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# Behavior, Plug Loads and Conservation Potential

Michael Murray, CEO, Lucid

# Energy Reduction Competitions: By the Numbers

- Hundreds of thousands of occupants engaged
- 50+ competitions over 5 years
- Megawatt-hrs of energy reduced



231,400 kWh

**Hamilton**

44,300 kWh

**Bowdoin**

16,900 kWh



9,000 kWh

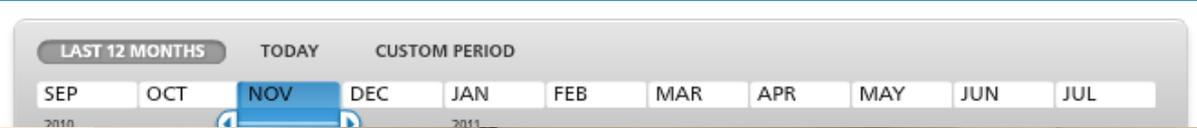


3,100 kWh



1,700 kWh

# Competitions in Commercial Office Space



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Nov 15 (Pac

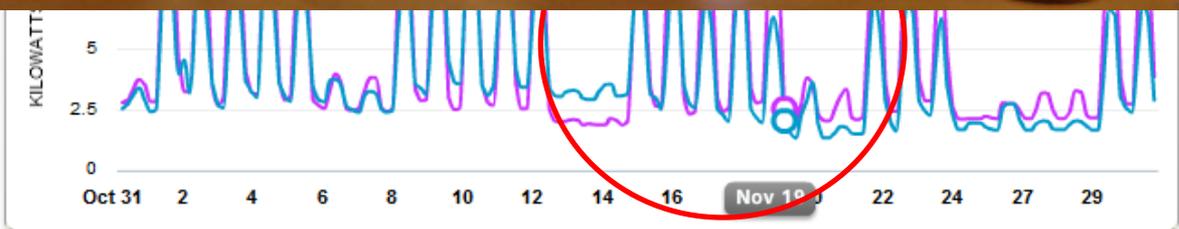
ELECT

REAL-TIME

REAL-TIME



- T
- energy, o
- Electric
- Compet



RUP

# Competitions in Commercial Office Space

## 2011 Turn It Off Challenge

Apr 22 (Pacific)

Finished

May 2 (Pacific)

Browse All Competitions



Savings Across Your Buildings

972

Kilowatt-hours saved

kWh

CO2

Money



- 14 floors competing for one week
- Monitored for total electricity (including HVAC/lights)
- Significant savings with two floors reporting particularly high levels of engagement (peers)



Jonathan Rose Companies

# Lucid hosts the first real-time building energy and water use reduction competition in North America



# CCN 2010 Results

CAMPUS  
CONSERVATION  
NATIONALS 2010



NOVEMBER 1 → 19  
COMPETE TO REDUCE

508,694

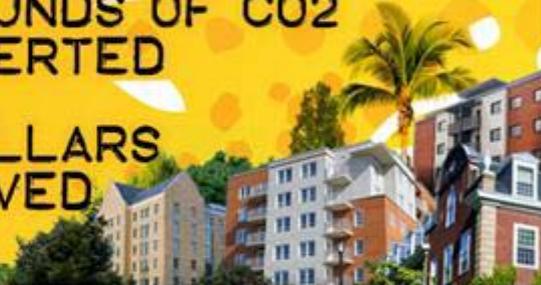
KILOWATT-HOURS  
SAVED

816,394

POUNDS OF CO2  
AVERTED

\$ 50,209

DOLLARS  
SAVED



Top-reducing campuses:

DEPAUW  
UNIVERSITY

(25.8% average electricity reduction)



HUMBOLDT  
STATE UNIVERSITY

(15.4% average water reduction)

Other top reducers in their category or region:



EMORY  
UNIVERSITY

UNIVERSITY OF  
Cincinnati

st. john's  
UNIVERSITY

BGSU  
Bowling Green State University

Appalachian  
STATE UNIVERSITY



CAL POLY POMONA

# CCN Success: St. John's University

## St. John's Residence Challenge Fall 2010

Nov 1 (Eastern)

Finished

Nov 18 (Eastern)

