

MINUTES OF THE JOINT GRID CODE REVIEW PANEL MEETING

Held at the Clarion Hotel Dublin IFSC, Dublin

On Tuesday 1 May 2013, 10:30 – 13:05

Present:

Members/Alternates	Representing	Position on the JGCRP
Jon O’Sullivan	EirGrid	Chairman
Karen Creighton	SONI	Observer for SONI
Conor O’Doherty	SONI	Advisor for SONI
Tom McCartan	SONI	TSO
Alan Kennedy	SONI	TSO
Mark Gormley	SONI	Observer for SONI
Anne Trotter	EirGrid	Advisor for EirGrid
Alan Rogers	EirGrid	Advisor for EirGrid
John Egan	EirGrid	Interconnectors
Mark Norton	EirGrid	TSO
Brendan Woods	SONI	TSO
Mark Glancy	EirGrid	TSO
David Cashman	EirGrid	Advisor for EirGrid
David Carroll	EirGrid	Advisor for EirGrid
Séamus Power	EirGrid	Advisor for EirGrid
Donald Murray	AES Ballylumford (as alternate for Denis McBride)	Generator
Joe McMurrin	AES Kilroot (as alternate for Ian Luney)	Generator
Sean Doolin (alternate)	Electric Ireland	ESB PES
Cathal Martin	SSER	Generator
Jane McArdle	SSER	Renewable Generators
Robert O’Rourke	CER	Regulator
Kevin Hannafin	Energia	RoI Independent Electricity

		Supplier
Gary Thompson	Bord Gais Energy	Independent Grid Connected CCGT
Martin Stronge (alternate)	ESB PowerGeneration	ESB PG
David Macartney	PPB	Observer
Angela Blair	PPB	Observer
Brían McAuley	SEMO	Market Operator
Martin Ahern	Shannon LNG	Demand Customers
Patrick Liddy	Activation Energy	Demand Site Units
Ciaran Donnelly	Wind Prospect	Renewable Generators
Gerry Hodgkinson	NIE	DSO
Brian Mulhern	Utility Regulator	Regulator
Rónán Ó'Hogartaigh	ESB Networks	Transmission System Owner Licensee
Paul Hickey	DSO ESB Networks	DSO
Arlene Chawke	EirGrid	Secretary of the EirGrid GCRP
Dalia Majumder-Russell	CMS	Secretary of the SONI GCRP

Apologies: Denis McBride (AES Ballylumford), Brian Mongan (AES Kilroot), Jim Cooke (Coolkeeragh ESB), Brian, Mick McGuckin (Moyle), Stephen Hemphill (Moyle), Alex Baird (SONI), Karol O'Kane (ESB PG), Joe O'Connor (Demand Customers), Barry Sherry (Independent Grid Connected Non CCGT & Non Renewable), Cormac McCarthy (TSO (EirGrid)).

Introduction to JGCRP meeting

- Jon O'Sullivan as Chairman of the JGCRP meeting welcomed Panel Members to the meeting.
- The Chairman welcomed the alternates and noted the apologies. The Chairman requested that wherever possible attendees should give at least 48 hours notice so as to allow for changes in catering and room arrangements.
- The Chairman provided an overview of the agenda.

Minutes and Actions from JGCRP held on 3 October 2012

- The Chairman noted that some comments were received to the minutes of the previous meeting held on 20 February 2013 in Belfast. The Panel considered these comments and there being no other comments, the minutes of the previous meeting were approved by the Panel.

General Update - Transmission System DS3 Update (Jon O'Sullivan)

System Services: The TSOs have sent an all but final version of recommendations to the Regulators. Two documents were sent: a synopsis of the recommendations and a more detailed document that includes responses to questions of the consultation, recommendations and supporting analysis, product definitions, principal and specific recommendations on details. The final versions of the documents are expected to be sent to the Regulators within the next two weeks. The TSOs will publish the documents provided the Regulators are comfortable with the documents. The Chairman stressed that the report contains the TSOs recommendations which are distinct from the decision that will be made by the Regulators in due course.

Grid Code Changes: CER have approved DS3 WFPS for the Ireland Grid Code. The Utility Regulator is considering the Windfarm Settings. The DSOs in Ireland are actively looking at bringing forward modifications to the Distribution Panel. The TSO will engage with the DSO.

