ILLUMIENT
Smart Off-Grid Lighting

Illumience Smart Off-Grid™ Technology

Monitor, manage and maintain your off-grid systems over the Internet

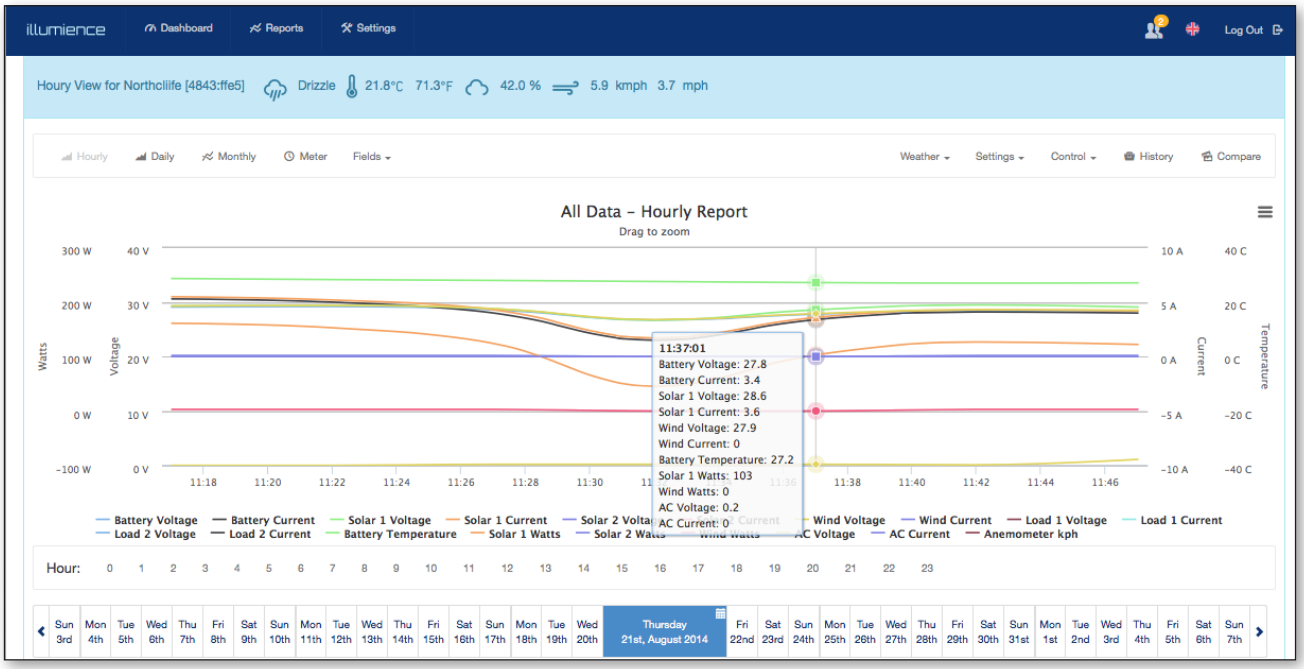
10633 kWh Generated	6064 kWh Used	9225 LBs of Carbon Offset	99 Trees Saved

Reliability, Reliability, Reliability

Illumience Cloud software lets you monitor site performance, manage and proactively maintain off-grid systems over the Internet. Forecasting and load management enables you set up and change lighting profiles anytime, with dimming and motion detection to ensure lighting regardless of the weather. Illumience optimizes the system to ensure long life, elevating off-grid systems' reliability to that of traditional grid-based systems.

24x7 Monitoring

Illumience monitors your system day and night and sends alerts when needed so issues can be identified and dealt with at any time. With its continuous capture of data, Illumience can pinpoint the right action to take to keep systems operating at the highest possible efficiency.



Lowest Cost to Maintain

Illumience functionality includes proactive maintenance, diagnostic testing and fault determination. Historical data and weather forecast data provide critical information to keep systems running efficiently and ensure long battery life. With Illumience corrective action can often be done remotely, but if a technician needs to be dispatched that person will be prepared with the correct parts.

