

Wiser

Home Energy Management

leveraging technology infrastructure to deliver measurable value to utilities, grid operators, and customers alike.



Make the most of your energySM



- *Demand Side Management and Automation*
- *Advanced Analytics and Forecasting*
- *Utility systems integration*
- *HAN Devices*
- *Home Energy Management*

Delivering a combined solution satisfying the utility and consumer needs

Relevant Experience

The logo for ComEd, featuring the word "ComEd" in a bold, red, sans-serif font with a small starburst graphic above the letter "d".

An Exelon Company

The logo for Hydro One, with "hydro" in a black, lowercase, sans-serif font and "one" in a red, lowercase, sans-serif font. A red stylized "E" shape is positioned above the "o" in "one".The logo for BlueStar Energy Solutions, featuring a blue and green starburst icon to the left of the text "BlueStar" in a bold, blue, sans-serif font, with "energy solutions" in a smaller, green, sans-serif font below it. The tagline "Your Power. Your Choice.™" is written in a smaller, blue, sans-serif font at the bottom.The logo for the Ontario Power Authority, with "ONTARIO" in a bold, green, sans-serif font above "POWER AUTHORITY" in a smaller, green, sans-serif font. A green leaf icon with a power plug at its base is to the right of the text.The logo for PECO, featuring a blue stylized wave icon to the left of the word "PECO" in a bold, blue, sans-serif font.

An Exelon Company

The logo for Naperville, featuring a blue square icon with a white stylized tree and water waves to the left of the word "Naperville" in a blue, sans-serif font.

Developed and field-proven since 2004

- **Ontario Power Authority (Toronto, Ontario) – cascading, multi-utility Demand Response**
- **Commonwealth Edison (Chicago, IL) – 8,000 customer integration project, Program Mgt., DR settlements & validation; commercial building energy measurement**
- **PECO (Philadelphia, PA) – Program Management**
- **Naperville (Naperville, IL) – City-wide Smart Grid**
- **Exelon Corporation – Program Management**
- **BlueStar Energy (Chicago, IL) – Customer data presentment and DR**
- **Toronto Hydro (Toronto, Ontario) - Demand Response**
- **Hydro One, Inc. (Toronto, Ontario) - Demand Response**
- **Cambridge and North Dumfries Hydro (Toronto, Ontario) - Demand Response**
- **Kitchener-Waterloo Hydro (Toronto, Ontario) - Demand Response**

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Home Energy Management

Two Systems in One

Leveraging technology infrastructure to deliver measurable value to utilities, grid operators, and customers alike.



