

## DS3 Programme Status Update

23<sup>rd</sup> September 2014

- A major re-planning of the DS3 Programme was completed with the publication of the RoCoF and Frequency Control workstream plans on 30/05/14. All workstream plans have now been updated and published to the EirGrid website. These can be found [here](#).
- The SEM Committee published a DS3 System Services Procurement Design Consultation Paper on 09/07/14. This can be found [here](#).
- The Regulatory Authorities (RAs) held an open industry forum regarding this consultation in Dundalk on 29/07/14 which was attended by approximately 100 participants. Following this forum the RAs published a clarification paper on 13/08/14, which can be found [here](#). As a result of the clarification paper, the consultation period was extended and closed on 05/09/14.
- A Decision Paper is still planned to be published by the end of 2014, followed by the detailed design phase beginning in early 2015, with envisaged 'go-live' date of October 2016.
- Currently there is no firm commencement date from the CER for the Ireland portion of the RoCoF project.
- The Northern Ireland portion of the RoCoF Project has commenced and the first six-month generator capability study report is due on 10/11/2014. SONI wrote to UR on 07/07/2014 to request that UR consider aligning the timelines for completion of the generator studies across the two jurisdictions. SONI are awaiting a response on this from UR.
- Four DSU modifications arising from the DSU Grid Code working group were submitted to the CER for decision on 24/07/2014. SONI is to open a consultation on corresponding modifications in Northern Ireland in September.
- Following a number of DSU working group meetings, EirGrid and SONI wrote to both the CER and UR on 21/08/14 regarding DSU Operational Concerns. The letter details the issues as seen from a TSO perspective and a workshop on next steps has been set up for September.
- The second, third and fourth meetings of the Operational Policy Review (OPR) Committee took place on the 19/06/14, 30/06/14 and the 23/07/14 respectively. Reports discussed included:
  - Impact of Embedded Generation Loss of Mains RoCoF Relays
  - Over Frequency Generation Shedding
  - All-Island Minimum Generation study
  - All-Island High SNRP Reports Summary for H2 2013
  - Metrics for Assessing System Security and Stability
- The sixth and seventh TSO-DSO Joint Working Group meetings took place on 05/06/14 and 03/09/14. At these meetings, the TSOs' gave a presentation about the ENTSO-E Network Codes relating to Connections (RfG, DCC and HVDC) and also discussed with ESNB the implementation of the nodal control pilot project.
- A DS3 Enhanced Performance Monitoring and Testing workshop was held on the 24/06/14 in Belfast. The focus of this workshop was to get feedback from Industry on the proposed business process (priorities, tolerances, actions and timelines) that will be used for the enhanced process. Presentations can be found [here](#).
- Louis Fisher has been appointed the new Manager of the Sustainable Power Systems team.

## Status

Workstream	Commentary
<b>Communications</b>	<ul style="list-style-type: none"> <li>Presentations relating to the DS3 Programme were given at the Dublin meeting of the ISGAN (International Smart Grid Action Network) on 26/05/2014.</li> <li>A presentation on the Irish approach to large scale variable RES penetration was given at the Rome Electricity Networks Concerted Action meeting on 21/05/2014.</li> <li>The Ireland and Northern Ireland GCRP meetings took place on 11/06/2014. The modifications can be found <a href="#">here</a>.</li> <li>Having published all 11 workstream plans, the DS3 Programme Overview document for 2014 has now been uploaded to the EirGrid website and can be found <a href="#">here</a>.</li> <li>Workshops on demand side management were held with representatives of Energy Pool (11/07/2014) and Pacific Gas and Electric (29/07/2014).</li> <li>Following the publication of the DS3 System Services Consultation Paper, a presentation on DS3 and Phase Two of System Services was given at the open industry forum. The RAs held this forum in Dundalk on 29/07/2014 which was attended by approximately 100 participants.</li> <li>A DS3 Presentation was made at the Chinese Wind and Solar Energy Conference in Beijing on 09/08/2014.</li> <li>The Quarterly Constraint and Curtailment Reports for Q1 were issued on the 13/08/14.</li> </ul>
<b>System Services</b>	<ul style="list-style-type: none"> <li>The SEM Committee published a DS3 System Services Procurement Design Consultation Paper on 09/07/14. This can be found <a href="#">here</a>. The consultation outlines a Competitive Multiple Bid Auction to be administered by the TSO for varying lengths of contract. This differs from the TSOs' recommended Regulated Tariff approach.</li> <li>The Regulatory Authorities (RAs) held an open industry forum regarding this consultation in Dundalk on 29/07/14 which was attended by approximately 100 participants. Following this forum the RAs published a clarification paper on 13/08/14, which can be found <a href="#">here</a>. As a result of the clarification paper, the consultation period was extended and closed on 05/09/14.</li> <li>The TSOs submitted their response on 05/09/14.</li> <li>A Decision Paper is still planned to be published by the end of 2014, followed by the detailed design phase beginning in early 2015, with envisaged 'go-live' date of October 2016.</li> </ul>
<b>RoCoF</b>	<ul style="list-style-type: none"> <li>Currently there is no firm commencement date from the CER for the Ireland portion of the RoCoF project.</li> <li>The Northern Ireland portion of the RoCoF Project has commenced and the first six-month generator capability study report is due on 10/11/2014. SONI wrote to UR on 07/07/2014 to request that UR consider aligning the timelines for completion of the generator studies across the two jurisdictions. SONI are awaiting a response on this from UR.</li> <li>The RoCoF Alternative Solutions will be presented to the Advisory Council for discussion on 23/09/14 and will then be published to the EirGrid website for industry comment before kicking off the project.</li> <li>Similarly the 'Generator Prioritisation' studies will be published for industry comment. Post appointment of CER independent consultant, the TSOs will then look to hold a workshop with industry on the findings and invite industry to comment further. Following this a revised version will be sent to the CER for approval.</li> </ul>

