

## MINUTES OF THE GRID CODE REVIEW PANEL MEETING

Grand Canal Hotel, Dublin 4

13 October 2011

### PANEL ATTENDEES

<u>Name</u>		<u>Present</u>	<u>Role</u>
Jon O'Sullivan	JOS	Y	Chairman
Alan Darbey	AD	APOLOGIES	TSO Representative
Salim Temtem	ST	Y	TSO Representative
Cormac McCarthy (Alternate)	CMcC	APOLOGIES	TSO Representative
Peter Gillespie	PG	Y	IPP (excl. Renewables and CCGT)
Miguel Gonzalez (Alternate)	BS	APOLOGIES	Grid Connected Independent Generators excluding Renewable Generators
Gary Thompson	GT	Y	IPP Generators (CCGT only)
Jane McArdle (observer)	JMcA	Y	Renewable Generators
Gráinne O'Shea	GOS	Y	ESB PG
Joe O'Connor	CN	Y	ESBPES
VACANT		VACANT	Independent Electricity Supplier
Conor Healy	CH	APOLOGIES	Transmission Asset Owner
Robert O'Rourke	RO'R	Y	CER
Brian Williams	BW	Y	HVDC Interconnector
Liam Ryan	LR	Y	Market Operator
Martin Ahern	MA	Y	Demand Customer
Rónán Ó hÓgartaigh	RO	Y	Distribution System Operator

### OTHER ATTENDEES

<u>Name</u>		<u>Present</u>	<u>Role</u>
Arlene Chawke	AC	Y	GCRP Secretary
Anne Trotter	AT	Y	TSO
Yvonne Coughlan	YC	Y	TSO
Alan Rogers	AR	Y	TSO
Sonya Twohig	ST	Y	TSO
David Carroll	DC	T	TSO
Paul Brandon	PB	Y	CER
Michael Peters	MP	Y	Observer – Fingleton White & Co
Jim Gannon	JG	Y	Observer – RPS Group
Patrick Liddy	PL	Y	Observer – Activation Energy
Don Colella	DC	Y	Observer – RPS Group (dialling in from US)
Kieran Adams	KA	Y	Observer – Huntstown Power
Claire Downey	CD	Y	Observer – Indaver Ireland

### APOLOGIES

<u>Name</u>		<u>Present</u>	<u>Role</u>
Simon Grimes	SG	N	TSO
Barry Sherry	BS	N	Grid Connected Independent Generators excluding Renewable Generators

**Introduction to GCRP Meeting & Approval of Minutes**

1. JO'S (Chairman) welcomed all panel members and in particular he welcomed new panel members JO'C (ESB Electric Ireland), MA (Shannon LNG) and RO'R (CER).
2. AT (TSO), YC (TSO), ST (TSO), AR (TSO) attended the GCRP to present some of the items on the agenda. JG (RPS Group) and DC (Covanta Energy) and CD (Indaver Ireland) also attended to observe the item on Waste to Energy. PB (CER) attended as an observer. MP (Fingleton White & Co), PL (Activation Energy) was also in attendance to observe the item on Demand Side Units. KA (Huntstown Power), the alternate for IPP Generators (CCGT only) attended as an observer.
3. The Chairman noted apologies received from SG (TSO) CMC (TSO), BS (Endesa Ireland), MG (Endesa Ireland), AD (TSO Rep) and CH (TAO).
4. A number of differing nominations were received for the panel position of Grid Connected Renewable Generators. Three nominations were received for JMCA (SSE Renewables), two nominations were received for JG (RPS Consultants) and one nomination was received for Donal Smith (Bord Gáis). **Post meeting note:** All three have discussed their nominations going forward and JMCA (SSE Renewables) has been given unanimous support by the other nominees and JMCA (SSE Renewables) will continue in her role on the panel.
5. In the past the chairman exercised his power, as per the Constitution, to appoint an additional member to represent Renewable Generators. Following discussions with IWEA and NOW it was decided to appoint Yazhou Lei. The Chairman has requested JMCA (SSE Renewables) to discuss their future choice of appointment with IWEA and NOW.
6. The GCRP approved the minutes of the previous meeting held in Dublin, 8 June 2011.
7. JOS (Chairman) gave an update on all the actions from the previous meeting.

