Cachelan®
SMART GRID ENERGY

NRGpilot™
SmartGrid PORTAL

Manage distributed energy resources from a PC or mobile device with an NRGpilot portal
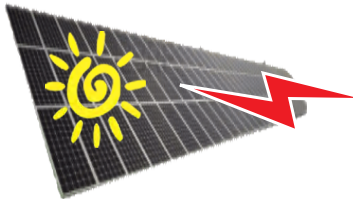
SOLAR

SolarVu® is a web energy portal that continuously monitors solar array performance displaying power, energy, revenue, status and trends on your PC or mobile device. SolarVu can be installed on systems of any size. It works with inverters and equipment from many different vendors.

Receive a daily email report of income earned from your solar generation system. Get alarm messages when problems occur. Remotely view live inverter measurements and logs to speed up troubleshooting. Calculate ROI with the payback calculator or download lifetime data for performance analysis.

## SCADA

LDC SCADA   **M**
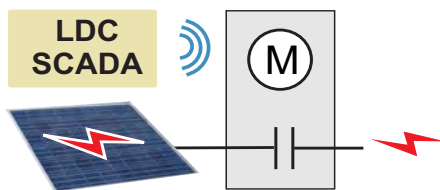
Many LDCs require a connection to their SCADA system as a condition in the CIA FIT contract. Each utility has different specifications ranging from simple metering to remote shutdown. Newer inverters include remote control capability for power factor correction and power output level control. A SCADA interface can be supplied by Cachelan to meet all requirements leading to successful grid connection either as standalone equipment or included with an *NRGpilot* portal.

STORAGE
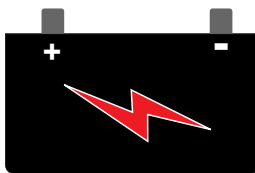
Commercial scale batteries store energy from solar arrays or the grid during low demand periods. Power is consumed when needed at lower cost to take advantage of variable TOU (time of use) rates. Power can be sold on demand to a utility for peak shaving allowing reduced investment in generation capacity to meet peaks with behind the meter storage. Standby emergency power is available to keep critical loads operational especially for areas experiencing frequent outages. View live status, receive equipment alarms, change settings and perform manual control from an *NRGpilot* portal using a browser.

MICROGRID
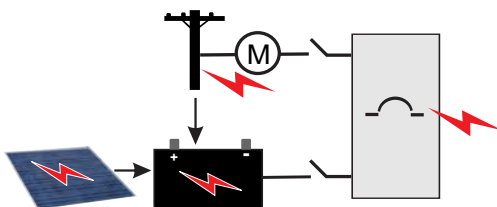
Significant cost increases from utilities with a large differential in TOU rates is making local energy storage for time shifted use economically viable. Create a local microgrid to store energy generated by solar or purchased power at low night rates. Consume locally stored power during the day when utility supplied grid rates are higher. During power outages, the microgrid provides emergency standby power for critical loads. Manage microgrids in locations with high energy costs or unreliable utility power using an *NRGpilot* portal.

CHARGING

As consumers buy EVs (electric vehicles) demand for a place to plug in will rise. Owners of condos, apartments, office buildings and parking lots can install charging stations with an *NRGpilot* portal to monitor, bill and control power delivery. Commercial vehicle owners want detailed operating analysis of their fleet. With a large installed base of EVs, utilities can implement load shedding and V2G control for buying surplus power at peak loads. Manage V2G and G2V energy delivery with an *NRGpilot* portal.