Performance Monitoring: As part of today's agenda David Carroll will give an update on Enhanced Performance Monitoring. The delay in progress on this is due in part to the restructuring that is taking place within EirGrid. Andrew Cooke is the new Director of Operations and a restructuring of management is taking place. EirGrid will be back with a reprogrammed workstream. There will be a more unified approach going forward and the workstreams will be reissued June/July 2013

Frequency/Voltage Control: Ongoing work and a lot of engagement with DSOs.

Renewable Reporting: EirGrid have a draft 2012 Curtailment Report that has been discussed with the CER. This will be finalised over the next coming weeks. On tentative figures the dispatch down of Windfarms was less in 2012 in comparison to 2011, primarily this was due to the TSO having more controllability of Windfarms, Turlough Hill coming back on line and the up and running of the Interconnector. Out of the SEM Committee tie-break decision on wind there was a direction to come up with a different template, there has been engagement north and south with a number of different stakeholders (including Wind, CHP, Hydro, Peat) because this is a Priority Dispatch issue and a proposal template is due end of second quarter.

Modelling and Studies: WSAT and Control Centre Tools are progressing.

- Martin Stronge raised a request from Grainne O'Shea in relation to the RoCoF traces that a meeting of the user group is reconvened to discuss those traces and the implications to the definition of RoCoF in the Grid Code.
- Robert O'Rourke noted that the CER have invited Generators to meet to discuss any technical issues they have with the RoCoF Modification. The CER's consultants have prepared a draft report and this should be finalised following discussions with Generators. It is the CER's intention to have a position by the end of May. Given the nature of this modification the CER may consult on this position as opposed to moving directly to a decision. Brian Mulhern noted that the Utility Regulator is doing separate analysis but the timescales are similar to that of the CER and they will be in contact with Generators and the TSOs. The CER have arranged the meeting for the 9th May. Robert O'Rourke stressed that the meetings will deal with technical issues only and not cost recovery.

ACTION – TSOs to convene DS3 group to consider RoCoF traces

Distribution System DS3 Update (Paul Hickey and Gerry Hodgkinson)

- Paul Hickey gave an update on the DSO position. The DSO have sent out a series of Distribution modifications that have fallen out of the DS3 WFPS modifications to the Grid Code. The Distribution Code meeting will be convened within the next few weeks. The DSO study with regard to RoCoF is complete.
- Jon O’Sullivan noted that considerations must be given to very high frequency situations where EWIC may trip. One of the key defence mechanisms in very high frequency situations is the tripping of windfarms at 50.5 Hz – this is a piece of work that will progress between the TSO and DSO.
- Paul Hickey further updated the panel that a new team has been set up, headed by Tony Hearne and reporting into Paul, to specifically look at the implications for the Distribution System with more and more embedded generation. The team will work closely with EirGrid on a number of the DS3 issues.
- Gerry Hodgkinson updated the members that NIE have concluded a study on RoCoF settings. They are currently documenting the new suite of settings. The document has been given to SONI for their consideration and they will also engage with Generators. Industry documentation is silent in relation to RoCoF values. NIE propose formalising it in the current document G59. Intensive discussions have taken place with SONI and EirGrid in relation to the provision of Reactive Power by Distribution connected generation. There is also a need for investment in static Reactive Power and NIE are investigating this.
- Patrick Liddy asked how stakeholders may engage with these discussions with the DSO and NIE as certain DSU customers will be part of embedded generation and so would be interested in any developments in this area.

ACTION – DSO and NIE to provide link to Constitution and Rules of Panel Meetings.

Post Meeting Note: Link to the Constitution and Rules of the Distribution Code Review Panel:

http://www.esb.ie/esbnetworks/en/downloads/approved_rules_constitution.pdf

Enhanced Performance Monitoring (David Carroll)

- David Carroll gave a presentation [[available on the EirGrid website](#)] on the existing performance monitoring process which the TSOs are looking to enhance on an all island basis. Primarily this is driven by the greater amount of intermittent generation on the system which is not compatible with the non systematic checks currently in place and the reliance on ad hoc analysis. The TSOs are proposing to standardise and enhance, via the DS3 program, the performance monitoring process between EirGrid and SONI so as to implement systematic and transparent processes so users are aware of the performance monitoring obligations they are expected to fulfil. The proposed system would also operate close to real-time rather than be email based.
- The proposals relating to data, analysis, reporting and functional specification, have received internal approvals in the TSOs and the next step would be for the TSOs to seek input from industry. The TSOs are currently issuing invitations to Panel Members and DS3 members for workshops on 6 June 2013 in Belfast and on 11 June 2013 in Dublin to discuss the proposals and generators’ view. The aim is to roll out the new process in Q3/4 2014.

