

DS3 Programme Status Update

20th May 2014

- A major re-planning of the DS3 Programme is close to conclusion. Nine out of the eleven workstream plans have been updated and published. This included a revision of the list of deliverables. The TSO's are currently working on finalising the two outstanding Workstream plans, RoCoF and Frequency Control, following the publications of the Regulatory authorities decisions published on 04/04/2014 and 07/05/2014 respectively. It is planned that both Workstream plans will be published prior to 27/05/2014.
- At the request of the SEM Committee, the TSOs carried out further economic analysis on the proposed new System Services. This "demand side" analysis was completed and the report and results were submitted to the RAs on 07/03/2014. The findings were presented to the SEM Committee at their meeting on 27/03/2014.
- The SEM Committee have since stated that they will publish the DS3 System Services Consultation Paper by 9th July 2014, following its meeting at the end of June. It is planned that the consultation period will be open until 22nd August and Regulatory Authorities will hold an open forum mid consultation period. As per the existing Workstream plan a Decision Paper is still planned to be published by the end of 2014.
- The TSOs published and circulated the 'DS3 Programme Operational Capability Outlook' on the 10/04/14 to inform industry of the EirGrid/SONI view of how operational capability metrics for the Irish and Northern Irish power system are expected to change out to 2020. In particular, it highlights the likely changes to the System Non Synchronous Penetration (SNSP) metric. A link to this paper can be found [here](#).
- A final RoCoF decision paper was published by the CER on 04/04/2014. While the TSOs' proposed RoCoF modification is approved in principle, its implementation will be linked to the completion of generator studies over a period of 18 to 36 months with higher priority units being required to complete their studies first. EirGrid are in the process of prioritising generators for completion of their studies. The overall project will be overseen by the CER with the assistance of an independent consultant.
- A final RoCoF decision paper was published by the URegNI on 07/05/2014. Similar to the CER decision, the TSOs' proposed RoCoF modification is approved in principle; its implementation will be linked to the completion of generator studies over a period of 18 to 36 months with higher priority units being required to complete their studies first. EirGrid are in the process of prioritising generators for completion of their studies.
- Further to this, URegNI request that SONI oversee the process for implementation, establish a working group to facilitate consistent delivery of studies and review any derogation requests received from generators. If a generator is to be exempt from the incentive (GPI) mechanism set out in this paper then any application for derogation must be submitted to URegNI by 10 August 2015.
- As part of the overall programme SONI are requested to submit regular six-monthly reports to URegNI. The first report is due on 10 November 2014. These reports should also outline the scope and progress of work carried out on examining other options on reducing RoCoF events. The overall project will be overseen by the URegNI.
- A [DS3 Industry forum](#) took place on 08/04/2014 in Dublin. The forum was well received and attended by over 80 industry participants. Topics presented included a DS3 Programme Status Update, RoCoF, TSO-DSO Engagement, the Annual Renewable Report 2013, Energy Policy Developments, System Services and figures on Recent High Wind Generation.
- The first DS3 Operational Policy Review Committee meeting took place internally on 29/04/2014. Any changes to operational policy arising from the DS3 Programme must be approved through this committee by the Control Centre Manager prior to implementation in the control centres.
- The third and fourth DSU Joint Grid Code Working Group meetings were held on the 25/03/2014 and 29/04/2014 (by teleconference). Four significant modifications to the Grid Codes are close to finalisation in advance of the June Ireland and Northern Ireland Grid Code Review Panel meetings.

- The third, fourth and fifth meetings of the TSO-DSO Joint Working Group took place on 20/01/2014, 20/02/2014 and 29/04/14 respectively – the focus of these meetings was on engagement on voltage control, performance monitoring, RoCoF and demand side management.
- The third TSO-DSO DS3 Oversight Committee meeting (director-level) took place on 17/04/2014. Discussions focused on the workstream plans and the need to re-programme in some areas given slippage, changes in responsibility between NIE and SONI.
- Odd Håkon Hoelsæter of the SEM Committee visited EirGrid on 25/03/2014.
- A US delegation visited the EirGrid offices on 25/04/2014. The delegation received a presentation on EirGrid Group's role in the electricity system; world leading progress in Integrating Renewables in Ireland and Northern Ireland; areas of cooperation with the US and European integration in energy. A number of SEAI representatives were also in attendance.
- The quarterly constraint and curtailment report was approved by the CER and the reports for Q1, Q2, Q3 and Q4 2013 have been issued.

