



## **Single Electricity Market**

# **Fixed Cost of a Best New Entrant Peaking Plant, Capacity Requirement and Annual Capacity Payment Sum For Trading Year 2018**

**Decision Paper**

**SEM-17-078**

**10<sup>th</sup> October 2017**

## 1 EXECUTIVE SUMMARY

The Capacity Payment Mechanism remunerates providers of generation capacity in the SEM. It is a fixed revenue mechanism which collects a pre-determined amount of money from suppliers. These funds are paid to available generation capacity in accordance with rules set out in the SEM Trading and Settlement Code. The value of this Annual Capacity Payment Sum is determined as the product of two numbers:

- A Quantity (the Capacity Requirement) – determined as the amount of capacity required to exactly meet an all-island generation security standard; and
- A Price – determined as the annualised fixed costs of a Best New Entrant (“BNE”) peaking plant less inframarginal rents and ancillary service earnings.

The **BNE** peaking plant determined in 2015 was the Alstom GT13E2 firing on distillate fuel, sited in Northern Ireland. This was determined as part of the calculation of the Annual Capacity Payment Sum (“**ACPS**”) for 2016 and 2017. In accordance with the decision described in the 2016 Final Decision paper, its costs were fixed for 2016 and indexed for 2017.

The SEM Committee consulted on two alternative approaches to the calculation of the 2018 value of the BNE component of the ACPS. The first was a continuation of the indexation method utilised for 2017, and the second set out an alternative indexing approach to address the effects of observed currency fluctuation throughout 2016.

There were two calculations proposed, the first calculation (C1) followed the method:

1. Index the 2017 BNE annualised cost (in Euro) by June 2017 UK RPI (3.1%)
2. For both approaches consulted on, calculate new Euro-denominated deductions for:
  - i) Inframarginal rent (based on an updated bid price); and
  - ii) Ancillary Services (which includes estimates of revenues received under the new DS3 framework); and
3. Calculate a new Capacity Requirement using same methodology as previous years. This was determined to be 7,368 MW for 2018.

The alternative method (C2) utilised an indexation method by rebasing the investment costs of the BNE (as established in 2015), and after inflating in their assumed currency, rebased back into Euros at a forward looking exchange rate for the determination of an alternative BNE value.

On consideration of responses to the Consultation Paper, the SEM Committee decided to publish an Information Note<sup>1</sup> stating C1 calculation as the preferred option.

It is important to note that the new I-SEM will go live on 23 May 2018 and as such the current Capacity Payment Mechanism will discontinue at that time. As such, the RAs have published the Capacity Period Payment Sum (“**CPPS**”) for 2018 to indicate the monthly sums to be paid for the period Q1 2018- Q2 2018 ahead of I-SEM Go-Live:

Month	Capacity Payment Period Sum 2018
January	€55,355,619
February	€53,608,147
March	€49,572,140
April	€41,515,538
May	€28,230,139
<b>Total until I-SEM Go-Live</b>	<b>€228,281,584</b>
June	€36,493,688
July	€34,686,566
August	€38,014,970
September	€37,980,545
October	€47,692,306
November	€55,034,591
December	€57,624,024
<b>2018 Total with Actual May 2018</b>	<b>€535,808,274</b>
<b>2018 Grand Total ACPS</b>	<b>€546,116,160</b>

Table 1.2 – Capacity Payment Period Sum 2018

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<sup>1</sup> <https://www.semcommittee.com/publication/fixed-cost-best-new-entrant-peaking-plant-capacity-requirement-and-annual-capacity>

Further to the above, it is worthwhile to note that as the I-SEM goes live on 23 May 2018, the RAs intend that only that pro-rated fraction of the May 2018 CPPS will be paid out (\*currently estimated to be €28,230,139 at the time of writing). The RAs are currently in the process of determining with SEMO the best option for the efficient discontinuation of Capacity Payments in the middle of the month of May 2018.

