



Energy for  
generations

Generation & Wholesale Markets

**Response to:**

SEM Fixed Cost of a Best New Entrant Peaking Plant, Capacity Requirement & Annual Capacity Payment Sum for the Trading Year 2016

Reference: SEM-15-032

## 1 Introduction

ESB Generation & Wholesale Markets (ESB GWM) welcomes the opportunity to respond to the SEM committee's consultation paper on the SEM fixed cost of a best new entrant peaking plant, capacity requirement & annual capacity payment sum for the Trading Year 2016.

In this response, ESB GWM provides our response to the specific issues contained in the consultation document. ESB GWM's response outlines, in section 1, specific elements of the WACC that ESB GWM deems inappropriate, while section 2 details a number of high level principle issues with the current proposal.

The proposed reduction in the ACPS of €111 million (approximately 20%) and the consequent reduction in ESB GWMs ACPS revenue stream, will potentially have **considerable impact on ESB GWM's cost of capital and credit rating. This is a significant issue that will have repercussions that should be taken into account both for ESB's financing but also for other industry participants**, as stated in the Davy report.

DAVY Report – “We expect the market participants to challenge the severity of the drop given its importance in investment signalling. Ironically the consistency of the ACPS was one of the reasons why the Irish utilities had experienced a lower cost of capital, we believe.”

To promote investor confidence as the market transitions from SEM to ISEM, **maintaining good regulatory practice with price stability** has to be the key regulatory focus.

ESB as a member of the EAI have commissioned Frontier Economics and Poyry to provide consultation on this SEMC consultation paper.

## 2 Executive Summary

The following are ESB GWM's key concerns;

- ESB GWM strongly disagrees with the assumption that the Investor type should be a VIU and not an IPP, because the investment should appeal to the widest community of investors.
- The WACC has been independently estimated by Frontier Economics to be 6.45% and 5.69% in NI and ROI respectively. ESB GWM believes incorrect proposed assumptions are lowering WACC and indeed they should still be higher.
- ESB GWM argues that the gearing ratio used to calculate the WACC should be 30% not 60% as proposed. Standalone generators also have a higher cost of debt, higher asset betas and lower gearing than integrated utilities.
- Regulatory good practice of market price stability should be maintained. In the lead up to ISEM, volatility and uncertainty should be limited. The SEMC should retain its CPM medium term review conclusion of price stability as the industry transitions to ISEM.
- The IMR methodology is not consistent with its original intent and CER should use the previous methodology to ensure that the equilibrium levels can be met.
- The Northern Ireland LOLE of 4.9 hours should be used to calculate the NI BNE IMR, not the proposed ROI LOLE of 8 hours.
- The plant life should be 10 years to reflect the small island system and high degree of uncertainty and the risk of displacement that exists for a peaker.
- ESB GWM seeks an immediate bilateral meeting with CER to set out the ESB GWM's position and discuss issues raised in this document.

## 3 Section 1

### 3.1 WACC

#### 3.1.1 Investor Type:

The SEM is an open inclusive market for electricity that should welcome new market entrants from a range of investor profiles. ESB GWM believes that by assuming the investor is an integrated utility and therefore not project financed, investment by an Independent Power Plant (IPP) investor is potentially discouraged. ESB GWM's generation and supply businesses are ring-fenced and do not make decisions to invest in such a generation project as a VIU.

GWM use different hurdle rates to analyse different investment decisions. Hurdle rates differ for different investments depending on the investment risk profile. An investment decision to build a peaking plant would set a higher hurdle rate than a lower risk investment.

Frontier Economics, as part of the EAI's consultancy engagement, has independently estimated the WACC for an IPP to be 6.45% and 5.69% in NI and ROI respectively compared to 4.46% in NI and 4.52% in ROI as presented in this consultation. ESB GWM believes the incorrect investor profile assumption has caused the regulator and CEPA to significantly under estimate the WACC.

