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# Capacity Requirement Calculation Methodology

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# Purpose of Today

RAs & TSOs aim to provide further clarity on the process used to calculate the Capacity Requirement as part of the Annual Capacity Payment Sum (ACPS) calculation

# Areas to Cover Today

1. Issues raised in past consultations
2. Inputs used for Capacity Requirement calculation
3. Overview of Adcal Model
4. CPM Medium Term Review
5. Next Steps for Capacity Requirement

# Issues raised in Consultations

- Improving the **transparency** of the calculation process
- **Access to the Inputs** used in the Capacity Requirement Calculation
- Running of the **Adcal** Model
- Forced Outage Probability (**FOP**)
- **Treatment of Wind** and the Wind Capacity Credit used

# Inputs to Calculation

Inputs defined in '*Determination of the Capacity Requirement for the Capacity Payment Mechanism*' (AIP-SEM-07-13)

1. Forecast Demand;
2. Generation Capacity;
3. Scheduled Outage Durations;
4. Forced Outage Probabilities; and
5. Treatment of Wind power.

**Inputs for 2010 Calculation recently published.**

# Inputs to 2010 Calculation

Input	Description
<b>Load Forecasts for ROI and NI for 2010</b>	<p>A combined load forecast for 2010, on a half hourly basis for both jurisdictions, was created and agreed with the TSOs.</p> <p>The base year used to develop this forecast was 2008.</p>
Input	Description
<b>Generation Capacity</b>	<p>Sent Out Capacity for each unit based on Feb 2009 data (from MMU team).</p> <p>Units to be commissioned or decommissioned during 2010 adjusted to reflect period available.</p>

# Inputs to 2010 Calculation

Input	Description
<b>Wind Capacity Credit (WCC)</b>	Wind Capacity Credit (WCC) curve used by TSOs. For 2010: Time Weighted Total Wind = 1,999MW. This results in a Capacity Credit of 0.178.  Time Weighted Market Wind =1,514MW.  Therefore <b>WCC = 269MW</b> (1,514 x 0.178)

Input	Description
<b>Scheduled Outages</b>	5 year average of scheduled outages for each unit determined to the nearest number of weeks

# Inputs to 2010 Calculation

Input	Description
<b>Force Outage Probability (FOP)</b>	<b>FOP = 4.23%</b> based on weighted average FOP for NI plant (2002 to 2006).  <b>FOP = 0.19%</b> for Moyle Interconnect

Input	Description
<b>Generation Security Standard (GSS) / Generation Adequacy Standard</b>	As highlighted in the consultation paper, the RAs maintained the value of <b>8 hours</b> for the GSS.



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# Overview of AdCal Model by TSOs

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# Next Steps

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# CPM Medium Term Review

## Information Paper on Scope of CPM Medium Term Review

### Activities planned in relation to the Capacity Requirement:

- Improve Transparency of Calculation
- Impact of Wind Penetration on Capacity Requirement Calculation

# Next Steps

- CPM Medium Term review ongoing in 2010
  - Discussion Paper to be issued in Q1/2010
- Current process will be used for Calculation of Capacity Requirement for 2011
  - All Inputs used will be published as part of consultation for ACPS 2011 in Q2/2010
- Feedback

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Thank You!  
Any Questions?