System Operator Grid Development Report

CAP 24 – EL/24/15

TSO

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EirGrid

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Contents

1 Overview

As per CAP action EL/24/15, System Operators are to submit to DECC a report on large-scale onshore grid development projects to be delivered in 2024 and publish an appropriate version of same. This report provides an overview of the grid development projects to be delivered and connected to the transmission system in 2024.

2 Executive Summary

In 2024, twenty-nine projects will be energised. These projects range from Grid Reinforcement Projects required on the transmission system to the connection of renewable and thermal generation along with battery storage and additional demand load. New technology is also being connected to the transmission grid in 2024. 1.2 GW of renewable and thermal generation as well as battery storage will be connected to the transmission grid in 2024. Over 200 MVA of demand load will be connected to the transmission grid and twelve Grid Reinforcement Projects will be energised in 2024.

3 Disclaimer

While all reasonable care has been taken to prepare this document, we can make no guarantee to the quality, accuracy, and completeness of the information herein. We do not accept responsibility for any loss associated with the use of this information. Use of these documents and the information they contain is at the user's own risk. Information in these documents does not amount to a recommendation as regards to any possible investment. Before taking a business decision based on the content of this document, we advise that interested parties seek separate and independent opinion in relation to the matters covered by these documents. Information in these documents with reference to completion dates (Capital Approval (CA), Project Agreement (PA) and Energisation (EI) Dates) has been prepared with all reasonable care and diligence. All and any dates have been estimated and are indicative and subject to change.

4 Transmission level Grid Development Works - 2024

4.1 Grid Reinforcement/Strengthening

In 2024, twelve TSO Grid Reinforcement/Strengthening Projects will be delivered. These projects are required to replace ageing equipment, and to reinforce the grid in areas to facilitate the connection of addition generation and load.

Some substations are undergoing significant redevelopment such as Galway 110 kV Station and Moy 110 kV Station in the West of the Country. High voltage overhead lines such as Binbane – Cathaleen's Falls in Donegal and Maynooth – Woodland in the East of the Country are undergoing an uprating of the conductor along those lines to allow them carry additional electrical current and therefore facilitate the growth of generation and demand connections in those areas. New technology like the Static Synchronous Compensator (STATCOM) being connected at Thurles 110 kV Station will aid in the control of system voltage and enhance the stability of the system. Additionally, the Greenlink Interconnector will allow the

interconnection of electricity grids in Ireland and Great Britain, allowing for a flow of power in either direction of 500 MW.

As evidenced, these projects include a range of complexities and technologies. These projects will connect to the system at varying times throughout 2024. Details of the connection timeframes can be found in Appendix A.

4.2 Generation Connections

In 2024, fourteen TSO Grid Connected Generation Projects will be delivered. These projects range from the connection of renewable generation such as Solar and Wind Farm connection, the connection of battery storage, and the connection of conventional thermal generation.

Six Renewable Generation Projects will be connected connecting 0.47 GW of renewable generation in the midlands, the East of the Country, and the South-East of the Country. Six Conventional Thermal Generation connections will be delivered in 2024 providing a capacity of 0.52 GW of conventional thermal generation to the grid. Two Battery Storage Projects will be delivered in 2024 in the south of the country and the midlands delivering 0.18 GW of battery storage.

All projects in this category include an element of contestable and non-contestable works. For example, in the South-East of the country Rathnaskilloge 110 kV Station will be contestably delivered while the connection of this station will be carried out non-contestably by the TAO.

As can be seen these projects include a range of complexities, and technologies. These projects will connect to the system at varying times throughout 2024. Details of the connection timeframes can be seen in Appendix A.

4.3 Demand Connections

In 2024, three TSO Demand Connection Projects will be delivered connecting over 200 MVA of demand load into the Dublin region.

All projects in this category include an element of contestable and non-contestable works. For example, in the Grange Castle area of Dublin, Kishoge 110 kV Station will be contestably delivered while the connection of this station to the transmission grid will be carried out non-contestably by the TAO.

As can be seen these projects include a range of complexities, and technologies. These projects will connect to the system at varying times throughout 2024. Details of the connection timeframes can be seen in Appendix A.

Appendix A: Grid Development Projects - 2024

Grid Reinforcement/Strengthening

Project Code	Project Name	MW	MVA	Energisation	EI (Quarter) - 2024	Project Type
CP0813	Trien 110 kV Station Works			31/10/2024	4	Reinforcement
CP0839	Moy 110 kV Station reconfiguration and busbar uprate			18/10/2024	4	Reinforcement
CP0869	Maynooth - Woodland 220 kV line uprate			30/11/2024	4	Reinforcement
CP0871	Galway 110 kV Station Redevelopment Project			30/11/2024	4	Reinforcement
CP0872	West Dublin New 220-110 kV Station (Castlebagot 220 kV			12/11/2024	4	Reinforcement
CP0933	Thurles 110 kV Station - Statcom			18/01/2024	1	Reinforcement
CP1079	Binbane – Cathaleen's Fall 110 kV Line uprate			11/09/2024	3	Reinforcement
CP1132	Cow Cross New 110 kV Transformer			26/06/2024	2	Reinforcement
CP1160	Coolroe, Inniscarra & connected stations protection upgrade			30/11/2024	4	Reinforcement
CP1272	Derryiron Temporary By Pass Project			16/04/2024	2	Reinforcement
CP1437	Clahane-Tralee 110 kV Circuit Alteration CAR			11/10/2024	4	Reinforcement
CP1088	Greenlink Interconnector			28/06/2024	2	Reinforcement Interconnection

Generation Connections

Project Code	Project Name	MW	MVA	Energisation	EI (Quarter) - 2024	Project Type
CP1129	Aghada BESS 02	159		02/02/2024	1	Generation BESS
CP1414	Cloncreen Battery Phase 2	25	16.1	03/10/2024	4	Generation BESS
CP1041	Timahoe 110 kV Station (Timahoe North Solar Farm)	70		26/07/2024	3	Generation Renewable
CP1136	Deenes 110 kV Station - Gaskinstown Solar Farm	85		18/09/2024	3	Generation Renewable
CP1145	Rathnaskilloge Solar Farm	95		15/10/2024	4	Generation Renewable
CP1201	Bogtown 110 kV Station	60		15/05/2024	2	Generation Renewable
CP1248	Harlockstown Solar (Gallanstown Ext)	50.5		08/03/2024	1	Generation Renewable
CP1329	Stonestown 110 kV Station_Derrinlough Wind Farm	105		19/08/2024	3	Generation Renewable
CP1103	Corduff FlexGen	63.5	2	07/02/2024	1	Generation Thermal
CP1293	Tarbert TEG - 2 (Phase 2) (SOS)	150		15/08/2024	3	Generation Thermal
CP1307	Tarbert Flexgen	0		01/02/2024	1	Generation Thermal
CP1308-H10	Shannonbridge Flexgen H10	130		26/01/2024	1	Generation Thermal
CP1308-H7	Shannonbridge Flexgen H7	130		23/03/2024	1	Generation Thermal
CP1493	Huntstown TEG	50		02/02/2024	1	Generation Thermal

Demand Connections

Project Code	Project Name	MW	MVA	Energisation	EI (Quarter) - 2024	Project Type
CP1093	Barnageeragh Phase 2		42	01/11/2024	4	Demand
CP1175	Kishoge 110 kV Station		48.2	22/11/2024	4	Demand
CP1230	Darndale Phase 2 - 3 110 kV customer connections in Darndale 110 kV station		142	19/08/2024	3	Demand