Standalone generators have a higher cost of debt, higher asset betas and lower gearing than integrated utilities. ESB GWM believes that the most relevant description of a set of investor types should be used; as such ESB GWM believes that the widest community definition would be the IPPs. IPPs therefore can be supported by venture capitalists, engineering companies, utilities of many forms as well other finance or wealth funds.

ESB GWM would also like to point out that the initial BNE calculations were based on an international investor raising finance at the project level and as such believe that adhering to the principle of consistent regulation creates the stable market framework in which investment decisions can be made, this has been recognised by Davy as quoted above and creates significant risk for ESB GWM in the way of credit cost and increased regulatory uncertainty .

#### 3.1.2 WACC Calculation:

The high level assumption applied to the WACC methodology for this project is a key concern for ESB GWM. The analysis applied to calculate the WACC and the comparators should be relevant for the competitive business and international IPPs as discussed above. ESB GWM considers the CEPA assessment to have materially understated the risk assessment by incorrectly assuming the investment profile of the BNE project. The CEPA assessment erroneously equates this investment with a long life asset and not one that can be easily displaced in a competitive environment which is magnified in a small system. ESB GWM considers a thermal SEM peaking project to have a considerably higher risk over its project initialisation and lifetime and sets its return expectations accordingly.

Frontier Economics have estimated the BNE WACC is 6.45% for Northern Ireland and 5.69% for the Republic of Ireland, after completing a "bottom up" assessment of the appropriate WACC for the BNE plant. Frontier also completed a "top down" benchmarking approach, their evidence suggests the current CEPA estimate is around 150 to 250 basis points too low.

Frontier's review of the WACC parameters concluded that the RAs have underestimated the costs of debt/equity by 150 basis points;

- The latest EU/UK benchmarks for new debt forecast increase in debt yields in the short to medium term according to (50bps);
- A risk premium should apply to ROI and NI above that of GB,
- Argue that CPI is a more appropriate metric to convert nominal to real rates(vs RPI)
- Propose a gearing ratio of 30% based on an analysis of other VIUs and the latest information available from the CMA GB market investigations (20-40%)
- Propose risk range with the non-investment grade BNE at the top(200bps)

### **3.1.3 Risk – Free Rate:**

ESB GWM are of the view that the CEPA analysis considerably understates the risk free rate. ESB GWM notes that CEPA acknowledge the impact that quantitative easing is having and refer to the ongoing uncertainty in assessing RFR, however they then conclude on a “historically low rate assumption” which appears at odds with the commentary.

ESB GWM would contend that the lower end of the range should be (at minimum) 0.25% higher and the range should be wider to accommodate the acknowledged uncertainty. CEPA have widened the range on other elements of their calculation to 2% and we would agree with this approach.

ESB GWM's analysis utilises the upper elements of such a range for a RFR, which is in line with historical precedents. Frontier Economics have also proposed a RFR of 2% in both NI and ROI.

### **3.1.4 Cost of Debt:**

ESB GWM's view is that the cost of debt is significantly underestimated. Frontier Economics analysis shows that the cost of debt for the BNE should be at least 150bps higher on average than CEPA have proposed. They have estimated the appropriate real cost of debt to be between 2.6% and 4.96% (compared to CEPA's proposed range of 0.75% to 2.25%) and between 1.98% and 4.44% (compared to CEPA's proposed range of 1% to 3%) in Northern Ireland & Republic of Ireland respectively.

### **3.1.5 Level of Gearing:**

ESB GWM does not consider 60% debt to be representative of the ratio of debt required by all investors. The level of gearing set at 60% is under pinned by the assumption that the investor is an integrated utility. Frontier Economics have assessed the appropriate gearing ratio of 30%. Frontier have cited that the gearing rate chosen by CEPA (60%) is much higher than: (i) observed gearing rates for generation and vertically-integrated firms; and (ii) the range of 20-40% that the CMA recently applied to generation and vertically integrated firms in the current Energy Market Investigation.

### **3.1.6 Total Market Return (TMR) and Equity Risk Premium (ERP):**

ESB GWM support Frontier Economics view that long run historical averages provide the best indication of future expected market returns and ESB GWM believes the regulator should use this as the basis to calculate total market returns.

