

Minutes of Distribution Code Review Panel Meeting – 9th June 2015

<u>Present:</u>	James Brennan (JB)	Chairman
	Keith Moore (KM)	Secretary
	Nigel Morris (NM)	CER Representative
	Tony Hearne (TH)	DSO Representative
	Derek Hynes (DH)	DSO Representative
	David Cashman (DC)	TSO Representative
	Sean Doolin (SD)	PES Representative/ Independent Suppliers Representative
	Michael O'Hara (MOH)	ETCI Representative
	Ciaran Donnelly (CD)	Embedded Generators Representative
	Séamus Power (SP)	EirGrid
<u>Guest:</u>	Ger Beatty (GB)	Synchronous Generators Ireland
<u>Apologies:</u>	Stephen Walsh (SW)	ESB Networks
<u>Absent:</u>	Catherine Joyce-O'Caollai (CJ)	Major Customers Representative

1. Review of Previous Minutes

The minutes of the last DCRP meeting (24th March 2015) were accepted by all.

2. Membership of the Distribution Code Review Panel

At the DCRP meeting of 24th March 2015, the issue of representation of conventional generators was raised both in the discussion relating to application requests from new members and in relation to Mod #34, which has a direct impact on generators. The panel agreed that a subgroup would be setup to address the issue of the representation of the impacted cohort of generators.

TH gave an update on the discussions at this subgroup meeting.

TH summarised the outcome from the subgroup:

- CD clarified that CD represents IWEA only in relation to the DCRP
- Arising from the re-casting of the wind only representation and separately because of expected impact on upcoming FRT modifications, there is consensus that a gap exists in the small OEM's.
- TH engaged with OEM customers as part of another meeting topic and raised this with the OEM. OEM meeting has taken place and nomination made to rep the group of small OEMs.
- As a result Synchronous Generators Ireland rep was invited to the DCRP meeting for introduction and nomination discussion
- If panel realises that a new panel member/category is required, the panel may seek to invite that category and propose membership to CER
- If new application for membership is received by the DCRP this will be considered and if appropriate submitted to CER for decision

KM clarified that should a group/category wish to apply for membership to the DCRP a letter will be sent to these customers following their approach informing them that an individual nomination will not be accepted. The group in question must nominate a person whom they wish to represent them, and then put forward this nomination to

Minutes of Distribution Code Review Panel Meeting – 9th June 2015

the DCRP Secretary via the DistCodePanel@esb.ie mailbox. This can be in the form of a letter, which includes the names of the companies, signed by each representative of the company, nominating the said person to represent them on the Distribution Code Review Panel.

Should an application letter for membership be received (as allowed by sections 5.1(i), and DGC7.3 of the DCRP Constitution and Distribution Code, respectively) , it will be presented for consideration at the next DCRP meeting, for review by the panel and may be sent to CER for approval. It was also noted to the customers that all proposals need to be submitted 21 days prior to the next DCRP meeting, for inclusion on the agenda.

Synchronous Generators Ireland are currently being considered for membership.

It was also discussed that a Solar rep may be required in the future due to the upturn in solar applications.

3. New DCRP member proposal – Member introduction to the Panel

Mr. Gerard Beatty of Synchronous Generators Ireland recently contacted the DCRP to request membership. GB introduced himself and declared his intention to represent the Embedded Diesel and Gas generator suppliers of Ireland.

- GB stated that there was no representative of OEM suppliers of synchronous generators (**suppliers**) currently
- GB stated that he does business with all the suppliers he represents however the suppliers do not know each other.
- GB stated that his representation of this group of suppliers at the DCRP was of benefit to all in relation to sharing of information regarding the Distribution Code and collaboration with other suppliers abroad who cannot get the information about the Irish network easily.
- GB stated that the suppliers are contacted by plant owners in relation to issues that they do not have expertise on and it is the intention of the Synchronous Generators Ireland group and GB to represent both groups (owners and suppliers) at the DCRP in order to share information about the different matters that may impact suppliers, and ultimately the plant owner, regarding changes to the D Code.

KM advised that a letter submitted by Gerard Beatty had been circulated to all members of the DCRP for information and was on the DCRP agenda for discussion later.

The DCRP agreed to consider GB's nomination

4. Update on the implementation of approved modifications #22, #23 and #24

KM provided an update:

- 206 derogation applications received since March 2014.
- Approximately 59 derogation applications are pending submission to CER.

