Island Electricity Generation
Isle of Eigg

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Isle of Eigg

• 8 km x 6 km 10 miles west coast of Scotland
• Population 87
• 45 residential properties and 5 commercial properties
• The Isle of Eigg Heritage Trust was formed in 1997
  - Island residents, Highland council and Scottish Wildlife Trust

Island Electrification Project

• Island was relying on age old diesel generators
• Eigg Electric was formed as a subsidiary company under the trust.
• New Island Electrification project operational on February 2008
• Voluntary effort by the islanders with the help of Scottish Hydro and various contractors.

Island Electrification System

• Integration of multiple renewable energy sources
  - Wind, hydro and solar
• Each of these sources has been sensitively sited to cause minimum visual and physical impact upon the island.
• 11km of buried high voltage cables
• Limited the demand with the approval of the residents; domestic and small business supplies have been capped at 5kW, and larger business supplies at 10kW.
• Electricity charges are collected via pre-payment card operated meters.

Finance

• The total cost of the scheme was £1.6 million.
• European Regional Development Fund, Big Lottery, Highlands & Islands Enterprise, HIE Lochaber, Highlands and Islands Community Energy Company, Scottish Community Household Renewables Initiative, Energy Saving Trust, Highland Council, Isle of Eigg Heritage Trust & The Residents of the Isle of Eigg.

Wind turbines

4 Nos. of 6 kW
Proven wind turbines
Hydro Electric

The major renewable energy source is a 100kW Hydro Electric Generator.
This is supported by two smaller Hydro Electric Generators of 10kW and 9kW.

Independent hydro schemes

Solar Photovoltaic

- 10 kW PV

Electricity Distribution

Control Room

Twelve Sunny Island 5kW inverters are used connected in four three phase clusters to give a total output rating of 60kW.
A MultiCluster Box communicating inverters and provides contactors for the connection to the island grid and the back-up generator.
Control Room

Batteries
Each cluster is connected to a 48V 2242 Ah (C10) battery bank consisting of 24 batteries

Metering System

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