

Smart Off-Grid Solar and Wind Lighting: The Brightest Lights in the Industry

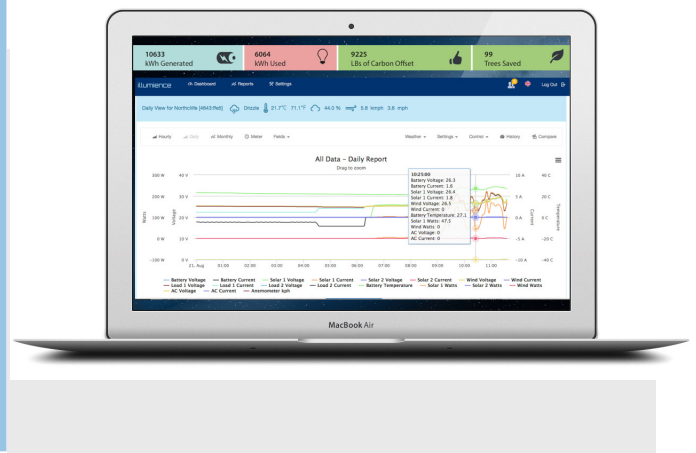


Illumient advanced off-grid lighting solutions deliver the lowest cost of ownership and highest performance in the market. Smart Off-Grid software enables the lights to be *monitored, managed and pro-actively maintained* over the Internet, delivering unmatched reliability, long lasting system performance, and the brightest light year-round, with smaller, less-costly batteries.

The Choice is Yours!

- Spun concrete or metal poles, choice of colors and designs
- Pathway, parking lot or street light heights
- Many luminaire choices with any dimming technology and both A/C and D/C lights
- Variety of battery technologies
- Engineered for high reliability, easy installation and quality fit and finish
- Single, dual solar or solar/wind hybrid configurations
- Motion detection option, security camera option
- Advertising banners

Smart Off-Grid



Poles: Spun Concrete or Metal



Pole Types: Round, square, hexagonal options

Heights: 10' to 32' and more

Many pole colors in etched or polished finishes with acrylic, non-acrylic or anti-graffiti coating

Variety of decorative arms

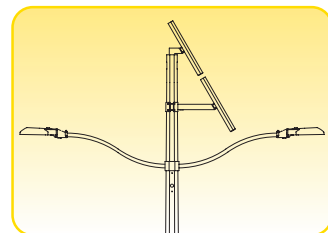
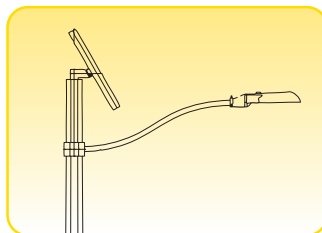
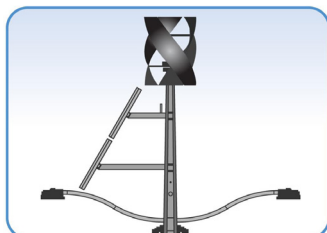
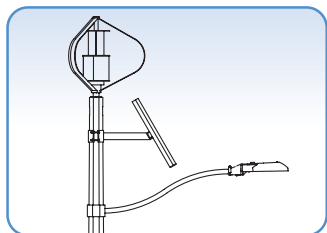
Wide choice of luminaires

Distinctive designs

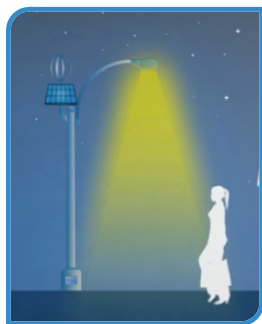


Solar & Wind Power Options

<p>Illumient Hybrid</p> <p>1 Turbine + 1 Solar PV Panel powers 1 LED luminaire</p>	<p>Illumient Hybrid Duo</p> <p>1 Turbine + 2 Solar PV Panels powers 2 LED luminaires</p>	<p>Illumient Solar</p> <p>1 Solar PV Panel powers 1 LED luminaire</p>	<p>Illumient Solar Duo</p> <p>2 Solar PV Panels powers 2 LED luminaires</p>
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Illumient lights can support two load ports that can be configured independently. Each load is individually managed and can be set with multiple light dimming functions (for lighting) or set for security camera and other non-lighting loads such as traffic signs, emergency power, agriculture, weather and industrial or commercial monitoring loads. An option for grid connect is also available, which allows for grid power to top up batteries in case solar panels are not able to generate enough energy.



