DS3 Programme Advisory Council Meeting Minutes

Date: 23/05/2018
Time: 10:30 – 15:35
Venue: SONI, Belfast
Chair: Jon O' Sullivan
Attendees:

Full Name	Company/Organisation
Mo Cloonan	CRU
Peter Harte	Element Power
Ross McNally	IWEA
Paul Blount	ABO Wind Ireland LTD
Federico Rueda Londono	Vestas Wind Systems
Meabh Cormacain	NIRIG
Ronan Mullan	Mullan Grid
Graham Brennan	SEAI
Mark Coleman	SSE Renewables
Padraig Lyons	ESB Networks
David Hill	NIE Networks
Colin Darcy	Tynagh
Andrew McCorriston	UReg
Patrick Mohr	NTMA
Jon O' Sullivan	EirGrid
Ian Connaughton	EirGrid
John Young	EirGrid
Barry O'Connell	EirGrid
Noel Cunniffe	EirGrid
Eoin Clifford	EirGrid
Lorraine Whyte	EirGrid

Apologies:

Rodney Ballentine, Joe Duddy, Carsten Junge, Jag Basi, Tony Hearne, David Connolly, Bobby Smith, Bob Hanna, Bernie Comey, Gerald McTiernan, Mark McGranaghan, Paddy Finn, Donal Smith, Paul Bell, Denis McBride and Michael Conlon.

Industry Perspective – Meabh Cormacain, NIRIG

- An overview was given of the existing renewable energy strategy in Northern Ireland, the United Kingdom and the EU. The goals, objectives and targets of the Strategic Energy Framework 2010-2020 were discussed.
- NIRIG have developed an Energy Strategy for NI focused on low-carbon energy and decarbonisation of the energy sector up to 2050. Pillars of the document include: long-term policy certainty, cost effectiveness and investment (access to EU funding post Brexit).
- MC emphasised the importance of setting targets – as they help to influence local government decisions and acts as a useful tool for evaluating progress.
    - **Action:** MC to send the 'NIRIG Energy Strategy for NI' to the TSO for distribution within the DS3 Advisory Council.
- A discussion was held on the modelling approach and inputs of the paper.
    - The research being done by Baringa has shown that 70% RES is possible and cost neutral. It was noted that the research will be made available in two months' time.
    - TSOs cautioned the use of "technically possible" as the analysis is primarily techno-economic based. The TSOs noted that significant further analysis would need to be carried out in order for the ambitious 2030 scenario to be proven technically feasible.
- To encourage early engagement on the setting of the 2030 targets, NIRIG are arranging meetings with NI stakeholders in June.
- NIRIG requested an All-Island system study looking to 2030-2050.
    - TSO explained that the TSO lead Horizon 2020 'EU SysFlex' project will be looking at this. NC noted that the TSO 'Tomorrow's Energy Scenarios' will be looking at the NI element – input will be requested from industry during the summer.

DS3 Programme Status Update – Ian Connaughton, EirGrid

- IC discussed the DS3 Advisory Council report.
- Update given which covered the permanent system operation of 65% SNSP. Noted that a new All Island wind record was reached on 14th of March - 3,655 MW.

- An update was given on Regulated Arrangements Procurement (11 Services).
- The TSO made the decision to only procure 1 out of the 3 services for the Regulated Arrangements Procurement as FPFAPR and DRR can only be availed of post > 70% SNSP.
    - FPFAPR and DRR will be procured at a future gate (gates open every 6 months).
- An overview was given of recent publication of the Volume Capped and Market Ruleset consultations. The decision paper for the Market Ruleset will be issued at the end of May and the Volume Capped recommendation paper will be published at the end of June.
- The 2018 QTP aims to look at solar, DSO/TSO interaction and other technology over the summer.
- Key Operational Milestones were discussed – the inertia floor increase from 20,000 MWs to 23,000 was highlighted by NC. The system has never reached 23,000 MWs in normal operation due to RoCoF and 8 min generation units constraint.
    - Discussion held on Min Gen, Mid Sets and generators dropping their load.
    - TSO highlighted how QTP is a road path available to industry to trial new technologies and address system needs – i.e. reducing Min load.
    - NC noted that 8 set rule acts as a proxy offering reactive power as well as addressing inertia issues on the system, and that inertia required by the system is inherently linked to RoCoF.
    - The DS3 voltage trajectory tools will offer the TSO control centre to undertake long-term forecasts of the systems voltage needs and schedule units on and off accordingly.
- The six-month change freeze to the Control Centre as required for I-SEM was noted as moving to align with new I-SEM go-live date.
- A discussion was held on the recent Storage Technology Workshop.
    - RA noted that discussions are taking place on this issue in regards to the PSO levy. No decision has been agreed.
    - Industry suggested that units should have the option to procure Over Frequency and Under Frequency capacity separately.

Rate of Change of Frequency (RoCoF) – TSO Update – John Young, EirGrid

- An overview of RoCoF was given – 63% complete.
    - There are units behind schedule and issues remaining in Ireland and Northern Ireland. Conventional generation stands at 57% complete. It was recognised that most of large-scale delays are due to complication arising during the study phase. However, in the last few weeks, a number of large units have moved into the testing phase.
    - Noted that status remains red as deadline for RoCoF completion was December 2017.
- Increased engagement with all parties, continued effort on what needs be done to get the remaining units over the line.
    - EirGrid/SONI acknowledged the hard work done on all sides to get here especially in regards to dispatchable wind.

Rate of Change of Frequency (RoCoF) - ESB N Update – Padraig Lyons, ESB Networks

- An overview of ESB Network RoCoF status was outlined - Wind is now considered complete.
- Non-wind is on track: 241 MW out of 330 MW complete. Expected to complete the remainder over the summer during the shutdown period.