Frontier Economics propose an equity risk premium (ERP) of 5.1% in Northern Ireland and 4.8% in Republic of Ireland based on a RFR of 2% and TMR of 7.1% in NI 6.8% in ROI.

## 4 Section 2

### 4.1 High Level Principles

#### 4.1.1 Price Stability:

The CPM medium term review in 2012, in the light of volatile swings in the capacity values, determined that the market required stability. This stability was introduced into the BNE calculation by indexing it to the CPI for a period of between 3 to 5 years. This conclusion was further supported as most appropriate as we transition to the ISEM. The outcome has been to bring certainty to investors with regard to the level of future payments and reduce investor uncertainty and risk.

Table 1: Trend of ACPS since 2007

Year	BNE Peaker Cost (€/Kw/yr)	Capacity Req'd (MW)	ACPS	% Year on Year Change
2007	64.73	6,960	450,517,348	n/a
2008	79.77	7,211	575,221,470	27.68%
2009	87.12	7,356	640,854,720	11.41%
2010	80.74	6,826	551,133,375	-14.00%
2011	78.73	6,922	544,956,545	-1.12%
2012	76.34	6,918	528,120,120	-3.09%
2013	78.18	6,778	529,876,722	0.33%
2014	80.27	7,049	565,819,301	6.78%
2015	81.6	7,046	574,953,600	1.61%
2016	65.5	7,070	463,103,448	-19.45%

As can be seen in Table 1 (ACPS from 2007 to the 2016) there is a marked split in the degree of volatility between pre and post 2012 except when we take into consideration 2016 where there is a 19.45% reduction year on year between 2016 and 2015.

The return to a volatile ACPS combined with the existing level of uncertainty faced by investors with the impending changes, as the market moves from SEM to ISEM, is an impediment to investors. ESB GWM firmly proposes that the indexation method as applied to calculate the 2014 and 2015 trading years be used for 2016 and until the introduction of ISEM to reduce investor uncertainty. A smooth transition for the annual capacity payment to ISEM is required by all market participants, existing and potential. Significant swings in the ACPS undermine the view drawn by the SEMC to have a smooth transition into ISEM, to ensure that good regulation is practiced retaining the previous decisions on stability will ensure that the regulatory risk is reduced.

#### 4.1.2 Entry and Exit Price Signals:

ESB GWM advocates the ability of the capacity mechanism to display entry and exit signal to capacity in the market. ESB GWM cannot identify clear signals in the current proposal with the proposed reduction juxtaposed with the tendered support for security in NI.

### **4.1.3 Capacity Adequacy/Reliability of the System:**

The recovery of fixed costs through the capacity payments is a core part of the original design of SEM. It was designed to address the missing money problem given the imposition of BCOP which only allows short run marginal cost bidding therefore not allowing for a generator to bid above the cost of production. To recover fixed costs a generator must receive adequate capacity payments. Under recovery of fixed costs will at best lead to reduced investment in ongoing essential maintenance and at worst lead to plant closure.

In addition plants that do not get economically dispatched when unconstrained, but are required for transmission constraints and therefore run constrained, need to be considered in this context. ESB GWM believes that this service should be fully compensated for at a market clearing rate rather than solely at cost, as it provides specific system needs.

System services contracts are not due to be implemented until ISEM for plant that provide system support.

### **4.1.4 Infra Marginal Rent Calculation:**

ESB GWM believes that any potential investor would not included any IMR income stream in their investment assessment, In the absence of any market running that can be relied upon for the purposes of investment appraisal. The IMR reflect the producer surplus that is present in any market clearing position and rewards participants based on their competitive cost and technical efficiency.