Optional Motion Detection

- Lights turn off when no one is around, turn on when someone approaches
- Reduces battery draw when lights are not needed
- Motion sensors help with liability issues and safety
- Data captured provides valuable information on light usage, traffic patterns and more

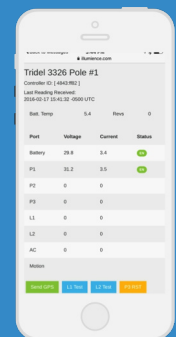
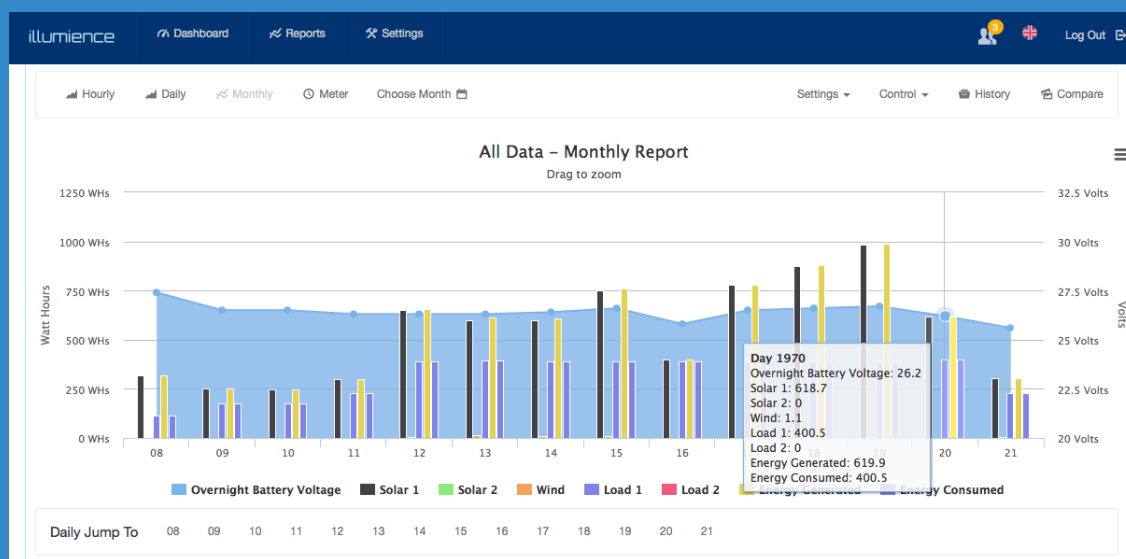
Luminaires - Use any light you prefer!

The Illumient Smart Off-Grid system works with any light a customer wants (either D/C or A/C power). We also offer a variety of luminaire choices, such as King Luminaire, Enduralite, LED Roadway, GE or others. They range from 20 - 150 watts, yet provide the same amount of light on the street as HID lights that have much higher wattage. The long lasting LED effectively eliminates normal maintenance required for HID lighting. Options include pendant lights, pole tops and more. Here are just a few examples:



Illumience Real Time Monitoring and Control

Illumience brings Smart Grid technology to off-grid lighting, providing unmatched reliability. Unique in the market, our real time remote monitoring and control software tracks and optimizes performance, enables lighting profile changes at any time and much more – all accessible via the Internet from a PC or smartphone. Our installation tool runs on smartphones and ensures lights are installed properly before the installer leaves the site.



Installation validation tools on smartphone

Reports

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

Real Time Alarms

System outages
Uptime warnings

Data

Solar and wind power and energy
Load 1 and 2 power and energy
Real time battery status including health test
Integrated weather data, forecasts and alerts

Tools

Installers commissioning tool
Light test, solar panel test
Real time lighting profile configurator

- All poles connect to the Internet via built-in, low-cost cellular or mesh communications, no setup required!
- Controls all power and load functions to optimize performance, set lighting profile and dimming easily
- Automatically identifies and diagnoses issues for fast and convenient troubleshooting, sending you alarms when needed
- Software runs in the cloud, requiring no installation or specialized training to use.

