



# Workplace Engagement: Finding and Filling the Gaps for Fruitful Energy Savings

Kat A. Donnelly, Ph.D., P.E.



Behavior Energy and Climate Change Conference  
Baltimore, MD  
October 20, 2016

# The Opportunity

30% of a commercial building's energy use is **wasted energy**.



CO<sub>2</sub>  
\$ \$ \$ \$ \$

# The Opportunity

Staff costs typically account for about **90%** of a business' operating costs.

Reduce operating costs by 10%  
(evenly spread)

- **0.1 %**  
Energy costs

- **0.9 %**  
Rent/Mortgage costs

- **9.0 %**  
Staff costs

Source: World Global Building Council, 2014

©Empower Efficiency, LLC, October 20, 2016, Slide 3

# Engagement Facts: Office Worker



The typical office worker is...

- not aware of the waste
- not motivated to change
- not aware that as an individual, one can make a difference



*“Never underestimate the power of a small group of committed people to change the world. Indeed, it's the only thing that ever has.”*  
- Margaret Mead

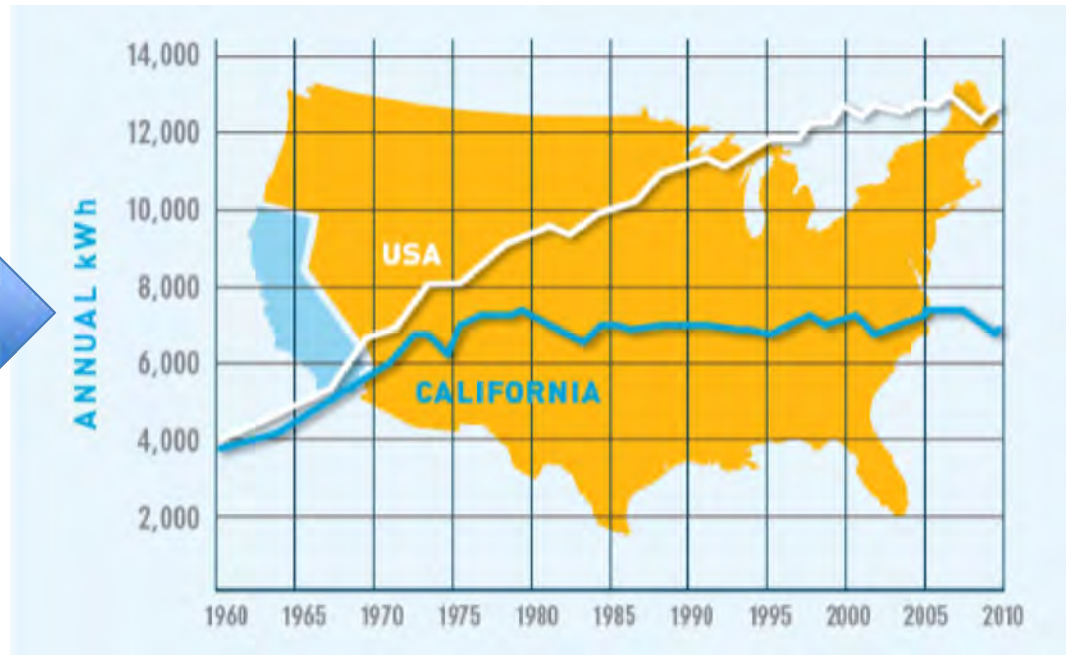
# How to break down the barriers?

- Build on best practices
- Establish public-private-academic partnerships
- Focus efforts within geographic areas
- Focus efforts on large office buildings



# Replicability

Envision Charlotte caught the attention of other utilities, States, and even the White House.



**PG&E conceived  
“Step Up and Power Down”**



# Did You Know?



**People use the most energy in a building.**



# Contributing to San Francisco and San José sustainability



- \$1 Million to support local environmental projects in each city.
- Community-wide energy savings goals.
- Engagement of large commercial customers and small/medium businesses.

