



The Green Button Initiative

white house inspired.
industry led.

In response to the Obama Administration's call to action, 35 utilities and energy providers committed to provide 36 million homes and businesses with their own energy usage information in the consensus, industry-standard Green Button format.

[Learn more >>](#)



Photo credit: Silver Spring Networks CustomerIQ™ Energy Portal

Matt Theall
Presidential Innovation Fellow

What is Green Button?

- *Common-sense idea that electricity customers should be able to download their own energy usage information in a consumer- and computer-friendly format.*
- *A common experience, from provider to provider, setting clear expectations that their information is theirs to have – and share.*



**Green Button
Download
My Data**

A customer visits their utility web portal, they can simply login and download their Green Button Data as an XML-formatted file.

**Green Button
Download My Data &
Connect My Data
Now Rolling Out**



**Green Button
Connect
My Data**

This powerful model allows a consumer to authorize a third-party service provider to receive direct access to their Green Button Data - no need to repeatedly login to their utility and download files. These authorizations are valid for an agreed upon time and can be revoked at anytime by the consumer.

Why is Making Data Available to People Valuable?

Download My Data Example



Example: Solar Company Quote (No Green Button Data Available)

September 21, 2012

Matt Theall

**But....IMMEDIATE System and Installation Cost = \$28,698
AFTER REBATES AND TAX CREDITS**

RE: PV Proposal



In lieu of an electric bill, we have used the state average annual residential electrical consumption- 7,200 kWh. As a monthly average, this would equate to 600 kWh at a cost of \$118/ month. Estimated 20 year total would be 144,000 kWh at a cost of \$50,323* (\$0.35 per kWh). Installing solar has the potential to cut this cost by 66%.

The 6.62 kW system we are proposing is comprised of (27) SunPower 245 Watt module with estimated production equal to 94% of your current annual electrical load. The system array gross demensions are approximately 23' by 29'. See Google Earth photo rendering for the actual layout.



Energy Billing Period	Usage (kWh)	Cost of Usage
06/28/2013 - 07/30/2013	799	\$154.18
05/30/2013 - 06/28/2013	808	\$155.78
04/30/2013 - 05/30/2013	333	\$70.10
03/29/2013 - 04/30/2013	1548	\$288.43
02/27/2013 - 03/29/2013	2241	\$397.35
01/29/2013 - 02/27/2013	2407	\$421.93
12/27/2012 - 01/29/2013	2788	\$457.59
11/28/2012 - 12/27/2012	1804	\$266.59
10/27/2012 - 11/28/2012	1454	\$216.82
09/27/2012 - 10/27/2012	330	\$56.98
08/28/2012 - 09/27/2012	666	\$104.75
07/27/2012 - 08/28/2012	1220	\$183.54

Summary of Electric Power Usage	
Last Billing Date	07/30/2013
Total Usage	16398 kWh
Total Cost of Usage	\$2,774.04
Total Billing Period	07/27/2012 - 07/30/2013

Estimated
600 kWh/month
\$118/month

Actuals/month
16398/12 = 1366.50 kWh/month
\$2,774.04/12 = \$231.17/month

**Solar Company
Estimate:**



In lieu of an electric bill, we have used the state average annual residential electrical consumption- 7,200 kWh. As a monthly average, this would equate to 600 kWh at a cost of \$118/ month. Estimated 20 year total would be 144,000 kWh at a cost of \$50,323* (0.35 per kWh). Installing solar has the potential to cut this cost by 66%.

**Based on Green
Button Data:**



16,398 x 20yrs = 327,960 kWh @ 0.35 = \$114,786

\$114,786 - \$50,323 = \$64,463 – 2X Higher Savings Than Estimated!

***MAKING EVEN BASIC DATA AVAILABLE
CAN BE EXTREMELY VALUABLE!***

What Can Green Button Be Used For?