**Key Principles**

<p><b>MPID 220 – Small Amendment to the Constitution and Rules of the GCRP</b></p>	<p><b>AC</b></p>
<ul style="list-style-type: none"> <li>• EirGrid propose to change the reference to HVDC Interconnectors to Interconnectors. This is in line with the definitions of the Grid Code.</li> <li>• EirGrid propose to include a meaning for Market Operator and Interconnectors in the Definitions and Interpretations section of the Constitution.</li> <li>• Six members were in attendance for this item and all members agreed that the proposal should go forward to the CER for their approval.</li> </ul> <p><b><u>ACTION:</u></b></p> <ul style="list-style-type: none"> <li>• The Constitution states that eight members or alternates must be present at the meeting. This item was presented to and supported by six members.</li> <li>➤ <b>A post meeting suggestion: Attach the proposal to the Minutes and all members are given 10 business days to comment. If no comments or objections are received this recommended proposal will be go forward to the CER for their approval.</b></li> </ul>	<p><b>AC</b></p>

<p><b>MPID 206 – Ramp Rate Applicable Point – WFPS1.5.2.1</b></p>	<p><b>AT</b></p>
<ul style="list-style-type: none"> <li>• The threshold value of 10% was not included in the proposal.</li> <li>• JMCA (SSE) expressed her concern that the value of 10% has never been demonstrated/tested and that a reasonable value is difficult to quantify. She also noted that the concept of the modification has merit.</li> <li>• It was suggested that the Minimum Ramp Rate Applicable Point should not be less than 10% <u>unless agreed with by the TSO.</u></li> <li>• JO'S (Chairman) raised the point that if a higher value is being suggested by any member of the GCRP that evidence must be submitted to support this new value being suggested.</li> </ul> <p><b>ACTION:</b></p> <ul style="list-style-type: none"> <li>➤ <b>Include in the proposal the threshold of 10% and return the proposal to the GCRP for agreement.</b></li> <li>➤ <b>Provide evidence of reason for a higher than 10% break point.</b></li> </ul>	<p><b>AT</b></p> <p><b>JMcA</b></p>

<p><b>MPID 214 Demand Side Units (DSU)</b></p>	<p><b>YC</b></p>
<ul style="list-style-type: none"> <li>• Since the last GCRP (8<sup>th</sup> June), this proposal has been further discussed and developed by YC (TSO), MP (Fingleton White &amp; Co), PL(Activation Energy) and LR (SEMO). The proposal being presented today has the agreement of all four participants.</li> <li>• The Grid Code was originally written without the full understanding of Demand Side Units and the aim of this modification is to improve the understanding of the concept.</li> <li>• YC (TSO) presented the main definitions being introduced as outlined in the proposal document.</li> <li>• YC (TSO) gave an example to explain further:</li> </ul> <p>Individual Demand Site with a daytime load of 9 MW, night time load of 1 MW and has an on-site diesel generator 5 MW in size.</p> <p>During the day: DSU MW Capacity = 5 MW  DSU MW Availability = X of 5 MW  DSU (when dispatched) = 4 MW System Import  DSU MW Response = 5 MW (provided 5 MW was available)</p> <p>In a scenario where this site can also provide 3 MW of load reduction, the DSU MW Capacity increases to 8 MW and system import reduces to 1 MW.</p> <p>During the day: DSU MW Capacity = 5 MW  DSU MW Availability = X of 5 MW</p>	

