also very complex and would need further analysis to fully understand its implications and the cost-benefit case.

Q2. Is a Capacity credit methodology appropriate for the CPM?

VPE Response

No (see response to Q1) and if applied would need to be coupled with grandfathering provisions to protect existing investments to maintain the credibility of the SEM as a location for investment.

Q3. Does the current mechanism fairly reward wind or does it need to be revised?

VPE Response

We have not seen any conclusive analysis to date to show that the capacity payment to windfarms is unduly generous when all aspects of the effect of wind on the market are considered.

Renewable support schemes as well as existing investments have been designed based on the current capacity mechanism. CPM and renewable support need to be considered together and if any changes in either have an adverse impact on existing investments then grandfathering provisions and transitional arrangements should apply.

Any proposal to revise capacity payments to Wind would need to be made in the context of grandfathering provisions to protect existing investments from default and safeguard the investment and lending environment for future projects otherwise renewable targets will not be met.

Q4. Should there be a separate stream of capacity payments for wind?

VPE Response

No, see response to Q3 above.

Q5. The RAs welcome alternative suggestions for allocating capacity payments between generator types.

VPE Response

This is not necessary.

Q6. Should interconnector users' payments and charges be treated differently than under the current methodology in the CPM?

VPE Response

No, it is not necessary to change the existing methodology in this regard (interconnectors were not banked on the basis of receiving capacity payments) and it would therefore be inadvisable, especially in the context of future European Target Model requirements and the timing issues for implementing any change as identified in the main body of our response. Furthermore, paying interconnectors capacity based on availability will lead to reduced flows into the SEM and therefore higher SMP.

Q7. The RAs welcome alternative suggestions for allocating capacity payments between ICs / IC users.

VPE Response

Please see response to Q6 above.

Q8. Should energy limited and pumped hydro storage units be treated differently to the current methodology in the CPM?

VPE Response

No, it is not necessary and now is not the time for change for reasons already explained elsewhere in this response.

WP8 – Incentives for Generators

Q1. 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?

VPE Response

No, the CPM should not offer payments for flexibility and VPE would agree with the RAs in this regard. CPM and AS have two separate and distinct objectives and that should remain. Incorporating flexibility criteria into the CPM would be discriminatory, introduce significant complexities to what is already a complex mechanism and would inevitably reduce transparency. We agree however that generation should be rewarded for providing flexibility to the system and believe that the ancillary services mechanism is the best way of achieving this.

Q2. Do respondents agree with the SEM Committee, 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?

VPE Response

Yes in principle, but it does not seem necessary to change CPM design to ensure that generators actually have the ability to provide the capacity they are being paid for – arguably this is a Grid Code matter. More regular and frequent capacity testing restricted to plant with low-load factors would seem appropriate combined with non receipt of capacity payments for the interval between a failed test and the next successful test. This approach would need to be applied in a proportionate manner allowing for more than one attempt to start up when called and ensuring that the interval between tests was not overly long.

Q3. Do respondents believe the CDP arrangement as described would fit the SEM CPM design? What should an appeals process involve / include?

VPE Response

Incentives to be available when declared (through the CPM), whilst important, need to be proportionate and reasonable and we have suggested how this might be done in response to Q2. However the specific proposals in SEM-11-019 relation to penalties are overly stringent and disproportionate and will hence require further consideration and development.

Q4. How should the proceeds from penalties be distributed?

VPE Response

All proceeds from penalties and charges under CPM should be recycled back to generators that successfully provided capacity during the penalty period in question.

Q5. Should New Entrants be treated differently to incumbents in the CPM?

VPE Response

No, new entrants should not be treated differently to incumbents in the CPM. The separate treatment of new entrants would be unduly discriminatory and would undermine the universal, non-discriminatory nature of the CPM. There is no difference in the capacity provided by existing and new generators. If existing generators cannot reliably provide capacity this is a different matter that should be determined through regular testing as discussed elsewhere in this response.

Q6. The RAs welcome comments on the feasibility of introducing a new entrant guarantee.

VPE Response

Noting response to Q5 above, new entrants should not be treated differently to incumbents in the CPM. A new entrant guarantee would clearly introduce an open-ended risk for future investors of any kind and would need to be coupled with grandfathering provisions, or opt-in provisions for existing generators to participate in the same scheme.

WP9 – Timing & Distribution of Capacity Payments

Q1. The RAs welcome comment on:

a. Should the design of the distribution allocations be changed?
b. The weighting of the 3 components.
c. Should the current values be maintained?
d. New ideas on the distribution allocation.

VPE Response

If anything the distribution allocation should be more heavily ex ante weighted as generators are unable to respond to an ex-post pricing signal, this would reduce the potential for gaming and would also be in keeping with the need for day-ahead coupling of the SEM and neighbouring markets under the emerging European Target Model.

In contrast, a more ex post weighting would:

- Be clearly inconsistent with ex-ante market coupling at the EU level
- Be clearly damaging to efficient interconnector trades by increasing the 'dead-band' in which trades do not occur.
- Significantly increases the potential for gaming and would benefit portfolio players in particular
- Be very contentious in the context of scheduling generator outages and would give the TSO, via the power to schedule outages, undue influence over matters of a commercial nature. This is of particular concern as the TSO is soon to be an asset holder.
- Significantly increases generator risk and hence cost of capital
- Not result in any behavioural change

There is also no evidence presented to quantify the extent to which generators are not making themselves available at key times (if this is indeed the case).

Further details on this question are provided in the main body of our response.

Q2. Should a FPF be applied within the CPM?

VPE Response

Yes, it is necessary as currently applied.

Q3. Should the current value be maintained or changed?

VPE Response

The current value should be maintained.

Q4. If the mechanism moves to a heavier weighed ex-post payment will the FPF be as effective?

VPE Response

There should not be a heavier weighed ex post payment as explained in the main body of our response and under Q1 above.

Q5. The RAs welcome comments on the feasibility of introducing a SOCAP Model.

VPE Response

There is no basis for introducing a SOCAP model and we would strongly oppose it for the reasons have already stated in the main body of our response.

Q6. The RAs also welcome comment on:

a. The concept that the SO's would 'push money around' and signal need for capacity within-year.
b. The value to the system of more explicitly incentivising capacity providers to make sure they will be available when the system will genuinely need them most.
c. Whether a Floor; set high enough; is a sound tool for delivering revenue stability and lowering the cost of capital, and if not why not.
d. The implications for Cash Flow and Credit for participants and operators.

VPE Response

The SOs should have no role in the CPM as suggested in the discussion paper.

Q7. The RAs welcome alternative suggestions for allocating an effective distribution and timing payments system.

VPE Response

We remain unconvinced that ex post capacity payments based on relative LOLP increases availability and suggest that CPM objectives might be better facilitated with the fixed capacity payments stream parameters increased. This would provide greater certainty to investors and capital providers hence reducing the cost of capital to the long run benefit of consumers, without wholly removing short-term signals in the CPM. Such an approach would also align the half hourly capacity signal to generators with the capacity payments by suppliers.

WP10 – Impact of CPM on Suppliers

Q1. The RAs welcome comments from respondents / suppliers on options for shaping supplier Capacity Charges, in the context of the existing design and in the context of the other Capacity Payment proposals in this document.

VPE Response

Whilst theoretically desirable to match payment profiles, it is difficult to see the practical benefits of doing this for the foreseeable future given the cost and complexity involved.

We would also note from a retail perspective that pass-through of capacity costs in contracts is welcomed by customers therefore more certainty rather than less is needed.