



**PSO Benchmark Price Setting Methodology:  
A Decision Paper**

**AIP/SEM/07/431**

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## **1. Introduction**

The introduction of the Single Electricity Market in November 2007 will require a change to the methodology that determines the setting of the Public Service Obligation (PSO) benchmark price. As part of the recently published Memorandum of Understanding<sup>1</sup> (MoU) and the SEM Regulation<sup>2</sup> decision paper the Commission for Energy Regulation and the Northern Ireland Authority for Utility Regulation (jointly “the Regulatory Authorities”) committed to reviewing the current process with a view to aligning the processes in both jurisdictions.

On 4th of June the Regulatory Authorities published a paper that set out a proposed methodology to setting PSO benchmark price.

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<sup>1</sup> MOU can be found at [www.allislandproject.org](http://www.allislandproject.org)

<sup>2</sup> AIP/SEM/304/07

## **2. Background**

At present the market structure in both jurisdictions is a bilateral contracts market with a top-up and spill balancing mechanism. There is no clearing price that could be considered a market price, which is one set by the forces of supply and demand. In absence of this the respective Regulatory Authority developed a proxy for the market price.

In the SEM there will be several prices determined by market forces. The pool price provides a separate price every half hour in the year. This price is determined by the short run cost of the marginal generation unit it takes to meet the total demand in that particular half hour period. The Regulatory Authorities published a paper<sup>3</sup> that set out the following proposals in relation to the PSO benchmark price setting methodology:

The RA proposed the following:

- The benchmark price will be based on a derivative of the directed contracts allocation prices,
- A capacity value will be added to the PSO benchmark price. This will take the form of a flat capacity adder.
- The benchmark price will be determined ex ante, on the basis of forecasts but there would be a correction mechanism to take account of volume and price differences,
- While both jurisdictions would base their PSO benchmark prices on the same methodology, there would be different prices in the separate jurisdictions (e.g. for baseload, mid merit and peak),
- A correction mechanism will be applied so that the setting of the PSO does not imply additional risk to the relevant companies, and,

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<sup>3</sup> AIP-SEM-07-240: [Proposed Approach to Setting the PSO benchmark Price in the SEM: A Consultation Paper](#)

- The new NI PSO will run from 1<sup>st</sup> November 2007. However, the RoI PSO will not be changed for the last two months of 2007, and instead be revised from 1<sup>st</sup> January 2008.

The Regulatory Authorities received 6 responses to this paper. These responses were from:

- Aughinish Alumina
- Airtricity
- ESB Customer Supply
- ESB Independent Energy
- NIE
- Viridian Power and Energy

The Regulatory Authorities thank all those who made comments in relation to this issue. In coming to the views set out in section 4 of this paper the Regulatory Authorities have taken on board the views of participants where relevant. The purpose of this paper is to review the comments received in relation to the setting of the PSO benchmark price and provide a final decision.

### **3. Summary of responses**

The following section sets out the main comments received in relation to this paper and the Regulatory Authorities response to these comments.

#### **3.1. Price setting methodology**

Participants have concerns as to whether some of the parameters used are representative of reality. Respondents argued that the proposed methodology was less than transparent given that the index parameters created to price directed contracts have been produced from analysis which has not been made public and which uses modelling software which is not freely available to market participants. This view was shared by several respondents.

*The Regulatory Authorities acknowledge the point that the index parameters used to determine the Directed Contract prices are not easily modelled and may be less than fully transparent. However the Regulatory Authorities are of the view that the modelling process underlying the directed contracts process is fully transparent given that all inputs were validated and agreed with the industry and have been subject to rigorous scrutiny. Furthermore both the inputs and the software used to develop the modelling results are available to all participants. Having taken the comments received into account the RA's have decided to base the PSO benchmark price using the same methodology as for the directed contracts. This approach will provide the transparency required while at the same time providing a reasonable forecast of the market price.*

