



Need for Laois Kilkenny Project

The Laois-Kilkenny Project is required to address problems on the electricity grid across the Midlands and the South East.

The infrastructure will be located in counties Laois and Kilkenny and it will address two specific problems that affect both Laois and Kilkenny and a wider region that also includes counties Carlow, Kildare and Wicklow.

The problems relate to the quality of supply across Laois, Carlow, Kildare and Wicklow and a security of supply issue that affects County Kilkenny. They are caused by weaknesses and a lack of reliability on the transmission network across the region as a result of continued growth in demand for electricity. The problems are starting to become critical.

“Quality of supply” is a term that covers performance issues relating to low voltages and dips in voltage.

Common signs of a voltage problem are:

- Lights that dim when other appliances are in use
- Kettle is slow to boil
- Electrical motors that fail to start first time

If the quality of supply issue is allowed to continue it may result in voltage collapse, which ultimately leads to complete loss of electricity supply across Laois, Carlow, Kildare and Wicklow.

“Security of supply” simply means maintaining a supply of electricity to consumers; the ability of the electricity grid to transport electrical energy from where it is generated to where it is consumed.

Kilkenny is connected to the transmission system by two lines, the Kellis – Kilkenny 110 kV and Great Island – Kilkenny 110 kV lines.

The loss of both these lines would result in a complete loss of electricity supply to a large portion of the county.

There is a particular risk to security of supply during periods of planned maintenance work. When one of the two lines is out of operation during regular maintenance, the loss of the other line would result in the loss of electricity supply.

For that reason, we schedule maintenance outages when demand for electricity is relatively low, generally from March through to October, in order to minimise the potential impact.

The development will provide a third line into the Kilkenny substation, ensuring the lights stay on if the two existing lines were out of operation. The 400 kV connection into the midlands is key to ensuring the security of supply around the region is maintained.



Potential future developments in the region

EirGrid operates and develops the electricity system to meet the needs of all electricity users. As a state-owned company, EirGrid's role is to support a successful economy and society, rather than to further its own commercial interests.

In 2018, the Government launched Project Ireland 2040, which aims to provide balanced regional development and to improve the state's infrastructure. Specifically, it seeks to anticipate where the one million extra people who will be in the state in 2040 will live and work.

It consists of a National Planning Framework and a ten-year National Development Plan, which comprises an investment in infrastructure totalling €116 billion up to 2027. The latter specifically references EirGrid and its work in continuing "to progress a number of important projects within the All-Island Electricity Market." The Laois-Kilkenny Project is one such project.

In June 2019, the Government published the Climate Action Plan which sets a target of 70% of electricity to come from renewable sources by 2030.

As a result of the spatial planning and decarbonisation policies set out under Project Ireland 2040 and the Climate Action Plan, it is anticipated that there will be further renewable generation projects throughout the country. It is possible that some developments could be located in the Midlands and South East.

EirGrid have a statutory obligation to connect such renewable generators to the electricity grid.

However, such developments would need to progress through the various statutory processes, separate to and independent of the Laois-Kilkenny Project.

No windfarms have applied to connect to the substation in Coolnabacky, a key component of the overall Laois Kilkenny Project. There has been an application to connect into the substation from a nearby solar farm.

EirGrid is aware of two proposed windfarm developments in the region which have received planning permission for wind turbines.

Finally, to reiterate, the purpose of the Laois-Kilkenny Project is to address the concerns on the network in the region. Every year, EirGrid publishes a Transmission Development Plan which sets out our plans for the development of the Irish transmission network and interconnection over the following ten years. As can be seen in the Transmission Development Plan 2019-2028¹, aside from the uprating of the Coolnabacky - Portlaoise 110 kV Line, EirGrid currently has no further plans for grid infrastructure development in the Coolnabacky area.

¹ Transmission Development Plan 2019-2028: <http://www.eirgridgroup.com/site-files/library/EirGrid/TDP-2019-2028-Final-For-Publication.pdf>



All parts of Ireland need a reliable, high-quality standard of electricity supply. This ensures that our electricity network can meet the present and future needs of all users, from homes to farms, and from small businesses to industrial customers.