Utility Demand Response and Systems Integration

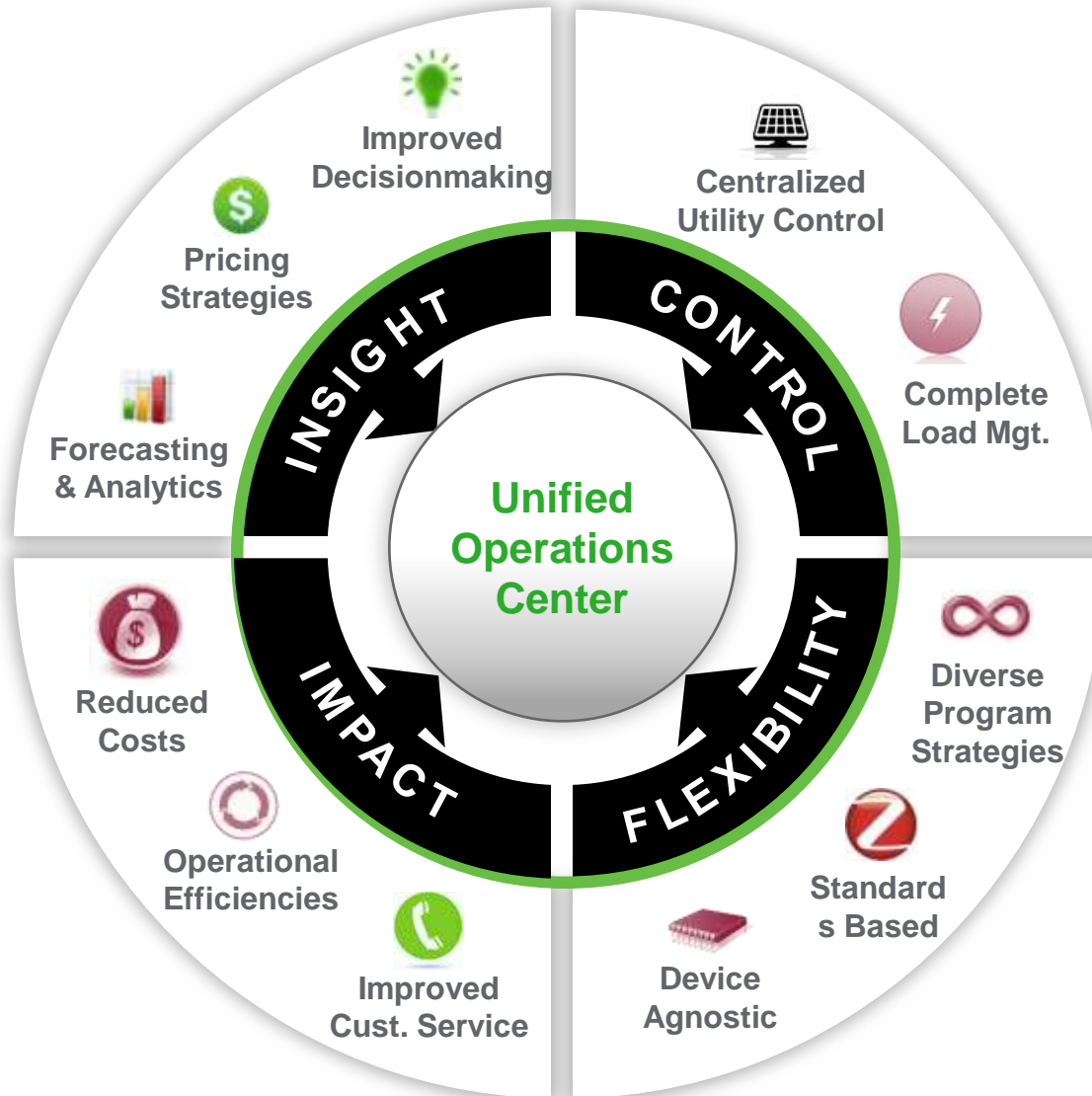


Home Energy Management, Customer Comfort and Savings

Control and automation of household loads such as:

- Programmable Controllable Thermostat
- Indoor Lights
- Standard Outlets/Switches
- Pool Pumps
- Hot Tubs
- Water Heaters

