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Generation & Wholesale Markets

**ESB GWM Response:**

**Capacity Remuneration Mechanism (CRM) T-4 Capacity Auction  
for 2022/23 Best New Entrant Net Cost of New Entrant (BNE Net  
CONE) Consultation Paper (SEM-18-025)**

**15<sup>th</sup> June 2018**



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## 1. INTRODUCTION

ESB GWM welcomes the opportunity to respond to the CRM T-4 Capacity Auction for 2022/23 Best New Entrant Net Cost of New Entrant (BNE Net CONE) Consultation Paper (SEM-18-025). The Consultation Paper is based on a Poyry Management Consulting report requested by the SEM Committee to assist the RAs in a bottom up assessment of the fixed costs and a Net CONE of a BNE peaking plant that meets a set of criteria similar to those previously used to determine the BNE peaking plant under the SEM Capacity Payments Mechanism and a BNE Combined Cycle Gas Turbine (CCGT) as evidenced by recent investment in the SEM. The consultation highlights the adjustments made to the methodology, consistent with that used for previous BNE calculations, that were necessary to make the BNE applicable to the capacity market design.

## 2. EXECUTIVE SUMMARY

The BNE Net CONE is an integral part of the I-SEM CRM Auctions as it sets the Auction Price Cap, Existing Capacity Price Cap and New Capacity Investment Threshold. ESB GWM welcomes the addition of a CCGT to the SEM Committee's BNE Net CONE review as it reflects a choice available to investors and the reality of investments to date. However, ESB GWM is concerned with a number of assumptions that have led to a CCGT appearing to be a more favourable BNE Net CONE than an OCGT for the Capacity Year 2022/23. In this response, ESB GWM has discussed the main assumptions used in the Consultation Paper that need to be addressed in order to ensure the BNE Net CONE accurately reflects a rational investors' assessment.

The experience gained from the previous Capacity Payments Mechanism has provided the industry with a certainty around the identification of costs as they have gone through significant scrutiny in the past. ESB GWM believes the cost side of the BNE Net CONE methodology in this Consultation Paper has a number of errors in the assumptions that need to be addressed for it to be acceptable for this T-4 auction. At a high level, ESB GWM believes the Consultation Paper aims to minimise costs rather than accurately represent the potential costs and associated commercial risks that a rational investor accounts for when determining the investment case.

The SEM Committee has set the Auction Price Cap at 1.5 x BNE to accommodate a 50% margin for uncertainty in setting the BNE Net CONE<sup>1</sup>. ESB GWM is concerned that the assumptions used in the proposed BNE Net CONE methodology may lead to a failure in attracting new investment as the 50% margin could be too tight to deliver a new entrant. Thus, ESB GWM would like to highlight the importance of achieving the most realistic assumptions that an investor would apply to a BNE for the CY 2022/23 rather than rely on the 50% margin to cover errors in the BNE Net CONE assumptions.

ESB GWM is of the view that the BNE Net CONE methodology/assumptions on DS3 forecasted revenues, LOLE revenues and IMR methodology need to be considerably revised in order for the BNE Net CONE to be fit for purpose in a new competitive market.

The BNE Net CONE needs to address the changing market revenue streams and the interlinked risk. Without doing so the BNE Net CONE does not represent a true reflection of the BNE for the T-4 auction. While it has been fit for purpose to date in its proposed format is not fit for purpose for the new I-SEM that will see plants with revenues streams that are significantly integrated across the energy, DS3 and capacity markets .

The current method for including DS3 revenues in the BNE Net CONE methodology / USPC process is a fundamental flaw as it removes any incentive for participants to invest in DS3 products. The cost based regulation approach applied to I-SEM, DS3 and CRM means any DS3 investment decisions results in a zero

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<sup>1</sup> SEM-17-022

sum game as all the upside from a DS3 investment is included in the CRM IMR bid determination. ESB GWM believes the previously scrutinised BNE Net CONE methodology is a logical starting point for determining the BNE Net CONE for a T-4 auction. However, it needs to be further developed to account for the regulatory and revenue uncertainty from I-SEM and the requirements from the incoming EU balancing code .

