

## Off-Grid House and stable complex



An ideal application for one of our standard Off Grid kits...

**Paul Holland, Energy Solutions**

Due to the cost and difficulties in connecting to the National Grid, we were approached by a customer to design and commission an off grid system in a large rural dwelling and stable complex. The system had to be completely automated, providing 24 hour continuous power.

The customer initially considered installing a large generator, and running it continually. However, it soon became apparent that this option would be costly, noisy and inefficient.

Instead, the customer opted for a standard Energy Solutions's 5kw off-grid kit, who's features fitted his requirements. Subsequently, Energy Solution supplied the kit, configured with the customer's specified configuration and generator run-times. This was then installed by a local electrician.

The system now provides the customer with a comprehensive management of the generator running times, including pre-defined runs, a weekly synchronisation

charge, a silent period (ie. Night-time), automatic generator running if batteries discharge becomes low or if there is an unusual high load demand. Within the house is situated a control panel, which provides the customer with information regarding the status of the system, and allows him to remotely start/stop the generator.

The system has significantly reduced the running hours of the generator, but still provides 24 hour power. It is expected that the ES Offgrid system costs will be recovered within 3-4 years due to the savings in diesel and servicing costs.

The next stage is to install a small wind turbine to further reduce the generator running time.

### Solution

- 1x 24/5000/120 ES Offgrid Kit
- 1104 Ah batteries at 24V
- 1x 11KVA Generator

