

Energy Management and Information Systems

Scott Kessler

NYSERDA Project Manager

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What is NYSERDA?

- Public benefit corporation
- Primarily funded by System Benefits Charge on electric and natural gas bills

Mission Statement

Advance innovative energy solutions in ways that improve New York's economy and environment.

NYSERDA's Vision Statement

To serve as a catalyst – advancing energy innovation and technology, transforming New York's economy, empowering people to choose clean and efficient energy as part of their everyday lives



NYSERDA & EMIS

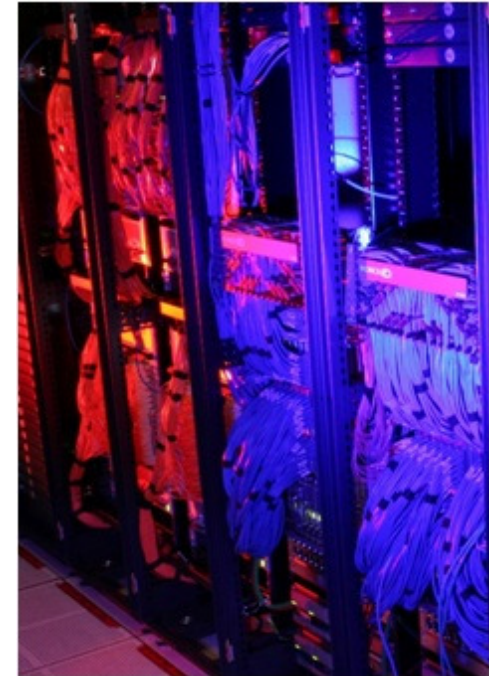
- Innovative Opportunities Solicitation
 - Northwrite (Small to medium sized)
 - ThinkEco (Scalable from small- to large-sized systems)
- NYSERDA's Core Programs (C/I & Residential)
 - Existing Incentives
 - Monitoring-Based Commissioning Incentive (targeting largest customers)

Innovative Opportunities

- Recurring RFP open to all entries
- Seek out innovative C/I projects that
 - Are not addressed through other NYSERDA initiatives
 - Complement existing NYSERDA programs
 - Explore and test emerging technologies
- Primary goal: enable modifications to “core” programs

Innovative Opportunities

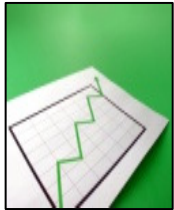
- Evaluation and success varies depending on project
- Past Projects
 - Commercial Kitchen Pilot
 - Benchmarking Data Centers
 - Transformers
- Competitively selected EMIS businesses
 - Northwrite
 - ThinkEco, Inc.



Northwrite

- Targets small- to mid-sized commercial buildings (6/10 – 10/12)
 - 20 buildings evenly distributed across NY
 - Fewer than 100,000 sf
- Participants receive hardware installation, recommendations for O&M + capital measures, and data tracking
- Technical and software improvements made to product, streamlined delivery
- Train new service providers
- Link to existing NYSERDA programs

Northwrite



Energy Expert+Plus

Outsourced energy information management services

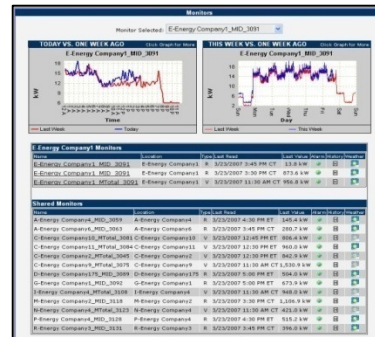
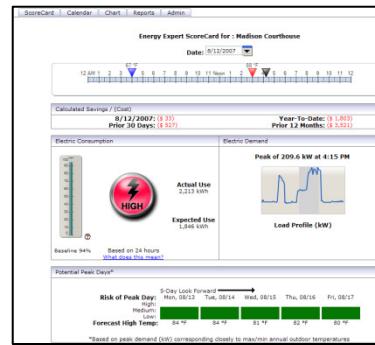
Uses technology and expert analysis to:

