

Fernando de Noronha
Wind into a diesel grid

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Fernando de Noronha system

- Fernando de Noronha is a Brazilian island (18km²) in the Atlantic 345km from the coast
- The population is 1700 + tourists (approx. 1000)
- The power system consists of one power station with 2*1MW diesel gensets (new, installed 2001) and 1*225kW wind turbine
- Minimum load approx. 400kW and maximum load is approx. 800kW



Wind diesel system experience

- Wind turbine installed May 2000
- Wind turbine owned by ANEEL (Brazilian Electricity Regulatory Agency)
- Project headed by Brazilian Wind Energy Centre
- Utility was sceptical towards wind energy and was not actively participating in project
- No incentives for the utility to participate (actually the utility lost money due to reduction in fuel subsidy)
- Utility experienced problems with their old gensets (1 generator burned, 2 AVR's failed) after wind turbine installation
- Wind turbine not allowed to operate.
- After measurements and discussion between owners, operators and utility it was allowed to be operated at reduced rating (150kW)
- Utility is beginning to be positive
- They will participate in follow up project