

# 2016 DS3 Demand Side Management (DSM) Workstream Plan

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May 2016



## Context

EirGrid and SONI are the Transmission System Operators (TSOs) in Ireland and Northern Ireland. As Transmission System Operator (TSO) in Ireland and Northern Ireland, it is our job to manage the electricity supply and the flow of power across the island of Ireland. This work is done from the National Control Centre (NCC) in Dublin and the Castlereagh House Control Centre (CHCC) in Belfast.

One of our key tasks is to maintain balance between electricity supply and electricity demand. During times of Imbalances between supply and demand we may want to reduce the demand on the power system. One possible way to achieve this reduction is through Demand Side Management (DSM). At the same time, such consumer action can help improve the use of generation and grid infrastructure increasing the overall efficiency of the power system. Additional demand flexibility can also enable system operators to manage increasing amounts of wind on the power system.

At present, there are a number of Demand Side Units (DSUs) and Aggregated Generator Units (AGU) in both Ireland and Northern Ireland. These units operate commercially within the Single Electricity Market (SEM) and are centrally dispatched.

## Objective

A key objective of this workstream is to increase participation of DSUs and AGUs in the Single Electricity Market (SEM). To date this has resulted in and may require further changes to the Grid Codes, Trading and Settlement Code and the Regulatory Authorities' Supply Licence. In addition, the future role of domestic appliances, electric vehicles etc. also need to be factored into the DS3 programme. In late 2011 and early 2012, the Regulatory Authorities/SEM Committee approved changes to the Ireland and Northern Ireland Grid Codes, the Trading and Settlement Code and the CER Supply Licence. This removed many of the barriers to DSUs and AGUs participating in the SEM and becoming operational.

## Work Completed

Key In 2012, two DSUs became operational in Ireland in addition to the existing AGU in Northern Ireland. Grid Code testing procedures were put in place by EirGrid and SONI.

In May 2013, DSU Grid Code modifications were brought to the Ireland and Northern Ireland Grid Code Review Panels following engagement with the DSU industry. The modifications were subsequently approved by the Regulatory Authorities. Further DSU workshops were held to promote demand side participation in the SEM.

We also developed a DSU System Operator Interface Agreement which covers liabilities on both sides. In November 2013, a DSU Joint Grid Code Working Group was established with the aim of reviewing and discussing current and future requirements for DSUs Grid Codes.

In 2014, six DSU modifications were presented at the Grid Code Review Panel (GCRP) meetings which were held on 11/06/2014 in Dublin. Following further industry engagement, the six modifications were approved by the GCRP in Ireland for submission to the CER for decision in late 2014. The corresponding SONI DSU Grid Code Modification Consultation closed on 12/12/2014. A DSU switchover document was also developed which allows an individual site switch from one DSU to another.

Throughout 2014 and 2015, there was engagement with industry and the DSOs on an All-Island DSU application process. A cross-industry workshop on the proposed All Island DSU Application form was held on 28/08/2015. Two further DSU Grid Code modifications were approved by the CER and UR. The Joint Grid Code Review Panel agreed to replace the previous DSU Grid Code Working Group with the wider remit DSM Grid Code Working Group. A project on the provision of demand response from residential consumers was initiated. The Residential Consumer DSM Scheme competition closed for e-tenders platform on 17/11/2015.

### **Focus Areas 2016**

- An assessment of large-scale DSM penetration on the transmission system.
- Develop long-term Operational Policy and Tools for large-scale DSM penetration.
- Development of Residential Consumer DSM Scheme.

## High-Level Plan

TASK NO.	TASK	Responsible	Original Due Date	Due Date
<b>DSU and AGU Readiness</b>				
DSMS.1.1	Approval of Grid Code Modification for DSU (MOD_36_10)	CER	Q4 2011	Complete
DSMS.1.2	Northern Ireland Grid Code Modification Consultation	TSOs & RAs	Q4 2011	Complete
DSMS.1.3	System Services Consultation #1	TSOs / RAs	Q4 2011	Complete
DSMS.1.4	Northern Ireland Approval of DSU Modification	URegNI	Q1 2012	Complete
DSMS.1.5	Delivering T&SC Modification	SEMC	Q1 2012	Complete
DSMS.1.6	DSU Operation (Ireland Pilot)	TSOs / Industry	Q2 2012	Complete
DSMS.1.7	System Services Consultation #2	TSOs / RAs	Q3 2012	Complete
DSMS.1.8	WPDRS phase out	EirGrid / CER	2012 – 2013	Complete
DSMS.1.9	Review of System Services arrangements for DSUs and AGUs	TSOs	Q3 2013	Complete
<b>DSM Evolution</b>				
DSMS.2.1	DS3 TSO-DSO Engagement Strategy modified to take account of DSM	TSOs/DSOs	New Task	Complete
DSMS.2.2	Review of relevant Network Codes from perspective of DSM	TSOs	New Task	Complete
DSMS.2.3	Joint report on impact of DSUs on load shedding	TSOs/ESBN	New Task	Complete
DSMS.2.4	Joint report on impact of DSUs on load shedding	TSOs/NIE	New Task	Complete
DSMS.2.5	Remove barriers to DSU and AGU System Service provision	TSOs	New Task	Complete
DSMS.2.6	TSO review of long-term operational issues associated with DSM	TSOs	New Task	Complete
DSMS.2.7	Final DSO-TSO Workshop on TSO-DSO interaction for DSU application process	TSOs/NIE /ESBN	New Task	Complete
DSMS.2.8	Agreed DSO-TSO process for DSU applications	TSOs/NIE	New Task	Complete
DSMS.2.9	Agreed DSO-TSO process for DSU applications	TSOs/ESBN	New Task	Complete
DSMS.2.10	Present DSU Application Process at DSU JGCWG	TSOs/NIE /ESBN	New Task	Complete
DSMS.2.11	Assessment of need for DSM Tool in Control Centres	TSOs	New Task	Complete

