



NovaUCD

Technology Licensing Opportunity



Intelligent Network Tool to Evaluate Frequency Regulation in Electrical Grid

- Remote monitoring of energy sources to improve grid stability



Opportunity:

In order to maintain stability of the electrical grid, it is imperative that the devices that generate energy are able to regulate their frequency regulation as needed to ensure grid stability. Researchers at University College Dublin have developed an intelligent network tool to evaluate frequency regulation in an electrical grid and to evaluate whether a device connected to the grid is correctly performing frequency regulation.

Applications:

The tool measures sources from both; synchronous devices, such as hydro-electric, fossil and nuclear fuel power plants, which provide frequency regulation through the use of inertia, and non-synchronous devices (such as wind and solar, which may not have the same level of control.

Key Features/Advantages:

- Provides a method for estimating whether a device connected to a bus or node of the electrical grid is providing frequency regulation. The inertial response being provided by a device and its machine rotor speed can also be evaluated using the techniques provided by the present technology.
- Does not require any knowledge of the specific devices connected and thus is suitable for use by transmission system operators.
- Can remotely measure both non-synchronous devices and synchronous devices.

Value Proposition:

Remote monitoring solution for complete node frequency monitoring.

Market:

Transmission system operators, industry regulators, industry consultants and energy planning systems.

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