1. Gather key building metrics and operating parameters
2. Identify energy savings opportunities based mostly on operational changes
3. Track results
4. Repeat 1-3 continuously

Northwrite

Low-cost way to reduce energy use by 5-10%+

1. Ideal for small- to mid-sized commercial buildings
2. Focus on operational changes (no/low-cost)
3. Delivered remotely
4. Ongoing service-based model



Monitoring Tool



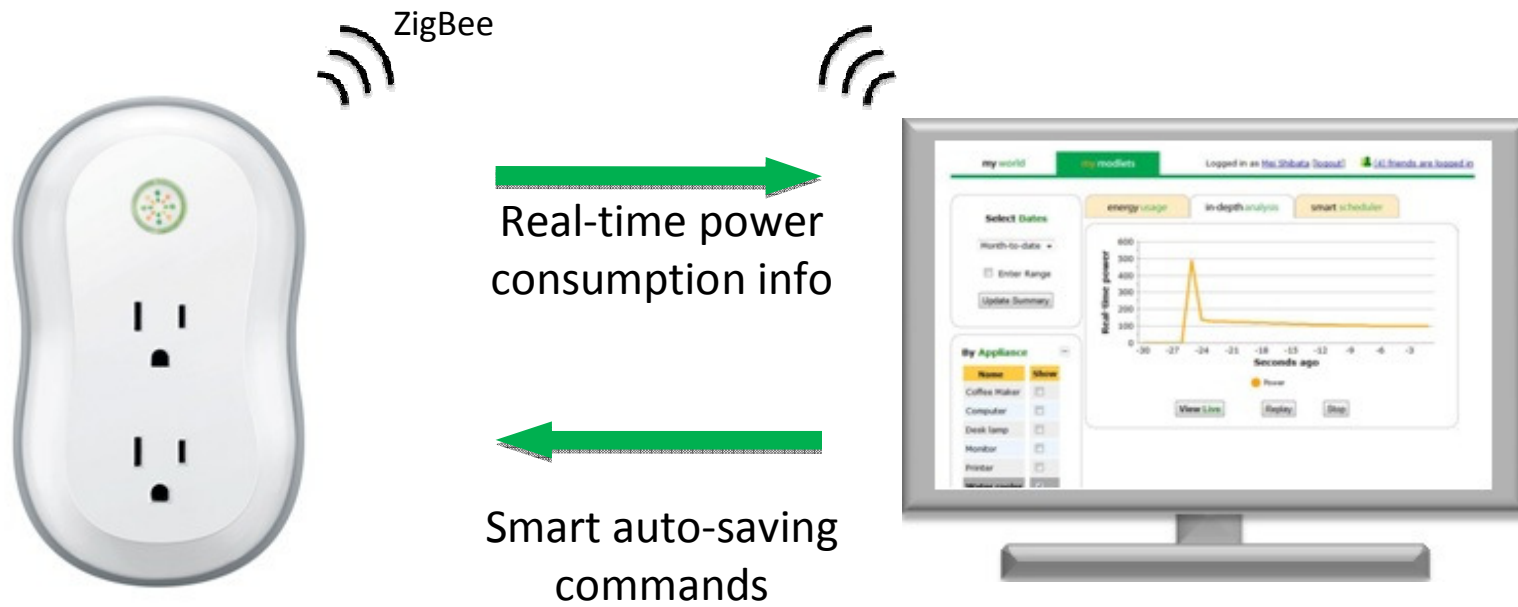
Hardware



ThinkEco

- Install Modlet into 10-20 NYC commercial office spaces
 - Effects single outlet, can be networked, no central system, no hardwiring
- Half receive hands on instruction, half receive “retail” level instruction
- 1-2 month baseline, 1 year data monitoring
- Evaluate accuracy of existing energy-efficiency labels (e.g. ENERGY STAR®)

