

Pulse Energy

Energy Visualization for portfolios of buildings

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www.PulseEnergy.com

Energy Visualization for large portfolios

1. Introduction
2. Who is Pulse Energy?
3. Who cares about portfolio energy management?
4. Conclusions



Portfolios: Why are they important?

- Big footprint, high energy costs
- Energy management is taken seriously
- Common metering and sub-metering infrastructure across buildings



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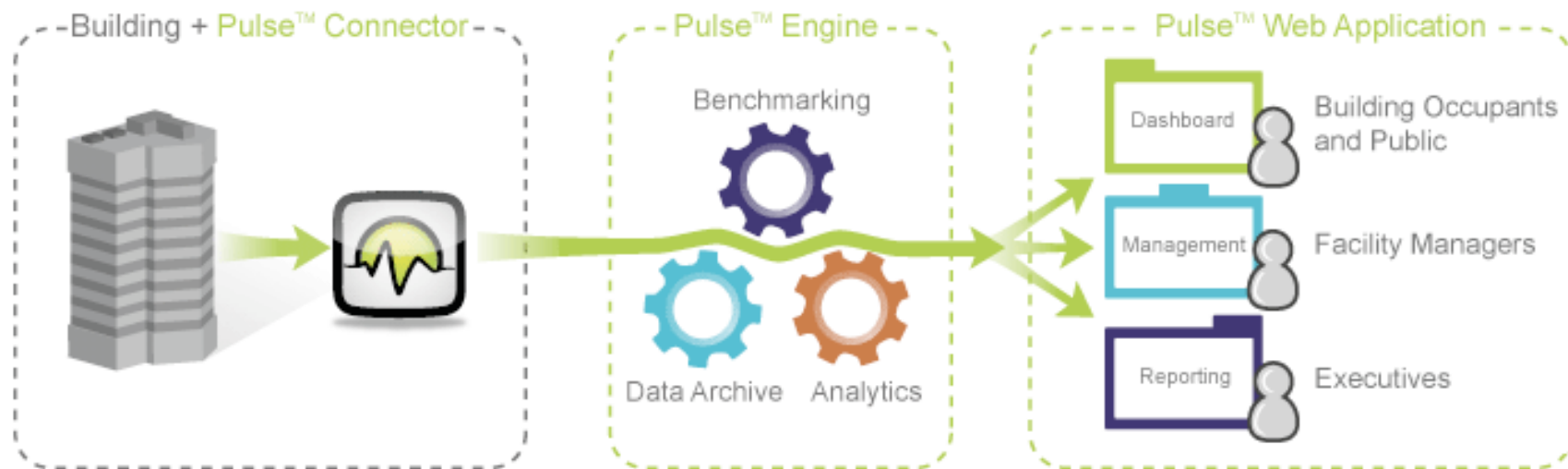


About Pulse Energy

- Co-founders from the energy and software industries
- Making energy managers into heroes
 - Energy Productivity
 - Measurement & Verification



How it works: Pulse architecture



- **Collect:** Acquisition device reads from meter or BAS
- **Analyze:** Algorithms process historical data and correlate it to real-time climatic and temporal variables
- **Communicate:** Web-based views for occupants, operations, and management / reporting



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Organizations are interested in energy management for a number of reasons

- Energy reduction
 - from operations
 - from behaviour change
- Measurement & Verification
- Communicating results & impact

