ILLUMIENT
Smart Off-Grid Lighting

CLEAN ENERGY   COMMUNICATIONS

Smart Off-Grid
Control and Monitoring

CLOUD SOFTWARE   OFF GRID POWER

Illumience Smart Off-Grid is advanced technology that provides real-time, 24x7, remote control, monitoring and management of all wind and solar powered lighting systems from Illumient. With Smart Off-Grid, streetlights and other off-grid systems can achieve unprecedented levels of reliability and performance while slashing installation and maintenance costs.

Illumience turns an off-grid light into a proactively maintained system, giving owners peace of mind that all aspects of the system and the load are being monitored at all times. Illumience also lets owners control and manage their systems anytime, anywhere using an Internet-connected PC or smartphone.

How Smart Off-Grid Enhances Reliability

- Optimizes battery life

A common misconception is that the weak link in any system is the battery itself. In actuality the weak link is not having the ability to monitor and control how the battery is being discharged and recharged. Our Smart-off Grid controller eliminates all the variables which shorten battery life, with its optimized charge profiles, life cycle management, short circuit and overload protection and low voltage disconnect capabilities.

- Optimizes performance with lighting profiles and motion detection

With Illumience it simple to remotely set up lighting profiles that automatically adjust based on time

of day, day of week, and whether or not motion has been sensed (with optional motion sensor option.) This allows for full customization of the lighting profiles at any time, which maximizes performance to account for weather or seasonal changes in cloud cover, shortened sunlight hours and more. This is done easily with the benefit of Illumience's real time historical data to guide the user on exactly what light profile to set up.

- Fastest time to resolution with real-time alerts

With customizable alarms and real-time alerts, system owners can take immediate actions if there is a problem. Furthermore, troubleshooting can be done remotely via PC or smartphone, saving time and money on maintenance.

Feature	Function	Benefit
Remote, real-time system monitoring of each system input and output	Lets owner know status at all times	Knowledge to determine what needs to be done to assure reliable performance year round
Remote, real-time system control	Dimming and control of light level, with or without motion control sensing	Perform control functions remotely, eliminating the need to be on site
Remote commissioning, simple plug and play installation	Set up all site parameters from the office	Does not require an electrician and saves time, with no guess work for the installer
Remote maintenance. Check solar panels or wind turbines. Perform short circuit test. Adjust battery level. Reboot system remotely	Instead of sending technician to site, these tests (and more) and changes can be done remotely to determine problem and/or fix problem	Saves time and money on maintenance or troubleshooting
Proactive, versus reactive. maintenance can determine when batteries or solar panels need to be replaced	Can plan for swap without emergency shipping and service call	Saves time and money on maintenance or troubleshooting
Color coded, keyed and non- arcing connectors on controllers	Easy and fast swap of controller- so simple it does not require a trained professional,	Is safe and easy to swap out quickly , saving time and money
Customizable messaging and alerts	Set by user to provide notification of faults to specific email or text	Better service to customer, faster response, less downtime
Dynamic current sensing and power input shedding	Measures current harvesting of solar and/ or wind devices to enable maximum battery charging by allowing up to 1000 watts of power charging	Maximize power harvesting
Weather history	A tool to help correlate events with system anomalies speeds troubleshooting	Easy problem identification and faster resolution. Minimizes service calls.
Group diagnostics	Monitoring and control of multiple lights from one connection. Group comparison data of each pole to determine anomalies	Cost reduction. User friendly interface
Logic and communications powered by solar input or battery	Failsafe redundant power to controller should either battery or solar panel fail	Higher reliability
Daily, weekly or monthly energy report	Provides a true measure of the battery operating conditions which provides a gauge to expected battery life. It also helps guide you when the load profile needs adjustment or if environmental conditions have changed and require more in-depth investigation	Saves time and money, extends battery life and enhances reliability
Remote adjustability to data resolution	User can drill down to more high resolution data, down to historically looking at second by second detail, this data resolution feature enables easier and more reliable site fault resolution by removing the guess work out of problem determination.	Saves time and money, and enhances reliability

USERS