

# GRID25

Grid25 is EirGrid's strategy for the development of Ireland's transmission grid for a sustainable and competitive future. This strategy will support economic growth and provide the infrastructure to enable Ireland to realise its renewable potential and achieve the challenging 2020 target of having 40% of our electricity generated from renewable sources. Work is continuing on many different Grid25 projects with highlights and achievements for the quarter outlined below.

## GRID25 PROGRAMME MILESTONES ACHIEVED

The tables below show key recent milestones achieved:

### Recent Capital Approvals

- |   |                      |
|---|----------------------|
| • <i>Moneypoint - North Kerry Project</i>                 | <i>March 2011</i>    |
| • <i>Cathaleen's Fall - Golagh Tee 110kV Line Uprate</i>  | <i>February 2011</i> |
| • <i>Grid West Electricity Transmission Scheme</i>        | <i>February 2011</i> |
| • <i>Ardnacrusha 110kV Station Refurbishment</i>          | <i>February 2011</i> |
| • <i>Ballydine - Cullenagh 110kV Line Uprate</i>          | <i>January 2011</i>  |
| • <i>Cashla - Tynagh 220kV Line Uprate</i>                | <i>January 2011</i>  |
| • <i>Navan Station Replacement/Busbar Uprate</i>          | <i>January 2011</i>  |
| • <i>Macroom 110kV Station Protection Upgrade</i>         | <i>January 2011</i>  |
| • <i>Cathaleen's Fall - Srananagh 1 110kV Line Uprate</i> | <i>January 2011</i>  |

### Recent Planning Lodgements

- |  |                      |
|--|----------------------|
| • <i>Great Island 220kV Station Redevelopment</i>    | <i>March 2011</i>    |
| • <i>Tarbert Redevelopment 220/110kV New Station</i> | <i>March 2011</i>    |
| • <i>Dunstown 400/220kV 500 MVA Transformer</i>      | <i>February 2011</i> |
| • <i>Woodland 400/220kV 500 MVA Transformer</i>      | <i>February 2011</i> |

### Recent Project Agreements

- |  |                     |
|--|---------------------|
| • <i>Louth Woodland 220kV Line Refurbishment</i>         | <i>March 2011</i>   |
| • <i>Woodland 400kV Station Protection Upgrade</i>       | <i>January 2011</i> |
| • <i>Remote control to NCC - Phase 1</i>                 | <i>January 2011</i> |
| • <i>Protection for Arva - Shankill 110kV No. 2 Line</i> | <i>January 2011</i> |
| • <i>Porcelain Insulator Replacement</i>                 | <i>January 2011</i> |

### Recent Energisations

- |  |                     |
|--|---------------------|
| • <i>Lisdrum 110kV Station - Reactive Compensation</i> | <i>March 2011</i>   |
| • <i>Killonan - Knockraha 220kV Line Uprate HTLS</i>   | <i>March 2011</i>   |
| • <i>Castledockrell Windfarm Connection</i>            | <i>January 2011</i> |



## NEW TECHNOLOGY ON THE IRISH GRID

At 3am on Friday 25th March 2011 the Killonan – Knockraha 220kV line was successfully energised after being re-conducted using, for the first time on the Irish network, High Temperature Low Sag (HTLS) conductor.

The scope of the project was to uprate the line by replacing the existing 430mm<sup>2</sup> aluminium conductor steel reinforced (ACSR) conductor with HTLS gap-type ZT-aluminium conductor steel reinforced (GZTACSR) conductor to achieve a minimum of 50% increased rating. The required capacity uprate was provided by using a HTLS conductor of the same size and weight as the original ACSR.

The Killonan – Knockraha 220kV line was built in 1965, is 82km long and was originally constructed with 430mm<sup>2</sup> ACSR operating at a maximum temperature of 60°C.

This is the first of a suite of line uprate projects which will use HTLS to deliver Grid25.



*HTLS Installation Process*

## GRID25 PROGRAMME MANAGEMENT OFFICE (PMO) UPDATE



*EirGrid HQ, Dublin*

Quarter 1 2011 has seen continued activity across the PMO with the creation or revision of Grid25 polices in the public planning, legal, project management and training areas that impact capital projects.

The wayleave team continued to make good progress on land access on a number of projects in Q1 2011. Wayleave notices were issued for Arva – Shankill 2, Gorman – Meath Hill and Donegal 110kV projects in March 2011.

A review and update of the draft Ecology Guidelines for Transmission Power lines is ongoing. These guidelines will provide a standard approach for the manner in which ecology is reported for all new transmission projects.