ThinkEco



Plugs into any existing outlet

View on your computer's web browser

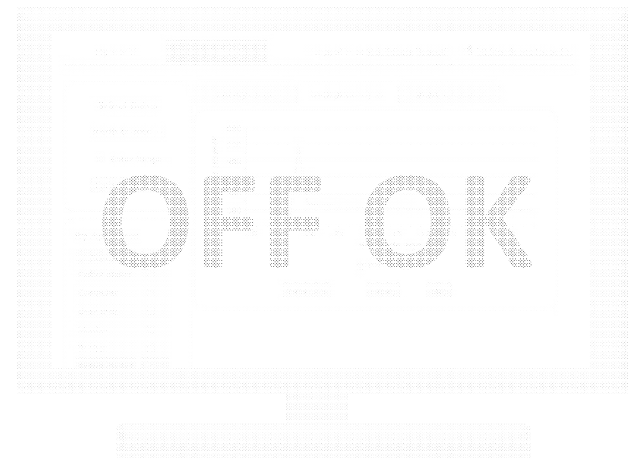
ThinkEco

Modlet[®] = modernization of the electrical outlet



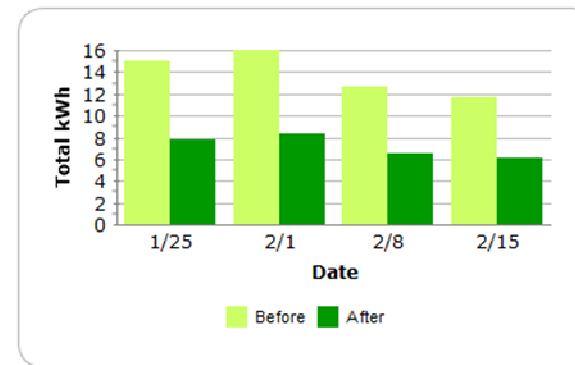
Caches power measurements until computer returns

Keeps executing the last set of on/off schedules



ThinkEco

Sampling of Scheduled Savings at ThinkEco Pilot Sites	
	Annual savings (\$)
Coffee maker	\$ 63
Water cooler 1	\$ 76
Water cooler 2	\$ 67
Laser printer 1	\$ 27
Laser printer 2	\$ 160
Laser printer 3	\$ 43
Computer 1	\$ 62
Computer 2	\$ 64
Computer 3	\$ 40
Vending machine	\$ 364
Computer 4	\$ 40
Computer 5	\$ 60
Cable box 1	\$ 28
Cable box 2	\$ 36
Cable box 3	\$ 35
Cable box 4	\$ 18
Audio system	\$ 30
Entertainment center power strip	\$ 49
TV and box set up 1	\$ 192
TV and box set up 2	\$ 147
Laser printer	\$ 26
Mini fridge	\$ 35



Actual savings quantified by appliance

Projected >\$23,000 in annual savings across 8 floors for a NYC company using the modlet

Energy saved per appliance using modlet ranges from 30-80%

ThinkEco

Save money/energy

my world my modlets Logged in as Mei Shibata [logout] (4) friends are logged in

Select Dates
 Month-to-date
 Enter Range
 Update Summary

energy usage | in-depth analysis | smart scheduler

your usage
 Used: 28.8 kWh
 Cost: \$5.19

52% savings
 Saved: 31.6 kWh
 Gained: \$5.69

HP Color Laser Jet 4650M
 ★★★★★
 With your printer schedule:
 You saved \$3.88 this month
 You have saved \$28.90 so far

By Appliance

Name	Show
Coffee Maker	<input type="checkbox"/>
Computer	<input type="checkbox"/>
Desk lamp	<input type="checkbox"/>
Monitor	<input type="checkbox"/>
Printer	<input checked="" type="checkbox"/>
Water cooler	<input type="checkbox"/>

By Room +
By Activity +

Buy better appliances

Get alerts

my world my modlets Logged in as Mei Shibata [logout] (4) friends are logged in

Oct 21 52° F
 3:38 PM New York, NY

Latest News

- ⚠ Your laptop is fully charged, but still plugged in. Would you like to turn off power to it [remotely](#)?
- 📧 You've been [requested](#) to join 4 new networks and 4 people were [influenced](#) by you.
- 📧 Someone made a [recommendation](#) on energy-saving tips for the [TV you own](#).
- 📖 **From the ThinkEco blog:** [Top Ten Energy Draws in Your Living Room](#)
- 📖 **Appliance watch:** 45 [new appliances have been added to Appliance](#) - see how yours stack up

my schedules

- Travel
- Normal (Nightly Off)
- Conserve (Aggressive)