Energy visualization is necessary for a number of things

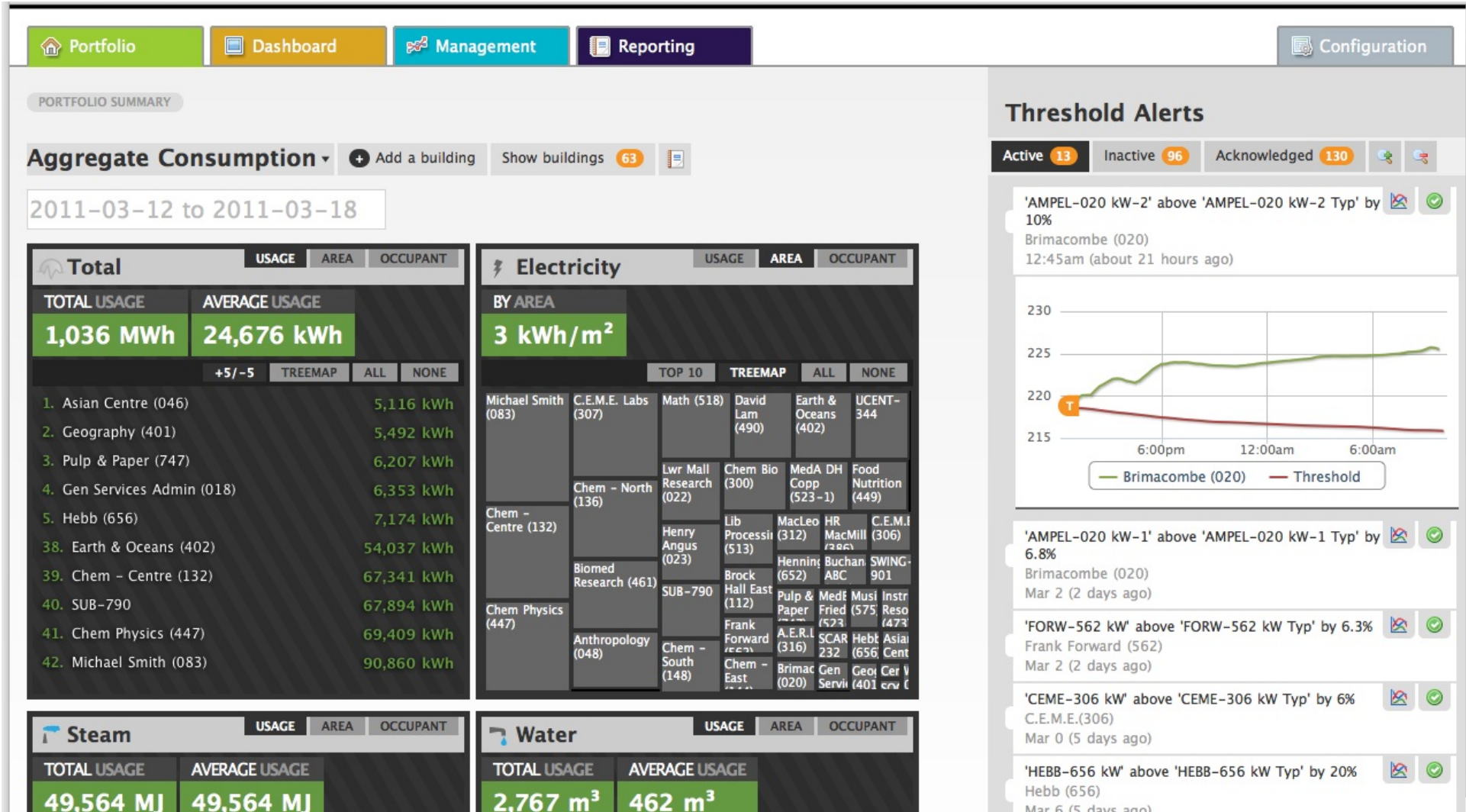
- Improved Productivity & Analysis
 - Energy Managers
 - Operations Managers
- Reporting
 - Finance
 - Utilities & regulators
- Engagement & Communication
 - Building occupants
 - General Public

Energy Productivity

- Identify a few valuable actions from a large volume of data
- Increased productivity for energy managers



