



ANNUAL CAPACITY PAYMENT SUM

INDICATIVE VALUE FOR 2007

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Introduction

At the Industry Communication Forum on 30 January 2007 the Northern Ireland Authority for Energy Regulation (NIAER) and the Commission for Energy Regulation (CER) - the *Regulatory Authorities* - confirmed their intention to publish an indicative estimate of the value of the Annual Capacity Payment Sum (APSC_v) for 2007. This note sets out the indicative value for 2007, the allocation of that value into monthly amounts (Capacity Period Payment Sums) and the basis upon which these numbers have been derived.

The Regulatory Authorities are of the view that participants should not legitimately expect the data utilised in determining this indicative value to be the same as that data used to determine the final value (due to be published in May 2007). Furthermore, the Regulatory Authorities note that in the case of the fixed costs of a Best New Entrant peaking plant, elements of the methodology and dataset are still subject to consultation. Accordingly the figures presented in this paper should be treated with caution.

Background

The Capacity Payment Mechanism (CPM) under the Single Electricity Market (SEM) is a fixed revenue mechanism which allocates an amount of money (the Annual Capacity Payment Sum – referred to here as *the annual sum*) determined prior to the start of each year into monthly amounts (Capacity Period Payment Sums). This money is collected from Suppliers pro-rata based on their actual demand and is paid to Generators pro-rata based on their availability¹. Determination of the annual sum is based on the product of two numbers:

- A volume element (the Capacity Requirement) - the quantity of capacity required to just meet an all-island adequacy standard; and
- A price element – the fixed costs of a Best New Entrant (BNE) peaking plant.

A Decision document setting out the methodology for the determination of the Capacity Requirement has today been published by the Regulatory Authorities². A Decision and Further Consultation

¹ The payment mechanism considers the value of capacity at any given point in time rather than paying out on a purely pro-rata basis. Precise details of the payment and charging process can be obtained from the Trading and Settlement Code (<http://www.allislandproject.org/2007/AIP-SEM-07-07.pdf>)

² Methodology for the Determination of the Capacity Requirement for the Capacity Payment Mechanism: Decisions Paper and Response to Detailed Comments

document on the methodology for the determination of the fixed costs of a BNE peaking plant has also been published today by the Regulatory Authorities³.

Basis of the Indicative Value of ACPS_Y for 2007

The following sets out the basis of the determination of each element of the indicative value of the annual sum for 2007.

Capacity Requirement

Data and Methodology

The estimated Capacity Requirement has been determined in accordance the methodology set out in the aforementioned Decision document. Since registration in accordance with the Trading and Settlement Code will not commence until May 2007, the Regulatory Authorities, in conjunction with the TSOs, have made a forecast of the Generator Units likely to be registered and which would therefore eligible to receive CPM payments. This forecast was based on the requirements of the Trading and Settlement Code and on the commissioning and decommissioning data from the Generation Adequacy Report (GAR) and Seven Year Generation Capacity Statement (SYGCS) work undertaken by ESBNG and SONI respectively for 2007⁴.

Input data used for the estimation of the Capacity Requirement was also based on 2007 data utilised for the GAR and SYGCS work. This consisted of:

- The central demand forecasts for Northern Ireland and the Republic of Ireland, which were harmonised into a single forecast for the whole island;
- Unit Capacity data; and
- The Scheduled Outage Durations, which were scheduled by the adequacy analysis programme (CREEP)⁵.

The Forced Outage Probabilities (FOP) applied were also as per the aforementioned Decision document. A historic average FOP for all NI units was calculated over the previous 5 years (2002 to 2006)⁶ and applied to all Generator Units⁷ on the island.

A capacity credit for Wind generation was derived by reference to the graph (Figure 2-2) in the most recent GAR. This gave a capacity credit of 20%, which was applied to the Wind estimated as likely to be registered under the Trading and Settlement Code⁸.

Finally the Generation Adequacy Standard was set to 9.4 hours/year in accordance with the estimated all-island value originally proposed under the consultation document on the Capacity Requirement methodology⁹.

³ Fixed Cost of a New Entrant Peaking Plant for the Capacity Payment Mechanism: Decision and Further Consultation Paper

⁴ Note that the timing of the final value of ACPS for 2007 is such that registration will not have been completed and therefore an estimate will again need to be undertaken.

⁵ In accordance with the Decision document the schedules for hydro and pumped storage plant were manually determined so as to avoid outages of these units being scheduled over the Winter period.

⁶ The resulting weighted average was 4.23%.

⁷ In accordance with the Decision document the average FOP was not applied to the Moyle Interconnector Units, which is modelled as a single unit and which retained it's own FOP. The actual FOP associated with Moyle units was not counted in determining the average NI FOP.

⁸ In determining the Capacity Requirement Wind is excluded from the generation "stack" (and the demand forecast is modified accordingly) while the surplus/deficit is identified and then a proportion (equal to the capacity credit) is added back in at the end – see the aforementioned Decision document for details.