Configure

your carbon diet

Goal

Last week 13 lbs -7%
 Last 30 days 4 lbs +10%

my competitions | my eco impact | friends and family

Your overall rating ★★★★★
 Your ecolideas have influenced 156 people spanning 3,245 miles.
 Your most influential ecolideas:

My ecolidea	date posted	people influenced	carbon impact
Wall AC on high	3/3/09	103	██████████
Efficient water cooler	3/11/09	42	██████████
Control kids' TV	10/08/09	4	██████████

Details

Share ideas, collaborate

NYSERDA Incentives

Existing Buildings

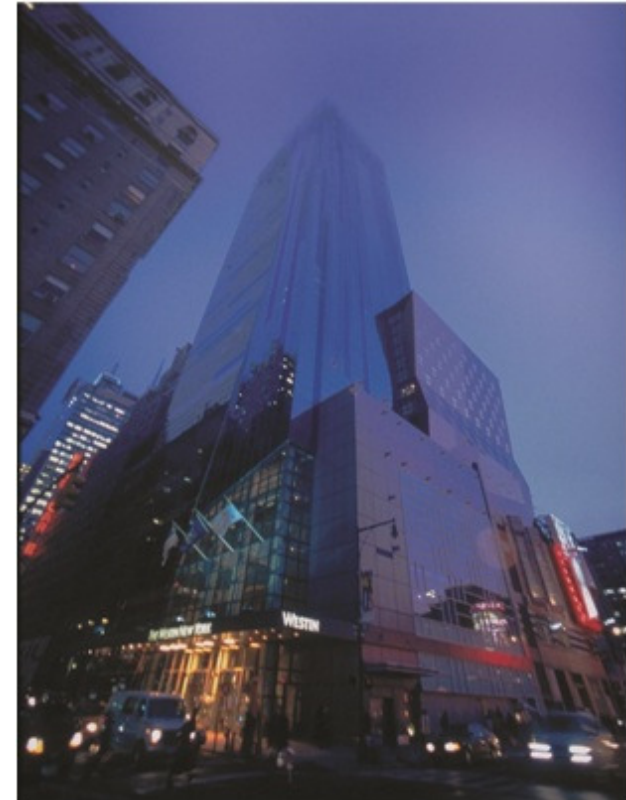
- FlexTech Program
- Existing Facilities Program

Construction Projects

- New Construction Program

Residential

- Energy \$mart Homes
- Energy \$mart Products



The Westin Hotel at Time Square

Monitoring-Based Commissioning Incentive

- NYSERDA provides incentives to support EMIS installation through the Existing Facilities Program
- \$0.05/kWh, minimum incentive of \$10,000
- Covers cost of energy data collection hardware and energy management service

Business Partners



- Mid-stream market transformation program

- Expanded pool of qualified, skilled service providers



- Market introduction for new high-efficiency technologies

- Focus on quality installation and design

Wrap-up

- Questions for Industry Partners
 - What is the performance criteria for these technologies in lieu of EER, watt/sf, % efficiency, etc.?
 - What does the industry need in order to move forward?
Pilot projects to demonstrate feasibility? Training for installers?
- For NYSERDA
 - Case studies to determine transitioning from modeling and M&V to pre-qualified incentives
 - Savings demonstrated in a variety of environments, i.e. different sized buildings, owner/tenant occupancy, varied climates, etc.

Wrap-up

- Components for case study evaluation:
 - Historic energy use and costs
 - Building description
 - Equipment inventory and nameplate data
 - Recommended energy conservation measures
 - Installed cost
 - Annual savings
 - Simple payback
 - Persistence of savings
 - Data to substantiate assumptions and calculations

Contact Information

Scott Kessler

NYSERDA NYC Office

212.971.5342 x 3022

sbk@nyserda.org