

University of Strathclyde – Power Engineering Capabilities



University of
Strathclyde
Engineering

Description and scope

The Institute for Energy and Environment (InstEE) within the University of Strathclyde is the largest academic group in Europe concerned with electrical power systems, distributed generation and renewables. Comprising of 26 academic staff members, 70 full-time researchers and 130 research students the Institute has a core expertise covering: power systems modelling, simulation and analysis; demand side management; wind energy and technology; power systems; renewable energy; power electronics, drives and converters; high voltage technologies; protection and control; and, monitoring, diagnostics and advanced ICT solutions for the power industry.

Current Research

- Integration of real-time simulation with power hardware
- Protection solutions in the presence of large amounts of DG and smart grids
- State estimation of HV networks
- Advanced Network Management solutions development and demonstration
- Developments in fuel cells and battery charging
- New system operator tools for improved network control

Research Infrastructure

Distribution Network and Protection (D-NAP) Laboratory

The Institute for Energy and Environment at the University of Strathclyde offers the experimental facility “Distribution Network and Protection Laboratory”, D-NAP. This comprises a 100kVA microgrid that can operate grid connected or variously islanded, integrated with a real-time digital network simulator and protection injection laboratory. The facility offers hardware-in-the-loop capability, and incorporates induction machines, programmable load banks and various 1/3 - phase inverters.



Offered Services

The D-NAP facility offers a flexible environment to test new components or algorithms on an LV network with a frequency and voltage variable supply. Devices can be attached to the network at a number of points and the voltage and current measurements taken back to a central real-time calculation system.

- Demonstration of new techniques for distributed power system control
- Analysis of the effects of components within a system
- Testing of protection systems/ devices.

Contact details

Address: Royal College Building, 204 George Street, Glasgow, UK, G1 1XW

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<i>For Management/Organization Issues</i>		<i>For Technical issues</i>	
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