For this Consultation Paper, ESB GWM is of the view that the proposed BNE Net CONE underestimates the real CY 2022/23 BNE Net CONE. One of the main assumptions is the overestimated load factor for a CCGT. The high load factor not only over estimates the potential energy market IMR but it also fails to address the interaction between DS3 and the energy market. The DS3 estimates for both the OCGT and CCGT based on EirGrid assessments do not factor the reduced DS3 revenue a plant will achieve due to a high load factor. ESB GWM believes the risk of market distortions to the BNE Net CONE as a result of incorrect IMR assessments of Net CONE are higher with a CCGT plant as more revenue is achieved through the energy markets for a CCGT than an OCGT, which would achieve most of its revenue through CRM. A rational investor must have a reasonable long term view of income streams and understand the relative risks, hence the need for a more realistic assessment of the BNE Net CONE must be undertaken to ensure it is representative of a rational investor's assessment. From the BNE Net CONE analysis in the Consultation Paper, ESB GWM considers the OCGT to be the more suitable BNE Net CONE as it retains market stability, avoids regulatory uncertainty from the potential opportunistic switching between capacity years and reduces the forecast risk associated with a CCGT's IMR.

### 3. EAI RESPONSE

The EAI has submitted a response to this Consultation Paper on behalf of a significant part of the energy industry that it represents. As part of that response, Frontier Economics carried out a review of the Consultation Paper for the EAI and presented its finding in a report which is appended to the EAI response. The key findings of the Frontier Economics report are as follows:

- Taking the absolute minimum of estimates across the technologies reviewed is incorrect;
- the need for the “headroom” provided by the auction price cap and the risks of deterring potential investors in new capacity have not been properly considered; and
- Insufficient weight has been given to the uncertainties associated with the IMR and DS3 income estimates, especially for CCGTs.

ESB GWM endorses the EAI response and the expert report from Frontier Economics and requests that the SEM Committee consider the EAI response in conjunction with this response.

### 4. MAIN CONCERNS

ESB GWM welcomes the addition of a CCGT to BNE Net CONE analysis, however, ESB GWM has concerns regarding the assumptions on cost, the assumptions for the IMR calculations, DS3 calculations, BNE Net CONE application in the competitive CRM auctions and transparency relating to supporting data with the Consultation Paper .

ESB GWM believes that there is significant risk relating to the regulatory interventions within the market design that create uncertainty to previously accepted income streams. The BNE Net CONE needs to address the changing market revenue streams and the interlinked risk. Without doing so the BNE Net CONE does not represent a true reflection of the BNE for the T-4 auction. The BNE Net CONE in its proposed format is not fit for purpose for the new I-SEM that will see plants with revenues streams that are significantly

integrated across the energy, DS3 and capacity markets . Below are a number of ESB GWM observations on the assumptions and methodology for the income calculation of the BNE Net CONE.

#### 4.1 Assumptions on Costs

As per the attached report with the EAI response, ESB GWM considers a more realistic investor approach for forecasting EPC costs for a candidate OCGT in the CY 2022/23 would be to use a cost for the average of the four candidate OCGT types that Poyry have considered rather than selecting a snapshot cost of the cheapest OCGT.