A number of participants suggested using the non-directed contracts prices as a method for determining the benchmark price and suggest that the non directed contracts price may be a better indicator of the forward market price as it is determined by market dynamics rather than market modelling by the Regulatory Authorities

*In ROI the Commission for Energy Regulation is obliged to publish a PSO benchmark price for the period beginning January 2008 by 1<sup>st</sup> August 2007. The non-directed contract prices will not be determined in time to allow the Commission to set the PSO benchmark price by this date. However in Northern Ireland the benchmark price does*

*not need to be established so early and therefore information on Non-directed contracts can be used when setting the benchmark price.*

### **3.2. PSO Commencement Date**

The period of calculation is given as January 2008 to September 2008 and not from November 2007. One participant stated that the period that should apply is from November 2007 in both NI and Rol to ensure consistency of treatment.

*The Regulatory Authorities accept the point made by participants in respect of this issue.*

*At present the legislation in ROI prescribes a PSO period that commences in January and ends in December. New legislation will be in place to allow the Commission to change the start date of the PSO. However this legislation will not allow the Commission to reset the PSO start date from January 2008 to November 2007. Therefore it will not be possible to align PSO periods from the beginning of the SEM, instead they will be aligned from October 1<sup>st</sup> 2008.*

*In NI, the PSO start date will be 1<sup>st</sup> November 2007.*

### **3.3. Treatment of capacity**

Participants in general supported the addition of a capacity adder to the benchmark price. One respondent argued that the capacity component should be determined based on the published capacity pot and a forecast of the available generation capacity. If there is to be an over/under recovery mechanism between the forecast of the available generation capacity and the actual outturn of the available generation capacity then it should occur in the following year. Another participant argued that it should be based on the forecasted pot divided by the total generation availability rather than total output

*The Regulatory Authorities concur with the view that capacity should be added to the PSO benchmark price. The Regulatory Authorities are of the view that the appropriate*

*calculation for the capacity value is to divide the forecast capacity pot by the all island generation availability. The pot will be determined by the Regulatory Authorities as part of the development of the SEM capacity payment mechanism. In NI it is proposed to take the capacity payments that have been determined for the months of November and December<sup>4</sup> and amalgamate them with the pots for January to September 2008<sup>5</sup> to form a total capacity pot for the year. In ROI the value of capacity will be determined on a forecast of the capacity pot for the period January to September 2008.*

### **3.4. Correction Mechanism**

Participants had a number of views in relation to whether a benchmark price should be ex-post or ex-ante.

One participant argued that there should be an ex-post reconciliation of market revenues when an ex-post reconciliation of contract costs is permitted. Another participant strongly disagreed with what they considered the RAs proposal, namely to set the PSO benchmark on an ex-ante basis. Instead they argued that while forecasts will inevitably be wrong it was still important to have an ex-post reconciliation to ensure that the actual costs are borne by the market. Other participants argued that setting the PSO benchmark price on an ex-ante basis will give retail businesses and customers the necessary level of certainty in setting tariffs and is therefore the correct approach. Another participant noted that setting the benchmark price on an ex-post basis would reduce the availability of contracts to the market.

*The Regulatory Authorities acknowledge the points put forward on this issue. It has been the Regulatory Authorities intention to retain an ex-post review of the PSO. The proposed benchmark price will be an ex-ante price and will be in line with the reserve price for PSO backed hedges. The PSO benchmark prices will continue to have ex-post reconciliation where actual outturn of the costs and volumes of the contracts are different to what was forecast. Further any differences between the actual and forecast revenues will be reconciled at the end of the PSO period. Any differences will be included in the*

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<sup>4</sup> These can be found at the AIP website- note published on 13<sup>th</sup> February 2007

<sup>5</sup> Indicative pot values for 2008 can be found at AIP-SEM-07-239 Indicative 2008 Annual Capacity Payment Sum



