

DS3 Programme Advisory Council Meeting Minutes

Date: 19/01/2016
Time: 10:30 – 15:30
Venue: Sandymount Hotel, Dublin.
Chair: Louis Fisher
Attendees

Name	Surname	Organisation
Rodney	Ballentine	NIE
Graham	Brennan	SEAI
Kevin	Chan	GE
Mo	Cloonan	CER
Bernie	Comey	DCENR
Michael	Conlon	DIT
Joe	Duddy	RES
Paddy	Finn	Electricity Exchange
Peter	Harte	Element Power
Tony	Hearne	ESB
Mick	Hogan	ABB
Carsten	Junge	GE
Mark	McGranaghan	EPRI
Andrew	McCorriston	UREGNI
Gerry	McTiernan	DCENR
Brian	McHugh	UREGNI
Patrick	Mohr	NTMA
Mo	Cloonan	CER
Robert	O'Rourke	CER
Gráinne	O'Shea	ESB
Donal	Smith	Consultant
Colin	Spain	Gaelectric
Peter	Thomas	Nordex
Robbie	Aherne	EirGrid
Eoin	Kennedy	EirGrid

Apologies:
 Ruth Buggie

Industry Perspective

- Michael Conlon (DIT) gave an overview of DIT and the current developments of the Grangegorman Campus. The research is focused in a number of areas including Photonics, Communication Networks and Electrical power research.
- Mick Hogan (ABB) gave an introduction to HVDC technology. Two types of HVDC technologies were discussed LCC – Line Line Commutated Converter and VSC - Voltage Source Converter. A summary of the projects currently being undertaken by ABB were presented. In relevance to DS3 the ability for HVDC to provide frequency control and reactive power support was discussed.
- Paddy Finn (Electricity Exchange) – presented on the Strengths, Weaknesses, Opportunities and Threats of Demand Side Management. The presentation outlined the evolution of DSM and the potential to contribute to the efficient operation of the Power System.
- Patrick Mohr (NTMA) described the mandate of the Ireland Strategic Investment Fund (ISIF) and how the DS3 Programme is perceived from the finance/investment industry.

DS3 Programme Update

- Robbie Aherne gave a general status update on the DS3 programme and the main developments since the last DS3 Advisory Council.
- The TSOs discussed the system trial where the SNSP limit has been increased to 55%. The trial started on the 16th October 2015 and to date no adverse system behaviour has been observed. From 16th October to 8th January the SNSP was over 50% for 10% of the time. The trial is expected to end Q1 of 2016. The next steps will be to conduct analysis of the trial results and focus on further changes to the operational metrics to increase the SNSP limit.
- The TSOs outlined the timelines for System Services – Interim and Enduring arrangements. It was highlighted a number of consultations were published since the last Advisory Council. This includes the consultation on the Volume Calculation Methodology closed on 04/12/2015. The TSOs are currently working through the responses and will soon begin work on the decision paper.
- The TSOs highlighted the current development in the RoCoF Implementation Project. Generator studies are progressing with mostly positive feedback, with further generators close to compliance. The Phase 2 report of the RoCoF Alternative & Complementary Solutions Project was published on 22/12/15 for industry comment. The closing date for comments is the 19/02/16. A link to the report can be found [here](#).
- An update was provided on reports which are in the process of going through the Operational Policy Review (OPR) process e.g. EWIC Export study, Cauten Nodal Voltage Control Pilot Project, Voltage Dip Induced Frequency Dip study.
- A brief update was provided on the work which is currently being done as part of the TSOs-DSOs Engagement Process on the Nodal Controller Pilot Project in Cauten. The project has the potential to avoid transmission network reinforcement by realising the potential of the reactive power capabilities of Distribution connected generation. In Northern Ireland the study to investigate using smart power factor for embedded WFs is nearing completion.
- The TSOs highlighted the Demand Side Management residential project is currently underway. The Residential Consumer DSM Scheme competition was opened on the e-tenders platform on 17/11/2015. The completion tender closed on 22/12/2015 – a number of submissions were received by industry and the Preferred Bidder is expected to be identified this month.

- The TSOs outlined the timelines for the 2016 DS3 workstream plans – following internal and external engagement they are expected to be published in Q1 2016.

Actions from the Last Meeting

- Robbie Aherne went through the actions from the last meeting and closed out any actions which required an update.
- It was agreed to carry over action item 1 to the next meeting as there was further discussion on the topic.

