

CASE STUDY 5

Shell UK Exploration & Production

PROVEN
PROVEN ENERGY

Location:

SE Coast of England,
North Sea

Site Overview:

Shell had a requirement to provide power through a portable renewable energy system that complied with IEC 60904-1,2 & 3 and was capable of being left unattended at either on or offshore sites. The portable systems are currently located at Shell's Kilo Platform off the South-East coast of England where they are un-manned.



The systems have been in place there now for a few years now and have continued to produce consistent results. Although the turbines are special build explosion proof units, all Proven wind-turbines are provided as marine-grade spec. This means that they are not susceptible to weathering the same as some of the competitors and has also helped to attract a lot more remote customers.

Access Restrictions:

Private access site that requires authorisation prior to any visit. Access only via helicopter or boat.



Equipment (per turbine):

- *WT2500/024 battery charging wind turbine.
- *Explosion proof to Shell specifications.
- TM650 6.5m tilt-up, self-supporting tower.
- *Custom built into battery pack for complete portability.

Installation: 2000
Guide Cost: £classified

Performance:

Annual Average wind-speed: 8m/s+
Carbon Displacement:
4,407kg/CO2 per annum
Projected Annual Output: 10,250kWh
Approximate Annual Savings: £717GBP*
ROC's revenue generated: £410GBP

Technical Specifications (per turbine):

Rated kW output (at 12m/s): 2.5kWp
Cut in wind speed: 2.5m/s
Cut out wind speed: n/a
Inverters: various
Blade Diameter: 3.5m
Rotor Thrust: 5kN
Noise @ 5m/s: 40dBA
Hub Height (centre): 6.5m
Head Weight: 190kg
Tower Weight: 241kg
Main Foundation Dimensions:
custom

*N.B. annual savings rate is based upon an import tariff of £0.07 per unit of electricity. This figure may vary in reality between suppliers.

*If the site were to have a grid connection, the cost of the cabling could very easily run into hundreds of thousands, if not millions.

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WIND ENERGY

ASSOCIATION

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RENEWABLE ENERGY GRANTS
INSTALLER ACCREDITATION NUMBER:

2118497