<b>Grid Code</b>	<ul style="list-style-type: none"> <li>NIE received a number of responses to their proposed D-Code mod for Wind Farm Power Stations (WFPS's) and the associated Settings Schedule. For this reason, a second Distribution Code consultation of a revised 'Setting Schedule for Power Stations less than 5MW Exporting on to the NIE System' commenced on 23/06/14 and ended on 07/08/14. The report is yet to be submitted to URegNI. This second consultation was only for small-scale generation (less than 5MW). This document can be found <a href="#">here</a>.</li> <li>UR have indicated that the DSU Grid Code modification submitted in 2013 will not be considered for approval until the subsequent modifications on DSUs arising from the on-going JGCRP WG are submitted.</li> </ul>
<b>DSM</b>	<ul style="list-style-type: none"> <li>Six of the DS3 DSU modifications were presented at the Grid Code Review Panel (GCRP) meetings held on 11/06/14 in Dublin. The modifications can be found <a href="#">here</a>.</li> <li>Four of the six modifications were approved by the members of the GCRP in Ireland for submission to the CER for decision. These were submitted to the CER for decision on 24/07/14.</li> <li>Two modifications were not approved (performance monitoring and frequency requirements) as it was agreed that there needs to be further discussions amongst the DSU JGCWG on these modifications. This is being addressed via a number of face to face and teleconference meetings in recent months.</li> <li>SONI is to open a consultation on all corresponding modifications in Northern Ireland in September.</li> <li>Following the presentation of a proposed all island DSU Application Process, ESBN and NIE have emphasised their concerns about the potential impact of increased DSU penetration on their system security.</li> <li>Following a number of Demand Side Unit working group meetings, EirGrid and SONI wrote to both the CER and UR on 21/08/14 regarding DSU Operational Concerns. The letter detailed the issues as seen from a TSO perspective. A workshop will be set up shortly to discuss next steps.</li> </ul>
<b>Voltage Control</b>	<ul style="list-style-type: none"> <li>ESBN have implemented TSO-DSO agreed power factor changes at Cauteen wind farm cluster. This is an interim measure to improve voltage stability in the area.</li> <li>Analysis of ESBN Nodal Voltage Control pilot at Cauteen is progressing. Aiming to agree design by end Q3 2014.</li> <li>TNP Reactive Compensation studies – Cauteen / Ikerrin / Thurles steady state studies are complete. Results indicate significant off-setting of transmission reactive compensation requirements if distribution connected wind-farms make a reactive power contribution.</li> <li>Dynamic studies to follow along with South West, Donegal and Mayo studies.</li> </ul>
<b>Frequency Control</b>	<ul style="list-style-type: none"> <li>ESBN have written to all distribution connected wind-farms requesting changes to frequency and RoCoF settings on G10 protection relays.</li> <li>Recommendations from two frequency control reports (Impact of Embedded Generation Loss of Mains RoCoF Relays, and Over Frequency Generation Shedding) have gone through OPR Committee.</li> <li>Work has started on the ramping policy study with data gathering and analysis underway.</li> <li>Work has begun to develop a more detailed representation of the distribution network for the 'full study to investigate voltage dip-induced frequency dips'.</li> </ul>
<b>Control Centre</b>	<ul style="list-style-type: none"> <li>Go-live of the new EMS Wind Dispatch Tool took place successfully in the Dublin and Belfast control centre on 08/05/2014 and 24/07/2014</li> </ul>

