# Pulse Energy

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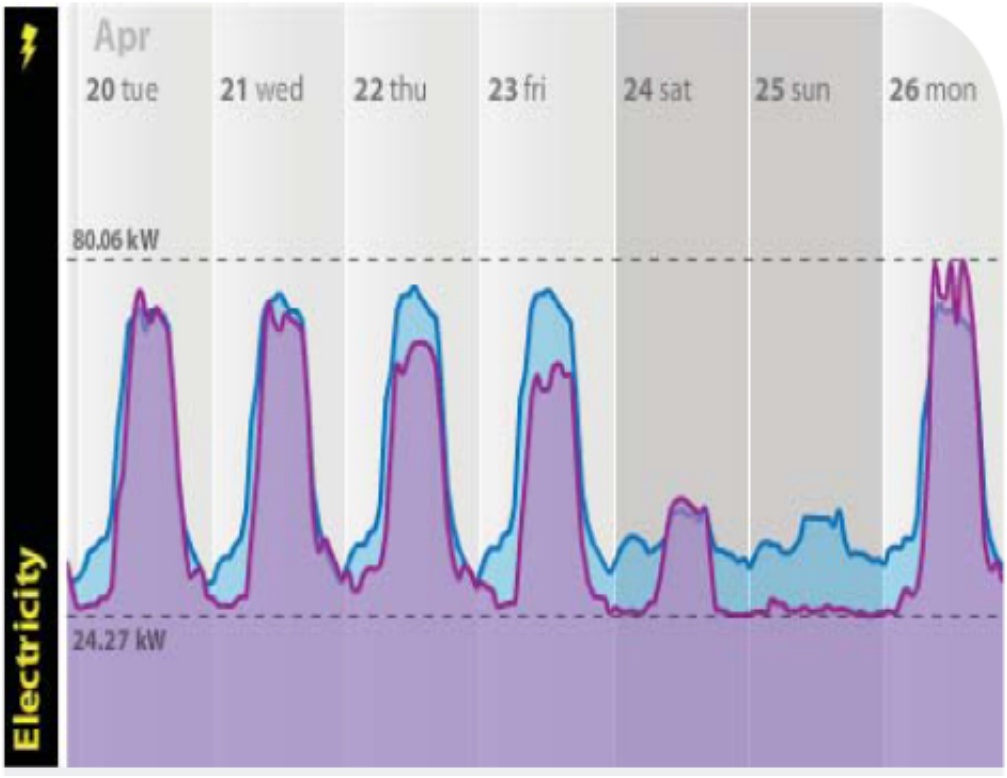



**Energy Management Provider Taps Cellular for Rapidly Deployable Solution in Problem Areas**

Pulse Energy was founded in 2006 to dramatically improve the energyefficiency of existing buildings. The company’s integrated hardware/softwareproduct collects, analyzes and communicates real-time energy intelligencefor building operators and management, providing savings of 5-25% fromimproved operating efficiency. Pulse™ energy management software has beenrecognized by the UC Berkeley Center for the Built Environment as one of thetop three products in the energy visualization market and was used to monitorenergy usage of venues during the Vancouver 2010 Winter Olympics.

## BUSINESS CHALLENGE

Based in Vancouver, BC, Pulse Energy’s effi ciency monitoring solution is usedin environments such as corporations, post-secondary facilities, universitiesand government buildings. In addition, the company works with many FirstNations communities, often located “off the grid,” to develop demand responsemeasurements resulting in savings on annual energy costs.

Pulse Energy is often required to deploy in locations where there is no accessto either their customer’s local area network or a direct line to the internet. Theprocess of installing a wired connection to the internet can be tedious andto overcome some of the challenges presented by wired connectivity. PulseEnergy began using data loggers with built-in cellular modems. However, theconsistency for a reliable connection greatly varied.

“With the reliable connection provided by the Sierra Wireless wirelessgateways we seldom have to send Pulse Energy technicians to customer sitesto troubleshoot connectivity issues,” explained Graham Cunliffe, a systemsengineer at Pulse Energy.