Solution Provides to Utility

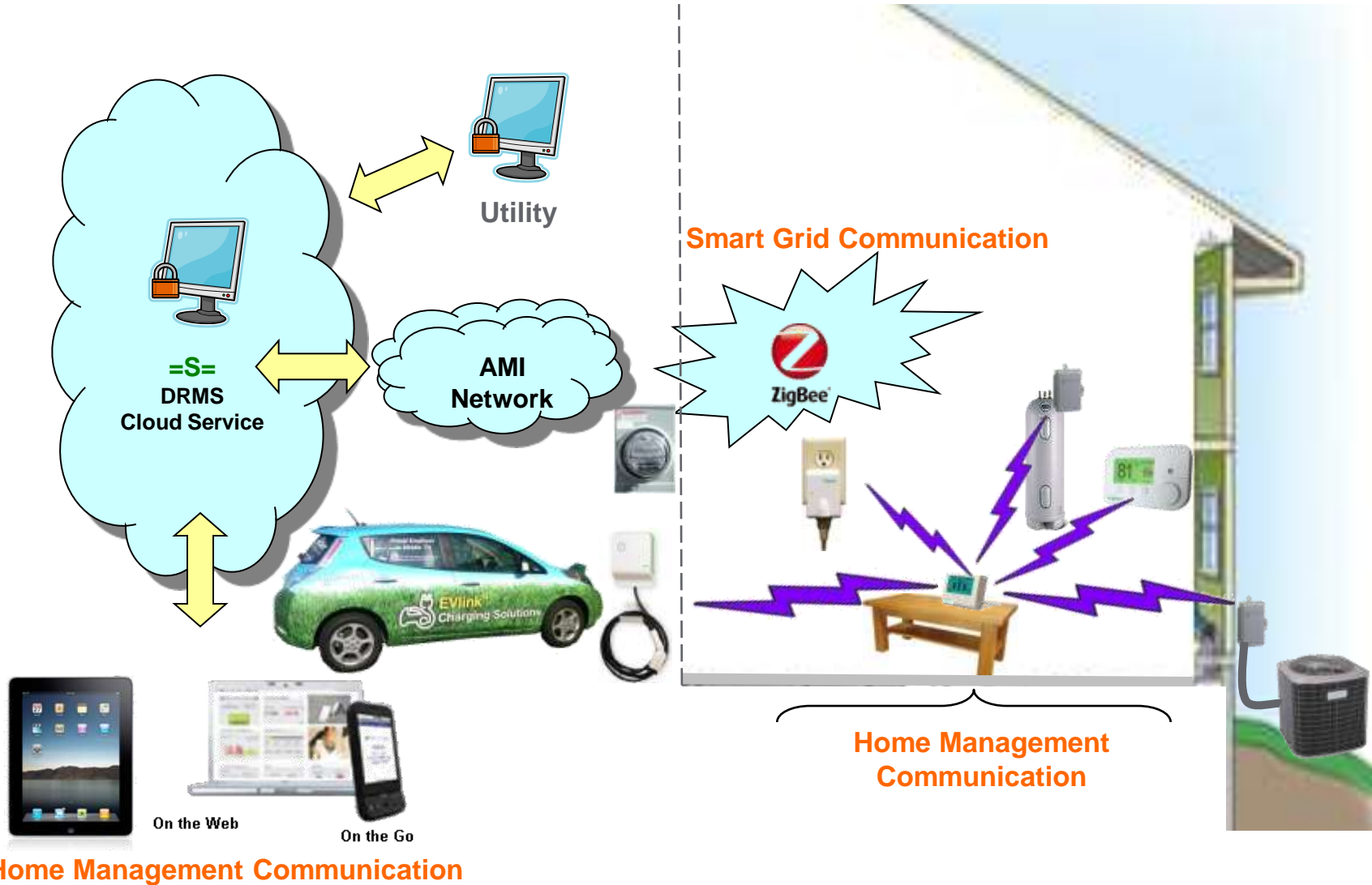


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Home Energy Management

AMI Solution- Differentiator

Home Energy Management

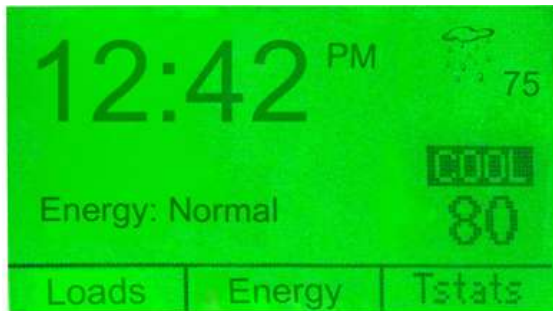


Make the most of your energySM

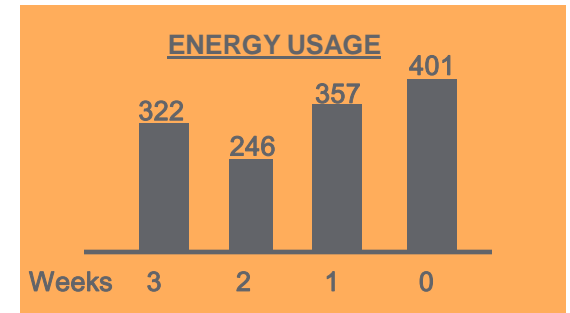
In Home Display

The IHD displays details of energy consumption on a daily, weekly, and monthly, and yearly basis. This information is obtained from simple metering devices located within the smart energy system.

In addition to a clock and weather information, the homeowner can control remote devices with event opt-out capability offering increased functionality for the homeowner.