Innovation: entrepreneur-created web portals and apps analyze energy usage and savings

Heating and Cooling: customized heating and cooling activities for savings and comfort;

Solar: Significantly better accuracy of quotes

Verification: Measurement of energy efficiency investments

Real Estate: Provide cost info to tenants/buyers

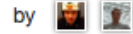
Education: Community and student energy efficiency competitions

Winners Gallery

BEST OVERALL APPLICATION – GRAND PRIZE



Leaffully



BEST OVERALL APPLICATION – SECOND PRIZE



Melon: ENERGY STAR Green Button Benchmark



BEST OVERALL APPLICATION – THIRD PRIZE



VELObill - The Utility Bill of the Future



STUDENT AWARD – GRAND PRIZE



wotz



STUDENT AWARD – SECOND PRIZE



BIY - Budget It Yourself



POPULAR CHOICE AWARD – GRAND PRIZE



VELObill - The Utility Bill of the Future



POPULAR CHOICE AWARD – SECOND PRIZE



Innovative Solar Demand Response



TRAVEL TO WASHINGTON, D.C. FOR THE WINNERS

PEAK ENERGY USAGE AWARD



DRIVE™ Mobile App



Green Button Apps!



DOE Apps for Energy Challenge

<http://appsforenergy.challenge.gov/>

What People Are Saying About Green Button...

“It may finally give consumers a reason to care about the smart grid.” – SF Chronicle

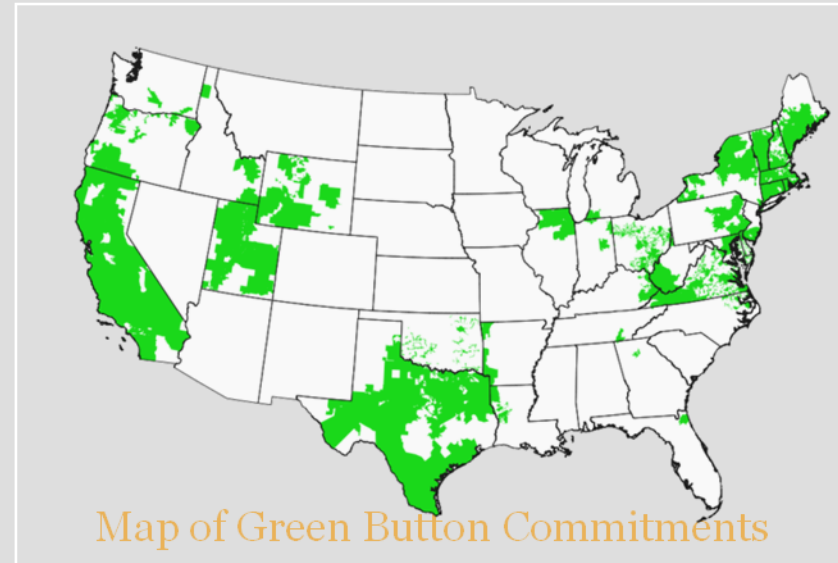
“Solar companies are also eager for consumer data because understanding a homeowner's electricity use is key to the sales process.” – San Jose Mercury News

“I'm a big fan of simplicity and open standards to unleash a lot of innovation....I'm going to reach out to ConEd, the utility in NYC, and find out when they are going to add Green Button support to their consumers data. I hope it is soon.”

– Fred Wilson (Venture Capitalist)

Utilities and electricity suppliers in **32 states and DC** across various regulatory regimes have committed to provide **36 million** US homes and businesses with Green Button data, over **16 million** of which already have access...

- **American Electric Power (live in Texas!)**
- **Austin Energy**
- **Baltimore Gas & Electric (live!)**
- **Bangor Hydro Electric**
- **CenterPoint Energy (live!)**
- **Central Maine Power**
- **Chattanooga EPB**
- **Commonwealth Edison**
- **Consolidated Edison NY**
- **Glendale Water and Power**
- **JEA**
- **Kootenai Electric Cooperative**
- **National Grid**
- **Northeast Utilities:**
 - **Connecticut Light and Power**
 - **Western Mass. Electric Co.**
 - **New Hampshire Public Service Co.**
- **NSTAR (live!)**
- **Oncor (live!)**
- **Pacific Power**
- **Pacific Gas and Electric (live!)**
- **PECO**
- **PEPCO Holdings (live!)**
- **Portland General Electric**
- **PPL Electric Utilities**
- **Reliant (live!)**
- **Rocky Mountain Power**
- **Sawnee Electric Membership Corp.**
- **SDG&E (live!)**
- **Southern California Edison (live!)**
- **Texas New Mexico Power (live!)**
- **TXU Energy (live!)**
- **The United Illuminating Company**
- **Virginia Dominion Power**
- **Efficiency Vermont***