Smart Off-Grid Makes the Difference

Issue	Without Smart Off-Grid	Illumient Smart Off-Grid
Installed properly?	Complex wiring. Experienced personnel needed. Primitive testing tools, if any.	14 simulataneous meter measurements using smartphone. Plug and play pre-packaged cable harnesses, color coded connectors.
Light working properly?	Wait for someone to notice and call.	24x7 monitoring. Automatic alerts and alarms via SMS, email.
Power systems management, battery life	Minimal if any.	Proactive maintenance. Remote battery lifecycle optimization ensures long life. Perform equalize charge remotely if needed.
Lighting profiles	Limited and fixed. No time of day option. Make changes at the pole only.	Set up and change over the Internet. Unlimited profiles including time of day / day of week. Weather forecasting, load management to optimize lighting profiles. Dimming, motion detection.
Troubleshooting	Multiple trips to the pole, with costly truck and personnel. No data available to find root cause, results in swapping of expensive components.	Real time data on all components plus data history. Troubleshoot remotely from the office. Bring the right part to the pole if needed.

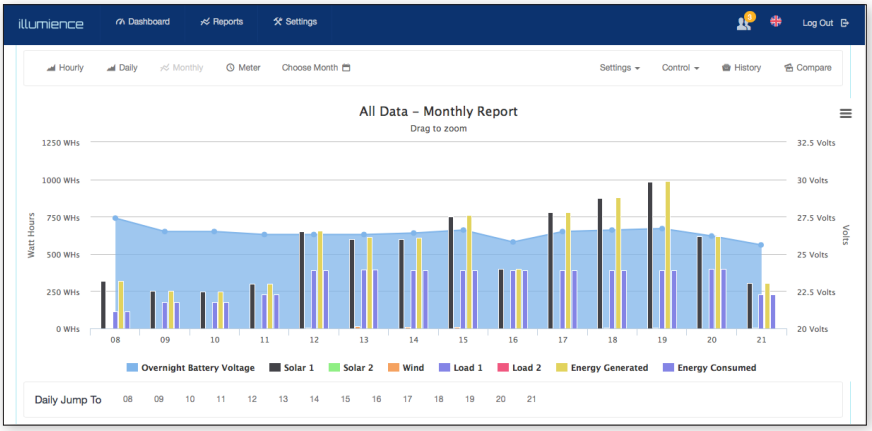
Sample Reports and Data

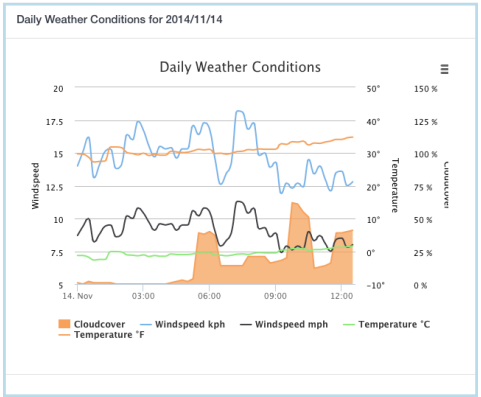
Reports

- Dashboard: network view, system view, weather alerts
- Daily, weekly, monthly, and detail charts
- >20 different customizable reports

Data

- Solar 1 and 2 current and voltage
- Load 1 and 2 current and voltage
- Wind current and voltage, frequency, power and speed
- Battery current, voltage and temperature
- Integrated weather data, forecasts and alerts