Browse All Competitions

ELECTRICITY

MORE INFO

Overall present reduction



DONOVAN HALL ST. JOHN'S

24.6% reduction



DASILVA HALL ST. JOHN'S

24.6%



CENTURY HALL ST. JOHN'S

12.5%



HELEN AND HUGH L. CAREY HALL ST. JOHN'S

12.1%



HOLLIS HALL ST. JOHN'S

9.0%



JOHN CADINAL O'CONNOR HALL ST. JOHN'S

4.7%



Savings Across Your Buildings

\$ 6,084

Dollars saved

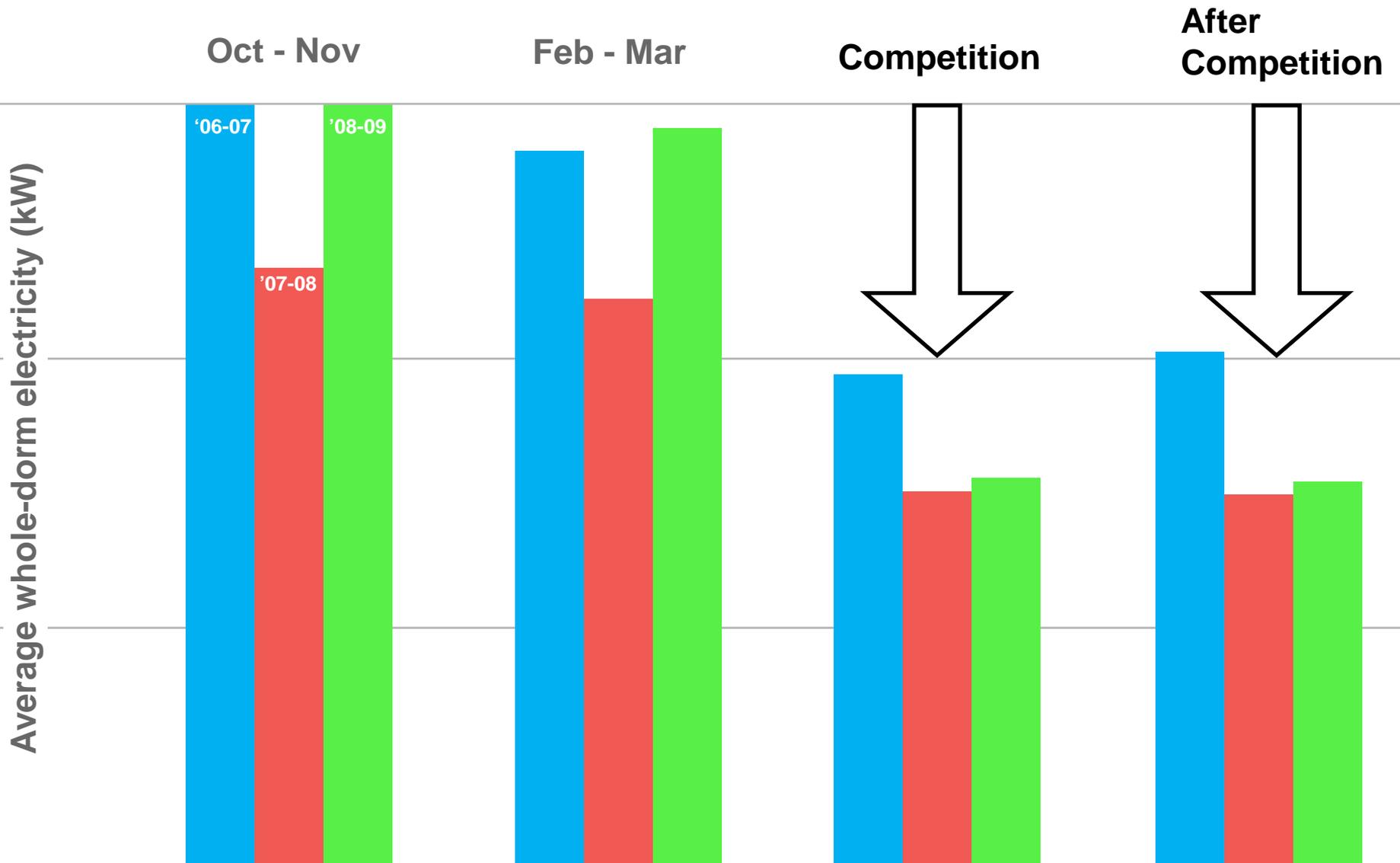
kWh

CO2

Money



# Research Behind the Savings

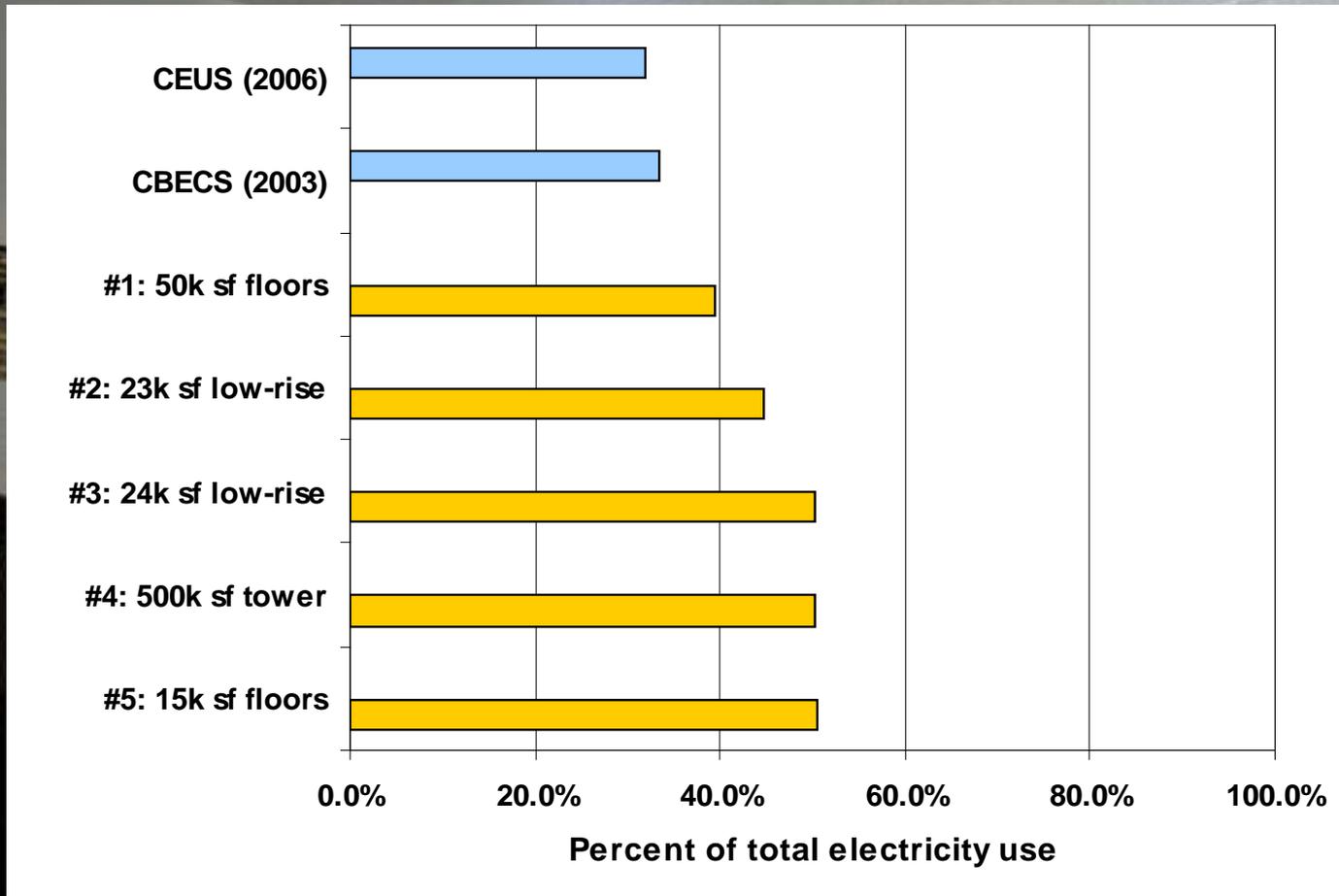




How much of a difference can behavior change make?



# Plug loads are a significant percentage of total electricity use





# LucidDesignGroup

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