Commissioning and testing (David Carroll)

- David Carroll noted that the Commissioning and Testing DS3 plan had a delivery date of Q4 2013 to *'Implement recommendations received from workshops'*, however a commitment was made to deliver the conventional recommendations in June 2013 and the wind in Sep/Oct 2013. Following a full scoping exercise the work involved in implementing the recommendations correctly and based on the Chairman's comments the June timeline will not be met. The TSOs are hoping that a sample procedure for conventional generators will be developed by the end of June and that this will be sent to industry for comment. The TSOs will also be looking to develop a full implementation plan and this may involve reprogramming of the Q4 2013 deadline and we hope to communicate this revised plan with Industry.
- Martin Stronge queried if the review of the commissioning and testing requirements will consider how to lower the number of tests and in turn the costs to the generators. David Carroll confirmed that this was being considered and that recommendation from the workshops will form part of the TSOs reviews. In response to the Chairman's request for examples, Martin Stronge noted that DOF'ing during the earlier phase testing was one of the areas.
- Gerry Hodgkinson queried whether the high speed recorders would be installed on distribution connected generators. David Carroll outlined that discussions have been initiated with the DSOs on details such as these and that the industry workshops in June will consider the high level performance monitoring process. The Chairman noted that access to the generation connected to the distribution network were valid considerations.

Dynamic modelling (David Cashman and Alan Kennedy)

- David Cashman began his presentation [[available on the EirGrid website](#)] by stating that this modification had already been proposed in the Republic of Ireland and this modification was previously engaged with the generators. This included explaining reasons for why this information is being sought. David Cashman stressed that this information is fundamental to efficient planning and operation of DS3 workstreams such as RoCoF and policies for Frequency Control and Voltage Control. Future developments such as facilitating system penetration of renewables and future studies like FOR Part 2 also depend on accurate modelling information. Another factor behind looking at the modelling requirements is the need to standardise the position across the different types of generation.
- David Cashman explained that the TSOs have increased the range of their studies which meant more software packages are being used and explained how the modelling information is used for each of the three main software systems (PSS/E, DigSILENT PowerFactory and DSA tools). The commissioning and testing reviews have revealed wide discrepancies between model output and actual plant performance and the TSOs are looking to improve the information they received from the power plants.
- Alan Kennedy explained that SONI have worked with users in the past to engage with a consultant to develop models. This has been the case for the Moyle interconnector, Ballylumford and Coolkeeragh power station. SONI have since updated these models based on actual results from commissioning tests and ongoing responses. The information for wind generation is generally in the form of black box models which have proved problematic and slow to resolve issues because it requires engagement with the supplier. Any changes to the software packages also have knock-on impacts on the modelling outputs.
- David Cashman further explained that to resolve this, the TSOs have asked for the source code to be submitted to them but EirGrid received feedback from the industry that the code would have certain commercially sensitive information which the manufacturers are reluctant to divulge. The feedback also noted that having to provide information in 3 formats had time and costs implications.