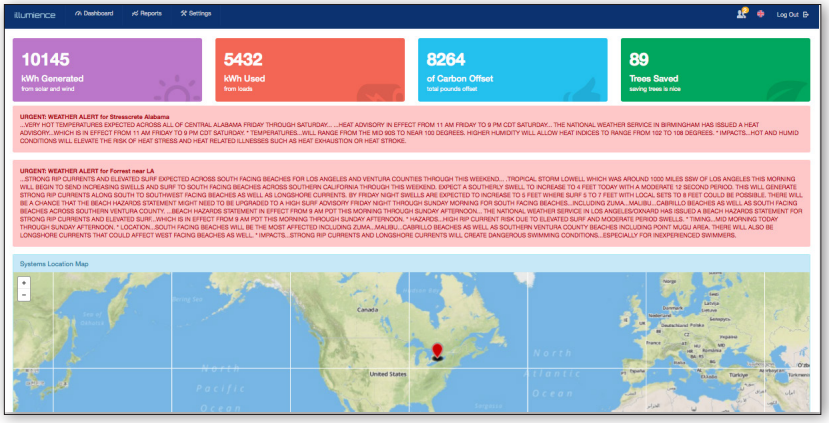




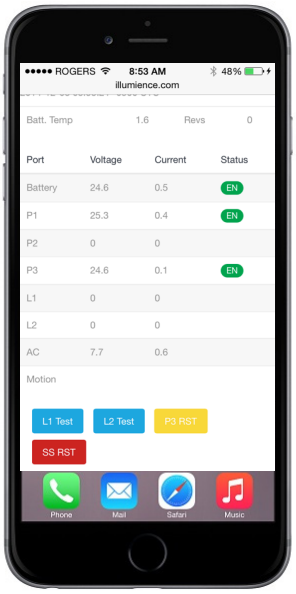
Illumience Features and Benefits

Feature	Benefits
System Monitoring & Status 	Data is continuously streamed from Clear Blue's Smart Off-grid controller to Illumience's cloud service. Data captured includes voltage and current readings for two independent solar panels, two independent load ports, battery as well as battery temperature. For systems configured with wind support, voltage and current is captured for AC and DC inputs as well as turbine frequency. An optional anemometer can be added to the system to capture wind speed at the installation site. Over 24 other indicators are also sent to the cloud to monitor services maintained by the controller. This data is stored in the Cloud to enable ongoing support, maintenance, and troubleshooting.
Alarms and Alerting 	Each user can optionally create alerts for their systems individually or as a whole. Notifications can be delivered over SMS, E-mail, or online via Illumience only. All statuses, and ports can have customized alerts based upon rules defined by the user. Notification frequency can also be controlled. As trouble tickets are cleared, notification alerts are also sent out stating that the alert is no longer active.
Lighting / Load Profiles 	Illumience makes it simple to set up and change lighting profiles that automatically adjust based on time of day, day of week, and whether or not motion has been sensed (motion sensor option must be included.) Illumience can manage two independent lighting profiles. System templates and modifications to lighting profiles and other attributes can be easily applied across multiple systems. Profiles can be activated during the day for providing power to other devices which may or may not be a light.
Predictive Weather Analysis 	This powerful capability will estimate energy generation for the following six days based upon current load and local forecasts and in the near future will proactively make recommendations to conserve battery life. Users are presented with potential weather issues for their site(s) upon logging into Illumience.
Proactive Maintenance 	Illumience alerts can be designed to notify you of a potential issue before it happens, allowing users to avert an issue before it occurs. An example of this would be an alert monitoring users of low battery voltage before the system hits low voltage disconnect, which would disable loads to preserve the health of the system. If such an alert were received, the user could pro-actively adjust the load profile remotely by increasing dimming, or disabling lights during the early hours of the morning entirely whilst enabling motion sensing with lighting control. The system would maintain the battery voltage, and supply lighting when motion sensors were activated. A second alert could be created in the system to notify the user when the battery reached an upper threshold allowing them to revert the changes they had already made to the lighting profile. This type of pro-active maintenance can all be done remotely averting any costly trips by service personnel to provide on-site support.
Installation & Provisioning Services 	During an installation, administrators can push remote control features to an administrators smartphone over SMS or email, allowing the installer to use their smartphone as a testing tool for the installation.
Flexible reporting 	Over 20 different customizable reports of dashboards and reports are available including daily, weekly, monthly, and detail charts. Reports can be printed and downloaded and users can set customized reporting periods.

Feature	Benefits
Customized Branding	OEMs who integrate Clear Blue technology into their own products can now have their own branded Illumience Web portal including vanity URL, customized colors and corporate logo.
Security camera integration	Allows operational control by security professionals for activities such as brightening lights to get a more clear view or dimming the lights to very low so infrared camera can display images more clearly.
Multi-language support	Illumience will be available in Spanish, German and French in addition to English in order to support international customers. (Coming soon). Other languages can easily be installed based upon customer request.
OEM User Administration	Illumience can be configured with features specific to OEMs allowing them to optionally have remote monitoring and control features for their customers' installations.



Weather alerts



Installation tools on smartphone