<p>DSU (when dispatched) = 4 MW System Export  DSU MW Response = 5 MW (provided 5 MW was available)</p> <p>In a scenario where this site can also provide 3 MW of load reduction, the DSU MW Capacity increases to 8 MW and system export increases to 7 MW.</p> <ul style="list-style-type: none"> <li>• YC (TSO) noted that DSU MW Capacity cannot be greater than 10 MW for a individual Demand Site which forms part of an Aggregated Demand Site within a DSU.</li> <li>• It was pointed out by YC (TSO) that the definition for <b>Individual Demand Site</b> should refer to <b>Customer</b> and not <b>Demand Customer</b>. The new definition should read:</li> </ul> <p>A single premises of a <b>Demand Customer</b> connected to the <b>Transmission System</b> or <b>Distribution System</b> with a <b>Demand Reduction Side Unit MW Capability Capacity</b>. The <b>Individual Demand Site</b> <del>shall have a</del> <b>can have a Maximum Import Capacity Demand Side Unit Export Capacity</b> and <del>shall not have a Maximum Export</del> <b>a Demand Side Unit Import Capacity</b>.</p> <ul style="list-style-type: none"> <li>• GO'S (ESB PG) expressed concern that the definition for <b>Maximum Down Time</b> is similar to <b>Maximum On Time</b> for a Generation Unit.</li> <li>• YC (TSO) explained that to re-title <b>Maximum On time</b> to <b>Maximum On Time for a DSU</b> would necessitate systems changes which would have a long lead time. This change will be incorporated as part of a wider review of Grid Code rules for DSU.</li> <li>• JO'S (Chairman) noted that the TSO will be reviewing DSM as part of a work stream in the DS3 programme.</li> <li>• All panel members agreed with the proposed modification.</li> </ul> <p><b>ACTION:</b></p> <ul style="list-style-type: none"> <li>➤ <b>Send recommendation to the CER noting participant concerns.</b></li> </ul>	AC
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<p><b>MPID 216 – OC4 System Services for Interconnectors</b></p> <ul style="list-style-type: none"> <li>• AR (TSO) stepped through the proposed modification.</li> <li>• Two main discussion items arose: <ul style="list-style-type: none"> <li>○ The rewording of the term <b>Governor Droop</b> for Interconnectors.</li> <li>○ The signal for the <b>Automatic Generator Control (AGC)</b>. Only a digital set point can receive the signal.</li> </ul> </li> <li>• An action against the TSO is to investigate the signal for the <b>AGC</b> and to reword the definition for <b>Governor Droop</b> as appropriate for Interconnectors.</li> </ul> <p><b>ACTION:</b></p> <ul style="list-style-type: none"> <li>• <b>Investigate the signal for the AGC and reword the definition for Governor Droop as</b></li> </ul>	AR
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- JG (RPS Group) noted that initial discussions on W2E were in the context of potential derogation and that it was through discussion with the TSO and at GCRP meetings that the proposal for modification had come about.
- PL (Activation Energy) recommended that we get the right market mechanisms in place.
- RO'H (DSO) pointed out that the owners of the W2E plant can apply for derogations and it is not necessary to put an exemption into the Grid Code, he made the example that exemptions do not exist for certain types of Wind Farm turbines.
- JG (RPS Group) noted that W2E is fundamentally a different generator type to other technologies due to its operating characteristics and technical limitations. Precedent is set in the provision of a wind grid code for amending the status quo to facilitate new technologies which meet our national need.
- JO'S (Chairman) pointed out that we are capping it at 150 MW in total and the TSO can review the situation should that amount increase.
- JMcA (SSE) pointed out that the investor took the risk of getting a derogation.
- RO'H (DSO) raised the point that further new technology will come on board and how will the GCRP deal with this?
- GT (Bord Gáis Energy) raised the point that CCGT technology had to invest to provide reserve.
- JO'S (Chairman) pointed out that CCGT technology has matured over time, given the primary function of the W2E plant and given the limit to the amount installed it is not anticipated that the technology will mature.
- JG (RPS Group) recommended the proposed modification should relate to the Waste Incineration Directive and suggested that the words 'unless otherwise agreed with the TSO' be added to the exemption to increase the level of control that the TSO would exercise over projects attempting to avail of the exemption.
- JO'S (Chairman) requested a show of hands and it was apparent the panel members were divided on how we should treat W2E plant going forward. It was decided to allow the CER make the call on this issue.

**ACTION:**

- **The secretary to send the divided issue to the CER for their decision.**

**AC**

<b>Performance Monitoring Update to the GCRP</b> <ul style="list-style-type: none"> <li>• <b>Presentation attached</b></li> </ul>	<b>ST</b>
<p><b><u>ACTION:</u></b></p> <ul style="list-style-type: none"> <li>➤ <b>In June 2012 the TSO will set up an open workshop to discuss the standardisation of testing procedures. All welcome to attend.</b></li> <li>➤ <b>Wind Farm Control Settings – remote software upgrades – EirGrid to set up a meeting to discuss the issues raised.</b></li> </ul>	<b>ST</b>  <b>ST</b>

<b>MPID 219 ROCOF</b>	<b>CD</b>
<ul style="list-style-type: none"> <li>• Two options of approach being suggested by the TSO: <ol style="list-style-type: none"> <li>1. Increase ROCOF limit in Grid Code so that generation does not trip at high ROCOF values.</li> <li>2. Keep sufficient inertia on the system so that ROCOF does not exceed 0.5 Hz/s.</li> </ol> </li> <li>• The TSO sent a letter to all conventional plant requesting their capability? No response given.</li> <li>• GT (Bord Gáis Energy) raised the point that it is a real challenge for CCGTs to investigate; other aspects must be fine tuned in order to investigate</li> <li>• GO'S (ESB PG) felt that the TSO have produced their results through the FOR studies and that conventional generators need more time to carry out their own studies.</li> <li>• JO'S (Chairman) stressed that current ROCOF levels are limiting the amount of Wind Farm penetration.</li> <li>• JO'S (Chairman) asked the panel members what they think a prudent system operator should do in this instance. If the TSO get it wrong and a high level of penetration of wind is permitted it could lead to a black out. He also pointed out that the European Grid Code is looking at 2 Hz/s retrospective.</li> <li>• JO'S (Chairman) recommended the setting up of a working group to review plant capability and return to the TSO with an answer.</li> <li>• GO'S (ESB PG) was of the opinion that the Advisory Council was a more appropriate forum for this discussion.</li> <li>• PB (CER) suggested that this be discussed at the Advisory Council on the 24<sup>th</sup> October and recommended that a Working Group is set up with the terms of reference defined.</li> <li>• JO'S (Chairman) recommended the setting up of a working group to review plant capability and return to the TSO with a response.</li> </ul>	