Main IHD Screen



Energy Use Display



Main Energy Display

Rate “Color Signaling”

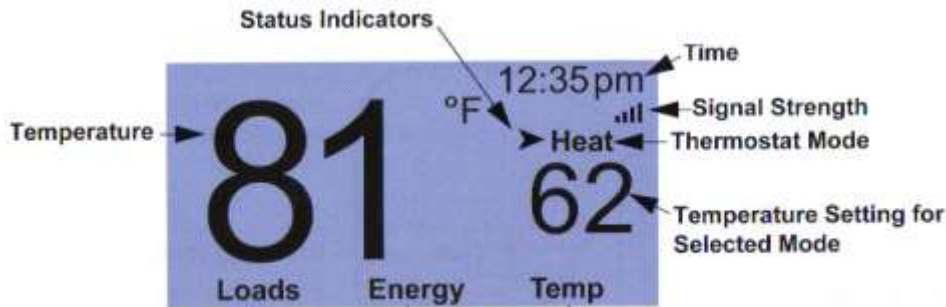
- Low – Green
- Medium – Blue
- High – Orange
- Critical - Red

PCT/ In Home Display

The Programmable Communicating Thermostat is the only PCT that is **remotely controllable** via IHD and has the **dual function** on as an In Home Display with “**color signaling**” pricing notification.

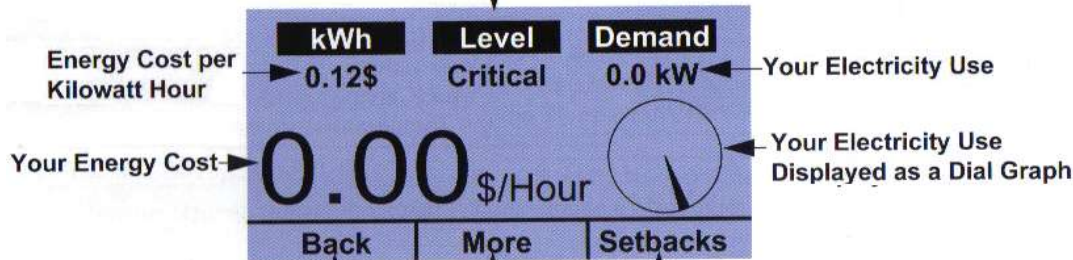


Homeowner automated HVAC control based upon pricing signals.



Button Functions
PCT Functionality

Energy Criticality Level



Button Functions
IHD Functionality

SETBACK AND CYCLE		
TOU	Setback	Cycle
Low:	0 °F	100%
Medium:	0 °F	100%
High:	0 °F	100%
Critical:	0 °F	100%
Cancel	Ok	Next

Make the most of your energySM

Load Control Relays

Models Available:

- 30 – 60 amp control @ 240 volts
- 5 amp control @ 24 volts.

The relays supports ZigBee DRLC events

ON / OFF functions from the ZigBee Cluster library (ZCL)

Internal storage of simple timer functions

Power measurement.

The simple timer functions provides user determined ON/OFF functions.

With/Wo energy reporting



Energy Information Suite

Demand Side Mgt.

Load Control

Demand Response

Energy Efficiency

Load Shifting

Residential & Commercial
Energy Data Presentment

Pricing & Energy Rate Management

Customer Communications

Asset Provisioning & Management

Customer Enablement/Mgt.

Supply
Side
Mgt.

Storage Mgt. & Renewable Integration

EV Charging & Management

EV Mgt

Integrated Analytics
& Reporting

Back-Office/Legacy Integration

Third-Party Application &
Hardware Integration

Enterprise Services Bus

Utility Control



OpCenter
Demand Side Management

Dashboard My Profile Change Password Sign Off



Programs Events Rates Baseline Locations Reports Community Users Operations

Event Date	DR Event	Participants	Status	Energy Reduction (kWh)
07/30/2011	Doug demo	1	Completed	NA
07/20/2011	jimtest	2	Completed	NA
07/14/2011	DrEventJul....	1	Completed	NA
07/14/2011	DrEventTes....	1	Completed	NA
07/13/2011	HCL-Bug349....	1	Completed	NA
07/13/2011	HCL IT31 e....	1	Completed	NA

Weather

City : Chattanooga

Hi / Lo : 85°/77° F

Humidity : 57 %

Wind : 6 mph SSW

Pressure : 29.85 hPa

85°F



HomeSMART™ Residential Enablement



HomeSMART

Welcome **Doug** | [Logout](#)
Residence: [Vacation Home](#)

[DASHBOARD](#)

[MANAGE MY ENERGY](#)

[AUTOMATE MY HOME](#)

[Notifications](#)

[My Settings](#)

[Online Help](#)

ALERTS!