<b>Tools &amp; Capability</b>	<p>respectively.</p> <ul style="list-style-type: none"> <li>The inclusion of RoCoF/Inertia constraints in RCUC has been successfully factory tested. It is expected to go live in the Dublin and Belfast control centres by Q4 2014.</li> <li>Deployment, integration and initial testing of site infrastructure as part of the EMS Integration project is complete. The next phase of the project is now underway and the deployment of the software package and Virtual Machine servers is currently taking place. Conversion of existing EMS displays (300+) to the new harmonised template is continuing.</li> <li>The method for managing DSO initiated wind constraints using functionality in the new wind dispatch tool has been agreed.</li> <li>Tender process for Wind Forecast vendor is underway.</li> </ul>
<b>Model Development &amp; Studies</b>	<ul style="list-style-type: none"> <li>The All-Island Minimum Generation study went through the OPR Committee on 19/06/2014 and a presentation will be given to the DS3 Advisory Council on 23/09/14.</li> <li>The new WSAT wind farm models that have been tuned to exhibit slow active power recovery following faults have been used as sensitivity for the High SNSP Reports for H2 2013. This response can now be modelled and an enduring process will continue to tune models as events are seen on the system.</li> <li>A 'Pilot version of automated approach to large-scale dynamic studies using Plexos' has been completed and signed-off. The pilot version takes a year's dispatch from Plexos and generates a solved powerflow in PSAT for each hour. These powerflows will be the basis for dynamic studies.</li> </ul>
<b>WSAT – Wind Security Assessment Tool</b>	<ul style="list-style-type: none"> <li>Work is on-going on the cross validation of dynamic models against real system events. As necessary, the underperformance of existing dynamic models is being investigated and solutions identified.</li> <li>A corresponding process document, Generator Response Validation and Parameter Identification has been drafted and has been submitted for approval.</li> <li>A TSAT v PMU Comparison report is being prepared and is currently under review.</li> </ul>
<b>Renewable Data</b>	<ul style="list-style-type: none"> <li>The All-Island High SNSP Reports Summary for H2 2013 is complete and has been presented to the OPR Committee.</li> <li>The Annual Curtailment Report for 2013 has been reviewed by the RAs and following these comments, the report is now being updated by the TSOs. It is expected that this report will be published in October.</li> <li>The Quarterly Curtailment Reports for Q1 2014 were issued on the 13/08/14. Reports for Q2 are due to be issued by the end of September.</li> <li>Work is underway on a new DS3 Brochure and is expected to be published by October.</li> </ul>
<b>Performance Monitoring &amp; Testing</b>	<ul style="list-style-type: none"> <li>Enhanced Performance Monitoring reporting templates were issued to industry for feedback and comments were incorporated into final system design. This can be found <a href="#">here</a>. Information Services are working with contractors to impact assess design requirements for the new performance monitoring system. Estimates indicate a delivery by Q2 2015.</li> <li>The testing procedures were published on the website for industry comment on. These can be found <a href="#">here</a>.</li> <li>Information Services are currently impact assessing the design specification for the new performance monitoring system in order to determine cost, effort and timelines.</li> <li>An Enhanced Performance Monitoring and Testing workshop was held</li> </ul>

	<p>on the 24/06/2014 in Belfast. The focus of this workshop was to gain feedback from Industry on the proposed business process (priorities, tolerances, actions and timelines) that will be used for this process. 33 industry participants were in attendance and presentations can be found <a href="#">here</a>.</p> <ul style="list-style-type: none"><li>• Industry feedback has been received and bi-lateral meetings have taken place on the proposed business process for Enhanced Performance Monitoring and a findings document was published on the 29/08/14 which can be found <a href="#">here</a>. Acting on the feedback the TSOs have committed to reviewing the proposed tolerance levels for the new system once live data is available during a trial run, rather than implementing final values now. As a result, based on feedback from industry, further engagement with Industry through workshops to present final business processes (as per deliverable PMT.3.7.4) will not go ahead.</li></ul>
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