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### 3 INTRODUCTION

On 1 November 2007 the Single Electricity Market (“**SEM**”), the new all-island arrangements for the trading of wholesale electricity, was introduced. The SEM is a gross mandatory pool which includes a marginal energy pricing system and an explicit Capacity Payment Mechanism (“**CPM**”).

The CPM is a fixed revenue mechanism which collects a pre-determined amount of money, the Annual Capacity Payment Sum (“**ACPS**”) from suppliers and pays these funds to available generation capacity in accordance with rules set out in the SEM Trading and Settlement Code (“**TSC**”)<sup>2</sup>. The value of the Annual Capacity Payment Sum is determined as the product of two numbers:

- A Quantity (the Capacity Requirement) - determined as the amount of capacity required to exactly meet an all-island generation security standard; and
- A Price - determined based upon the annualised fixed costs of a best new entrant (“**BNE**”) peaking plant.

In May 2005 the Northern Ireland Authority for Utility Regulation (“**the Utility Regulator**”) and the Commission for Energy Regulation (“**CER**”) (together the Regulatory Authorities (“**RAs**”)) set out the options for the CPM. The RAs indicated their proposal to develop a fixed revenue CPM that would provide a degree of financial certainty to generators under the new market arrangements and a stable pattern of capacity payments. The principles outlined were incorporated in the design of the CPM and in the Trading and Settlement Code.

In March 2006 a consultation document was published that incorporated a more detailed consideration of the comments received on the design of the CPM and put forward a number of alternative options for the CPM. This paper re-iterated the proposed outline of the CPM suggesting that annual capacity payments should be fixed and that the annual fixed sum be divided into a number of within-year pots (i.e. Capacity Periods). The paper also set out

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<sup>2</sup> <http://www.sem-o.com/MarketDevelopment/Pages/MarketRules.aspx>

proposals for the determination of the Annual Capacity Payment Sum. It proposed that the annual aggregate capacity payments should be set by multiplying an appropriate level of required generation capacity by the relevant fixed costs of a best new entrant peaking generator.

The RAs also determined that the resulting cost should be adjusted to account for the infra-marginal rent the BNE peaking plant may derive through its sale of energy into the pool, as well as the estimated revenues the plant may derive through its operation in the ancillary services markets.

The same process has been used for the calculation of the fixed costs of a BNE peaking plant for all subsequent years. The Annual Capacity Payment Sums for all previous years are summarised in Appendix 1 of this paper.

On 9 March 2009 the SEM Committee (“**SEMC**”) published a consultation paper titled ***Fixed Cost of a Best New Entrant Peaking Plant Calculation Methodology Consultation Paper*** (SEM-09-023). The purpose of the consultation paper was to propose options to address a key concern raised by industry participants regarding the stability of the Annual Capacity Payment Sum due to the annual determination of the Best New Entrant Fixed Cost. In the paper, the SEMC signalled its intention to carry out a further review of the CPM in the medium term. The main purpose of the review was to examine if the current design of the CPM could be further improved to better meet the CPM objectives. This review concluded in March 2012 when the SEMC published the final decision paper on the CPM Medium Term Review (SEM-12-016).

Following the Medium Term Review the SEMC decided that the BNE element of the ACPS calculation should be fixed and indexed for three years, ending the fixedness in 2015. Accordingly, the 2016 calculation was constructed from the ground up through the (usual) re-evaluation of the Capacity Requirement, and the BNE figure was calculated from first principles, through the contracted consultants Cambridge Economic Policy Associates (CEPA).

The SEM Committee published a consultation paper on 29 May 2015 along with the CEPA paper outlining the BNE figure. The consultation paper proposed once again fixing the BNE element for the Trading Year 2017 to provide stability to generators in light of the SEM ending as the new I-SEM goes live in 2017. The decision paper was then published on 4 September 2016 (SEM-15-059). It was decided within the decision paper that the BNE element will be the inflated through the UK Retail Price Index (“RPI”) for 2017. The SEM Committee approved to inflate through the RPI rather than the previously used Consumer Price Index (“CPI”). The deduction for System Services revenues was implemented for 2017 using estimated DS3 revenues which supplants the previously deducted Harmonised Ancillary Services (“HAS”).