## SIERRA WIRELESS AIRLINK® SOLUTION

Pulse Energy began searching for a reliable wireless solution and wasintroduced to the Sierra Wireless AirLink® gateways by one of their existingcustomers who had deployed the Pulse Energy solution as part of their owncontinuous optimization program for commercial buildings. Pulse Energy testedthe devices internally, and after deploying to a number of pilot sites, determinedthat the AirLink intelligent gateways provided the best wireless solution for their needs.

“The devices are very easy to work with and require a minimal amount of timeto both confi gure and deploy,” said Cunliffe. “It is very important for us to havea hardware solution that we can deploy with minimal effort.”

“We use the AirLink gateways to connect to the Internet in locations wherewired connectivity is not an option,” continued Cunliffe. The AirLink gateway isintegrated with the data logger solution connected to facility meters in order toprovide monitoring and connectivity for real-time data transfer back to Pulse Energy.

Pulse Energy tapped Sierra Wireless partner Apex Wireless to acquire itsAirLink solution, as well as to provide technical support. Cunliffe praisedQuentin Mellon and the Apex Wireless team as being “amazing to work with.”Pulse Energy also utilizes AirLink management software to confi gure thegateways and to test on-going connectivity strength.

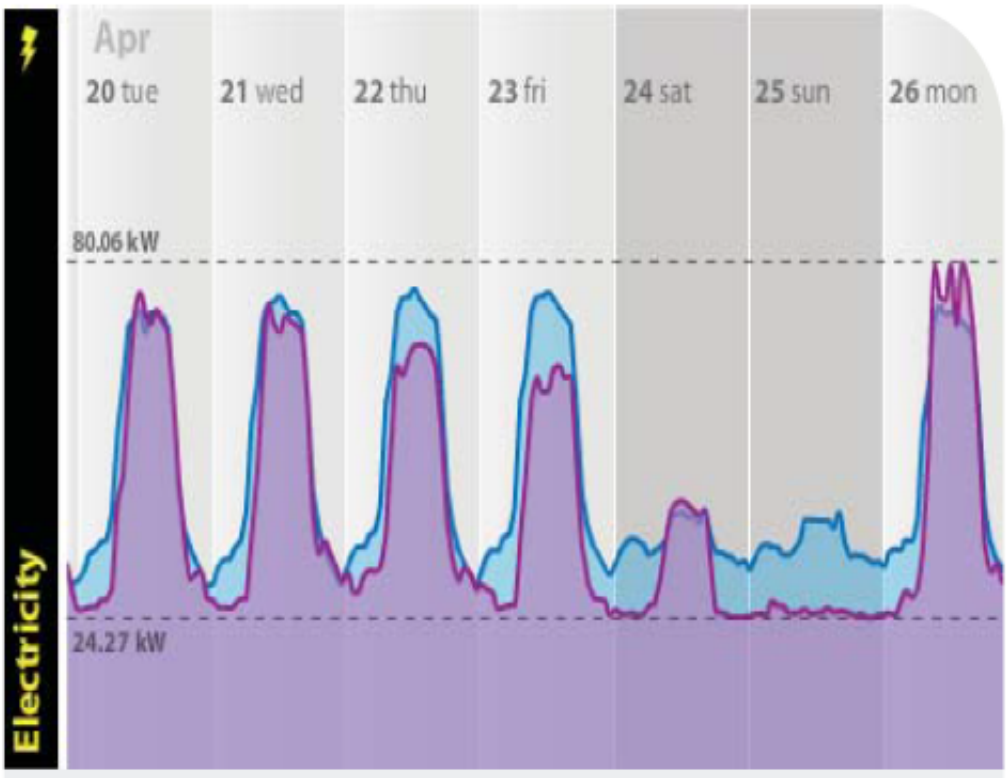
Pulse Energy began working with the Vancouver offi ce of Cadillac FairviewCorp. Ltd., a commercial property manager with 11 buildings in the Vancouverarea. With the Pulse Energy solution, Cadillac Fairview has been able toretrocommission the buildings in its portfolio in order to identify and implementlow-cost operational and maintenance changes to reduce energy use and produce cost savings.