SAVINGS EVENTS:

Program "Summer Savings" has expired.

Program "Labor Weekend Savings" has expired.

[Enroll in a new program](#)

Dashboard for Vacation Home

My Energy Usage: **Adjustments Needed**

Monthly Energy Usage: **On Target**



Goals

\$120

[Action Link](#)

Monthly Energy Budget: **On Target**



\$120

[Action Link](#)

Usage Compared to my Community: **Approaching Target**



\$120

[Action Link](#)

Week Day/Weekend Usage: **Exceeding Target**



\$120

[Action Link](#)

[MANAGE ENERGY](#)

Current Cost:

Low

[GET TOMORROW'S PRICE](#)

Current Weather

Tucson, Arizona 84085

Today Tomorrow Wed



65°/42° 67°/44° 64°/43°

[See extended forecast](#)

[ADJUST THERMOSTAT](#)

Next Steps to Improve Energy Usage:

[AUTOMATE MY COSTS](#)

[CHECK SAVINGS](#)

[ADJUST ENERGY USAGE](#)

Message from SMARTZIG ENERGY

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News and Events

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SAVINGS EVENTS

ACTIVE PROGRAMS:

- Demand Response (In Process)

SMART SAVINGS:

- Price Manager
- Energy Saver

Advertising

ENERGY STAR HOME ADVISOR
Get Customized Recommendations

SAVE ENERGY SAVE MONEY
ENERGY STAR® products

SHUT THE PLANET PROGRAM
NATIONAL GEOGRAPHIC



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Make the most of your energySM 12

HomeSMART™ Residential Enablement



Welcome **Doug** | [Logout](#)
Residence: [Vacation Home](#)

HomeSMART

DASHBOARD

MANAGE MY ENERGY

AUTOMATE MY HOME

Notifications

My Settings

Online Help

Manage My Energy / Energy Summary

Energy Summary

- My Savings
- Energy Tips
- My Energy Plan
- My Cost
- Load Profile
- Day Ahead Pricing
- Comparisons
 - by Period
 - by Weather
 - customized

SAVINGS EVENTS

My Energy Summary

Energy Prices

View by: [Year](#) | [Month](#) | [Week](#) | [Day](#)



Energy Price (\$/kWh)
■ Low ■ Medium ■ High ■ Estimated

[Enroll in Energy Program](#)

My Energy Usage

Total Usage: On Target	Goal
 \$40	\$120
Expand summary	
Pricing Tiers: On Target	Goal
 \$30	\$120
Expand summary	
Week Day/Weekend Usage: On Target	Goal
 \$70	\$120
Expand summary	

[Adjust Energy Usage](#)

My Energy Comparisons

Usage Compared to Weather: High	Goal
 \$90	\$120
Expand summary	
Usage Compared to Community: Med	Goal
 \$60	\$120
Expand summary	

[Add New Comparison](#)

Next Steps to Manage my Energy:

SET MY COSTS

CHECK DAY AHEAD PRICES

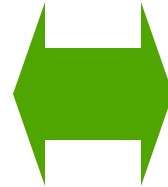
COMPARE MY USAGE



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Make the most of your energySM 13

Manage Energy Your Way



PCT/IHD Combo

In Home Display

On the Web

On the Go

Home Energy Management Devices

Delivering benefits with smart functionality = VALUE

● Home owner energy management system

- PCT and IHD all in one device
- Overall consumption visible.
- Empower consumers, to make control decisions based upon pricing and TOU/CPP
- Opt-in/Opt-out communication by multiple end devices through IDC
- Color coded pricing alerts
- Set back and cycling automation
- Internet and Smart Phone control
- Residential energy management solution with Demand Response applications...

● Utility control

- Visibility and insight into system operations
- Integration with other utility systems (Service Bus)
- Ability to expand platform to include a broad portfolio of load management programs and support future needs
- Cost Savings

Operations: ability to reduce truck rolls, optimize field staffing

Infrastructure: monitor & minimize losses, and extend life of capital equipment

Single platform reduces the administrative and operational burden of managing multiple systems.