It is well recognised that an OCGT does not have the same planning timelines as a CCGT. In order for a CCGT to be the BNE Net CONE for the CY 2022/23 it would need to have the planning significantly advanced. Does the SEM Committee view a participant as being “shovel” ready to provide a new CCGT for the CY 2022/23? ESB GWM would question if the potential land requirements to provide the carbon capture requirements on a CCGT have been included in the costs for a CCGT. ESB GWM considers it unrealistic for a CCGT to be the BNE Net CONE due to the timeframe for this 2022/23 auction. ESB GWM does not agree that a new entrant would achieve the planning for an ideal location as set out in Poyry assumptions and thus would not be ready to deliver power for the required period. Selecting a plant that wouldn't realistically be built for the CY could result in an artificially regulated lower T-4 auction clearing price with (a) higher auction clearing prices in the T-1 auction if the TSOs decided to replace the late capacity through an extra capacity requirement in the T-1 auction or (b) a risk to security of supply if the no replacement capacity is procured. The risks associated with selecting a technology that is unlikely to be built must be considered and minimised to ensure that any failures for delivery do not have real security or cost implications for the consumer. Consequently, from a rational investors point of view, ESB GWM would question the use of a CCGT as the BNE Net CONE for the CY 2022/23.

#### 4.2 CCGT IMR calculation

The SEM Committee appear to be choosing a BNE Net CONE on the basis of cost minimisation rather than what a rational investor would progress with. ESB GWM does not believe the proposed IMR methodology for a CCGT is sufficiently representative of the potential future IMR. The proposed methodology has applied the SEM approach to identifying revenue streams and has subsequently failed to address the intricacies of I-SEM. Considering the importance of the BNE Net CONE to the CRM auctions, the use of a simplified approach for determining IMR over a more detailed power system modelling has raised transparency and accuracy issues. At a high level, the modelling has failed to address items such as:

- DS3 forecasts.

The previous Capacity Payments Mechanism was an adequate indicator of the predictable ancillary service revenue before DS3 was introduced. ESB GWM believes the current DS3 structure has significantly reduced the certainty of ancillary services through uncertainty of EU regulation, DS3 contracts with one year termination clauses, unpredictable scarcity scalar and potential for a three month review of regulated tariffs.

- DS3 discount impact on energy prices.

The current BNE Net CONE methodology assumes that all of the DS3 revenue will be recovered on top of the energy market revenue. However, the energy prices do not appear to have factored in any DS3 discounting by participants on their energy market offers. ESB GWM believes that not all the DS3 revenue will be recovered on top of the cost of generation/SRMC/energy price as the incentive provided by DS3 payments could encourage participants to adjust their energy prices in

order to be in a position to provide system services. However, the energy price reduction does not appear to have been factored into IMR calculations for the BNE Net CONE.

The impact of DS3 on energy markets will take some years to understand due to regulatory changes and the settling period after these changes. Subsequently, it is extremely difficult to compare a rational investor's view of an OCGT and CCGT due to the enormous risk difference. The BNE Net CONE for a CCGT will necessarily be much higher than OCGT without ameliorating risks of energy income.

- Impact from previous auctions.

ESB GWM notes that no reference was made to a potential impact from plants exiting the market or the potential side contracts to plant not allowed to exit. ESB GWM believes the impact from a plant that has not cleared in auction but has received a side contract should be incorporated in the IMR calculation for the BNE Net CONE methodology. The inclusion of the side contract impact analysis ensures transparency and regulatory consistency across all the CRM auctions.

- Exposure to Balancing Market risk.

The BNE Net CONE methodology does not reference any exposure to market participants in the Balancing Market. ESB GWM has responded via other consultations highlighting their serious concerns with the possibility of over NIV tagging of TSO actions in the BM and its impact on imbalance pricing. Considering the Day ahead scheduling risk, as mentioned above, and unknown liquidity in the Intra-day markets, market participants have considerable exposure to the TSO actions and pricing in the Balancing Market. The BNE Net CONE methodology does not reference such issues.

- Forecasted running for CCGT (75% to 65%)

ESB GWM is of the opinion that the forecasted load factor of 75% to 65% is overly optimistic for a CCGT in I-SEM. ESB GWM requests further information on (1) the assumptions used for the renewable energy penetration and (2) what assumptions were applied to account for the impact new entrants could have on the CCGT load factor throughout the ten year contract for the plant.

The high load factor not only over estimates the potential energy market IMR but it also fails to address the interaction between DS3 and the energy market. The DS3 estimates for both the OCGT and CCGT based on EirGrid assessments do not factor the reduced DS3 revenue a plant will achieve due to a high load factor.