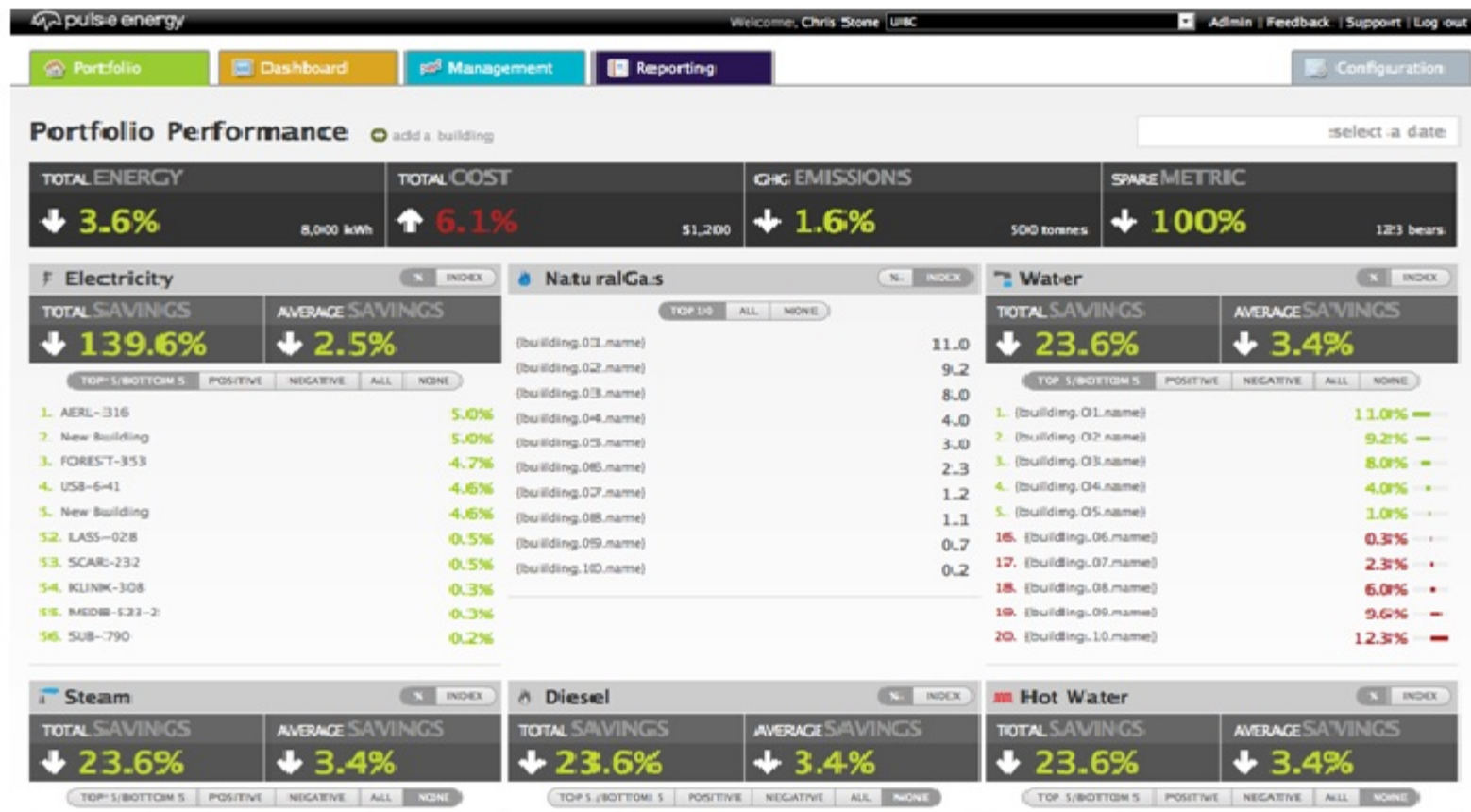
Productivity: Energy and Operations managers need a way to set priorities