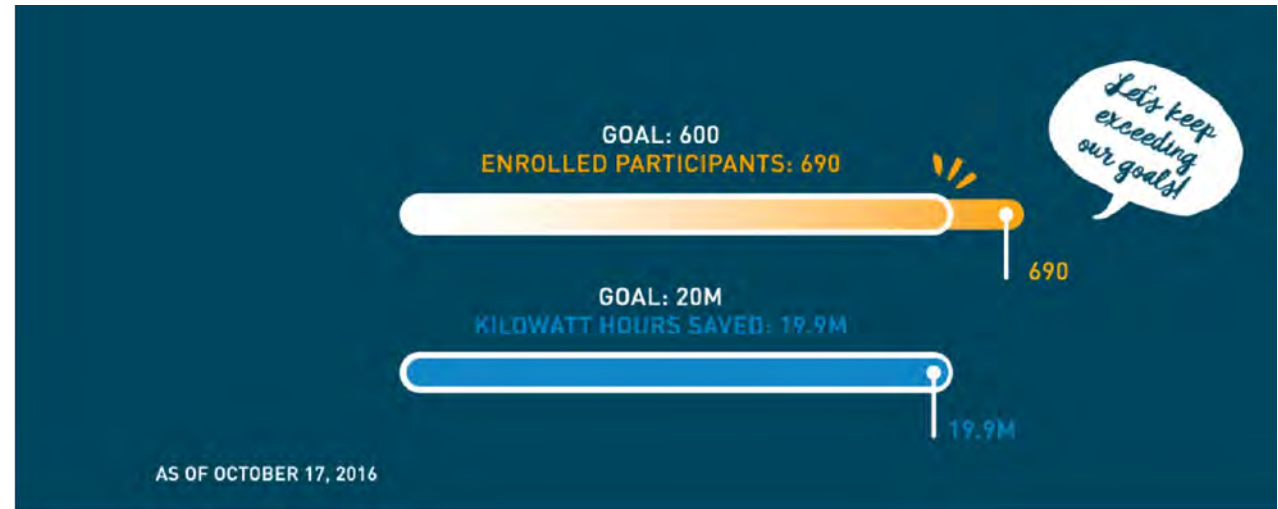




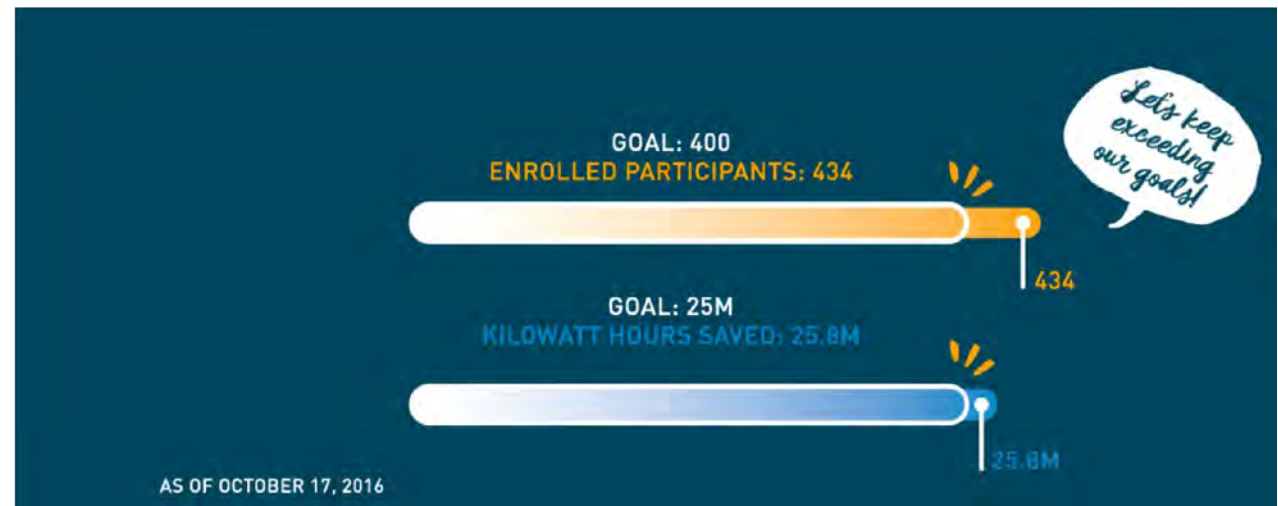
# Exceeding Our Goals



## San Francisco



## San José





# Rich variety of tools, training, & techniques



## ASSESSMENT & TRAINING

Audits, hands-on training and peer learning to support sustainability efforts



## TOOLS & TIPS

Actionable tips to engage and encourage employees



## ENERGY SAVING ENGAGEMENT CAMPAIGNS

Helpful toolkits and templates to engage and encourage employees

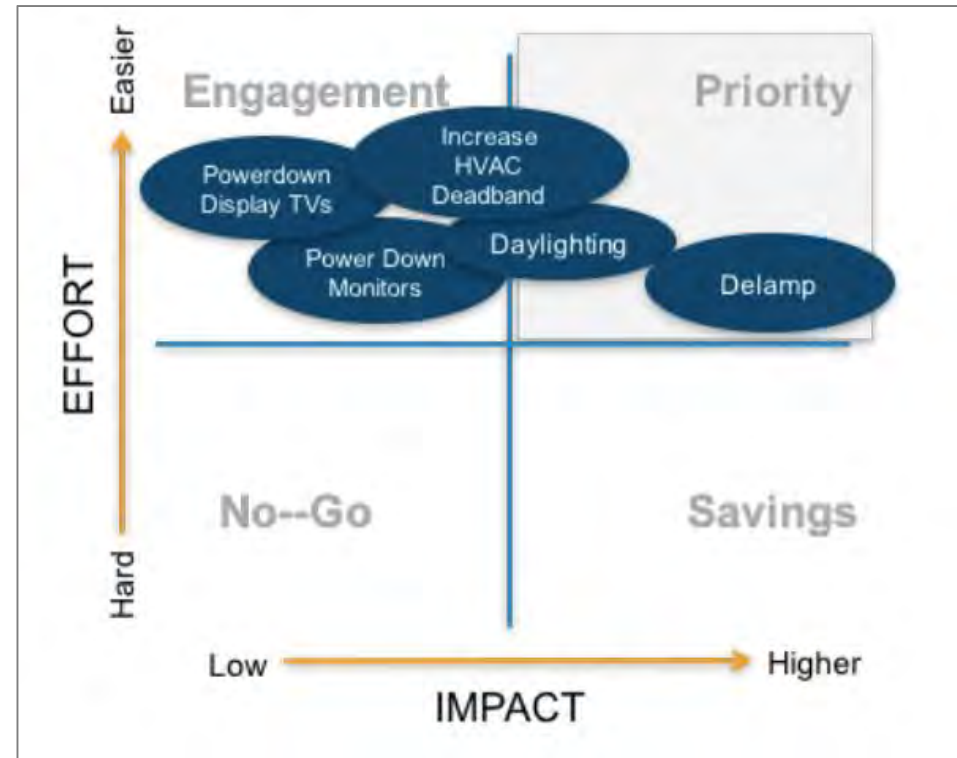


## ENERGY ADVISOR & SOFTWARE

Personalized recs & energy tracking, measurement software to create & execute your plan



# Energy Practices Inventory: Highlights & targets behavior-based opportunities



Low-cost, behavior-based initiatives drive energy savings



# Energy Practices Inventory: Typical Recommendations



- Most common:  
Lighting, Plug Load, & HVAC
  - Increasing HVAC setpoints
  - Reducing unnecessary lighting
  - Powering down workstations
  - Powering down equipment
- Achieved through:
  - One-time operational changes
  - Employee engagement campaigns

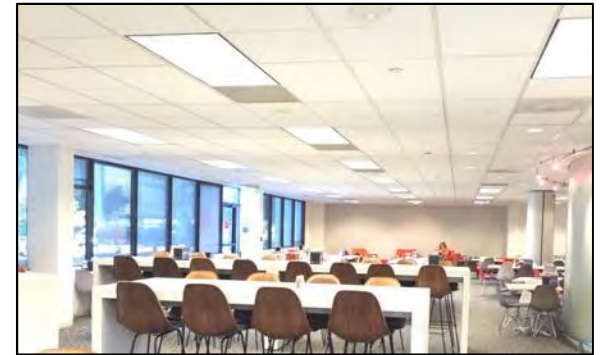




# Energy Practices Inventory: Typical Results



- Completed almost 40 EPIs
  - Large Offices
  - Hotels
  - Universities/Labs
  - Grocery Stores
- Median annual savings:
  - 4.5%, 122,000 kWh, \$16.5K
- Only top 5
  - No- & low-cost conservation/operational recs