<p><b><u>ACTION:</u></b></p> <ul style="list-style-type: none"> <li>➤ <b>Discuss this issue with the Advisory Council on the 24<sup>th</sup> October.</b></li> <li>➤ <b>Post Meeting Note: This was discussed at the first meeting of the Advisory Council and a number of actions were taken from the meeting, one of which is the setting up of a Working Group under the GCRP.</b></li> </ul>	<b>JO'S</b>
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<b>Grid Code Modifications to be approved by the CER</b>	<b>RO'R</b>
<p><b><u>Post meeting event: CER Formally Approved Modifications</u></b></p> <ul style="list-style-type: none"> <li>• MPID 204 OC5 Demand Control (effective date: 14/10/2011)</li> <li>• MPID 205 Derogation Process (effective date: 14/10/2011)</li> <li>• MPID 207 Dwell Times (effective date: 14/10/2011)</li> <li>• MPID 208 General Housekeeping (effective date: 14/10/2011)</li> <li>• MPID 209 Definition for Generator (effective date: 14/10/2011)</li> <li>• MPID 210 Definition for Central Dispatch (effective date: 14/10/2011)</li> <li>• MPID 212 Voltage System for Windfarms (effective date: 14/10/2011)</li> <li>• MPID 213 Notification of Re-location of the NCC (effective date: 24/10/2011)</li> <li>• MPID 215 FRT (effective date: 14/10/2011)</li> </ul>	

**SUMMARY OF ACTIONS**

	<b>MEMBER</b>
<p><b>MPID 220 – Small Amendment to the Constitution and Rules of the GCRP</b></p> <ul style="list-style-type: none"> <li>➤ <b>A post meeting suggestion:</b> Attach the proposal to the Minutes and all members are given 10 business days to comment. If no comments or objections are received this recommended proposal will be sent forward to the CER for their approval.</li> </ul>	<b>AC</b>
<p><b>MPID 206 – Ramp Rate Applicable Point – WFPS1.5.2.1</b></p> <ul style="list-style-type: none"> <li>➤ Include in the proposal the threshold of 10% and return the proposal to the GCRP for agreement.</li> <li>➤ Provide evidence of reason for a higher than 10% break point</li> </ul>	<b>AT</b>  <b>JMcA</b>
<p><b>MPID 214 Demand Side Units (DSU)</b></p> <ul style="list-style-type: none"> <li>➤ Send recommendation to the CER noting participant concerns.</li> </ul>	<b>AC</b>
<p><b>MPID 216 – OC4 System Services for Interconnectors</b></p> <ul style="list-style-type: none"> <li>➤ Investigate the signal for the AGC and reword the definition for Governor Droop as appropriate for Interconnectors</li> </ul>	<b>AR</b>

<p><b>Application for Clarification of the Grid Code Section CC.7.3.1.1(s)</b></p>	
<p><b>MPID 218 Waste to Energy</b></p> <ul style="list-style-type: none"> <li>➤ The GCRP Secretary to send the divided issue to the CER for their decision.</li> </ul>	<p><b>AC</b></p>
<p><b>Performance Monitoring Update to the GCRP</b></p> <ul style="list-style-type: none"> <li>➤ In June 2012 the TSO will set up an open workshop up to discuss the standardisation of testing procedures. All welcome to attend.</li> </ul>	<p><b>ST</b></p>
<p><b>Wind Farm Control Settings – remote software upgrades</b></p> <ul style="list-style-type: none"> <li>➤ EirGrid to set up a meeting to discuss the issues raised in ST (TSO) presentation</li> </ul>	<p><b>ST</b></p>
<p><b>MPID 219 ROCOF</b></p> <ul style="list-style-type: none"> <li>➤ Discuss this issue with the Advisory Council on the 24<sup>th</sup> October.</li> <li>➤ <b>Post Meeting Note: This was discussed at the first meeting of the Advisory Council and a number of actions were taken from the meeting, one of which is the setting up of a Working Group under the GCRP.</b></li> </ul>	<p><b>JO'S</b></p>