On 19 June 2017 the RAs published the consultation paper *Fixed Cost of a Best New Entrant Peaking Plant, Capacity Requirement and Annual Capacity Payment Sum For Trading Year 2018* which contained two values for the ACPS for Trading Year 2018; one of which was based on the indexation approach used in previous years (referenced in the paper as Calculation 1, “C1”), and another which sought to address shortcomings in the existing approach which was highlighted by the effects of the drop in the value of Sterling against the Euro as a result of the UK’s decision to leave the EU (Calculation 2, “C2”).

Participants offered their views in relation to both proposed methods of determining the BNE and after due consideration at the August 2017 meeting the SEM Committee have decided to publish the ACPS for 2018 with Calculation 1 as the preferred outcome. That is, the same indexation approach as used in 2017 calculation.

## 4 CONSULTATION

On 19 June 2017, the RAs published a consultation paper on the *‘Fixed Cost of a Best New Entrant Peaking Plant, Capacity Requirement and Annual Capacity Payment Sum for Calendar Year 2018’*<sup>3</sup>.

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<sup>3</sup> <https://www.semcommittee.com/publication/sem-17-047-fixed-cost-bne-peaking-plant-capacity-requirement-acps-trading-year-2018>



#### 4.1 BEST NEW ENTRANT PEAKING PLANT PRICE FOR 2017

In the decision paper on *'Fixed Cost of a BNE peaking plant, Capacity Requirement and Annual Capacity Payment Sum for the Calendar Year 2016'*<sup>4</sup>, the BNE for 2016 and 2017 was determined as an Alstom GT13E2 firing on distillate fuel, sited in Northern Ireland.

The indexation approach as set out in the Mid-Term Review and subsequently adopted in the 2016 & 2017 decision papers aimed to bring some stability and certainty to the volatility in the annual capacity pot. The intention was to give capacity providers, particularly new entrants' a degree of certainty. It was decided that elements such as Technology options/EPC Investment cost would remain constant and be indexed over a two year period. The indexation methodology decided upon resulted in the €/kW/year value being derived by taking the value in the preceding years and applying the annual inflation rate in the region that the WACC/ economic parameters applied. The 2016 BNE was located in Northern Ireland and a UK WACC was applied. For the 2017 Trading Year (SEM-16-044) the UK inflation rate was used to index the €/kW/year value for subsequent periods. This approach is referred to as Calculation 1 (C1) in the Consultation.

It was proposed within the consultation paper that there was a potential need to consider an alternative method for determination of the ACPS for 2018 through an updated method. In considering the movement in the GBP-EUR exchange rate in 2016, it was noted that the C1 approach did not reflect the change in the exchange rate on the value of the BNE unit measured in Euro terms. On the back of this, the SEMC considered an updated method of indexation, referred to as C2.

In the alternative (C2) approach, the SEM Committee proposed revisiting (rebasing) the original cost components of the BNE established in 2015, indexing for inflation based on their currency in which the original costs were assumed to have incurred, and then converted to Euros at the prevailing forward exchange rate, to estimate the BNE applicable for 2018. Under this method, all costs bar the EPC (Engineering, Procurement and Construction) costs (quoted

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<sup>4</sup> <https://www.semcommittee.com/sites/semcommittee.com/files/media-files/SEM-15-059%20ACPS%20Final%20Decision%20Paper.pdf>

in Euros) are converted to Sterling, then inflated at the UK inflation rate and finally converted back to Euros using a forward looking 2018 exchange rate. The rationale for the varying treatment of different cost components was set out in the Consultation.

The table below provides a summary of the final annualised costs of the BNE Peaker for 2017 and 2018 with the final 2018 figure. This includes the deduction of any revenues obtained from Infra Marginal Rent, and Ancillary Services.