# Engagement campaigns:



## A popular way to drive energy waste reduction



### Adopt A Light

Adopt & care for switches, turning them off when not in use.



### Power Down: Unplucked!

Power down workstations or receive a rubber chicken as a reminder.



### Vampire Slayer

Unplug energy vampires, or receive a set of fangs as a reminder.



### Sweet Goodnight

Power down workstations and receive a sweet treat on your desk in the morning.



# Engagement campaigns: Plan, Execute, and Measure



## Engagement Support

- Campaign planning
- Campaign facilitation
- Marketing and collateral
- Pre- & Post-measurements







# Engagement campaigns: Understanding Results



- Measure Impact
- Survey Participants





# Engagement campaign: Power Down: Unplucked!



Energy savings **over 4%** in targeted areas

- Survey Participants
- Employee Results
  - Positive changes in employee energy behaviors
  - Intention to persist and to take behaviors homes
  - Positive impact on employee morale







# Engagement campaigns: Lessons Learned (so far)



- Employees (really) like campaigns
- Campaigns capture low-hanging fruit
- Up-front prep leads to better results
- Campaign selection is especially important
- Participants want
  - Clarity on how to play
  - More feedback on impacts



# Any Questions?



CBSM and Behavior  
Change Programs



People-Centered  
Practices and Efficient  
Technologies

Kat A. Donnelly, Ph.D., P.E.

[KDonnelly@EmpowerEfficiency.com](mailto:KDonnelly@EmpowerEfficiency.com)

[KDonnelly@AZENTIVE.com](mailto:KDonnelly@AZENTIVE.com)