The planning and environment unit is currently reviewing final drafts of the Grid25 implementation programme, environmental report (ER) and appropriate assessment (AA) and it is anticipated that they will be put out for public consultation in April 2011 with a view to publication shortly thereafter.

## GRID25 PROJECT UPDATES

### Mullingar – Kinnegad/Derryiron new 110kV line

The project consists of a new 110kV line from the existing Mullingar 110kV station to either the existing Kinnegad or Derryiron 110kV stations. The project team are currently evaluating the route corridors and this will be completed prior to the second project open day which is planned for early April 2011 in Mullingar.

The final route corridor will be announced at this time and the public will be invited to make submissions and comments. The final 110kV line alignment decision will be made during Q2 2011 and the planning application will be submitted to An Bord Pleanála in Q3 2011.

EirGrid's Project Manager Neil Keegan commented that "the €25-30 million project will enhance the security of supply to the Mullingar area".



*Project Open Day with PM Neil Keegan*

### North Dublin Fringe 220kV Reinforcement Project

This €50 million project consists of a new 220/110kV station in North Dublin near Balgriffin. The project will facilitate the connection of a new 220kV cable from the new station to Finglas 220kV station some 10kms away and will support future load development over the long-term in this region.

The project team is currently reviewing potential sites within the study area and expect to select a preferred

site during Quarter 2 2011. A planning application will then be lodged with An Bord Pleanála in Quarter 4 2011.



*Photomontage of North Dublin Fringe 220kV GIS Station*

### Capital Approval granted for Grid West Project

Capital Approval for the Grid West Electricity Transmission Scheme (Grid West) was granted by the EirGrid Board on 16th February 2011. The project is driven by the need to connect 646.5MW of Gate 3 wind generation at Bellacorick in Co. Mayo and represents a significant investment in the region.

Studies have shown that a single 400kV circuit is the preferred option at this stage. Now that capital approval has been obtained, EirGrid will commence the detailed environmental investigations of route and station options, and alternatives, with reference to technical and economic requirements.

A preferred design including a route for the new circuit will then be progressed to planning permission and project agreement with the Transmission Asset Owner (TAO). Consultation with the public will continue throughout this process.



*Pictured are (L-R): Alan McHugh, Graham Parker, Louis Fisher, Aishling Goulding, Emma Fagan, Ken McDonnell, Jeff Kelliher. Not present: Deborah Meghen, Tom Lyons, Valerie Hedin.*

### Glanagow – Raffeen 220kV sub marine cable



*Submarine cable laying in shipping lane*

Installation of the land cable has commenced from Raffeen to the sea entry point at Ringaskiddy on the western side of Cork Harbour. The submarine section of the cable was floated across the harbour and placed on the seabed in early March 2011.

Subsea embedment works commenced on this section of the cable at the end of March 2011 and will last for approximately a month. The Glanagow GIS 220kV station is also on schedule for energisation in August 2011.

This will mark the completion of over €100 million of transmission works in the Cork Harbour area, in order to facilitate the export of power from two new CCGT power plants, which were built by Bord Gais and ESB Power Generation.

### Great Island Station Redevelopment

The existing 220kV air insulated switchgear (AIS) station at Great Island, Co. Wexford will be replaced with a new 220kV gas insulated switchgear (GIS) station. The new GIS station will be an indoor station and has a smaller footprint than the outdoor GIS station.

The planning application was submitted on 14th of March 2011 and a decision is expected from Wexford County Council in July 2011.

The redevelopment of the Great Island station is a €20 million investment in the transmission system which will provide Wexford and the surrounding area with a safe, secure and reliable electricity supply.



*Great Island Station Redevelopment*

## RENEWABLE INTEGRATION DEVELOPMENT PROJECT (RIDP) STAKEHOLDER FORUMS

RIDP stakeholder forums are due to take place in Belfast and Dublin in April 2011 as part of phase three of the RIDP project. To date a number of possible schemes have been identified as solutions to the challenges presented by, amongst other things, the 2020 targets. RIDP is a joint development between EirGrid, SONI and NIE.

### CONTACT DETAILS:

Tel: +353 (0)1 237 0000 (Main Reception)  
Tel: +353 (0)1 702 6642 (Customer Relations Team)  
Fax: +353 (0)1 661 5375  
Email: [info@eirgrid.com](mailto:info@eirgrid.com)  
Web: [www.eirgrid.com](http://www.eirgrid.com)  
Address: The Oval, 160 Shelbourne Road, Ballsbridge, Dublin 4, Ireland