Discussion:

Minutes of Distribution Code Review Panel Meeting – 9th June 2015

CD expressed concern about the number of WFs with temp derogations that will ultimately not be able to comply by the CER granted expiry date of 31/12/15. The concern is that these WFs will be placed into cat 1 if they are still not compliant by this date, even if the WF has an op cert. This could result in 100's of MWs being placed into cat 1 and makes a mockery of the derogation process.

NM explained that the intention of issuing temporary derogations to customers was in fact to allow time for each customer to quantify the necessary arrangements required to become compliant via cost benefit analysis for example. This will allow the SOs to tailor any ongoing derogation to accommodate exactly the wind farm's needs while minimising the overall effect of derogations on the system.

DC stated that the derogation process helps EirGrid understand and manage non-compliance by collecting detail regarding turbines and what their capability is, for example. It also allows the SOs to determine how much non-compliance there is on the system. It is also useful to help determine if there is a type issue.

KM/DC stated that the process around managing temp derogations still needs to be figured out over the next few months. A workshop has been suggested.

CD welcomed the idea of a workshop and ultimately a review of the process in order to determine what to do going forward.

NM stated the intention of the regulatory side of things is to conduct the derogation process so that Ireland is able to have more WFs connected while still maintaining system stability and quality of supply.

It was agreed that a process for temp derogations would be progressed by the next DCRP meeting.

5. CER update on Distribution Code Modification Proposal #28 (Distribution Code Modification Implementation Process)

NM provided an update:

CER 'minded to' decision:

- the default position for modifications of the Distribution Grid Code, consistent with the Transmission Grid Code, is that all modifications to the Distribution Grid Code are retrospective. This recognises the benefits of keeping the Distribution Grid Code and Transmission Grid Code as closely aligned as practicable;
- each proposal for a modification to the Distribution Grid Code should clearly and fully address the arguments for and against full, partial or no retrospection. The issues that should be addressed include those canvassed in the documents from ESBN and EirGrid i.e.
 - a) costs and benefits to the system if there is full, partial, or no retrospection;
 - b) costs and practicalities of compliance for the affected customers if there is full, partial, or no retrospection;
 - c) the numbers, type and classes of customers affected and any sensible divisions and reasoning's for partial retrospection;
 - d) consequential or precedent value of any decision on retrospection for the modification;
 - e) process issues for applying full, partial, or no retrospection;
 - f) etc.

Minutes of Distribution Code Review Panel Meeting – 9th June 2015

- the DGCRP should make a reasoned recommendation to CER on the retrospection issues for each modification proposal (setting out any differing views on the DGCRP);
- CER will decide whether to apply full, partial or no retrospection to the modification and any conditions surrounding retrospection as part of its overall decision on the modification.

Discussion:

The Panel expressed reservations about the CERs minded to decision.

TH expressed concerns about the having retrospection as a default position

NM explained that having retro as the default position was in order to benefit the system.

TH asked if the onus was on the proposer to justify the submission of a change to the code?

NM explained that the proposer should collect enough details from customers and SOs regarding the benefits so that the arguments for/against can be assessed by Panel and CER. CER wish for proposers of mods to look at the impact on both sides i.e. the user and the system operator.

It is not CERs intention to accept full/partial retrospection on a half argument. If we do not get 75% SNSP then the consumer will need to pay and it is up to CER to protect the customer.

DC stated that the process was not well defined and that a more detailed description of how the process is to function is required. DC also asked how do we ensure equity across users of both the transmission and distribution systems?

NM explained that this was not possible in all cases and that future retrospection decisions would necessarily apply a somewhat rough rule of thumb because it would likely be impossible to structure each derogation in sufficient detail to cover the exact circumstances of all customers.

DC stated that this process excludes the need to provide details which would otherwise help determine how much non-compliance is on the system and the proposed process needs to be thought through more before a decision is made. DC also said that full retrospection would apply appropriate pressure to wind farms to show why they can't comply, and that reduces the scope of derogations that they are likely to apply for.

CD stated that the onus should be on the proposer to justify the need for retrospection and welcomed the idea of cost benefit analysis but if there were huge implications then it is counter intuitive. However, IWEA disagree with changing the current process if the ENCs are going to change the process again in a years time.

MOH expressed a concern regarding the technical issues with non-compliance and how hard it is to get OEMs to engage re. provision of information of turbines.

CD agreed that for older turbines sets that are in non-compliance OEMs are not motivated to do studies on an adhoc one-off basis.

