



# DS3: Renewable Data Workstream

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## **CONTEXT**

Meeting the 40% renewable electricity targets in Ireland and Northern Ireland will require power system operators to manage the power system with increasing amounts of variable non-synchronous renewable generation out to 2020. In fact, as a percentage of system size, the island of Ireland will have one of the highest levels of wind generation in the European Union.

As the level of variable non-synchronous renewable generation increases year-on-year, EirGrid and SONI need to have sufficient clarity as to how this development is impacting the characteristics of the power system. The purpose of the renewable data workstream is to develop a repository for renewable-related data for the EirGrid Group and to produce and publish a range of internal and external reports that capture this development.

## **OBJECTIVE**

The overall objective of this work stream is to develop a detailed library of information associated with the integration of renewable generation on an all-island basis. This information will feed in to a range of internal reports and external publications – both technical and non-technical. By necessity, the range of information required is broad and therefore cuts across the EirGrid Group; however, it can be broken into three general areas covering:

- a) Operational policy
- b) System records
- c) Renewable outlook

This workstream acts to reinforce the implementation of the DS3 programme by providing information to different stakeholders, both internal and external, to support key decisions. The majority of this information is for internal use only, and is designed primarily to help inform the development of Control Centre operational polices and tools.

While the specific outputs from this workstream will evolve, the main reports deemed important at this stage have been captured.

## **WORK COMPLETED IN 2012**

The following list is a selection of the main reports completed during 2012:

- Annual Renewable Report
- Weekly Wind Report
- High Wind Reports
- All-Island Wind and Fuel Mix Reports
- Curtailment Report
- All-Island Renewable Connection Report – 36-Month Forecast

## **FOCUS AREAS FOR 2013**

The integration of increasing levels of renewable generation continues to revolutionise the electricity landscape across the island. As the TSOs operating on an all-island basis, EirGrid and SONI are helping develop many of the necessary solutions to facilitate this paradigm shift and help fulfil energy policy obligations in Ireland, Northern Ireland and the European Union. The introduction of increasing amounts of non-synchronous variable renewable generation means that System Operators face increasing levels of complexity in the safe operation of the power system. In this context, the following are key focus areas for 2013:

- Maintaining the overall level of report publications – Weekly Wind Reports, Monthly All-Island Wind and Fuel Mix Reports, etc.
- Further development of the High Wind Speed Shutdown report to an all-island report.
- Progressing the development of an all-island framework for the Annual Renewable Report 2013.
- Refining the Curtailment Report and All-Island Renewable Connection Report – 36-Month Forecast throughout next year.
- Working with the appropriate government departments on the second update to the National Renewable Energy Action Plan (NREAP).

## HIGH-LEVEL PLAN

TASK NO.	TASK / DELIVERABLE	PURPOSE	LEAD RESPONSIBILITY	TIMELINE
<b>Operational Policy (Internal Use Only)</b>				
RD.1.1	High Wind Reports	All reports feed into the Frequency Control and Voltage Control workstreams, and general renewable portfolio management.	TSOs	After events where SNSP exceeds 45%
RD.1.2	High Wind Reports into Annual Summary Report		TSOs	Q1 2013
RD.1.2.1	High Wind Reports into 6-Monthly Summary Report		TSOs	Q3 2013
RD.1.3	High Wind Speed Shutdown Report		TSOs	Q2 2013
RD.1.4	Wind Forecasting Reports		TSOs	Monthly
<b>System Records (External unless otherwise noted)</b>				
RD.2.1	Weekly Wind Reports <b>(internal)</b>	The information in these reports will be collected and analysed to inform the development of Control Centre policies and tools	TSOs	Weekly
RD.2.2	All-Island Wind and Fuel Mix Reports		TSOs	Monthly
RD.2.3	Annual All-Island Wind and Fuel Mix Summary		TSOs	Q1 2013
RD.2.3.1	6-monthly All-Island Wind and Fuel Mix Summary		TSOs	Q3 2013
RD.2.4	Wind Records Repository <b>(internal)</b>		TSOs	Complete
RD.2.5	Quarterly Wind Curtailment Report	This report will fulfil the requirement of EU Renewable Directive (2009/28/EC) and SI 147 in Ireland	TSOs & RAs	Q1 2013, Q2 2013, Q3 2013, Q4 2013
RD.2.6	Meet with industry to develop the design of an All-Island RES Curtailment Analysis Report (including content and frequency of publication)	This will include more data and analysis than the Quarterly Wind Curtailment Reports. This has been requested from industry		Q1 2013
RD.2.7	Publish first All-Island RES Curtailment Analysis Report			Q3 2013
RD.2.8	CO <sub>2</sub> and High Wind Correlation Report	To show the effect of high wind on carbon emissions		Q1 2013 and after high wind events thereafter (linked to High Wind Reports)
RD.2.9	6-Monthly Wind Capacity Factor Report (year-on-year comparison)	To compare capacity factors over time		Q1 2013, Q3 2013
<b>Renewable Outlook</b>				
RD.3.1	All-Island Renewable Connection Report – 36-Month Forecast	Designed to provide an overview of	TSOs	Q1 2013, Q2 2013, Q3 2013, Q4

		wind farm developments expected to connect over the coming years.		2013
RD.3.2	Contribute to the National Renewable Energy Action Plan (NREAP)	Feed into Ireland NREAP with data on grid development, renewable trajectory, operational studies and administrative information related to Renewable integration.	DCENR	Q4 2013
RD.3.3	Annual Renewable Report	Provide a high-level assessment of the current status, on-going work and future developments in the Renewable electricity space in Ireland and Northern Ireland.	TSOs	Q4 2013 (mid-November)