The Consultation Paper values are collated together with the Decision values as a means of comparison.

	Decision 2017	Consultation 2018 C1	Consultation 2018 C2	Decision 2018
Annualised Cost per kW per year	85.08	88.06	77.53	88.23
DS3 Deduction	7.34	7.76	7.76	7.76
Inframarginal Rent	6.29	6.26	6.26	6.35
<b>BNE Cost per kW per year</b>	<b>71.45</b>	<b>74.04</b>	<b>63.51</b>	<b>74.12</b>
Capacity Requirement (MW)	<b>7267</b>	<b>7368</b>	<b>7368</b>	<b>7368</b>
<b>ACPS for Trading Year</b>	<b>€519,227,150</b>	<b>€545,526,720</b>	<b>€467,941,680</b>	<b>€546,116,160<sup>5</sup></b>

**Table 4.1 – 2018 Consultation Paper and Decision BNE Prices**

## 4.2 CAPACITY REQUIREMENT FOR 2018

The methodology used for calculating the Capacity Requirement for 2018 was the same as used in previous years' calculations and was outlined in the consultation paper. As a result of analysis carried out in conjunction with the TSOs, the RAs have determined that the Capacity Requirement for 2018 should be **7,368 MW**.

## 4.3 FCPP<sub>y</sub> AND ECPP<sub>y</sub> FOR 2018

The Fixed Capacity Payments Proportion (FCPP<sub>y</sub>) sets the proportion of each monthly Capacity Period Payment Sum to be allocated on a fixed basis. This is based on a demand forecast and the payments are set before the start of the year.

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<sup>5</sup> This is the ACPS Grand Total for Trading year 2018. The amount to be paid is shown in Table 1.2 above, noting that the CPPS May 2018 will be pro-rated to reflect the Go-Live date for the I-SEM of 23 May 2018.

The Ex-Post Capacity Payment Proportion ( $ECPP_y$ ) sets the proportion of each monthly Capacity Period Payment Sum to be allocated according to the ex-post Loss of Load Probability (LOLP) in each Trading Period in the month. The payments are determined after the end of each month.

A third value, the Variable Capacity Payment Proportion ( $VCPP_y$ ) is implicitly derived from the values of  $FCPP_y$  and  $ECPP_y$ . This is set such that:

$$VCPP_y = 1 - (FCPP_y + ECPP_y)$$

The  $VCPP_y$  sets the proportion of each monthly Capacity Period Payment Sum to be allocated according to the forecast LOLP for each Trading Period in the month. These payments are determined before the start of the month.

Since the start of the SEM, these parameters have been set at the following values:

$$ECPP_y = 0.3$$

$$FCPP_y = 0.3$$

$$VCPP_y = 0.4$$

Within the consultation, the RAs did not propose changing the payment proportions for 2018.

## 5 CONSULTATION RESPONSES

The RAs received nine responses to the consultation from the following parties:

- Activation Energy Systems (AES)
- Bord Gáis (BG)
- Bord na Móna (BnM)
- Brookfield Renewables
- Electricity Association Ireland (EAI)
- Electrорoute
- Energia
- ESB
- Power NI Energy Ltd Power Procurement Business (PPB)
- Scottish and Southern Energy (SSE)
- Tynagh Energy Ltd (TEL)

It is worth noting that AES, Bord na Móna, Bord Gáis, Brookfield Renewables, Energia, ESB and Power NI PPB all endorsed the work undertaken by Frontier Economics on behalf of the members of the Electricity Association of Ireland (EAI).

These responses are summarised below and are published in full along with this decision paper.

### 5.1 SUMMARY OF COMMENTS RECEIVED

*Should the ACPS 2018 be determined as C1 or C2?*

All respondents took the view that C2 was inappropriate, inaccurate and designed with an opposite view as to why the CPM was established in the first place .i.e. to provide investor confidence of a reasonably stable level of capacity income.

