Wind Industry Workshop
Performance Monitoring

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Performance Monitoring Context

- The basis of secure and economic system operation relies on the expected plant performance to match actual performance
- The TSOs monitor Windfarms in both jurisdictions

Now, tomorrow and beyond….

- There are many challenges ahead with the number of windfarms increasing over the next few years.

TSO = Transmission System Operator

Processing of Performance Non-Compliances

- Managed by the TSOs performance monitoring team
  - Operational Services and Performance (EirGrid)
  - Near Time (SONI)

- Mixture of Manual / automatic processing of performance monitoring data



Scope of PM and Controllability (from SEM-11-62)

- Daily monitoring of all Category (ii) WFPS

- PM would not be applied to
  - Category (i) as they are with the C&T team in EirGrid and Near Time in SONI for resolution
  - Category (iii) as they are commissioning and C&T team in EirGrid and Near Time in SONI are responsible for moving category

PM = Performance Monitoring
SEM= Single Electricity Market
C&T = Commissioning and Testing
SONI = System Operator Northern Ireland
WFPS = Wind Farm Power Station

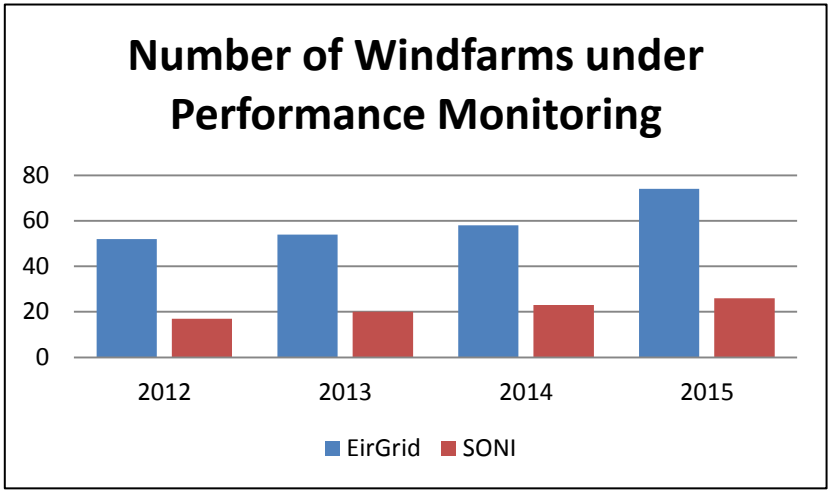
Communication to Generator

- Communication via performance monitoring team email to generator

- Information to generator includes notification, details of non-compliance and any other relevant information.

Daily PM Non-Compliances

EirGrid and SONI Monitor 103 Windfarms.



1. DI
   - Failure to follow instruction by wind dispatch tool
   - Broadband/RTU issues
2. Availability
   - Signal is stuck on a particular value/zero/freezes

SONI = System Operator Northern Ireland
PM = Performance Monitoring
DI = Dispatch Instruction
RTU = Remote Terminal Unit

Monthly PM Non-Compliances

- Availability
  - Signal is not within standard
- DI
  - Failure to follow instruction by wind dispatch tool
  - Broadband/RTU issues
- Improvements to process
  - Frequency response has been added into process to investigate if it is the reason for WFPS been outside the Active Power Control Standard.
  - Harmonise north and south to have one standard across both Jurisdictions. - Same Market - Same Rules

PM = Performance Monitoring
DI = Dispatch Instruction
RTU = Remote Terminal Unit
WFPS = Wind Farm Power Station

Active Power Control Accuracy Standard

Existing	SONI	EirGrid
Performance Monitoring	+/- 3% Registered Capacity	+/- 1MW

Harmonised	SONI	EirGrid
Performance Monitoring	Greater of: +/-1 MW or 3% Registered Capacity	

SONI = System Operator Northern Ireland

Active Power Control Accuracy Standard

Existing	SONI	EirGrid
Performance Monitoring	Rolling 14-day NRMSD error </= 8%. NRMSD error not greater than 5% for 3 or more days in any 14-day period.	Rolling 14-day NRMSD error </= 6%. NRMSD error not greater than 6% for 2 or more days in any 14-day period.

Harmonised	SONI	EirGrid
Performance Monitoring	Rolling 14-day NRMSD error </= 6%. NRMSD error not greater than 6% for 2 or more days in any 14-day period.	

SONI = System Operator Northern Ireland
NRMSD = Normalised root mean square Error

Next Steps

EirGrid

- Update WFPS Grid Code Guidance Notes document – Sept 2015.
- Update Joint ESBN & EirGrid document on Performance Monitoring Process – June 2015.

SONI

- Review of SONI WF Setting Schedule Q4 2015.
- Consultation as applicable early 2016.
- Update the SONI Performance Monitoring Process.

SONI = System Operator Northern Ireland
WFPS = Wind Farm Power Station
ESBN = Electricity Supply Board Networks
Q = Quarter


EIRGRID
semo
Single Electricity
Market Operator
SONI
System Operator for Northern Ireland