Poyry analysis shows that the formulation of the IMR discount is potentially inconsistent in a number of areas, each of which would lead to systematic under-payment to generators against the stated intention of the CPM:

1. The current approach of fixing the IMR term each year appears inconsistent with the stated intention when viewed in conjunction with the spreading of money in the ACPS across all generators during periods of over-supply. In the original methodology under and over supply of capacity was counter balanced to return to the equilibrium level on average, thus the theory of over or under rewarding should not exist. The current formulation of the IMR-term, introduced in the 2012 CPM mid-term review, is specifically designed to ensure that the IMR term itself stays stable at the level expected in equilibrium. That is, the IMR term reflects expected average payment flows assuming an equilibrium LOLE. However the interaction with the spreading of the ACPS across all plants now leads to a potential inconsistency— specifically that in periods of under- or over-supply, payments to each plant will actually be further from the equilibrium as the IMR term no longer moves in counter balance to the spreading term and that we know this may be limited by the date of the introduction of ISEM. This means that the money received by plant is reduced by the spreading of the ACPS across all plant, but there is no counter-acting movement in IMR term.
2. The IMR value calculated is out-of-line with recent SEM experience. If the IMR were to be regarded as reflective of the market situation, it follows that we should see evidence of numerous periods where the price moves to PCAP, during periods of load loss. A review of the history of the SEM pricing indicates that assuming an average unconstrained LOLE of 8

hours leading to 8 hours per year of PCAP is not reflective of the recent historical operation of the market.

3. The LOLE used in the IMR calculation itself appears to be an unrealistic expectation of an equilibrium market position based on recent System Operator actions.

In light of Poyry's analysis ESB GWM questions if the change in the IMR calculation methodology in 2013 is a correct fit for the CPM for the remainder of SEM.

The LOLE is set to 8 hours which is at odds with the NI LOLE set to 4.9 hours. ESB GWM questions how a NI peaker can be chosen as the BNE, but not use the NI LOLE and therefore NI IMR.

#### **4.1.5 Plant Life:**

In 2009 the SEMC made the decision to change the economic life of the plant from 15 years to 20 years for the calendar year 2010. From 2007-2009 a 15 year economic life with an unspecified residual value was assumed, the SEMC deemed it appropriate to move to a 20 year economic life with no residual value. ESB GWM believes this change was not appropriate and is incompatible with typical project financing structures. ESB GWM stated at the 2009 response "While we agree that the actual technical life of a plant may be greater than 15 years, our knowledge of the markets indicates that the project could only be structured and financed based on a 15 year plant life." ESB GWM would like to reiterate our view that this assumption is inappropriate.

The technical life of the plant will not be the most important aspect of the plant life for the purposes of investment. In the initial assessment of the BNE calculation ESB GWM argued that a rational investor would not consider an investment period of 10 years for such a plant. ESB GWM would point to the following evidence:

- SEM is a high risk environment for a peaker where it may be easily displaced in a small system
- The uncertainty of ancillary services revenue stream which are subject to annual variability based on Eirgrid's annual review.
- The BNE peaker plant would be effectively entirely dependent on the capacity mechanism for the purposes of investment appraisal.

Hence the BNE plant would take a merchant view based on a level of confidence in the capacity mechanism.

Two items would then be of paramount importance;

1. The variability of the capacity pot (as discussed above) and;
2. The length of time that the SEM could be relied upon to be in its form at time of investment. At the time our view was that it would last 5/6 years and 10 years at the most.

On that basis ESB GWM concludes that 10 years would be the most appropriate for investment appraisal purposes.



## 5 Summary and Conclusion

ESB GWM does not support the SEMC decision to review the fixed cost of a best new entrant peaking plant, capacity requirement & annual capacity payment sum for the Trading year 2016. ESB GWM sees this consultation as a significant threat to market stability and credit ratings within the industry that may affect commercial decisions in a rapidly changing and uncertain market. We strongly believe, however, that the significant reduction in the ACPS has been over estimated due to the incorrect assumptions used to calculate the WACC and the IMR. ESB GWM views the high level assumption that the investor profile is a VIU as particularly inappropriate as it excludes a large set of potential investor types. ESB GWM proposes the WACC is increased and the asset life is also reduced to reflect the competition and uncertainty that this type of investment would face. We urge the SEMC to reconsider all issues as raised in this submission.

ESB GWM seeks a bilateral meeting with CER to set out and discuss the ESB GWM position.

Kind regards,

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