This paper follows a different format to other years insofar as in previous years there are views raised by respondents on other aspects of the ACPS calculation, and in particular the

resulting values in the deductions for Infra-Marginal Rent (IMR) and those based on Ancillary Services (AS) revenues. Further to this, views are usually offered on the value of the Capacity Requirement (CR). No respondents commented on any of the above deduction or CR values.

On this basis, the following summary of responses and SEM Committee response will focus on the merits and appropriateness of the second calculation approach (C2).

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#### 5.1.1 HIGH LEVEL COMMENTS

Most participants felt it necessary to highlight the concern that basing the ACPS for 2018 on the C2 approach would bring uncertainty to the market. In particular, AES highlighted a risk of a perception of regulatory interference with the market. BGE indicated that C2 represents a dramatic change to existing methodology, significantly reducing Capacity Payments for generators.

Power NI PPB indicated that the move to an alternate method at such a late stage of the SEM, which determines a price for the BNE for only five months of 2018, represents a very unhelpful draw on resource, particularly since most participants are concentrating resource on the I-SEM workload.

Electroroute recognised that the two approaches proposed have merits and limitations, but went on to question why the SEMC felt it is appropriate to change existing, tested methodology that ensured two very different outcomes.

Energia highlighted that the importance of the consultation paper in terms of investor confidence in the SEM and in the new I-SEM Capacity arrangements cannot be understated. The CPM was designed to provide a degree of financial certainty and stability to generators, particularly during uncertain times. Energia felt that switching to C2 will undermine this investor confidence and seeks to work against the well-established stated objective of regulatory stability for investors and participants alike.

ESB disagreed with the choice of C2 as a preferred ACPS method, and commented on the fact that the indexed 2016 BNE is used as a proxy value parameter in many of the I-SEM Capacity inputs, and the SEMC has already made decisions that use this value. Therefore on balance the notion that the SEMC should move away from the existing methodology is in direct contradiction with the SEMC's views on the I-SEM Capacity Remuneration Mechanism.

TEL also commented on the SEMC's decision making on the parameters for the Capacity Remuneration Mechanism (CRM) and went on to add that the BNE value for 2016 is associated with the CRM's New Capacity Investment Rate Threshold (NCIRT) and the Net Cost of New Entry (Net CONE) which is used to determine the demand curve for the CRM Auctions. TEL felt that a change at this late stage would undermine the previously aforementioned investor confidence in developing the I-SEM and DS3 projects due to the increased regulatory risk.

SSE posed the question as to whether C2 was necessary, citing the result of the Mid-term Review in that the fixed nature of the BNE mitigated against the need for a bottom-up approach to calculating the fixed costs of a new entrant every year. The objective of fixing and indexing for three years was to give a fairly accurate assessment of the bottom up approach each year, along with a tolerable margin of error, and that the time and effort that is saved within this C2 calculation is vastly outweighed by the loss of accuracy along with the benefit of stability to participants in the SEM.

All respondents directly or indirectly (through support for the conclusions in the Frontier Report) raised comments identifying errors in C2 that, they argued, made this section of the consultation paper at times, difficult to comprehend.

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#### 5.1.2 THE FRONTIER ECONOMICS REPORT

Frontier Economics refer to SEM Committee's comment which alluded to a link between Sterling/Euro exchange rate and the inflation rate in the UK as the main basis of rebuttal

against C2. Frontier posit that as the relationship between inflation and exchange rate movements is unsupported in the paper, therefore C2 is not justified.

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### 5.1.3 SPECIFIC ISSUES RAISED

There were three main methodological issues commented on by participants, primarily that (1) The use of Ireland CPI instead of RPI for inflating the EPC costs is incorrect and (2), the rebasing of some but not all of the cost items is implied in the table on page 19 of SEM-17-047, which was contradicted by calculations in the spreadsheet.