Status

Workstream	Commentary
Communications	<ul style="list-style-type: none"> • The 8th DS3 Industry forum took place on 08/04/2014 in Dublin. The forum was well received and attended by over 80 industry participants. Topics presented included a DS3 Programme Status Update, RoCoF, TSO-DSO Engagement, the Annual Renewable Report 2013, Energy Policy Developments, System Services and figures on Recent High Wind Generation.
System Services	<ul style="list-style-type: none"> • At the request of the SEM Committee, the TSOs carried out further economic analysis on the proposed new System Services. This “demand side” analysis was completed and the report and results were submitted to the RAs on 07/03/2014. The findings were presented to the SEM Committee at their meeting on 27/03/2014. • The RAs have engaged consultants to assist with the other elements of the further analysis required by the SEM Committee, viz. “supply-side” analysis and procurement options. • The SEM Committee have stated that they will publish the DS3 System Services Consultation Paper by 9th July 2014, following its meeting at the end of June. It is planned that the consultation period will be open until 22nd August and Regulatory Authorities will hold an open forum mid consultation period. As per the existing Workstream plan a Decision Paper is still planned to be published by the end of 2014.
RoCoF	<ul style="list-style-type: none"> • A final RoCoF decision paper was published by the CER on 04/04/2014. While the TSOs' proposed RoCoF modification is approved in principle, its implementation will be linked to the completion of generator studies over a period of 18 to 36 months with higher priority units being required to complete their studies first. EirGrid are in the process of prioritising generators for completion of their studies. The overall project will be overseen by the CER with the assistance of an independent consultant. • A final RoCoF decision paper was published by the URegNI on 07/05/2014. While the TSOs' proposed RoCoF modification is approved in principle, its implementation will be linked to the completion of generator studies over a period of 18 to 36 months with higher priority units being required to complete their studies first. EirGrid are in the process of prioritising generators for completion of their studies. The

	<p>overall project will be overseen by the URegNI.</p> <ul style="list-style-type: none"> • Further to this, URegNI request that SONI oversee the process for implementation, establish a working group to facilitate consistent delivery of studies and review any derogation requests received from generators. If a generator is to be exempt from the incentive (GPI) mechanism set out in this paper then any application for derogation must be submitted to URegNI by 10 August 2015. • As part of the overall programme SONI are requested to submit regular six-monthly reports to URegNI. The first report is due on 10 November 2014. These reports should also outline the scope and progress of work carried out on examining other options on reducing RoCoF events. The overall project will be overseen by the URegNI. • The provision of RoCoF protection settings from both the DSOs is behind schedule.
Grid Code	<ul style="list-style-type: none"> • The original DSU modification has not yet been approved by URegNI. However URegNI have stated that they will consider this mod for approval along with the additional DSU mods currently being raised. This will require a change request to move into line with subsequent modification in the DSU workstream. • Windfarm Distribution Code modifications that were approved in Ireland in October 2013 have now been brought into force by ESNB. All windfarms connecting from April will need to comply with the new standards. • The Dynamic Models modifications, along with the supplementary documentation on validation, retrospection, EMT models and software formats, which were presented to the Ireland and Northern Ireland Grid Code review panels on 04/12/2013 were not approved in Ireland and were discussed at the Grid Code Review Panel (GCRP) meeting on 12/02/2014. • The proposal to bring dynamic model requirements to the Ireland GCRP was pushed out from Q1 to Q4 2014 following a change request. This was due to a parallel process that is underway in EirGrid Future Grids which will provide a recommendation of packages going forward. These will be presented at the November 2014 GCRP. • In Northern Ireland a consultation on the modification closed on 24/03/2014 and a report on the modification proposal was completed.
DSM	<ul style="list-style-type: none"> • The Ireland Grid Code DSU modification was approved by the CER on 24/09/2013. • A review of the existing GASOA (Generator Aggregator System Operator Agreement) from an Ireland and Northern Ireland perspective is currently awaiting sign-off. • The third and fourth DSU Joint Grid Code Working Group meeting were held on the 25/03/2014 and 29/04/2014. Four significant modifications to the Grid Codes are close to finalisation in advance of the June EirGrid and SONI Grid Code Review Panel meetings. • A draft DSM section of TSO-DSO Engagement Plan was presented at monthly TSO-DSO working group meeting for review. • A National Smart Metering Programme wholesale market interaction kick-off meeting was held between the CER, ESNB and EirGrid/SEMO on 15/04/2014.