DH stated that the intention of the mod on retrospection was to eliminate the unnecessary need for multiple derogation requests every time a mod to the code was approved. The biggest concern with applying default retrospection for all mods is that

Minutes of Distribution Code Review Panel Meeting – 9th June 2015

there is a potential for a modification to impact 100's of thousands of customers one day.

NM expressed the position of CER is as stated above and took an action to write to the DCRP in relation to their decision.

6. Class Derogations

NM noted that currently, CER considers that it has the power to make class order derogations. However, CER considers that the wording of the derogation provisions of the Distribution Grid Code require an application by a person affected by the specific provision from which a derogation is requested. Therefore, CER considers that a modification to the Distribution Grid Code is required if the DGCRP wishes to allow the SOs, or the DGCRP itself, to be able to request/propose derogations, whether individual or class. NM presented a proposal to permit persons other than a person affected to propose derogations, class or individual. NM suggested that the use of class derogations in the D Code may be a useful tool for use in the modification retrospection process discussed in point 5 above.

Example: Derogation application for WF connected in 1972. Turbines cannot comply with the current D Code. Class derogation could be issued by CER to state all of same turbine type are derogated.

- This would save time and energy regarding multiple derogation applications from customers and subsequent work by SOs and CER re. decision.
- Any user currently can apply for a class derogation however the derogation is required to come from an affected user.
- CER would support a mod to the code to apply for a class derogation however deem it inappropriate for CER to submit a mod for same.

NM explained that this was an alternative to writing retrospection provisions into Distribution Grid Code modifications.

CD welcomed this approach and offered to submit a mod to the code.
NM took action to send CD some suggested wording for the code.

DC noted that a modification to the existing derogations process in the Distribution Code would be required to enable this and that any modification would be divergent from the Grid Code process.

7. Proposed Distribution Code Modifications

New

a) Modification Proposal #36 – Power Park Modules

TH stated that this mod is as a result of the number of Solar applications for connection to the Dist system ~150MW.

TH explained that the mod was for an extension of WFPS requirements to PV and other Non-Synchronous generation and that the intention was to extend the scope of DCC11 ADDITIONAL REQUIREMENTS FOR WIND GENERATION to include any other form of generation, including PV, which presents to the Distribution System through an inverter.

TH stated that requirements under DCC11 are driven largely by the combined effect that large penetration of Non-Synchronous generation on the operation of the Transmission System. To date, this cohort of generation has been comprised, almost

Minutes of Distribution Code Review Panel Meeting – 9th June 2015

exclusively of wind generation. It is now apparent that other forms of generation, which have an inverter between the primary source and the Connection Point, present the same technical challenges to System Operation. It is logical therefore that similar, if not the same technical requirements should apply to them. This approach is also consistent with that which will be taken upon adoption of the European Network Codes, most notably the RfG, wherein the document structure is divided between Synchronous Generators and what are termed Power Park Modules.

TH explained that the proposal was not finalised and should be by the next DCRP meeting.

Update

b) Update to Modification Proposal #34 – Volt Freq FRT for all generators

- TH presented on the proposed modification for FRT for all generators
- Following discussions with GB, TH explained that the mod was not finalised and requires more thought before a formal submission is ready.
- Should be ready by the next DCRP meeting

c) Update to Modification Proposal #35 – Power Factor requirements for Type C and Type D WFPS connections

- SP presented the updated modification to the panel for approval.

Discussion:

SP gave an update on engagement since the last DCRP meeting:

- Following the last DCRP a subgroup meeting was held with CD, TH, NM, DC and SP in attendance. The outcome was largely positive with a change in wording agreed and reflected in the updated modification. CD was to bring back to IWEA mods panel to discuss.
- SP subsequently discussed mod with CD following discussion with IWEA. There were no issues from a technical perspective as WFPSs have the capability. There were no issues from a retrospection perspective.
- CD raised the issue of the potential of a more expensive connection if the DSO re-designed the connection of a WFPS that applied for a connection offer modification, to operate at unity power factor.

SP reiterated that the modification was about the capability of WFPSs and not about DSO connection policy and the intent of the modification is to use inherent capability of the WFPS to reduce the reactive compensation requirement. SP stated that in the areas investigated whereby operating the WFPSs at unity would reduce the reactive compensation requirement the driver for reactive compensation was the embedded WFPSs themselves. If the WFPS did not build or they were transmission-connected there would be no requirement for reactive compensation in these areas.