Qualifications

In using the above data the Regulatory Authorities recognise that some of the data may differ from that used to determine the final value of the Annual Capacity Payment Sum for 2007 (due to be published in May 2007) and therefore the Regulatory Authorities wish to highlight that the figures presented here should be treated with caution. For example it is possible that the actual Generation Adequacy Standard (which will be derived by the TSOs in the coming weeks) may differ from the value of 9.4 hours/year used to derive the indicative value of the annual sum in this paper. Furthermore, the calculation of the indicative value has not used average historic SOD data as required by the methodology for the Capacity Requirement.

Indicative Capacity Requirement for 2007

Using the above data and the methodology set out in the Decision document, the Indicative Capacity Requirement for 2007 is 7094MW.

Fixed Costs of a BNE Peaking Plant

Data and Methodology

The data employed to estimate the fixed costs of a BNE peaking plant was the data presented in the aforementioned Decision/Further Consultation document published today. This data gives an annualised fixed cost for the identified technology choice (and location) of €87.9/kW per annum.

In the Decision/Further Consultation document, the Regulatory Authorities highlight their preference to account for the infra-marginal rents such a BNE peaking plant will make. The calculation of such infra-marginal rents requires the completion of the work to validate the latest version of Plexos against the Trading and Settlement Code and the validation of the associated input data. Once this work has been completed forecast values of SMP can be determined for 2007 and the infra-marginal rents (both from the energy and Ancillary Service markets) can be calculated through whichever methodology is selected after the completion of the current consultation.

In the absence of a selected methodology for accounting for infra-marginal rents, and the absence of forecast SMPs from the validated Plexos/input data, the Regulatory Authorities have applied the infra-marginal rents presented in the previous consultation document on the BNE methodology⁹. This gave an infra-marginal rent of €3.30/kW p.a. In addition the Regulatory Authorities have recalculated the Ancillary Services revenues using the new information presented in the Decision/Further Consultation document and the running regime determined through the aforementioned estimation of the infra-marginal rents. This gives an Ancillary Service revenue of €6.24/kW p.a. For the avoidance of doubt it should be noted that neither of these figures has accounted for the costs of Uplift – this will be addressed when the final value is determined in May 2007.

Qualifications

As with the determination of the Capacity Requirement, the Regulatory Authorities recognise that the data used in the estimation of the fixed costs of a BNE peaking plant presented in this paper may yet be subject to change. In addition the methodology for the determination of the fixed costs of a BNE peaking plant is still subject to further consultation. Consequently the Regulatory Authorities wish to highlight that the figures displayed here should be treated with caution.

⁹ <http://www.allislandproject.org/2006/AIP-SEM-111-06.pdf>

¹⁰ <http://www.allislandproject.org/2006/AIP-SEM-124-06.pdf>

Indicative Fixed Costs of a BNE Peaking Plant for 2007

On the basis of the above input data and methodologies described, the Indicative Fixed Cost of a BNE Peaking Plant for 2007 is €78.36/kW.

Indicative value of ACPS_Y for 2007

On the basis of the above calculations the Indicative value of the Annual Capacity Payment Sum (ACPS_Y) for 2007 is €555,885,840.

Using the methodology set out in the Decision document on Capacity Payment Factors in December 2006¹¹ the indicative values of the Capacity Period Payment Sums (CPPS_c) for 2007 are:

Month	Amount
Jan	€ 53,083,892
Feb	€ 49,996,487
Mar	€ 49,398,476
Apr	€ 42,111,089
May	€ 39,858,118
Jun	€ 37,772,033
Jul	€ 37,118,394
Aug	€ 39,329,643
Sep	€ 42,583,934
Oct	€ 48,786,558
Nov	€56,950,102
Dec	€58,897,114

Note that the only values which will apply for 2007 are those for November and December 2007.

The final value of ACPS_Y (and the values of CPPS_c) will be published on 18 May 2007.

Values of ACPS_Y and CPPS_c for 2008

The Regulatory Authorities have commenced work to determine the values for the Annual Capacity Payment Sum and the associated values of the Capacity Period Payment Sums for 2008. It is intended that an Indicative value of ACPS_Y will be published in June 2007 together with indicative values of CPPS_c. The final values will be published in August in accordance with the requirements of the Trading and Settlement Code.

The Regulatory Authorities wish to highlight that they do not intend to undertake a consultation on the determination of the Fixed Costs of the BNE Peaking Plant for 2008 in order to calculate these values. The input data for the determination of the costs will be subject to review by the Regulatory Authorities and the basis of the costs will be published with both the indicative and final values. The input data for the Capacity Requirement will be as set out in the Decision document.

¹¹ <http://www.allislandproject.org/2006/AIP-SEM-231-06.doc>