Voltage Control	<ul style="list-style-type: none"> • TSO studies were completed to consider improving the Power Factor at Cauteen distribution connected wind-farm cluster as an interim measure pending development of a full voltage control solution with ESBN. • The TSOs' high level requirements for the Magherakeel 'Nodal Voltage Control' project have been agreed with NIE. • The fourth and fifth meetings of the TSO-DSO Joint Working Group took place on 20/02/2014 and 29/04/14 respectively – the focus of these meetings was on engagement on voltage control, performance monitoring, RoCoF and demand side management. • The third TSO-DSO DS3 Oversight Committee meeting (director-level) took place on 17/04/2014. Discussions focused on the work-plans and the need to re-programme in some areas given slippage, changes in responsibility between NIE and ESBN. • The methodology and assumptions for the All-Island reactive compensation study being conducted by Network Planning have been completed and studies are underway.
Frequency Control	<ul style="list-style-type: none"> • A study on over-frequency response, including proposing over-frequency trip settings of some generators was completed. • Another frequency related study 'Short Term Frequency Response' was completed and recommendations from both these studies are being considered by the TSOs' Operational Policy Review committee. • The TSOs have drafted the Frequency Control workstream plan and this will be published within 20 business days of publication of a ROCOF decision by the CER and URegNI.
Control Centre Tools & Capability	<ul style="list-style-type: none"> • Successful Site Acceptance Testing (SAT) took place in February 2014, which included a real wind dispatch being carried out. Information Services are finalising the design of a new settlement interface required in SONI to link the wind dispatch tool and SEM systems. Changes to the EirGrid interface are required and design is being finalised. • Implementation of the Phasor Monitoring Display Project has been completed and was launched in the National Control Centre in Dublin on 24/03/2014. • Testing of the EMS Wind Dispatch Tool is complete and the tool went live in the Dublin control centre on 08/05/2014. It is expected that this tool will be implemented in the Belfast control centre in July. • The inclusion of RoCoF/Inertia constraints in RCUC have been approved and testing will begin in Q3 2014. • Scoping of the Operational Requirements for Wind Forecast Tenders has been completed. According to the current timeline, tenders will be issued at the end of May and the contract will be awarded in July.
Model Development & Studies	<ul style="list-style-type: none"> • The new PowerTech generic wind farm models have been tuned using PSS/E models from Planning and, where available, PMU data from wind farm response to real system events. A report documenting the tuning process has been completed. • 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 SNRP Reports for Q2 2013. The results are currently being analysed. • A study by Planning on a pilot nodal voltage control project on a wind farm cluster in Ireland (Cauteen) has been completed.

	<ul style="list-style-type: none"> • An Over-frequency generation shedding settings schedule study has been completed. • Work has begun on developing a pilot version of an automated approach to large-scale dynamic studies using Plexos dispatches as an input.
WSAT – Wind Security Assessment Tool	<ul style="list-style-type: none"> • A roadmap detailing preferred functionality extensions to WSAT has been developed. In this document a range of preferred WSAT functionality extensions is discussed at a high level highlighting possible benefits for the enhancement of operational security of the evolving power transmission system encompassing both jurisdictions – Ireland and Northern Ireland. • A report on the comparison of PMU data with WSAT outputs has been completed. • Work is ongoing in adjusting dynamic models and changes to WSAT according to this plan have been made.
Renewable Data	<ul style="list-style-type: none"> • The Annual Summary of the All-Island Wind and Fuel mix was published on 18/02/2014. • The 36 Month Connection Outlook Q4 data is now published on the website. • The quarterly constraint and curtailment report was approved by the CER and the reports for Q1, Q2, Q3 and Q4 2013 have been issued. • Work on the Annual Curtailment report is on-going. It is expected that this report will be published in May. • The high wind report for Q2 2013 is nearing completion. Following the completion of a sensitivity analysis using the new wind modelling tool, it is expected to be finalised in mid-May.
Performance Monitoring & Testing	<ul style="list-style-type: none"> • Work is progressing on the Enhanced Performance Monitoring system. • An internal workshop was held to scope out the high level performance monitoring requirements for System Services. • Enhanced Performance Monitoring reporting templates were issued to industry for feedback and comments have been incorporated into the final system design. A link can be found here. • A workshop took place with ESBN (18/02/2014) and NIE (21/02/2014) to discuss workflow and report templates for enhanced performance monitoring. The workflow and report templates will be published for feedback over the coming weeks. • A business case and scoping document for the trial roll out of high speed data recorders is nearing completion. • Information Services are now working with contractors to impact assess the design requirements for the new performance monitoring system. Timelines have been received and discussions are underway regarding estimates on costs and effort. • An Enhanced Performance Monitoring and Testing presentation will be given at Generator Forum on 15/05/2014. • An all-island industry workshop will take place on 24/06/2014 in Belfast to discuss business processes for Enhanced Performance Monitoring.