CAPACITY PAYMENT MECHANISM

RESPONSE TO PRESENTATION QUERIES

DATE: 12 SEPTEMBER 2007

---

1. Introduction

On 27 July 2007 the Regulatory Authorities presented the Capacity Payment Mechanism (CPM) to interested parties[1]. The presentation explained how the CPM, as enshrined in the Trading and Settlement Code Version 2.0[2] and the relevant regulatory Decision documents[3,4,5,6] operates, covering matters such as the determination of the Annual Capacity Payment Sum, the allocation of this sum into monthly amounts and the way in which the monthly amounts (Capacity Period Payment Sums) are allocated for the purposes of payments to Generators and charges to Suppliers.

During discussion with the interested parties present, questions were raised regarding the availability of data associated with the determination of the inframarginal rent of the Best New Entrant (BNE) Peaking plant. Specifically the Regulatory Authorities were asked:

1. Can all the input data used to calculate the inframarginal rent of the BNE Peaking plant be released? and/or
2. Can all of the output data resulting from the above calculations be released?

A further question regarding the ability for a distillate operating unit to run within pollution control limits was also raised.

The representatives of the Regulatory Authorities present at the meeting agreed to consider this matters further and report back. This note sets out the further thoughts of the Regulatory Authorities in relation to this matter.

2. Background

The Capacity Payment Mechanism is a fixed revenue mechanism in which an annual sum (the Annual Capacity Payment Sum) is determined prior to the start of each year and is then collected from

---

[1] The Presentation can be found on the All-Island Project website at http://www.allislandproject.org/en/capacity-payments-consultation.aspx?article=15dedc5d-995f-427e-aa35-566cdfd73e04

[2] http://www.allislandproject.org/en/trading-settlement-code-decision.aspx?article=1854c8b6-c4d1-46fd-a86b-03c6fa7330f4

[3] Methodology for the Determination of the Capacity Requirement for the Capacity Payment Mechanism http://www.allislandproject.org/en/capacity-payments-decision.aspx?article=5f59436b-d753-498c-8ddd-013ad40aba00

[4] Fixed Cost of New Entrant Peaking Plant for the Capacity Payment Mechanism – Decision and Further Consultation Paper & Fixed Cost of New Entrant Peaking Plant for the Capacity Payment Mechanism – Final Decision Paper http://www.allislandproject.org/en/capacity-payments-consultation.aspx?article=3a72c290-e714-42ee-97b3-4c8ff691f42e

[5] Capacity Payment Factors Decisions Paper http://www.allislandproject.org/en/capacity-payments-decision.aspx?article=a73007f4-0743-4ed2-89ce-0bdc80564ff4

[6] Capacity Payment Factors - Ex-Ante Margin Decisions Paper http://www.allislandproject.org/en/capacity-payments-decision.aspx?article=7adaf60e-bb5b-4722-9a8a-0237f616e3f7

Suppliers and paid to Generators in accordance with the rules set out in the Trading and Settlement Code. The Annual Capacity Payment Sum is determined as the product of a volume (the Capacity Requirement) and a price (the Fixed Costs of a Best New Entrant (BNE) Peaking plant). In establishing this latter number, the Regulatory Authorities estimate the inframarginal rent such a BNE Peaker would attract were it to operate in the SEM for the year in question by estimating the short run marginal cost of the unit, the System Marginal Prices for the year in question and the running regime of the plant. This calculation is undertaken via multiple runs of the validated PLEXOS model of the SEM and using the validated input data for the model[7], together with the relevant plant characteristics of the BNE Peaking plant[8]. The plant is assumed to run on distillate since the charge associated with the booking of gas capacity made gas firing much more expensive.

3. Availability of Modelling Data

The following considers each of the two questions raised regarding data availability.

Can all the Input Data used to calculate the Inframarginal Rent of the BNE Peaking plant be released?

The Regulatory Authorities have already published the validated input data on the AIP website (see Footnote 7). All of the validated data has been published with the exception of the following:

- The Scheduled Outage data; and
- Variable Operation and Maintenance cost data (VOM).

In the case of Scheduled Outage data, when asked by KEMA during the model and data validation exercise to provide such data, only one Generator provided its Scheduled Outage data. Consequently KEMA progressed the model validation work employing the test data developed by SKM[9] and used in the previous SEM Modelling work. In undertaking the work on the BNE inframarginal rent calculations (and other work such as the Directed Contracts pricing work) the Regulatory Authorities have used draft Scheduled Outage data provided by the TSOs. This data has historically been considered confidential by the System Operators but under the SEM the Scheduled Outage data will be released two months before the start of the year. However the data employed by the Regulatory Authorities in the inframarginal rent calculations was, as noted above, draft data – the Scheduled Outage programme for 2008 is not due to be finalised until October this year, after which it will be published as per the requirements of the Trading and Settlement Code. Given the draft status of the data the Regulatory Authorities have not published this data to-date and do not propose to change this decision. This will be reviewed with market participants in any future data validation exercises.

