



Commission for Energy Regulation
An Coimisiún um Rialáil Fuinnimh

Rate of Change of Frequency Project Quarterly Report for Q1 2017

Information Paper

Reference:	CER/17/107	Date Published:	30/05/2017	Closing Date:	N/A
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Regulating Water, Energy and Energy Safety in the Public Interest

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1. Introduction

This report provides an update on the status of the RoCoF Generator Implementation Project in Ireland. The CER's Decision Paper, CER/14/081, requires that generators undertake technical studies to confirm their compliance with the new RoCoF standard.

Progress on the overall Delivering a Secure Sustainable Electricity System (DS3) Programme is available [here](#) on the EirGrid website.

In its Decision Paper CER/14/081, the CER approved, in principle, MPID 229, the proposed Grid Code change to increase the RoCoF withstand level from 0.5Hz/s to 1.0Hz/s over a sliding window of 500ms. However, the CER will not apply the new standard in the Grid Code until it has received confirmation from EirGrid that a sufficient number of generators can comply with the standard to allow EirGrid to safely operate the system in a manner reliant on the new RoCoF standard.¹

In May 2016, as part of the DS3 RoCoF Alternative/Complementary Solutions project, the TSOs published the final report "[RoCoF Alternative Solutions Phase 2](#)" on the EirGrid's website.

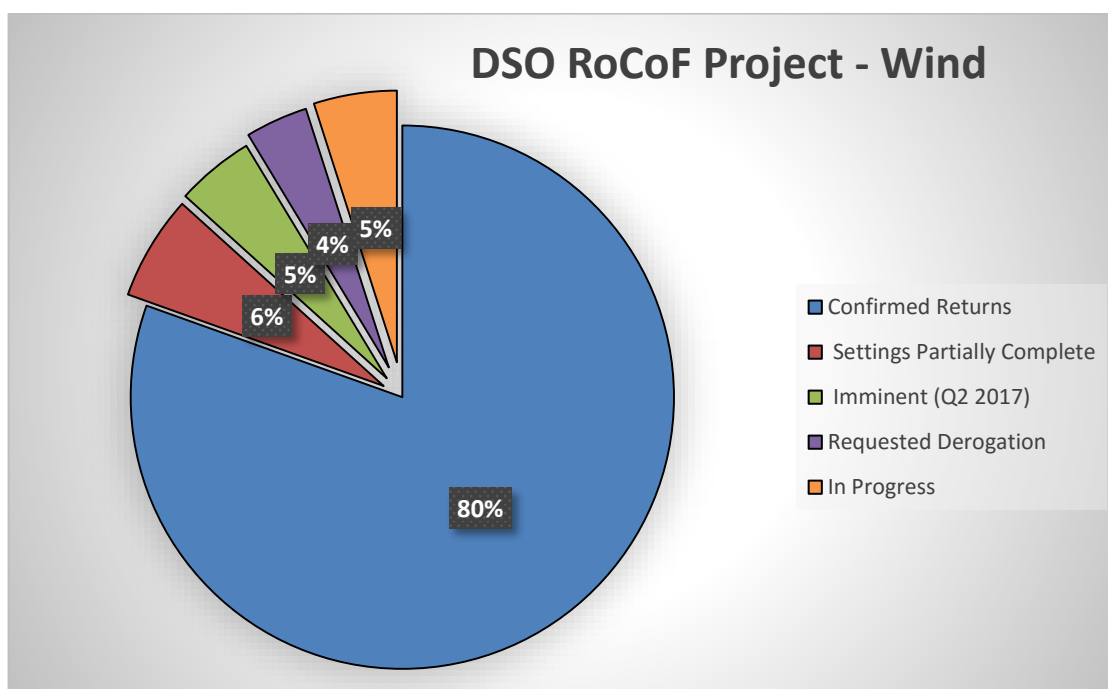
¹ Further information about this project can be found on www.cer.ie.

2.DSO Status Update

Wind

There is good progress with changes to settings for wind farms in Ireland, with over 80% of wind farm settings changed. A plan to complete the remaining 20% is in place.

- 80.47% confirmed returns;
- 6.23% complete but setting still to be transferred to ESNB;
- 4.65% either upgraded or due to be upgraded soon;
- 3.71% requested derogation;
- 4.94% at various stages of progress.



Non Wind

ESB Networks are currently engaging with the embedded (non-wind) generators and have instigated a five step process² for engaging with them. ESB Networks has issued Stage 1 Letters to 116 sites.

- 25 CHP Plants;
- 25 Hydro sites;
- 4 Biomass Sites;

² Five step process can be found in the [CER/163/64 RoCoF Project Quarterly Report - Q3 2016](#)

- 19 LFG;
- 42 Diesel Sites;
- 2 Gas Oil Sites.

To date interface protection settings upgrades have taken place at 6 Sites comprising 41.276 MW of generation.

Letters to ESB Networks customers will be continually sent out in Q2 2017, with all customer letters sent out by the end of Q2 2017.




ESB Networks reports the DSO RoCoF Project is on schedule for completion by Q4 2017.