Action Items

1. TSOs to investigate if regular data (e.g. hourly) for the total system inertia can be published on the EirGrid website in a similar manner to the frequency data **(TSOs)**
2. TSOs to follow up with adding a new representative from National Grid and representatives from the conventional generation industry and the wind industry. **(TSOs)**

RoCoF:

Generator Studies Project

- David Cashman provided an overview on the progress of the RoCoF implementation project including the overall project timelines for Generator Studies Timelines. TSOs-RAs-Generator trilateral meetings were held in November. The meetings were broadly positive, with some generators close to compliance and the majority of units on track to meet their study deadlines.
- The TSOs published a proposal for Rate of Change of Frequency Remuneration Mechanism Consultation in December. A six week consultation is currently in progress a link to the paper can be found [here](#). Industry comments are being accepted until the 08/02/2016. A recommendations paper will be issued to the SEM-C in March 2016.
- An advisory council member noted the proposed remuneration mechanism is aimed to compliment the RoCoF GPI calculation. Although the size of the generator has no bearing on the cost of generator studies. It was also noted that the timing of the introduction of the proposed remuneration mechanism may be too late to expedite generator studies. TSOs advised a six week consultation is currently underway and all responses on the proposed mechanism will be considered

TSO-DSO Implementation Project

- In Ireland, ESBN have had significant engagement with embedded wind farms to implement changes to protection settings. The latest figures indicate that approximately 40% of MW are outstanding.
- Discussions are on-going with non-wind embedded generator representative to change settings. The DSO has provided the TSO with MW quantity of non-wind embedded generation connected system. The TSO will perform impact assessment studies based on these volumes provided.
- A revised D-Code modification has been drafted by ESBN for the ride through capability of embedded generators for frequency, RoCoF and voltage ranges. The modification was agreed in principle at the December Distribution Code Review Panel meeting and subsequently was forwarded to the CER for approval.

- In Northern Ireland, Strathclyde University were appointed to carry out research into the risks of introducing up to 2Hz/s RoCoF protection setting for embedded generators using the same proven methodology as used in GB. NIE are progressing with LoM protection settings studies.
- It was noted following completion of the studies three technical reports of the four work packages will be produced, with key findings published.

System Services:

- A brief update was provided on the System Service timelines for the Interim & Enduring arrangements. A number of upcoming consultations were also discussed; this included the Scalar design paper, due for publication in February
- The consultation on the Volume Calculation Methodology and the Regulated Tariffs Calculation Methodology closed on 04/12/2015 and 18/12/2016 respectively. TSOs are currently working through the responses and will soon begin work on the decision paper.
- The TSOs have worked with DotEcon on the development of a detailed auction design proposal. The resulting report was submitted to the RAs in December 2015 and was published on 22/12/2015 alongside the RAs' auction design consultation paper.
- Eoin Kennedy provided an overview of the planned stakeholder engagement activities. A Workshop was confirmed for 01/02/2016. The focus will be on auction and scalar designs.

Regulatory Update

- Mo Cloonan (CER) – provided a Regulatory Authorities update. The focus of this presentation was on the Auction Design Consultation.
- The RAs highlighted that SEMC has recognised that there is a requirement to achieve a level of co-ordination between the DS3 and I-SEM programmes.
- The RAs have reviewed the DotEcon report on Auction Design and have developed a comprehensive Consultation Paper, highlighting key considerations for the detailed auction design. This paper, published 22/12/2015, will close for consultation on 12/02/2016.
- In response to a question from an Advisory Council member, the RAs reaffirmed that the current position of SEM Committee is that the DS3 System Services auction will not be combined with the CRM auction in 2017 and that separate auctions will be held. In addition, the RAs are considering how best to align the timing of the two auctions.

55% SNSP Trial Analysis

- Ivan Dudurych presented the SNSP trials study.
- The purpose of the study is to conduct analysis following occurrences when SNSP goes above 50%.
- Based on this analysis to date no adverse system behavior observed. The trial is set to complete at the end of Q1 2016. Following the conclusion of the trial a decision will be made, based on the analysis carried out, whether or not to increase the SNSP limit to 55% on a permanent basis.

RoCoF Alternatives

- Martin Eagar presented on the RoCoF Alternative & Complementary Solutions Phase 2 Study – see report [here](#). The purpose of the study was to determine the extra volume of synchronous and or synthetic inertia to maintain RoCoF from 0.5Hz/s and allow 75% SNSP.
- The outcomes of the analysis indicated both Synchronous and or Synthetic inertia as possible alternatives to RoCoF.
 - Synchronous Inertia – indicated approximately 12,000 MW.s of supplementary synchronous inertia being added to the 1 Hz/s base case scenario. This represents a system inertia of 20,000 MW.s
 - Synthetic Inertia – in order to meet the RoCoF criteria devices should be capable of responding within 100ms and be capable of ramping to full output within 200ms of the initial device response.
 - A combined synchronous and synthetic inertia response to system events may deliver a suitable result.
- It was noted the easing of the system constraints in the study reflects a ‘worst case’ and may not be a representative dispatch for assessing the system requirements for alternatives. The TSOs noted that the study was performed with less system constraints in order to determine the base inertia requirement to resolve the RoCoF issue.
- A discussion took place on the current technologies which may currently be capable of delivering the response time for Synthetic inertia and should be investigated further to take advantage of what is currently available on the power system. The TSOs stressed the RoCoF alternative project is a back-up to the primary RoCoF and not a procurement exercise. The plan is to advance the current generator studies.