Finally, (3) the value of a 2018 forward looking GBP-EUR exchange rate is presented but there are no accompanying calculations as to how the RAs arrived at such a value, hence this makes it very difficult for participants to replicate.

## 5.2 RESPONSES TO COMMENTS RECEIVED

Having evaluated all the responses to this consultation the SEM Committee is still of the view that the underlying principle proposed in C2 possessed sufficient merit to be included in the consultation on the basis that indexation by a single inflation rate in a dual-currency environment appears to have flaws in that it does not allocate currency and inflation risk appropriately across participants in the two jurisdictions. Under typical conditions with stable exchange rates these flaws would be inconsequential, but recent conditions have not been typical.

In relation to the Frontier Economics report, the SEM Committee notes the significant number of points raised in relation to the C2 approach. The SEM Committee notes that the main focus of the report is the extent to which there is a correlation between exchange rate movements and inflation. This was not the primary concern of the SEM Committee in developing the alternative approach, nor does this materially change the quantum of the CPM pot for C2. In other words, the application of the currency-specific inflation rate has a relatively immaterial impact compared to the adjustment made to currency-base of the underlying cost

components. The Committee considers that the fundamental logic of the arguments in favour of the C2 proposals are not addressed in the Frontier Economics Report, i.e. the fact that the cost of a new entry in Northern Ireland, in Euro terms, has fallen significantly due the depreciation of Sterling versus Euro. As many costs are incurred in Sterling there is therefore a corresponding drop in the cost of a new entry when measured in Euro.

The SEM Committee also notes the specific methodological issues raised by Frontier and other respondents. The SEM Committee acknowledges that the principles set out in the paper were not in all cases transcribed into the calculation methodology but considers that these issues could be relatively easily addressed either by further explanation of the approach or by adjusting the calculations in the published spreadsheet to align with the consultation. This said, and acknowledging the concerns raised in relation to the methodology, the SEM Committee acknowledges that to give full consideration of the issues raised in the consultation, further analysis would be required. This might include, a full reassessment of the BNE ('a bottom-up calculation') and a re-evaluation of the calculation methodology itself – including, but not limited to some refinement in terms of the allocation of costs between different currencies, and any indexation that might occur being linked to the weighting of the different currencies within the overarching calculation. Based on this, the SEM Committee acknowledges that this is not feasible at this time.

The SEM Committee has a statutory obligation to protect the interest of consumers and reserves the right to examine any regulatory mechanism which may be adversely affecting consumers. While the market in general benefits from regulatory certainty, the SEM Committee recognises the importance of investigating perceived fundamental methodological flaws that could not reasonably be anticipated to ensure that all market arrangements are economically efficient and rational, and operate in the interest of all- island consumers.

Given the above, the SEM Committee considers that the existing indexation approach could be improved upon but that such an endeavour is not feasible at this time. On this basis, the existing indexation approach (C1) will be applied for the 2018 ACPS pot. The SEM Committee may investigate the application of indexation in any future use, to ensure that it is robust to



unanticipated events and does not unreasonably distribute currency risk between the generators and consumers.

## 6 ANNUAL CAPACITY PAYMENT SUM FOR 2018

### 6.1 FIXED COST OF A BNE PEAKING PLANT AND CAPACITY REQUIREMENT

Having considered the responses to the consultation, along with other relevant information available, the RAs have updated the BNE calculation to account for the following:

- UK RPI data for June 2017<sup>6</sup> shows an average price increase of 3.1%. The figures outlined in 'Decision 2017' have been calculated by indexing the 2016 annualised cost by 3.6% (June 2017 RPI) and 3.6% (Aug 2017) respectively.
- A deduction based on DS3 services using the Final Decision Interim Tariffs
- Application of the infra-marginal rent deduction formula as follows:

$$\begin{aligned}
 \text{IMR deduction (€/kW)} &= [(\text{PCAP} - \text{BID})/1000] * \text{OUTAGE TIME} * (1 - \text{FOP}) \\
 &= [1000 - \mathbf{156.28})/1000] * 8 * (1 - 5.91\%) \\
 &= \mathbf{€6.35/kW}
 \end{aligned}$$

Note that only the bid price element has been adjusted within this calculation. The bid price calculated above is based on the average bids of distillate fired plants from Within Day data from the Single Electricity Market Operator (SEMO) on 18 August 2017.