Visit live sites at NRGpilot.com

How it works - Cloud Computing
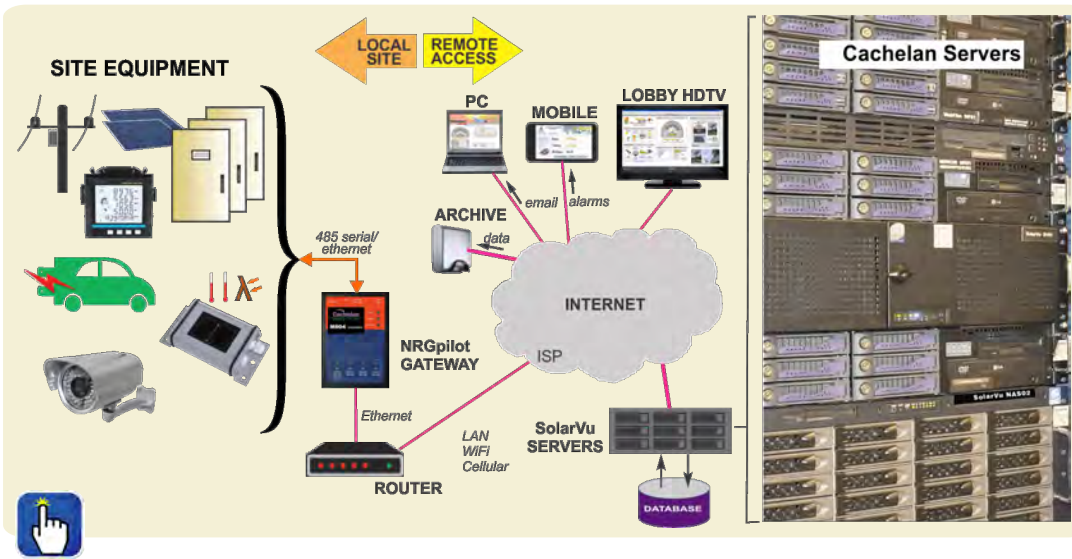
A gateway is installed at the site which monitors equipment such as inverters, weather sensors, meters, cameras, and charge controllers. Data is sent by internet to Cachelan servers for lifetime storage and processing. Users access their *NRGpilot* portal from a browser on a PC or mobile device. No software needs to be installed or upgraded. When faults are detected an alarm is sent by email. Analysis tools like 30 day logs and live equipment status help O&M staff quickly determine what remedial action is required to minimize downtime. Data for any time period can be downloaded for performance analysis.
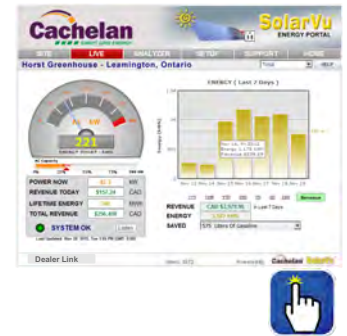
Portfolio Management

Manage multiple sites with diverse equipment using a SMART Enterprise account for complete portfolio status and navigation from a single log in.

*Manage multiple sites with status, alarms and navigation*

Sort by any parameter

Create groups of related sites

Go directly to site without login

Quickly identify problem sites

OWNER
*Go to any site to check status, revenues and performance*

MAINTENANCE
Receive alarm messages when problems occur

INVESTOR
Create custom PDF reports for any time period. Download lifetime data for performance analysis

How to Order
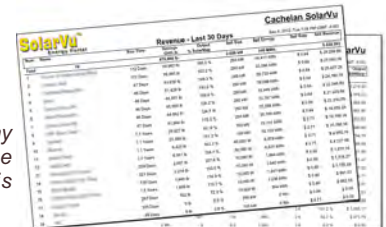
NRGpilot portals are configured using standard screen templates making them more affordable than custom software. Renewable energy systems are rapidly developing and may require new features. Ask about requirements that are not currently shown on the live site examples to discuss how they can be addressed for your application. Use an *NRGpilot* portal for remote monitor and control of site equipment with online document retrieval. Cost will vary depending on installed devices and options. *NRGpilot* portals are pre-configured to go live as soon as the system equipment is connected, ready to use. *NRGpilot* portals can also be retrofit to existing systems. Contact Cachelan with your system details for a quote and detailed design.

SLD is prepared from system details
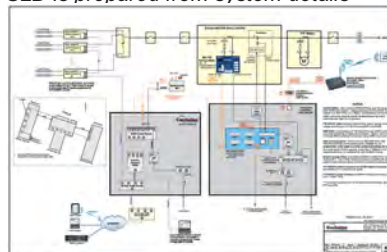
Site hardware is configured for installed equipment