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Design, installation and testing of grid connected high voltage power transformers.

By

Ken Lynch (ESBI)
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Simon Tweed (EIRGRID)

The power transmission network in Ireland is continuously being upgraded to support newly connected Combined Cycle Gas Turbine (CCGT) generating stations. These new stations are typically 430MW to 450MW in size and connected to the transmission system via a 500MVA transformer.

This presentation concentrates on this single electrical piece of plant, the high voltage power transformer, in a CCGT facility that connects between the plant generator and the external transmission system.

For this presentation, the power transformer will be discussed in three aspects:

- **Ken Lynch (ESBI):** General overview of the design criteria through to factory testing and on site assembly inspection and testing. Transformer protection methods (ANSI) will also be presented.
- **Brendan Diggin (ESBI):** Specific on site transformer tests, also referred to as finger print testing and reasons why. Presentation will also discuss the selection process of the transformer oil along with pro's and con's.
- **Simon Tweed (EIRGRID):** Finally, in order to connect such a large power transformer to the transmission network, which is operated by EIRGRID, customers need to ensure full compliance to the Irish Grid Code testing requirements.

Time: 8.00p.m.
Date: 26th January 2010
Venue: Rochestown Park Hotel

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