#### 4.3 OCGT IMR Calculation

The CRM Parameters for T-4 2022/23 Capacity Auction Consultation Paper (SEM-18-028) is consulting upon a reduction of the LOLE standard of 8 hours to 3 hours. One of the reasons for the proposed change is the harmonisation of EC capacity requirements. As highlighted in SEM-18-028, the latest planned Energy Package includes a proposed Energy Regulation which contains drafting relevant to the longer term setting of the LOLE security standard amongst a number of other I-SEM CRM auction parameters. In the draft regulation, ENTSO-E are required to produce a draft methodology for a European resource adequacy assessment. This assessment will use a single model that can also be used for national assessments and will enable the determination of LOLE. The SEM-18-028 Consultation Paper presents ACER's benchmarking of security standards in Europe. The analysis identifies that only nine countries have an explicit LOLE

standard. Of the nine countries, five have a tighter standard (less than 8 hours), two have the an 8 hour standard and one has a more relaxed standard.

ESB GWM and EAI are of the position that the LOLE should be a three hour standard and welcome this move and alignment with the wider European industry. ESB GWM agrees that the revenue from the LOLE for both the CCGT and OCGT needs to be revised according to a more prudent 3 hour standard.

#### 4.4 Dilution of DS3 investment incentive

The inclusion of DS3 revenues in the BNE Net CONE methodology / USPC process removes any incentive for participants to invest in DS3 products. ESB GWM believes the design of I-SEM (DS3, energy markets and CRM) must be done in a holistic approach and not in the current silo approach. ESB GWM is of the view that the current procedures for the calculation of the BNE Net CONE and USPC strips away the incentive to provide additional system services when the DS3 commercial advantage is removed from the potential capacity payment this is further magnified for plant that are being processed to get a USPC. If the net sum position of a plant's "allowable" cost recovery, due to BMPCOP, NIV tagging in the Balancing Market and BNE Net Cone/USPC less DS3 revenue, is zero the incentive to invest in other services no longer exists.

The cost based regulation approach applied to I-SEM, DS3 and CRM means any DS3 investment decisions results in a zero sum game as any impact on revenues from a DS3 investment is offset in the CRM IMR bid determination. ESB GWM believes a more holistic value based approach must be applied I-SEM, CRM and DS3 in order to ensure customers get the full benefits of I-SEM.

For the reasons described above, ESB GWM believes the proposed BNE Net CONE needs to be revised to ensure investment in much needed DS3 products is encouraged while at the same time provide a proficient BNE Net CONE that can be used in the CRM auctions.

#### 4.5 BNE application in CRM Auctions

ESB GWM acknowledges that the Auction Price Cap is set at 1.5 x BNE to accommodate a 50% margin for uncertainty in setting the BNE Net CONE. ESB GWM is concerned that the assumptions used in the proposed BNE Net CONE methodology may lead to a failure in attracting new in investment as the 50% margin could be too tight to deliver a new entrant. Thus, ESB GWM would like to highlight the importance of achieving the most realistic assumptions that an investor would apply to a BNE for the CY 2022/23 rather than rely on the 50% margin to cover errors in the BNE Net CONE assumptions.

The BNE Net CONE needs to achieve its objective of allowing a rational investor to act and not be solely aimed at minimising costs just for a theoretical exercise. ESB GWM believes the BNE Net CONE needs to be reflective of the costs an investor is willing to undertake to offer new capacity into a CRM auction.

#### 4.6 Supporting Information

There was a lack of transparency in the supporting documents to allow market participants the opportunity to review the analysis behind the SEM Committee's proposals. For further BNE consultations, ESB GWM requests the underlining Poyry calculations to be published. The ability to considerably review the proposals was restricted due to the limited information provided. Further to greater transparency of the Poyry calculations, ESB GWM could provide greater feedback to the BNE Net CONE for the CY 2022/23.