Controllis
Perpetual Power

Hybrid Energy Systems

Overview

Saving site fuel costs and reducing network carbon footprint are key drivers for all telecoms network operators today. As a manufacturer of DC generators that have optional solar charge controllers Controllis is able to provide operators with complete solutions that dramatically reduce fuel costs and the network's carbon footprint. By offering attractive financing for larger deployments we can provide a payback from day one of the installation.

Controllis provides two types of hybrid energy systems: a **battery cycling** hybrid generator solution and a **renewable energy based** hybrid solution. Both types reduce the cost per kilowatt hour of energy delivered to a site. Output from our hybrid energy systems can be either DC or AC.

The **battery cycling hybrid** system comprises a Quiet 48 generator and a battery bank (either lead acid or a lithium ion). The generator charges up the battery bank and the site runs off the batteries for several hours or longer, reducing generator run-time and ensuring that the generator is running at high load where it is most efficient. Such systems can provide significant savings in fuel and maintenance costs compared to continuously-running AC generator solutions.

The **renewable hybrid** system combines a Quiet 48 generator with a renewable energy solution based around wind, solar, micro hydro (or a combination of these renewable resources). The renewable energy device is monitored and controlled via an interface into the Remote System Controller within the generator; and the system seamlessly interfaces into the Controllis Remote Management Server, providing reports on renewable usage and system condition. In markets with feed-in tariffs, advanced renewable controllers can enable site operators to earn financial returns from excess energy produced.

Using a Quiet 48 generator at the heart of the renewable system has a number of advantages:

- reduced size of panel array and battery bank without compromising power delivery to the equipment – significantly reduces capital expenditure
- reduced requirement for site footprint and land area – reduces leasing costs
- higher energy efficiency than an AC generator and rectifier – reduces fuel costs
- management system (and single interface) common to all site components – reduces complexity, training time for staff and operating costs
- improved system reliability compared to large renewable sources and battery banks alone – reduces site outages (e.g. during rainy seasons)

Partners

Controllis partners with a wide range of suppliers and local system integrators to provide a complete commissioned turn-key hybrid solution. Contact us to discuss your requirements, we can model your specific scenario and show you how you can start saving today.

Hybrid Energy Systems Specifications

Site Load	300W to 10kW
Renewable Energy Source	Solar, Wind or Micro Hydro
DC Generator Size	5kW up to Dual 12kW
Battery Types	Lithium Ion or Lead Acid (sealed or watered)
Remote Monitoring & Control	Complete system monitoring including all generator and renewable controller parameters. Remote control of all critical functions.
Built in Communications	UMTS/GPRS/GSM
Alarms	via SNMP, SMPP (email) and SMS
Management and configuration Interface	Controllis RMS (up to 8,000 sites)
Optional Grid Back-feed	Yes
Typical project payback period	12-24 months (ask about our business case modelling service)
System Warranty	Industry leading 3 years plus
Geographic availability	Worldwide
Financing Facilities available	Yes

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