“The Pulse front-end provides three modes of presentation, so we can rolloutthe program to all of our key stakeholders – building operators, executivesand tenants,” explained Alison Kirk-Owen, energy management specialist at Cadillac Fairview.

By using AirLink gateways, Pulse is able to provide real-time energy data for anentire building, allowing building managers to monitor consumption, executivesto analyze patterns and develop trending and tenants to view usage and adopt habits that support energy conservation.

“We are currently developing a dashboard for tenants that present energyconsumption data in a visually appealing way,” explained Kirk-Owen. “CadillacFairview encourages conservation behavior changes, and we want to show tenants the impact they can make.”

Cadillac Fairview’s Vancouver-based offi ce has been involved in a continuouscommissioning program for about nine months and is currently transitioningfrom its benchmarking to implementation phase where, according to Kirk-Owen, “we will implement the measures required to start seeing valuableenergy and monetary savings.” She also noted that Cadillac Fairview’s westernoperations has presented the Pulse Energy / Sierra Wireless solution to a largercompany audience and has proposed considering adoption of the energymanagement solution as a standard across the larger entity’s entire portfolio.




**RESULTS**

Pulse Energy has currently deployed AirLink gateways at roughly 20 sites andplans to continue installing the devices at an increasing rate.

“Using the AirLink gateways decreases our deployment time and the amount ofon-site hardware support we have to provide,” concluded Cunliffe.

Pulse Energy recently released a free, lightweight version of its monitoringsoftware, as well as a new information dashboard that, according to Ashley Kerrin the marketing communications group at Pulse Energy, “has been getting greatreviews.” “When building tenants are aware of their energy performance, andthe impact they make, they’re inclined to make small energy saving changes. Inturn, companies can measure the resulting cost savings.”

“We have a large client base that has started to crave energy information,”continued Kerr. “Because our software allows organizations to view the dataacross their entire portfolio, benchmarking is becoming popular, to lower overalloperation costs.”

Seen as a value added differentiator, benchmarking is one of the featurespushing Pulse Energy to expand to new markets. The cellular solution enabledby the AirLink gateways will certainly be a part of this geographic expansion,as it will allow Pulse to easily deploy in new markets, where Airlink devices arealready being deployed.

“The AirLink gateways not only solved a huge problem we were having bycutting through red tape and greatly reducing implementation time, but thereliability of their wireless connectivity has made us think about new ways todeliver our energy visualization services,” said David Helliwell, president &co-founder of Pulse Energy.

The Sierra Wireless gateways have provided Pulse Energy with the following benefits:

- **Time savings**– Easy setup and confi guration provided by AirLink device management software, as well as the quick deployment inherent in wireless solutions, allows for minimal solution deployment time.
- **Reliable connectivity**– Advanced and always-aware connectivity required for critical fi xed and mobile data applications.
- **Ease-of-use**– Quick and easy confi guration and automatic system connection that facilitates seamless installation integration and deployment.
- **Remote monitoring**– Gateways include high-level functionality such as remote confi guration and device maintenance, packet-level diagnostics and dependable network session persistence.
- **Portability**– Utilization of wireless cellular connectivity fulfills potential need to move and re-use.

**APPLICATION:ENERGY MANAGEMENT**

**CUSTOMER CRITICAL CHALLENGE:**

- Remote data transmission for energy effi ciency monitoring, benchmarking and analysis
- Required strong, persistent wireless connectivity in both indoor and outdoor locations

**SOLUTION:**

- AirLink® gateways provide reliable cellular communications with reduced deployment time and on-site support requirements

**BENEFITS:**

- Uninterrupted connectivity for continuous access to energy usage data
- Reduced time and travel for onsite device troubleshooting
- Quick and easy setup and deployment
- Portability for re-use in new customer facilities