

DS3 Programme Advisory Council Meeting Minutes

Date: 19/03/2013
Time: 10.15 – 13.45
Venue: Radisson Blu Hotel, Belfast.

Chair: Andrew Cooke

Attendees: Michael Preston, Michael Conlon, Tony Hearne, Stephen Walsh, Mark O'Malley, Colm O'Conaill, Conor Kavanagh, Donal Smith, Grainne O'Shea, Paul Brady, Joe Duddy, Peter Duffy, Gerry Hodgkinson, Peter Harte, Ian Luney, Martin McCarthy, Brian Carroll, Catriona Diviney, Paul Brandon, Peter Thomas, Tom McCartan, Ivan Duduyrch, Andrew Cooke, Yvonne Coughlan, Jon O'Sullivan, Peter Baillie, Mark Gormley, Simon Tweed, Eadaoin McLoughlin

Apologies: Andrew McCorriston, Pamela Walsh, Carsten Junge, Colin Spain, Mervyn Adams, Paul Hickey

Review of Actions from last meeting

The actions from the last meeting were reviewed.

It was clarified that the reviews on Biomass and Storage Technologies were not circulated to Advisory Council members as these reviews were conducted as an exercise by a student on placement with EirGrid during the summer and do not necessarily reflect the TSOs' views on the topics.

There was a discussion about organizing a meeting to develop a template for the curtailment reports. IWEA expressed concern that this may slow down the process as they had already done a large amount of work in this area. It was decided to take the comments to date from IWEA as a starting point in the development of this template. There will be representatives from all priority dispatch renewable producers at this meeting.

Action Item:

1. TSOs to organize meeting to discuss curtailment report template by second week in April.
2. Curtailment report template to be agreed by end of Q2 2013

DS3 Programme Update

Summary of Presentation

Yvonne Coughlan gave a general status update on the DS3 programme which included updates on System Services, Grid Code modifications, Demand Side Management, Renewable Data, System Tools and System Policies.

The Minimum Generator study, which is investigating the minimum number of conventional units needed online in order to maintain system security, was briefly discussed. The Distributed Voltage Control study which is investigating operating modes for wind farm clusters was also mentioned.

Discussion

There was a discussion about the need for further Joint Grid Code Working Group meetings. The general consensus was that the meetings were useful and the need for any additional meetings will depend on whether any new issues emerge.

It was pointed out that the voltage control workstream had received very little attention at the Advisory Council meetings to date. The TSOs stated that there have been some voltage control studies carried

out recently, the results of which they hope to be able to share at the next Advisory Council meeting. This workstream is also highly dependent on the wind farm modifications which have only recently been approved.

There were also questions regarding the timeline for the Minimum Generator Study which is currently underway. The TSOs stated that they hope to have initial results at the next Advisory Council meeting.

ESBN stated that the drafting of the new wind farm modifications for the Distribution Code is at an advanced stage and they should be ready for the next DCRP meeting. NIE also commented that the Wind Farm Settings Schedule document, which is currently with UREGNI, covers both Transmission and Distribution connected wind farms. Separate to the Grid Code process, NIE is taking forward the work required to facilitate governance of the document against the NI Distribution code.

Comment

It was noted that the System Services workstream has taken slightly longer to progress due to the high volume of comments and input received during the consultation process.

Action Item

3. TSOs to check the SNSP level during the All-Island Wind Record which occurred on 18/12/2012
4. TSOs to present results of Voltage Control studies at the next Advisory Council meeting
5. TSOs to present initial results from the Minimum Generator study at the next Advisory Council meeting
6. DSOs to draft new wind farm modifications for the Distribution Code

WSAT Update

Summary of Presentation

Ivan Dudurych gave an overview of the WSAT tool which has been live in both the EirGrid and SONI Control Centres since November 2012. The main aim of WSAT is to monitor the transient and voltage security on the power system in near real time for the Real case, the Wind Increase case and the Load Increase case. This can be used to establish a secure wind or load level. At present, WSAT does not include a frequency security criterion and does not account for active and reactive power ramping requirements. WSAT uses SCADA data and runs every 15 minutes on a continuous basis. With the current levels of wind, no wind-related issues regarding transient and voltage stability have been identified. At the moment, the operation of the system is broadly determined using offline studies while WSAT is used as a back up to avoid transient and voltage instability. However, confidence is being built in WSAT as a Control Centre tool; WSAT has been used to assess the impacts of EWIC high and low frequency tests and the tool demonstrated a high level of accuracy of predicted system responses.