Financial and environmental reporting

- Demonstrating ROI
- Carbon and environmental impacts
- Evaluating new projects

Reporting: Know what works and what doesn't

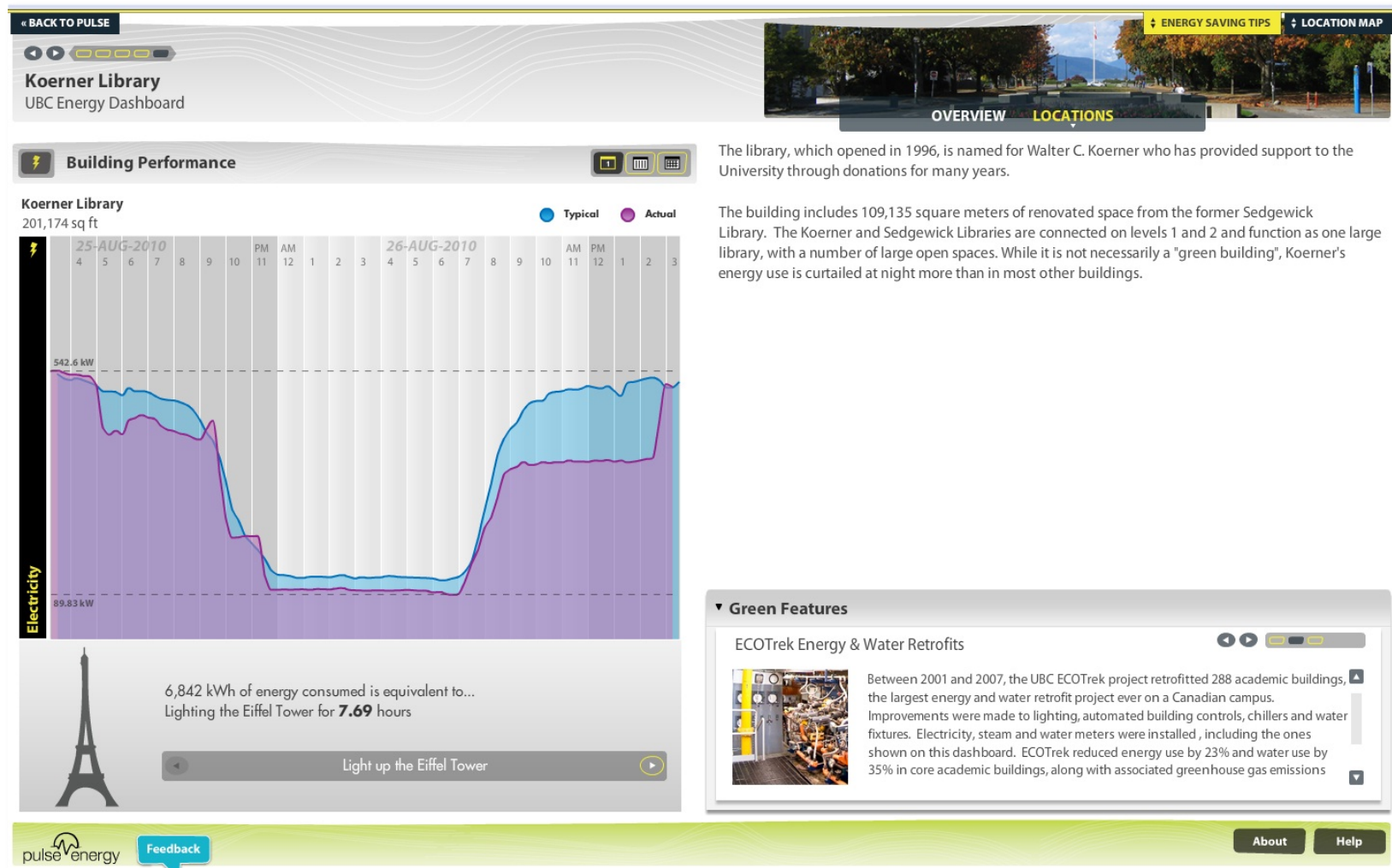


Threshold Alerts

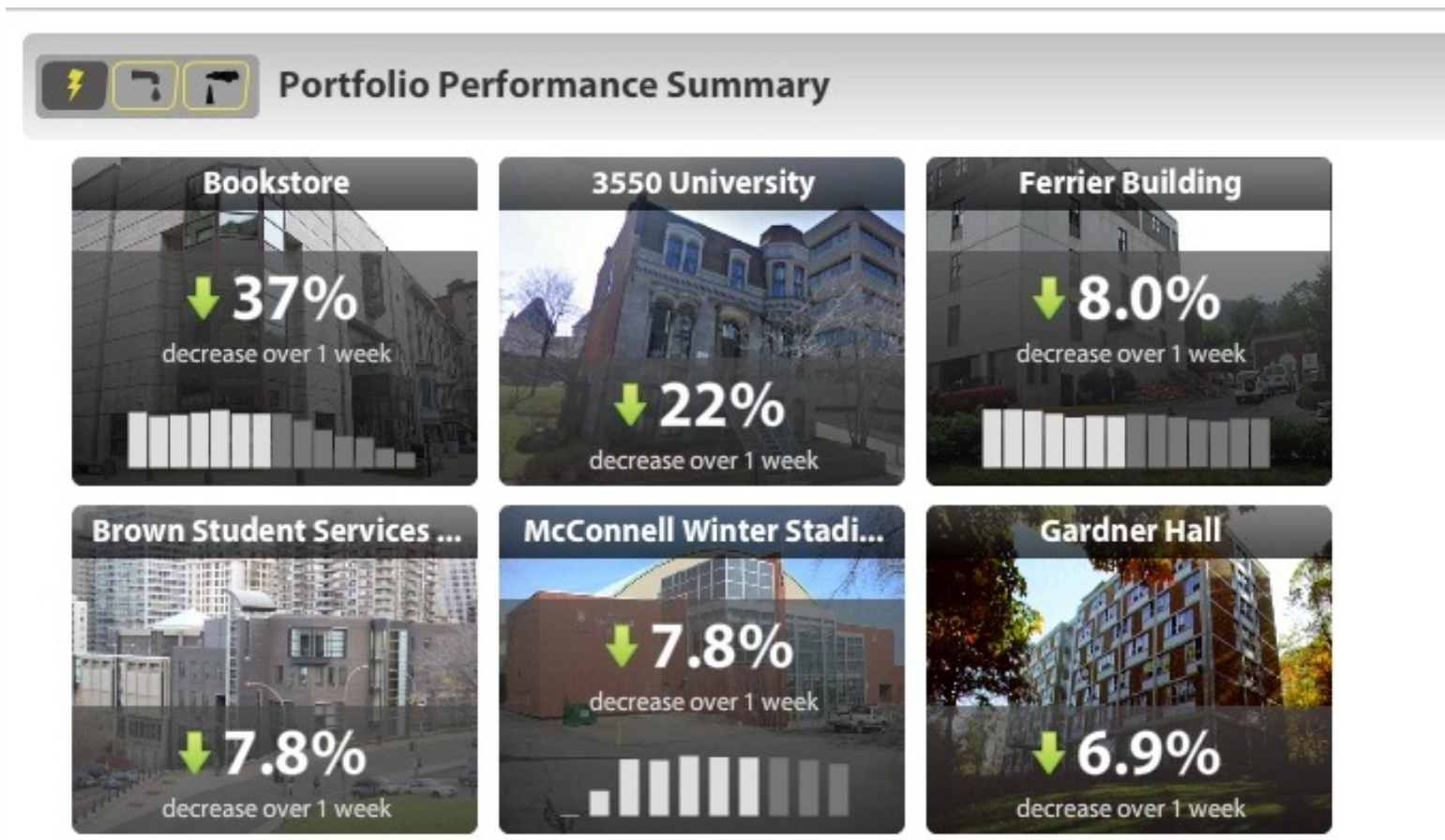
Total Electrical Power above 600 kW	[building.name.01]	16 Days Ago @ 12:33pm			
Total Electrical Power above 600 kW	[building.name.01]	16 Days Ago @ 12:33pm			



Engagement: Know your audience



Engagement: Getting people on board



Engagement: Competitions win every time

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ENERGY SAVING TIPS

LOCATION MAP

Perkins Will

OVERVIEW

LOCATIONS

COMPETITIONS beta

Perkins+Will Energy Cup Finals

Update: The race is over! In a photo finish, Seattle and Vancouver tied.

The four winners of last week's qualifying round have advanced on to the Energy Cup Finals. This race has headed over to Europe with the teams competing to save enough energy to drive their electric cars **800 miles** from **Paris** to **Madrid**.

The winner will be determined by whichever car has travelled farthest by Friday

What action did you take today?

Turned off overhead lights and encouraged people to turn on their more efficient desk lamps instead

Select your team

Share

I wore kneel-hide boots to keep legs warm. Also became fashion diva at the same time!

Vancouver (3 weeks ago)

1 did this +1

I walked around the office more often to talk to colleagues rather than emailing... burn more calories & generate positive relationships!

Vancouver (3 weeks ago)

2 did this +1

Perkins+Will Energy Cup: Finals

October 25, 2010 - October 29, 2010

27-Oct-2010 (Wed)

0.55

	TODAY	%	TOTAL
Miami	30.70		23.70
RTP	428.6	mi	1,670
Seattle	60.71	kwh	236.5

301 mi

1,029 mi

1,670 mi

1,410 mi

800 mi

VIEW MAP

Granville Island

TOTAL SAVINGS 24.30% (1,036 kWh)

The pace car shows how far an electric car has traveled in order to meet the target energy savings of 800 mi by the end of the competition.

1 kWh of electricity saved will propel an electric car 3.88 mi towards the finish line.