SP explained that the Network Codes will cover the situation from 2018 onwards. and the requirement will be $0.33 Q/P_{max}$ both leading and lagging for WFPS >5 MW so the WFPSs potentially impacted by the modification are those that fall into ***all*** the following categories:

- Contracted (i.e. not yet connected) WFPSs with Type C, Type D and Type B <5 MW connections

Minutes of Distribution Code Review Panel Meeting – 9th June 2015

- request a modification which would lead to a new connection study (i.e. not a name change or turbine change or change of ownership)
- the new connection by being designed to unity power factor instead of 0.95 leading power factor would lead to a more expensive connection

SP explained that studies have been done by EirGrid that show that there are significant benefits to operating closer to unity. The ability to operate at unity can significantly reduce the reactive compensation requirements on the system and has an overall system-wide benefit.

CD queried what would happen if a WFPS could not comply.

SP explained that as per the discussion at the subgroup meeting a derogation is only required if the WFPS has first been requested to operate to at a new power factor and then cannot comply.

Three nodes containing Type C WFPSs were studied by ESNB. Even though the connections were designed to 0.92-0.95 leading power factor, all the WFPSs in two of the three nodes were capable of being operated at unity power factor without breach of the DSO planning standards. One of the three nodes did not remain within planning standards when all WFPSs were operated at unity.

TH stated, as per previous meeting, that operating at unity will likely have network impacts in terms of voltage rise and reduce capacity for future connections and that DSO studies would be required in all cases where the WF was requested to operate to Unity to ensure that network was capable of sustaining the new PF requirement and that a new process and discussion on such a process would be required with the DSO Renewable Planning Department before implementing any change.

TH took an action to develop a Change of Process Notification (CPN) with Renewable Planning, ESNB.

JB asked if this change gives quantifiable MWs to solve the issue of reactive compensation?

SP explained that having Type C / D connected WFPSs operate at unity or closer to unity does not fully remove the need for reactive compensation on the system but that it significantly reduces the requirement.

KM clarified for all that clause DCC6.9 of the D Code states that the PF range defined in the clause for WFs is a min requirement.

SP emphasised the urgency of approving this modification in relation to Capital Approvals pending approval

TH stated that ESNB were open to a methodology where by contracted Gate 2 or Gate 3 customers would not be negatively impacted by this mod if they apply for a modified offer, i.e. Gate 2 and Gate 3 modified connections would continue to be designed to a 0.92 - 0.95 leading power factor until the Network Codes come into force.

The Panel agreed to approve this modification in principle, pending discussions with DSO and agreement regarding the process for implementation and circulation of an agreed document by the DSO. TH agreed to discuss this with the Renewable Planning Department and develop a document which comfort on modified offers. This will be circulated to the members.

Minutes of Distribution Code Review Panel Meeting – 9th June 2015

EIRGRID POST-MEETING NOTE: The intention of the modification is to optimise the system and not to penalise WFPSs. If a WFPS, having been requested to change its power factor, cannot comply due to turbine age/technology and requires significant works/cost to become compliant, the TSO is of the view that this is an unnecessary and unexpected cost to the WFPS. However, such WFPS would be required to submit a derogation application with sufficient supporting information to justify this conclusion. In addition, if there was significant work being undertaken at an existing WFPS site, such as a major refurbishment and/or an extension, the WFPS would be expected to make all reasonable efforts to maximise compliance with the new standards.

8. New DCRP member proposal – Consideration of new member application

The membership of 'Synchronous Generators Ireland' represented by Ger Beatty was discussed between the Panel members and it was agreed that a formal request should be submitted to the CER to approve the addition of Ger Beatty to the DCR Panel.

The Secretary took action to submit this formal request to CER.

9. Any Other Business / Items for discussion at next meeting

DC proposed a mod on 'bumpless' transfer which will be formally presented at the next DCRP meeting. Concern is that delays will affect the issuance of op certs.

CD has concerns that signal lists in relation to reactive power are not being issued. TH stated that DSO/TSO are working through this process. DC stated that this should not affect op cert issuance but will revert on this.

10. Next Meeting Dates:

- The following dates were proposed for the 2015 meetings of the DCRP:
 - Meeting 3: Tuesday 8th September
 - Meeting 4: Tuesday 1st December
- Next meeting invite will be issued in the coming weeks

**Keith Moore,
Secretary**

25th June 2015 (review of minutes issued on 9th June 2015)