The next steps in this workstream include the improvement of Governor and Load models through the comparison of WSAT results and actual data. This will allow the inclusion of a frequency sensitive study capability in WSAT.

Discussion

There was a discussion about the ability of WSAT to enable the increase of the SNSP limit. It was clarified that at the moment WSAT is not being used for frequency response monitoring but there are plans to update this in the future. NIE queried whether or not the impedance of the Distribution network was modelled in WSAT; the TSOs responded that some conservative assumptions were made.

Comment

It was noted that the TSOs are not seeing transient stability as an issue at present; RoCoF is the main issue.

System Services

Summary of Presentation

Jon O'Sullivan presented on the System Services workstream. The main topic covered in this presentation was the Third System Services Consultation paper. There were 20 bilateral meetings held with interested parties and 26 responses were received. There was a broad consensus from participants on the valuation approach for System Services and the method for the allocation of funds between products. However, there were concerns regarding a number of issues. The impact of System Services payments on capacity payments was one such concern. The length of the contracts was another issue with participants expressing the view that a short contract would be a risk in terms of investment. The majority of investors tended to favour payment for capability rather dispatch, however, some larger portfolio investors were less vociferous on this matter.

The TSOs aim to send their recommendations to the RAs by the end of Q1 2013. However, the timeline to achieve this is very tight. This submission is expected to include:

- A cover letter
- Recommendations paper
- Detailed modelling analysis
- Likely spend between 2015 and 2020
- Detailed response to participants' questions

Discussion

Peter Baillie gave an Industry perspective on the Third System Services Consultation paper. Discussion on System Services was reserved until after Peter Baillie's presentation as it addressed many of the potential discussion issues.

Action Items

7. TSOs to hold forum to explain modelling in detail before high level System Services decision is made by the SEM Committee.

Industry Perspective

Summary of Presentation

Peter Baillie from Energia gave an industry perspective on the DS3 programme of work, focussing mainly on System Services. An increase in SNSP is fundamental to both new and existing investments. At the moment there are higher levels of curtailment than were assumed and this will become a concern for financing if this level of curtailment continues.

The following issues were raised by Peter Baillie as matters of concern regarding the recent System Services consultation paper:

- The link between ancillary services and capacity payments needs to be decoupled
- There is insufficient information in order to enable an investment decision; the types of services were identified but no information was given on the quantities.
- There are no market incentives to indicate optimum locations of System Services.
- The paper favours the retrofitting of old plants, which is difficult to do, rather than the investment in new plants.
- The length of contracts: 5 year contracts are too short to incentivise investment; a contract term of a minimum of 10 years is needed for new investments.
- Revenue allocation favours pumped storage and coal; remuneration for OCGT is inadequate.

Discussion

There were some questions regarding the level of confidence which the TSOs have in a System Services decision being progressed. There was also a question about whether there is adequate time for the RoCoF issue to be resolved and the technology for system services to be developed, as if

these are done in parallel there is a risk to the investor. The TSOs commented that a speedy decision is needed in the case of both RoCoF and System Services in order to provide certainty for investment.

Comments

The TSOs are considering recommending a full industry consultation on the portfolio used before rates are fixed.

RoCoF Update

Summary of Presentation

Tom McCartan gave an update on the RoCoF workstream. The RoCoF Grid Code modifications were sent to the RAs on 21/12/2012. A RoCoF standard of 1Hz/s over 500ms was proposed. The progress of this workstream relies on the RAs' decision regarding the Grid Code modifications and on data from the DSOs on the RoCoF capability of the distribution connected generation. There is also input needed from the RAs on the cost recovery for generator studies. The TSOs cannot consider any material change to SNSP levels until these RoCoF issues are resolved.

Discussion

There was a suggestion that the process could be expedited if the TSOs were to model RoCoF rather than the OEMs carrying out these studies as the TSOs have more information in this area.

The TSOs stated that they would be concerned about embedded generation tripping in sympathy after an N-1 event of a transmission connected generator/interconnector tripping. For this reason, the less information the TSOs have about the distribution connected generation, the more conservative the manner in which they have to operate the system. NIE stated that they plan to receive online information from generation greater than 200kW in size and that this could then be considered by the TSO's at an aggregated level.

NIE stated that their report focussed on the RoCoF island protection of DFIG distribution connected generation. This accounts for the vast majority of generation MWs on the distribution system. Their intention is to move towards a RoCoF protection setting of 1Hz/s. At present RoCoF protection settings are not defined in either the NI Distribution Code or within G59/NI. The required setting is instead detailed in an internal NIE policy document. Consideration is being given to limiting any changes in documentation to that latter document.