Rate of Change of Frequency (RoCoF) – NIE N Update – David Hill, NIE Networks

- An overview of NI RoCoF status was outlined. Since 22nd of May 2018 95% or 914 MW of LSG has been successfully changed - 5 sites remaining. These sites are expected over the summer period – noted that these units are from the 1990s and require G59 relay changes.
    - Noted that the total capacity changed includes 100 MW of solar.
    - NIE acknowledged the hard work done by industry to get here.
- An update was given on the 1,500 Small Scale Generation (SSG) Protection Settings sites. NIE Networks received approval from the Utility Regulator regarding the Distribution Code modification for SSG Protection Settings.
    - The expected timescale for modifying SSG interface settings is approximately 18 months - 30th of September 2019.
    - TSO acknowledged that an 18-month delay would cause a significant delay to the planned SNSP timelines and lead to delays in implementing new Operational Policies for high RES-E.
    - NIE Networks have assigned G59 approved contractors. Cost by site is expected from £500 - £1,500 (if a new relay is required – required for older units built in the 80s/90s).
    - Letters have been sent out this week. The letter states that non-compliance of the D code can lead to sanctions - including disconnection. Letter request acknowledgement and to inform NIE Networks of the contractor chosen for the work. NIE Networks will monitor the level of responses received.
    - NIE Networks emphasised that the 18-month timelines isn't when they expect all RoCoF settings to be complete but that non-compliant units will be in breach of D code.
- TSO recognises the hard work being done by NIE Networks on the SSG units. Noted that plans to address non-compliance will require credible information on the units to make any changes to operational policy and undertake any RoCoF trials on the system.
- Concern raised by industry on the effects of the delay on curtailment to wind and the financial impacts as a result of this.

Nodal Controller – ESB Networks – Padraig Lyons, ESB Networks

- An overview of ESB Networks SCADA screen for the Nodal Controller was given. It was acknowledged that technical issues were experienced and are now resolved.
    - Commissioning and testing programme was agreed between ESBN and TSO. Operational Protocol agreed for conduct of testing.

- An overview of other issues were discussed including; lack of wind, control room resource challenges (TSO and DSO) and the time taken to resolve technical issues. Overall, ESBN are happy with the progress being made.
    - Industry encouraged communication between the DSO and wind industry – companies will invest in reactive capabilities for type A & B windfarms if a payment option may become available in the next few years.
    - Noted that the service would most likely provide benefit in the South East – high voltage areas of the system/local area concerns.

SNSP Replanning – Noel Cunniffe, EirGrid

- Discussion held on the need to review the SNSP programme timelines due to the 18 months delay of the NI SSG protection settings.
- NC explained that the 65% SNSP target was met as set by the original programme timelines.
- Proposed SNSP replan programme timeline was shown to the Advisory Council for the 70% & 75% SNSP implementation. Feedback was requested during the meeting or by email.
    - Current progress was reported: ramping policy is complete, control tools are focusing on system stability and progress is being made on these, I-SEM delay has extended the control centre tools testing timelines – expected to move some deliverables to Q1 2019. Will be in place before it's possible to move system due to RoCoF limit.
    - Discussion held on 2019 timelines; inertia floor and SNSP 75% will be delayed, as time is needed to trial system at 70% SNSP. VDIF policy will help System Services implement DRR + DPFAPR.
- Industry would like to see the financial cost of the program delay – due to increased constraint placed on wind. Industry suggested new metrics which could be used to assess DS3 progress during SNSP increase delay time.
- **Action:** TSO to investigate new metrics for assessing progress in reducing wind curtailment separate to SNSP constraints, e.g. Minimum Generation Levels and Negative Reserve.

Nodal Controller – NIE Networks – David Hill, NIE Networks

- Presentation given setting out on overview of Northern Ireland Nodal Controller. Project timelines were discussed.
    - If Phase 1 is successful, roll out of Nodal Controllers at other cluster substations - subject to a positive CBA outcome for each site.
- Query raised about units connecting and not taking share of the cost involved. DSO explained that clusters in question are full so not likely to need new units soon.

Ramping Policy – Noel Cunniffe, EirGrid

- Presentation provided an overview of the concepts of ramping. System Ramping Terminology was also discussed.
- The basics of how the ramping reserve requirement is calculated was shown.

    - Example used talked through the calculation of future requirements.
- Noted that ramping requirement will increase with increasing wind. Both variability and uncertainty influence the ramping requirement.
- Next steps include: Define ramping policy, scope, develop and procure and trial Ramping Tool in Control Centre (train Control Centre operators).

Oscillations - Barry O'Connell, EirGrid

- Overview of oscillations events seen from 2014 to 2018. Caveated that this is working theory at this point in time.
- Overview of PMU devices installed across the island to provide more information on the causes.
- Summary on operational protocol for managing oscillations.
    - Highlighted that TSO monitoring of the system is one of the best in the world.
- Query raised on whether there is a cost to operational units for having APC mode turned on.
    - TSO responded that there is a small cost but APC is turned on for system security reasons.
    - APC will be looked at as ongoing solution to oscillations depending on outcomes of the studies.
- Next steps include more investigations into adding more dampeners to the system.

EU SysFlex – Noel Cunniffe, EirGrid

- Update given on Work Package 2.1 of the EU SysFlex project.
- The first significant deliverable of the Horizon 2020 project is a Literature Review assessment of 28 RES integration studies.
- Overview given of the technical scarcities defined as part of deliverable 2.1 including; lack of frequency control and voltage control, rotor angle instability, network congestion and degradation of system adequacy.
- **Action:** TSO to present on progress of scenario development, model development and 2030 analysis at the next Advisory Board.

AOB:

N/A.

Actions:

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