



Single Electricity Market

Inputs used for the Capacity Requirement Calculation for the Calendar Year 2010

Information Paper

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2 INTRODUCTION

On 27 August 2009, the Regulatory Authorities (RAs) published a decision paper on the 'Fixed Cost of a Best New Entrant Peaking Plant, Capacity Requirement & Annual Capacity Payment Sum for the Calendar Year 2010' (SEM-09-087). Within this paper the Capacity Requirement for 2010 was determined, using the same methodology as has been employed in previous years.

The RAs wish to improve the transparency of the Capacity Requirement Calculation. With this in mind, the RAs have decided to publish the inputs that were used for determining the Capacity Requirement for 2010. This paper summarised the main input used and have the data sheets used in the calculation as a series of appendices.

It is the intention of the RAs to publish this type of data set for future annual calculations of the Capacity Requirement. This will be carried out as part of the annual calculations.

3 INPUTS FOR CAPACITY REQUIREMENT FOR 2010

In the decision paper 'Determination of the Capacity Requirement for the Capacity Payment Mechanism' (SEM-07-13), the inputs used for the calculation of the Capacity Requirement are:

- Forecast Demand;
- Generation Capacity;
- Scheduled Outage Durations;
- Forced Outage Probabilities; and
- Treatment of Wind power

The inputs used for the 2010 calculations are summarised below. The associated data sets are attached as appendices to this paper.

Input	Description
Load Forecasts for ROI and NI for 2010	<p>A combined load forecast for 2010, on a half hourly basis for both jurisdictions, was created and agreed with the TSOs. The base year used to develop this forecast was 2008. The period used for analysis was 3 January 2010 to 1 January 2011 as the Adcal model uses a 364 day sample. Two traces were agreed:</p> <ol style="list-style-type: none">1) Total Load Forecast for 20102) Total (In Market) Conventional Load Forecast <p>See Appendix 1 – Load Forecast for 2010</p>
Generation Capacity	<p>A list of all generation to be in place in 2010 was determined, including the Sent Out Capacity for each unit. For any units to be commissioned or decommissioned during 2010, the Capacity available was adjusted accordingly to reflect the actual period they are available (time weighted average).</p>

	<p>The Time-Weighted Capacity for Conventional Generation used in the Adcal model was 9206MW</p> <p>See Appendix 2 – Generation Capacity for 2010</p>
Wind Capacity Credit (WCC)	<p>The most recent available Wind Capacity Credit (WCC) curve (produced by the TSOs) is used to assess the total WCC for the combined total wind installed.</p> <p>The Average WCC is calculated for the total installed wind. This average WCC is then applied to the time weighted total capacity for the Wind in the Market</p> <p>The Time Weighted Total Wind in 2010 used was 1,999MW. This results in a Capacity Credit of 0.178.</p> <p>The Time Weighted Market Wind Capacity in 2010 was 1,514MW.</p> <p>Therefore the Wind Capacity Credit is derived as 269MW (1,514 x 0.178)</p> <p>See Appendix 3 – Wind Capacity in 2010</p> <p>See Appendix 4 – Wind Capacity Credit (WCC) curve</p>
Scheduled Outages	<p>The Scheduled Outage Durations are determined to the nearest number of weeks and are determined from the 5 year average of scheduled outages for each unit.</p> <p>See Appendix 5 – Average SOD for 2010</p>
Force Outage Probability (FOP)	<p>As highlighted in the consultation paper, the RAs maintained the value of 4.23% for the FOP. It should be noted that an FOP of 0.19% was used for the Moyle Interconnect, again based on historical data.</p>
Generation Security Standard (GSS)	<p>The RAs maintained the value of 8 hours for the GSS.</p>

Table 3.1 – Summary of Inputs into Adcal Model