The TSOs also stated that operational policy will not be changed based only on the generator RoCoF withstand decision from the RAs. A decision from the RAs will enable the commencement of another body of work. If for example the distribution system protection cannot be changed and is deemed to have a material impact on the performance of the power system, SNSP will not change.

The Advisory Council members were asked if they could provide any input as to the timing of the deliverables which are outside the TSOs' control. The CER commented that they should have a decision on the RoCoF Grid Code modifications by the end of Q2 2013. They also stated that this would be a joint decision between CER and UREGNI. NIE stated that a date of 2013/2014 is a good estimate for their RoCoF implementation plan which involves a review and update of the internal NIE policy document, interaction with generators and a revision of settings. ESB stated that they recognised that there was an action on them to respond to TSO queries on the RoCoF issue.

Comment

The TSOs commented that this workstream is fundamental to the DS3 programme and at the moment there is very little progress being made.

Action Items

8. TSOs to clarify the size of the largest credible in-feed loss
9. TSOs to investigate modelling RoCoF instead of OEMs
10. TSOs to provide information on equivalent vector shift.
11. DSOs to respond to outstanding queries from TSOs on RoCoF performance of embedded generation and distribution protection.

Performance Monitoring and Testing

Summary of Presentation

Michael Preston gave a presentation on this workstream. The TSOs are moving from their current performance monitoring process to an enhanced performance monitoring process which aims to standardize and harmonize the performance monitoring and testing procedures. This will involve the phased introduction of high speed data recording devices which are required to analyse the performance of products provided in the 0 to 15 second timeframe. A web based graphical user interface will also be developed so that generators can download data and reports, eliminating the need for emails. There will be industry presentations in Q2 2013 on this enhanced performance monitoring process.

The presentation also covered the testing philosophy. Testing is either by physical demonstration or model verification through compliance monitoring. For fault ride through and dynamic reactive power capability there is no physical testing planned. However, any turbine type tests should be submitted to the TSOs and there will be a requirement for dynamic models at the time of application. Enhanced performance monitoring systems will monitor compliance against the Grid Code requirements utilising high speed data. Static reactive power capabilities will be tested by demonstration, while frequency response will be tested via an injection signal.

Discussion

There was discussion around the fact that various different turbines require different detailed models. The TSOs stated that a good basic model should be sufficient in the initial stages.

It was also clarified that there may be changes required to the Grid Code in order to reflect the overall testing procedure but the Grid Code has not been reviewed from this perspective yet.

Action Items

12. TSOs to circulate date for Enhanced Performance Monitoring and Testing workshop once it is decided.

System Operator Interconnector Countertrading

Summary of Presentation

Conor Kavanagh gave a presentation on system operator interconnector counter trading. The current arrangements allow for system operator trading of up to 200 MW on each interconnector. The main reason for counter trading at the moment is to reduce the curtailment of priority dispatch plant. EWIC is undergoing maintenance and testing until May 2013. Based on the assumption that, on the return of EWIC to service at full capacity, there will be market scheduled imports of power to Ireland, the requirement for system operator counter-trading is likely to increase. There are a number of additional counter-trading options being considered by the TSOs:

1. System Operator countertrading via a UK Power Exchange
2. Procure a third party service
3. Interconnector Trade exchange

Comment

IWEA commented that an estimated timeline for the resolution of this matter would help to resolve some of the uncertainty which surrounds this matter. TSOs indicated that they aim to resolve this matter as soon as possible as the need for counter trading is likely to increase in the coming months; however they stated that any arrangements which are in place by May will only be an enhancement of the current arrangements. TSOs also stated that they are likely to register with a Power Exchange anyway.

Action Items

13. TSOs to provide an estimated timeline for the System Operator Interconnector Countertrading project.

Review of Advisory Council

The Advisory Council members were asked to give feedback on the efficacy of the Advisory Council. The general consensus was that the meetings were very useful and a good forum for sharing information. However, it was noted that there is often a large amount of information to digest in a very short period of time and that it may be of benefit to extend the meetings until 4pm. It was also suggested that there could be an expert session at the end of the day which members had the option of attending.

There was also a discussion on the membership of the Advisory Council. The TSOs explained that they were reluctant to allow alternates as it takes time for new people to become familiar with the DS3 body of work.

Action Item

14. Advisory Council members to submit detailed topics of interest which they wish to be covered in the optional expert session at the end of the day.