- David Cashman outlined that EirGrid have amended their proposals in line with this feedback including revising the request for the RMS model only to be provided in PSS/E format together with all supporting information. Also required would be one EMT model in DIgSILENT PowerFactory. EirGrid would develop the other format (TSAT) and pass the costs back to the generators. He also explained that the proposals would need to have retrospective effect and that EirGrid recognise cost impacts for older plants so would be interested in finding a way to work through this issue with the industry.
- David Cashman stressed that the TSOs may be prepared to not receive the source code if the generators were able to submit sufficient information and supporting documents for the TSOs to achieve their modelling requirements. The TSOs would also like to develop a standard confidentiality agreement that would be acceptable to the generators and OEMs so as to avoid protracted bilateral negotiations. The Chairman noted that the TSOs do not have the resources to manage a large number of party specific NDAs and so are looking to industry to develop an NDA standard that would be acceptable to it and the OEMs.
- Conor O'Doherty explained that in Northern Ireland where SONI had included the proposals for modelling in its WFPS Settings Schedule, all three model formats were asked for. The majority of the WFPS Settings Schedule will not be retrospective however SONI will be applying the RoCoF and modelling requirements retrospectively. SONI has also requested source code to avoid the problems presented by black box models. Cathal Martin confirmed that the generators did not raise the issue in relation to modelling in the consultation responses, possibly due to the size of the consultation document.
- The Chairman noted that the TSOs are looking for ways to minimise the burden on the users but still require accurate and comprehensive modelling information. The Chairman proposed that one of the alternatives may be an obligation on the generator to update the models. Ciaran Donnelly stated that the source code was the OEMs proprietary information and so difficult to have disclosed. In relation to the TSAT model (DSA tools), this was considered to be too difficult to require from such a small market as wind generators.
- The Chairman and David Cashman both noted that the TSO as prudent system operator needs to have accurate modelling information to control the system. Having relevant information also involves having the capability to develop the models themselves in the event that an OEM is unable to provide updated models of their system. Martin Stronge queried whether this necessarily required the source code. The Chairman stressed that the TSOs are looking for sufficient information to be able to update their software package and deal with other changes while maintaining the accuracy of the models. For this the TSOs are also considering offering to have the source codes stored in escrow accounts which would be accessed only on certain conditions being met (e.g. insolvency event).
- Martin Stronge queried why it was not sufficient for the generators to provide comprehensive representations of the plant. The Chairman, David Cashman and others from EirGrid and SONI expressed views that the TSOs need information to be able to use to adapt to system needs and need to ensure that the requirements are robust to meet future changes to the system. Mark Norton pointed out that similar requirements are being considered as part of the Requirements for Generators European Network Codes work.
- Ciaran Donnelly commented that in the UK the users required to provide Laplace representations of their plant and the TSO then engaged consultants to develop these models in DIgSILENT format although he was unaware of the costs. David Cashman pointed out that this was only true for retrospective plant at the time of the changeover to the DIgSILENT format. Conor O' Doherty explained that this approach would put the risk of translations between models onto the TSOs as the OEMs would not stand over these models. Ciaran Donnelly stated

that OEMs have expressed strong reservations about providing an EMT model however Jane McArdle stated that she had received different feedback on this.

- Martin Stronge expressed concern that there is little scope for negotiation if the TSOs have set out positions that they will not move from including in relation to areas that are problematic for generators. The Chairman disagreed that concerns of the industry voiced in the workshop have not been addressed and stressed the need for the TSOs comply with their prudent operator obligations.
- Jane McArdle asked for clarification on what modelling information was being asked of OEMs and what provisions the TSOs are looking to include in the NDA. The Chairman explained that the TSOs are seeking for the industry to engage with the OEMs on the provisions of the NDA and revert to the TSOs with a form that would be acceptable to the industry. Kevin Hannafin noted that the requirements of different manufacturers are likely to be project specific.
- Ciaran Donnelly stated that he understood the OEMs to be opposed to sharing the source code. Jane McArdle thought that some OEMs may be prepared to share their source code subject to the NDA but was nervous about implications for changes being made to the source code. Ciaran Donnelly asked for the TSOs and OEMs to have a conference call to discuss the issues prior to any modifications being brought into effect. The Chairman agreed to review the proposals and discuss it with the industry so as to bring a new proposal to the next Panel meeting. David Cashman also invited comments (to be sent to him) to the minutes of the working group that he will re-circulate.

ACTION - TSO to consider the modelling requirements being proposed in GB as part of the modification proposals and to revise the proposed modifications.

ACTION - TSOs to engage with the industry prior to next Panel meeting so as to hear industry concerns.

ACTION – Industry to consider NDA provisions with OEMs with a view of agreeing a form of NDA acceptable to the industry and to provide this to the TSOs.

ACTION – David Cashman to re-circulate minutes of the working group for comment.