DSMS.2.12	Launch of revised DSU Application Form	TSOs	New Task	Complete
DSMS.2.13	Industry Forum – evolution of DSM sector	TSOs	TSOs	Q3 2016
DSMS.2.14	1 <sup>st</sup> DSM Grid Code Working Group meeting - identify challenges and future areas of work for working group.	TSOs	TSOs	Q3 2016
DSMS.2.15	Review communications requirements for large-scale DSM penetration	TSOs	Q2 2015	Q4 2016
DSMS.2.16	Develop long-term Operational Policy for large-scale DSM penetration	TSOs	Q4 2015	Q4 2016
DSMS.2.17	Review of existing TSO DSU performance monitoring of dispatch instructions, application and commissioning and testing processes for large-scale DSM penetration	TSOs	Q2 2016	Q2 2017
<b>Contracts &amp; Licensing</b>				
DSMS.3.1	Review of licensing arrangements for AGU	RAs	Q2 2012	Complete
DSMS.3.2	Development of regulatory contract for AGU	RAs	Q2 2012	Complete
DSMS.3.3	Decision on DSU supplier license & tie in with Bidding Code of Practice	RAs	Q4 2011	Complete
DSMS.3.4	Review if a DSU – SO contract is required		New Task	Complete
DSMS.3.5	Review of existing GASOA (Generator Aggregator System Operator Agreement) from Ireland and Northern Ireland perspective	TSOs	Q3 2012	Complete
<b>Commissioning &amp; Testing</b>				
DSMS.4.1	Review and analysis of appropriate communications mechanisms for aggregated units from the Control Centres	TSOs	Q4 2012	Complete
DSMS.4.2	Decision on communications mechanisms from Control Centres	TSOs	Q1 2013	Complete
DSMS.4.3	Design and implementation of new communications mechanism from Control Centres	TSOs	New Task	Complete
DSMS.4.4	Investigate metering mechanisms for AGU	TSOs	Q1 2012	Complete
DSMS.4.5	Develop Grid Code testing procedures for AGU/DSU	TSOs	Q1 2012	Complete
DSMS.4.6	Development of process for performance validation for DSU	TSOs	Q2 2012	Complete

<b>Grid Code</b>				
DSMS.5.1	Review of Grid Code standards for AGUs and DSUs	TSOs	New Task	Complete
DSMS.5.2	Bring modification to Grid Code Review Panel based on review	TSOs	New Task	Complete
DSMS.5.3	Decision on Ireland Grid Code DSU modification	CER	New Task	Complete
DSMS.5.4	Bring DSU modifications arising from DSU JGCRP WG to Ireland and Northern Ireland GCRP for review	TSOs	New Task	Complete
DSMS.5.5	Decision on DSU Grid Code modifications (as submitted in 2013)	URegNI	Q1 2014	Complete
DSMS.5.6	Decision on DSU modifications arising from DSU JGCRP WG	CER	Q4 2014	Complete
DSMS.5.7	Decision on DSU modifications arising from DSU JGCRP WG	URegNI	Q4 2014	Complete
<b>Residential Consumer DSM Scheme</b>				
DSMS.5.8	Opening of Residential Consumer DSM Competition Tender	TSOs	New Task	Complete
DSMS.5.9	EirGrid Assessment and Decision on Winner(s)	TSOs	New Task	Q1 2016
DSMS.5.10	Project Initiation Document (PID) Published by Winner	Industry	New Task	Q2 2016
DSMS.5.11	Customer Engagement Plan Published by Winner	Industry	New Task	Q2 2016
DSMS.5.12	1 <sup>st</sup> Project Progress Report (PPR) Published by Winner	Industry	New Task	Q3 2016
DSMS.5.13	Decision on Early Bonus Payment of €30,000 (> 0.5 MW Capacity)	TSOs	New Task	Q4 2016
DSMS.5.14	2nd Project Progress Report (PPR) Published by Winner	Industry	New Task	Q2 2017
DSMS.5.15	Decision on Early Termination Clause (<1 MW Capacity)	TSOs	New Task	Q2 2017
DSMS.5.16	3rd Project Progress Report (PPR) Published by Winner	Industry	New Task	Q4 2017
DSMS.5.17	Close Down Report Published by Winner	Industry	New Task	Q1 2018
DSMS.5.18	Residential Consumer DSM Scheme Closes	TSOs	New Task	Q1 2018