CUSTOMER SUCCESS STORY

Consumer Energy Monitoring
for M2M Smart Grid Device Manufacturer

Consumer Energy Monitoring Interface

Our client's product provides remote energy resource management through the use of smart adaptive gateways in the home or office. Combining a variety of wide and local area communication services with an advanced control structure, the platform is capable of managing millions of devices from a cloud -based environment. For end consumers, the ability to easily monitor their individual energy usage is a critical component. In order to broaden the appeal of their Energy Solution, a Google PowerMeter™ interface was required.

Challenge

Google PowerMeter allows customers to view energy consumption through a web-based gadget interface. Customers opt-in through a device activation process. After activation, energy measurement data is periodically uploaded to Google through a secure RESTful (Representational State Transfer) interface. Customers then log into their Google account to view historical, current, and forecasted energy consumption from the iGoogle gadget.

To rapidly deliver the PowerMeter interface while keeping the platform team focused on other critical enhancements, our client turned to Green Energy Corp — a software development partner with significant smart energy, cloud service, and web portal development skills.

Task

Build a cloud-based Google PowerMeter Interface

While the platform already collected and stored device usage data, there was no consumer friendly way to monitor it. In addition, the Google PowerMeter interface was a programmatic one – not something that an end user was capable of "adding" to their existing Smart Energy solution. Green Energy Corp had to provide a simple web based wizard to perform the device activation. It also needed to develop a periodic upload task to complete the user experience.

First, the user would log into the platform and invoke the Google PowerMeter device activation wizard. The wizard would locate the customer's gateway and its attached devices. It would then perform the PowerMeter device activation sequence via the PowerMeter API. After successful activation, the user completed the process by adding the PowerMeter gadget to their home page. The periodic upload process now had permission to query for device energy usage data and push it to Google.

Delivered

A Seamless Google PowerMeter Interface

Using Java based frameworks, web services interfaces, and standard HTML and CSS, the team was able to deliver a seamless user experience — both usable and fail safe for even a user of modest web skill.

This was accomplished as the wizard not only coordinated web service calls across two platforms, but actually transported the browser session between those platforms as well. Again, the periodic upload task had to coordinate web service calls across the platforms and minimize performance impact to both.

Results

This engagement reflects the volatile, fast-paced, and nascent nature of the Smart Energy Market and how Green Energy Corp is able to adapt to the customer's needs. During the development phase of the project, our client was made aware of the opportunity to participate in a utility trial that interjected an aggressive milestone not originally included in the project plan. Because of Green Energy Corp's intimate knowledge of smart grid technology combined with our iterative and flexible software development methods, Green Energy Corp was able to quickly re-scope the product functionality and deliver a working system to the customer in time to participate in this critical utility trial.

About Green Energy Corp

Green Energy Corporation is a technology company that provides software engineering services to communications, utilities and energy companies and delivers software products to enable the Smart Grid of the future.

Our offerings include the GreenBus™ open source platform that enables utilities to move from legacy operations systems to the smart grid, and software engineering services for communications and utility companies.

The GreenBus forms the foundation for TotalGrid.org — a Green Energy Corp sponsored open source community dedicated to modernizing national power systems and microgrids while driving the development of the Smart Grid. Visit TotalGrid.org for more information.

Contact Us

For more information about our software engineering solutions, please visit
greenenergycorp.com
or call 303-453-8338 to speak to a Green Energy Corp representative.

If you are interested in developing applications for the GreenBus, or for more info on the **GreenBus Alliance Program**, contact us at 303-453-8380

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