A strong electricity network provides this reassurance. This project will enable this region to remain up to the national standard of electricity transmission. It will also provide the capacity and security of supply demanded by industry and high tech users. This will allow the region to compete for - and keep - businesses with employment potential.

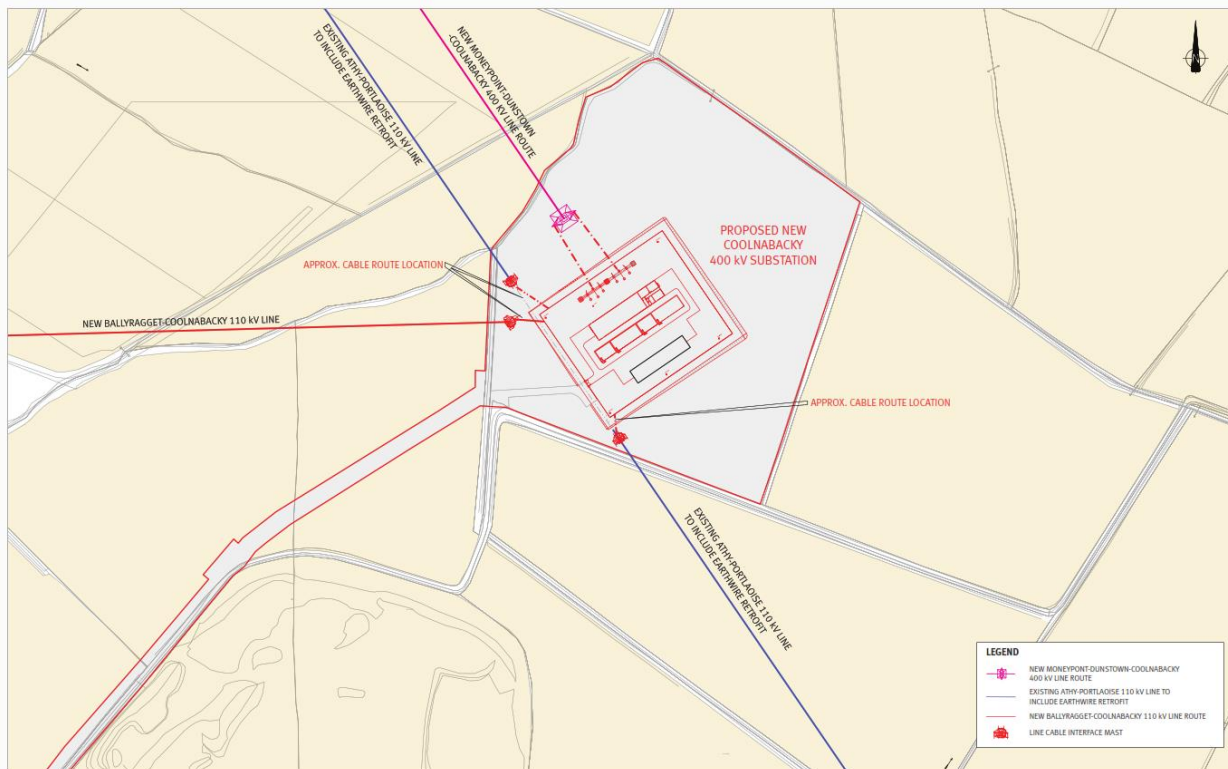


Figure 1; Coolnabackey Site Layout and Proposed Overhead Lines



View 34 Montage

Figure 2; New 400 kV Overhead Line from R427²



Figure 3; Coolnabackey 400 / 110 kV Substation Model

² Laois Kilkenny Planning Application Further Information Documents - <http://www.eirgridlaoiskilkenny.ie/media/pdf/Laois%20-%20Kilkenny%20Reinforcement%20Project%20Further%20Information/Laois%20-%20Kilkenny%20EIS%20Appendices/6.1%20A3%20Photomontages.pdf>