**Green Button
Connect
My Data**

*Service Provider

Committed

- Aclara
- [Apogee Interactive, Inc.](#)
- Belkin
- BuildingIQ
- Calico Energy Services
- C3
- [Ecova](#)
- [Efergy USA, Inc.](#)
- Efficiency 2.0
- [eMeter - A Siemens Business](#)
- [EnergyDeck Ltd.](#)
- EnergySavvy
- FirstFuel
- Honest Buildings
- iControl Networks
- [Johnson Controls Panoptix](#)
- [LinkCycle](#)
- [Melon](#)
- [myBenchmark](#)
- [Noesis Energy](#)
- Oracle
- PlotWatt
- [Power2Switch](#)
- Schneider-Electric
- Silver Spring Networks
- Simple Energy
- [Smart Utility Systems](#)
- SunRun

Implemented

- [Alarm.com Incorporated](#)
- [Autodesk, Inc.](#)
- [Building Energy Inc.](#)
- [BuiltSpace Technologies Corp.](#)
- [EchoDog](#)
- [EnergyAi](#)
- [EnerNOC](#)
- [EnerNex](#)
- [Gas and Power Technologies](#)
- [Genability](#)
- [Green Suite LLC](#)
- [High Energy Audits](#)
- [HyperTek](#)
- Itron
- [Lucid](#)
- Melon Power
- OPower
- [PEV4me.com](#)
- [Planet Ecosystems](#)
- People Power
- Performance Systems Development
- Retroficiency
- [Smart Grid Labs](#)
- [Snugg Home](#)
- [Tendril](#)
- [Wattvision](#)
- [Watts At Work](#)

3rd Parties



**Green
Button**

in Ontario



in Ontario

MaRS Data Catalyst

Entrepreneurship,
energy and
healthcare.

In energy, Data Catalyst is working to establish an industry and regulatory framework for the effective use of energy data in Ontario to create a realizable local market and a world-leading innovation ecosystem

Energy Data Access Working Group

Ministry of Energy, Ontario Energy Board, Ontario Power Authority, Independent Electricity Systems Operator, Information and Privacy Commissioner of Ontario, Guelph Hydro, Hydro One, Hydro Ottawa, London Hydro, Milton Hydro, Powerstream, Toronto Hydro, Clean Energy Institute, and MaRS Discovery District Data Catalyst and CleanTech Practice

Ontario, Canada - Adopting Green Button!



ONTARIO'S GREEN BUTTON:
PROVIDING YOU WITH ACCESS
TO YOUR ENERGY DATA

The Green Button allows Ontarians to access and share data in a standardized, secure manner.

Access to smart meter data—and the ability to share that data with innovative applications, products, services, and solutions—can help Ontario households and businesses conserve energy and better manage their electricity bills.

“The Ontario Green Button initiative will enable each of us to have better access to information on our own energy use and will help families make choices to save energy and money.”

Chris Bentley
Former Minister of Energy

FOR SOLUTION PROVIDERS

THE STORY

RESOURCES

LEARN MORE

CURRENT STATUS

CURRENT STATUS

Currently, the Green Button "Download My Data" standard has been implemented in over 2 million households and small businesses in the province, with larger rollout coming in the next few months. The next phase, "Connect My Data", will be piloting in select utilities in late 2013.



115 developers, coders, designers, energy experts, utility representatives, and behavioral economists came together to build around the Green Button standard

U.S. Green Button Focus Areas

- Working with utilities to articulate benefits and continue momentum
- Developing a testing and certification program
- Rolling out Green Button Connect My Data
- Developing common look and feel across utility sites





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