The Capacity Requirement is to remain as per proposed in the Consultation Paper at 7368 MW.

The BNE Peaker Cost and Capacity Requirement are shown below:

Year	BNE Cost (€/kW/yr )	Capacity Requirement (MW)	ACPS (€)
<b>2018</b>	74.12	7,368	546,116,160

**The Annual Capacity Payment Sum (ACPS) for 2018 is €546,116,160**

<sup>6</sup> RPI figures available at <http://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/czbh>

## 6.2 FCPP<sub>y</sub> AND ECPP<sub>y</sub> FOR 2018

Following receipt of responses, the RAs have decided not to amend the Fixed Capacity Payment Proportion and Ex-Post Capacity Payment Proportion for 2017.

$$\mathbf{ECPP}_y = \mathbf{0.3}$$

$$\mathbf{FCPP}_y = \mathbf{0.3}$$

$$\mathbf{VCPP}_y = \mathbf{0.4}$$

## 7 APPENDIX 1 – ACPS FOR 2018 AND FOR PREVIOUS YEARS

The annualised fixed cost of the BNE Peaker is multiplied by Capacity Requirement resulting in the Annual Capacity Payments Sum (ACPS). The ACPS for all previous years are detailed in Table A1.1 below.

Year	BNE Peaker Cost (€/kW/yr )	Capacity Requirement (MW)	ACPS (€)
2007	64.73	6,960	450,517,348
2008	79.77	7,211	575,221,470
2009	87.12	7,356	640,854,720
2010	80.74	6,826	551,133,375
2011	78.73	6,922	544,956,545
2012	76.34	6,918	528,120,120
2013	78.18	6,778	529,876,722
2014	80.27	7,049	565,819,301
2015	81.60	7,046	574,953,600
2016	72.82	7,070	514,837,400
2017	71.45	7,267	519,227,150
2018	74.12	7,368	546,116,160

Table A1.1 – ACPS for 2018 and Previous Trading Years

## 8 APPENDIX 2- DEMAND FORECAST

Med	TER (GWh)						TER Peak (MW)			Transmission Peak (MW)		
	Ireland		Northern Ireland		All-island		Ireland	Northern Ireland	All-island	Ireland	Northern Ireland	All-island
2015	27,425	2.4%	9,058	0.1%	36,483	1.8%	5043	1752	6746	4945	1733	6631
2016	27,989	2.1%	9,097	0.4%	37,086	1.7%	5092	1761	6805	4994	1741	6687
2017	28,899	3.3%	9,139	0.5%	38,038	2.6%	5167	1769	6888	5070	1747	6769
2018	29,566	2.3%	9,178	0.4%	38,745	1.9%	5209	1777	6938	5112	1753	6818
2019	30,159	2.0%	9,216	0.4%	39,375	1.6%	5243	1785	6980	5146	1761	6858
2020	30,681	1.7%	9,255	0.4%	39,935	1.4%	5294	1792	7038	5196	1767	6916
2021	31,238	1.8%	9,297	0.5%	40,535	1.5%	5338	1799	7089	5241	1773	6966
2022	31,788	1.8%	9,337	0.4%	41,125	1.5%	5416	1807	7174	5319	1780	7051
2023	32,365	1.8%	9,381	0.5%	41,746	1.5%	5498	1815	7264	5400	1787	7140
2024	32,934	1.8%	9,420	0.4%	42,354	1.5%	5578	1823	7354	5481	1795	7229
2025	33,480	1.7%	9,463	0.5%	42,943	1.4%	5655	1832	7439	5558	1803	7313

TableA2-1: Median Demand Forecast