SYSTEM COMPONENTS

Power generation

Photovoltaic Solar Panel Converts Sun Energy Into Electricity

This crystalline-silicon module has an aluminum frame and an advanced textured glass surface on the front that increases light absorption and efficiency.

Vertical Axis Wind Turbine: The VAWT Converts Wind Energy Into Electricity

Our wind turbines provide an efficient and reliable way to produce pollution-free, renewable power. The self-powered system costs nothing to operate, saving money in electricity costs every year.

Option for Grid-connect to power other local devices

Load

High Efficiency LED Luminaire

From 20 -150 watts, yet provides the same amount of light on the street as HID lights that have much higher wattage. The long lasting LED effectively eliminates normal maintenance required for HID lighting.

Construction - Our lighting systems use the highest quality North American components

Luminaire & PV Arm

Aesthetically designed and engineered for strength, the arms are made of galvanized steel and painted your choice of color with a protective coating guaranteed to never rust or fade.

Spun Concrete or Steel Pole

We offer both concrete and metal poles. The Stresscrete Alexander series combines elegance with durability, and has a hollow raceway inside the pole to provide a smooth conduit for electrical and communication cables. The Americana series includes distinctive pole options that support solar only applications and come in a variety of heights to suit pathway and street applications. The Illumient steel pole series provides a cost effective solution that is quick and easy to install and support batteries in the base or underground. Illumient works with industry innovators for designs that deliver high reliability and lower cost of ownership.

Control & monitoring

Clear Blue Control and Monitoring

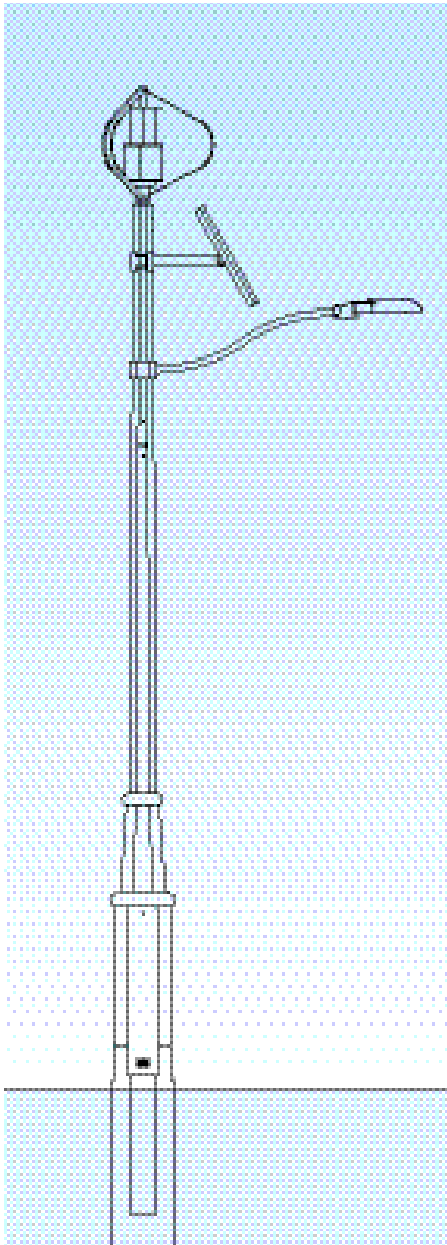
Unique to our system is our hybrid smart controller combined with wireless communications to transmit data to the Illumient real-time monitoring software via the Cloud, which ensures peak performance and convenient troubleshooting.

Easy Maintainability & Reliability

Because of Clear Blue's full remote management capabilities, ongoing maintenance and troubleshooting is done remotely, eliminating the cost for specialized service crews and reducing the number of site visits by up to 90%.

Power storage

Batteries - AGM, Gel, Lithium, NiMH, custom configurable to support any manufacturer's charging specs.



A division of



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