European Codes and ENTSO-E RfG Network Code Network Code readiness (Mark Norton)

- Mark Norton gave a presentation [[available on the EirGrid website](#)] on the development of the European Network Codes. The Capacity Allocation and Requirement for Generators codes have been put forward to the commitology process following the recommendations from the regulators. The European Commission is considering these commendations and is free to make such amends to the codes as it sees fit. It is expected that the Requirement for Generators and the Demand Connection codes will have passed the commitology process by the end of 2013 and will need to be implemented by the member states into national legislation structure within 2 years of such date.
- Mark Norton gave a brief description of each code and updated on where each code is in its development process. Since the presentation the mandate letter for the HVDC code has been received and will be for completion and submission to ACER in May 2014.
- The EirGrid Group have commenced discussions on what legislative ‘vehicle’ should be used to implement the nine codes on a national basis. The first code for implementation is the Requirement for Generators (RfG)

- The TSOs are seeking a process from the Network Code Application Team on how to implement the Network Codes. There will be multiple overlapping codes and the process will need to take this into consideration. The RfG will be used as a pilot to create a process for how the codes should be implemented at a national level.
- The RfG goes beyond the Grid Code; it will affect the Distribution Code and others documents. This is a much broader topic than just Grid Code and consideration will need to be given to the wider coordination of these changes.
- The Chairman asked members whether the changes should be implemented on a joint basis or on a jurisdictional basis. The Chairman explained that the TSOs are minded to carry out the pilot work on a joint basis.
- Mark Norton suggested the facilitation of subgroups to implement the changes and the Chairman invited interested parties to join the subgroup. For those who are interested in participating in such a group can you please send an email to Arlene Chawke at GridCode@eirgrid.com or Dalia Majumder at Dalia.Majumder-Russell@cms-cmck.com
- The Chairman opened the floor for discussion. The panel did not raise any objections to progressing on a joint basis with subgroups. Gary Thompson queried if there was a higher lever group, such as the DS3, to look across the entire industry.
- Mark Norton explained that EirGrid/SONI have set up a team to look at a number of issues such as the timing of implementation and the alignment of the Grid Code and the Distribution Code and to ensure no conflicts will occur between the Grid Code and the Distribution Code. EirGrid/SONI may not be the only constituents of the team – it is early days for the team.
- The Chairman summarised the broad agreement taken from the panel members at this meeting:
 1. A joint approach for the RfG. At the end of the process there will be a lessons learned and recommendations for the future.
 2. The formation of a subgroup with appropriate participation and regular updates given at the JGCRP meetings. A notice of three weeks will be given for nominations. Mark Norton stated that he would provide updates to the Panel on the wider progress.
 3. Broader discussion required on the wider coordination of issues.
- David Macartney viewed the final point as being of utmost importance – the overall governance arrangements is an important issue and must be right from the beginning.
- The Chairman stated that the TSOs welcome member feedback and comments in relation to the suggested approach.
- Mark Norton noted that his European colleagues believe that Ireland is in a good space and have a good structure in place to deal with the Network Requirements.
- Robert O'Rourke noted that in relation to the overall governance structure the Regulators are looking at how to coordinate this and in particular with the Market Codes. The Market Codes have a derogation so the first implementation will be the Grid Code related network codes. The Regulators are interested in the implementation process of the RfG and the interaction with the GCRP members. It was also noted that the Network Codes are a Member State obligation and engagement with the Departments may be needed.

Regulator Updates (Robert O'Rourke and Brian Mulhern)

- Robert O'Rourke updated the panel on the Fail to Sync Modification and noted that the Regulators have discussed the modification. The Regulators consider there is merit to a more involved discussion with the panel. This discussion could take place through a working group or the Grid Code Review Panel meeting. Further discussion is required on the implications of flexibility and the cost.
- Brian Mulhern also added a further issue - unintended consequences such as an increase to SMP.
- The Chairman noted that SMP is not part of the Grid Code in Ireland and outside the remit of the Irish Grid Code but he further noted that the SONI Grid Code is slightly different. He is more than happy to discuss.
- Robert O'Rourke noted that unintended consequences such as SMP need to be identified and the Regulators need to take it into account.
- Robert O'Rourke encouraged Generators to directly engage with Regulators on any issues they may have with the ENTSO-E Network Codes that are currently going through the process. It is important for the Regulators to be aware of issues in order to influence discussions.

SONI 'Demand Side Unit' Update (Alan Kennedy)

- Alan Kennedy updated the Panel that the 'Demand Side Unit' consultation is currently in draft form and in circulation with the TSOs. The TSOs are aiming to keep the positions harmonised between the two jurisdictions and the consultation is likely to be published on the SONI website on 10 May.

Any Other Business

- Next meeting – 11 September 2013 (Belfast)