*calculation of the correction factors to apply to PSO charges in the following period (October 2008 to September 2009). It should be noted that the ex post reconciliation will include a number of different circumstances. The actual revenues earned from the PSO backed hedges and any revenues earned from any un-contracted PSO plant in the market (e.g. wind) and from ancillary services will be reconciled against underlying costs. The overriding principle that will be applied in determining the correction factor (and level of PSO charges) is that the holders of the PSO contracts remain financially neutral.*

### **3.5. Single Benchmark Price**

Participants were generally of the view that there should be one single benchmark price in both jurisdictions. One participant argued that a harmonised approach is likely to lead to greater transparency and stated that if a single forecast price is taken together with an ex-post benchmark price then neither generator nor suppliers are disadvantaged.

*The RA's note the views on this point. It should be observed that the underlying processes that set out how the benchmark price will be set are the same in both jurisdictions. However, NI will use more than one input price calculated for the period November 2007 to September 2008, whilst in ROI the period of calculation will run from January 2008 to September 2008. The reason for having more than one price in Northern Ireland is that NI PSO generation is more flexible than ROI generation capacity and tends to run as baseload, mid merit and peaking plant. In ROI, the PSO generation capacity tends to be baseload or intermittent baseload capacity. In addition, the Power Procurement Business in NI intends to offer base load mid merit and peaking hedges against its PSO generation contracts, whereas ESB PG intends to only offer baseload hedges*

### **3.6. Other Comments**

One participant requested clarification on how the ancillary services revenue would be treated in the PSO.

*The Regulatory Authorities are of the view that estimates of ancillary service payments can be taken into account in the calculation of the PSO levy. This adjustment will prevent the situation of estimating a levy amount which would include a systematic error each year.*

A number of participants requested clarity on how gas transportation costs would be treated arguing that the benchmark price should take these costs into account.

*The PLEXOS model takes account of gas commodity transportation costs. This issue was raised by a number of participants in recent discussion with the Regulatory Authorities and the Regulatory Authorities considered this issue as part of these discussions. The Regulatory Authorities decided not to include the capacity element of gas transportation costs as part of the bidding behaviour of generators. Therefore, given that the benchmark price is reflection of the market price, there is no rationale for including these gas transportation costs as part of the benchmark price.*

#### ***4. Regulatory Authorities' Decision***

Having reviewed the comments received to this paper the Regulatory Authorities have decided the following:

- The benchmark price will be based on a series of forecast modelled pool prices, using the same model that was adopted in determining directed contract prices. This approach will involve the RA's running the PLEXOS model and determining a forecast market price. This approach has been modified slightly from the approach suggested in the consultation paper. This is to take participants views into account in relation to both the transparency of the proposed approach and the implementation issues as previously outlined.
- The PSO year will begin in November 1<sup>st</sup> 2007 in NI and January 1<sup>st</sup> 2008 in ROI. Both periods will finish on the 30<sup>th</sup> September 2008 after which the PSO periods will align in both jurisdictions.
- The PSO benchmark price will include a capacity adder. If the capacity value is not added to the benchmark price it will systematically undervalue the market cost of the energy procured under the PSO. This adder will be based on the total forecast pot divided by total availability. In NI this pot will be the forecast pot for the period November 2007 to September 2008 while in ROI this pot will be forecast for the period January 2008 to September 2008.
- There will be one price in ROI but three separate prices in NI (baseload, mid merit and peaking prices). The Regulatory Authorities will determine jurisdictional prices using the same methodology but each will have separate prices. The reasoning behind this approach is outlined in section 3.5 above.

- The price will be set on an ex-ante basis but there will be an adjustment at the end of each PSO period (using to determine charges in the following year) to take account of differences between forecast costs and revenues of PSO plant.

## **5. Conclusion**

The Regulatory Authorities acknowledge all the comments received in relation to this paper and thank those who submitted comments. It is expected that the final PSO benchmark price and levy will be published in early August in ROI and late August / early September in NI.