



HYBRID TELECOMS POWER

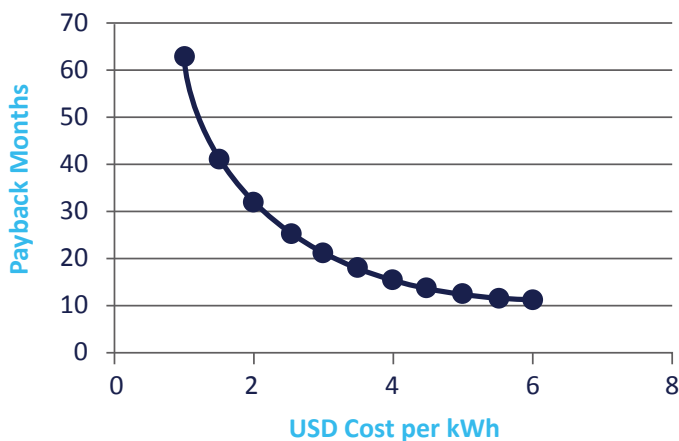
Firefly's hybrid generator systems provide instant OPEX savings for off-grid and DG supported telecom tower infrastructure. Firefly's Hybrid Power Generators combine efficient battery storage and energy management. With compact modular design and robust, proven operating capabilities, Firefly's hybrid systems are easily retrofitted onto existing tower systems providing reduced diesel use, longer servicing intervals and extended DG operating life.

Benefits

- ▶ Substantial savings on diesel use - up to 75% reduced OPEX
- ▶ Simple retrofit installation on existing tower infrastructure
- ▶ Reduced CO2 emissions
- ▶ Longer service intervals for DG sets – reduced use through efficient energy management
- ▶ Mitigate the impact of diesel theft
- ▶ Improved asset life - extending operational life of DG sets



Potential CAPEX payback



The Firefly Hybrid Power Generator (HPG) is an extremely cost effective CAPEX investment which delivers immediate OPEX savings from fuel consumption, reduced servicing and logistics costs, and increased DG service life.

The Firefly HPG offers additional flexibility through a modular design approach: additional battery capacity, solar PV or wind turbines can be added at a later date. This allows CAPEX flows to be managed over the longer term, or to allow for the acquisition of additional land for solar panel installation whilst realizing fuel saving benefits in the short term.

Based on USD 1 per litre diesel, 40% fuel loss due to theft service and maintenance costs
See GSMA: "Green Power for Mobile Interactive Replication Guide".



FIREFLY CLEAN ENERGY

Firefly is an innovative cleantech company headquartered in the UK. Our capabilities include the design and manufacture of Hybrid Power Generators for industry, Off-Grid Power Systems for emergency response and development projects, renewable energy storage solutions that reduce grid dependence, and turnkey solutions for temporary power applications.

Through our European and African hubs, and a rapidly expanding dealer network, we are making a positive social and environmental impact around the world.

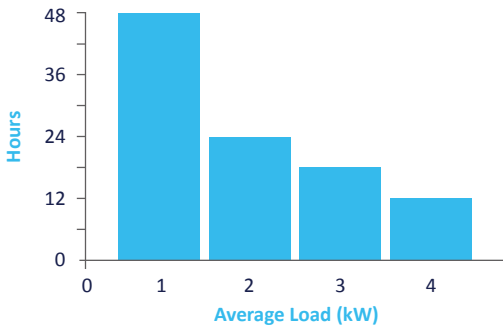
Flexible Configuration

Firefly's CYGNUS® Hybrid Power Generator range can be adapted to suit site specific requirements:

- ▶ Inverter capacity: 1.2kVa to 72kVa
- ▶ Energy storage: 6kWh to 100kWh
- ▶ Canopy or open skid frame
- ▶ Remote monitoring

Autonomous Run Times

Firefly provides market leading autonomy between charge. A typical 48kWh CYGNUS® HPG would provide the following:



INSTALLATION OPTIONS:

RETROFIT: to existing off-grid sites, with simple cost effective installation

UPS: For mains grid sites to replace stand by DGs, eliminate down time on difficult to access locations.



Case Study: Ericsson

During the 2014 winter flooding in the UK, our partner Speedy Hire received over 400 call outs to supply backup diesel generators for grid supplied BTS. Many locations were cut off, which delayed response times. With the installation of the Cygnus® HPG, this problem was alleviated. Service levels have been consistently maintained reducing the costs incurred by the TowerCo.



Case Study: Hostile Environments

Firefly's HPGs have been proven in a range of weather conditions, including the hot, dusty environment of Afghanistan. This 5kVA 18kWh unit was installed in January 2013 and has been working completely fault free since then. Connected to 500Wp of solar PV panels the HPG has supported all power requirements of a single office space, which was previously supplied by a small diesel generator.

To find out more about how Firefly's range of Hybrid Power Generators can deliver immediate OPEX savings contact us on [+44 1273 409595](tel:+441273409595) or email us at telecoms@fireflysolar.net. We are able to provide a full service offering including:

- ▶ Audit of potential fuel saving and cost breakdown for each site
- ▶ Arrange trial installations*
- ▶ Installation support and training for local teams
- ▶ Ongoing asset tracking and monitoring of performance**

* terms and conditions apply ** depending on data coverage