When KEMA asked the Generators whether their VOM data could be made public, some Generators stated that they wished for their data to remain confidential while others stated they were content for their data to be published subject to the data for all other Generators also being published. Thus although the VOM data was used by KEMA during the validation exercise and has been employed by the Regulatory Authorities in the BNE inframarginal rent calculations (and the Directed Contracts work), the Regulatory Authorities have not published any of the VOM data and given the expressed wishes of Generators, do not intend to change this decision either.

[7] The Regulatory Authorities employed KEMA to undertake a validation of the PLEXOS model to ensure compliance with the requirements of the Trading and Settlement Code and also a validation of the input data for the model. Details of this work can be found on the All-Island Project website at http://www.allislandproject.org/en/modelling-group-minutes-presentations.aspx?article=43618f97-6118-40f1-9b56-18c500592c70

[8] This data can be found in the Presentation (see Footnote 1) on slide 17.

[9] Fuel Price and Generator Maintenance Assumptions for use in SEM Modelling http://www.allislandproject.org/en/modelling group-info-documents.aspx?article=c28cf485-a2fc-42c5-adbd-2378dbac5fc5

In relation to both these sets of data, Generators may be able to make an estimate of the data for the purposes of undertaking their own modelling and therefore this limitation is not considered material by the Regulatory Authorities.

Can all of the Output Data resulting from the Inframarginal Rent calculations be released?

In undertaking the Inframarginal rent calculations, the Regulatory Authorities ran the PLEXOS model a total of 60 times for each year in question. The first set of 30 runs were undertaken without the BNE included in the stack of available generation – this enabled the establishment of a forecast SMP profile for the year. The second set of runs included the BNE Peaking plant within the stack of available generation – this established the running regime for the plant. In both sets of runs the seed which determined the allocation of forced outages was altered so as to provide an element of randomness to the runs, enabling averages to be taken about the distributed results.

For 2007 the BNE Peaking plant ran for an average of 80.5 hours, generating an inframarginal rent from the energy market equivalent to €14.19/kW for the year. The same process was undertaken for the indicative 2008 Annual Capacity Payment Sum and this resulted in no inframarginal rent from the energy market for the unit. These results have previously been published by the Regulatory Authorities[10] and the technical characteristics employed for the BNE Peaking plant were contained within the Presentation material presented by the Regulatory Authorities on 27 July 2007[8]. The Regulatory Authorities have not however published the actual output run data from the PLEXOS runs (i.e. the SMP values and the running regime of the BNE Peaking plant).

The Regulatory Authorities have previously considered whether similar data should be made publicly available in relation to other workstreams, principally the Directed Contracts workstream. In consideration of such matters the Regulatory Authorities have been concerned that any publication of such data by the Regulatory Authorities could be given undue weighting by the industry or other interested parties, such that the prices are seen as “accurate” price forecasts for the year in question or are perhaps in some way “acceptable” prices to the Regulatory Authorities. This is a significant concern for the Regulatory Authorities and as a result it is not intended to publish any further data from the CPM calculations.

The methodology for the determination of the inframarginal rent of the BNE Peaking plant has been consulted upon extensively and is detailed in the associated Decision documents[4]. The input data for the runs has been clearly identified in earlier papers[10] and, with the exception of the Scheduled Outage and VOM cost data referred to earlier, is all in the public domain. Given this, and the BNE Peaking plant technical characteristics contained in the Presentation material from 27 July 2007, the Regulatory Authorities consider that sufficient information exists for interested parties to be able to undertake their own estimate of the inframarginal rents should they wish to do so. In determining the inframarginal rents the Regulatory Authorities have adhered to the methodology set out in the Decision documents and are satisfied that the calculations have been undertaken correctly.

4. Distillate Firing

The Regulatory Authorities have sought confirmation from their expert consultants who advised on the selection of the BNE peaking plant that the introduction of the Selected Catalytic Reduction (SCR) equipment set out in the associated Decision document[4] would be sufficient to allow the BNE Peaking plant to operate on distillate for at least the number of hours identified in the PLEXOS runs undertaken for the inframarginal rent calculations. As noted earlier the BNE Peaking plant was scheduled on average to operate for 80.5 hours in 2007. The Regulatory Authorities consultants have confirmed that the SCR equipment would ensure that the unit would meet all emission control regulations such that it could operate for the average 80.5 hours scheduled by PLEXOS, the

[10] Annual Capacity Payment Sum – Final Value for 2007 & Annual Capacity Payment Sum – Indicative Value for 2008 http://www.allislandproject.org/en/capacity-payments-consultation.aspx?article=4c42e409-1082-4b9c-b9f3-b3e0ac03f564

maximum number of hours scheduled by PLEXOS (140 hours) in the inframarginal rent calculations, and beyond this number of hours too if required.

5. Conclusion

In conclusion, the Regulatory Authorities do not intend to publish any further detailed information pertaining to the calculation of the BNE Peaking plant inframarginal rent since both the methodology and the vast majority of the input data is publicly available already and interested parties can undertake their own estimate of inframarginal rent employing this data should they choose to do so.

The Regulatory Authorities have sought and received confirmation that the specified BNE Peaking plant would be permitted to operate for the number of hours scheduled by PLEXOS in the inframarginal rent calculations when operating on distillate.