3. Generator Project Progress







The RoCoF Implementation Project formally commenced on the 21st November 2014. Progress in general is very positive with no significant technical issues being raised to date.

Engagements with the generators on the RoCoF project are ongoing. A number of generators have completed testing and further testing or analysis is underway for other generators.

Progress of each generator and the overall project status is assessed against the project programme using corresponding “traffic light” indicators.

-  - On schedule;
-  - Schedule is at risk;
-  - Delay to schedule.

4.1 Project Status

Overall Summary		
<p>Progress in general is very positive and no significant technical issues have been raised.</p> <p>The majority of units have now entered or completed the testing phase and are either awaiting EirGrid approval or addressing comments. One mid priority units study is overdue.</p> <p>All low priority units are currently on or ahead of schedule. The current status of the project remains green but the CER will continue to closely monitor progress.</p>		
Overall Status		
Medium Priority Category		
Station/Unit	Owner	Traffic Light
Poolbeg CCGT (PBC)	ESB	
Station/Unit	Owner	Traffic Light
Low Priority Category		
Aghada OCGT (AT1)	ESB	
Aghada OCGT (AT2)	ESB	
Aghada OCGT (AT4)	ESB	
Lough Ree (LR4)	ESB	


West Offaly (WO4)	ESB	
Ardnacrusha (AA1-4)	ESB	
Erne (ER1-4)	ESB	
Lee (LE1-3)	ESB	
Liffey (LI1,2,4,5)	ESB	
Marina (MRC)	ESB	
North Wall (NW5)	ESB	
Edenderry OCGT (ED3)	EPL	
Edenderry OCGT (ED5)	EPL	


The following table contains the generation stations who have submitted their studies of the generation stations identified in the approved categorisation list.


Units that have submitted their studies		
Station/Unit	Owner	Progress
Dublin Bay (DB1)	ESB	Submitted
Aghada CCGT (AD2)	ESB	Submitted
Aghada (AD1)	ESB	Submitted
Turlough Hill 1 (TH1)	ESB	Testing
Turlough Hill 2 (TH2)	ESB	Testing
Turlough Hill 3 (TH3)	ESB	Testing
Turlough Hill 4 (TH4)	ESB	Testing
Moneypoint 1 (MP1)	ESB	Testing
Moneypoint 2 (MP2)	ESB	Testing
Moneypoint 3 (MP3)	ESB	Testing
Sealrock (SK3)	AAL	Testing
Sealrock (SK4)	AAL	Testing
Whitegate CCGT (WG1)	BGE	Testing
Meath W2E (IW1)	Indaver	Testing


Tawnaghmore (TP1)	SSE	Testing
Tawnaghmore (TP3)	SSE	Testing
Rhode (RP1)	SSE	Testing
Rhode (RP2)	SSE	Testing
Tarbert (TB1)	SSE	Testing
Tarbert (TB2)	SSE	Testing
Tarbert (TB3)	SSE	Testing
Tarbert (TB4)	SSE	Testing
Edenderry (ED1)	EPL	Testing
Tynagh (TYC)	TPL	Testing
Huntstown (HNC)	Viridian	Complete
Huntstown (HN2)	Viridian	Complete
Great Island (GI4)	SSE	Complete


5.2 Project Progress


Generator	Progress
ESB	
<p>ESB have the majority of generating units within the project, spread across all three stages (high, medium and low priority).</p> <p>Reports have been submitted for all eleven high priority units. Seven units have been tested. The remainder of the studies are under review.</p> <p>Studies for the mid priority Aghada unit 1 have been submitted on time. However, the study for Poolbeg CCGT has been delayed and is not expected to be submitted until Q2 2017. Low priority units are progressing to programme and no delays are currently expected.</p> <p>The CER will continue to closely monitor ESB's approach to bringing their delivery dates forward.</p>	


Generator	Progress
Bord Na Mona (BnM)	
BnM have completed their studies for the ED1 unit. The equipment manufacturer has provided a statement of RoCoF compliance for their other two units (ED3 and ED5) and BnM are currently arranging for electrical studies to be undertaken.	

Generator	Progress
SSE	
SSE have submitted their studies.	

Generator	Progress
Bord Gáis Energy (BGE)	
BGE have submitted their studies.	

Generator	Progress
Tynagh Energy	
Tynagh Energy have submitted their study.	

Generator	Progress
Aughinish	
Aughinish have submitted their study.	

Generator	Progress
Indaver	
Indaver have submitted their study.	

Generator	Progress
Viridian	Complete
Viridian have completed RoCoF testing.	

4. Next Steps

Reports shall be issued at the end of each quarter during the 36 month project period.

Report	Period
1	Quarter 1 2015
2	Quarter 2 2015
3	Quarter 3 2015
4	Quarter 4 2015
5	Quarter 1 2016
6	Quarter 2 2016
7	Quarter 3 2016
8	Quarter 4 2016
<u>9</u>	<u>Quarter 1 2017</u>
10	Quarter 2 2017
11	Quarter 3 2017
12	Quarter 4 2017