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$_2$

$\text{$$$$}$

©Empower Efficiency, LLC, October 20, 2016, Slide 2
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

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
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

©Empower Efficiency, LLC, October 20, 2016, Slide 9
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

©Empower Efficiency, LLC, October 20, 2016, Slide 10
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

©Empower Efficiency, LLC, October 20, 2016, Slide 13
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

Get Started

Week 1
BUILD YOUR TEAM
Identify the right people to help drive the campaign internally (e.g., executive sponsor, key accounts, internal communications, etc.).

Week 2
ENGAGE YOUR SLAYERS
Ask employees to commit to slay energy vampires by taking the Energy Vampire Slayer Oath.

Company Campaign Manager distributes Energy Vampires’ Marker Bars and instructions to employees who take the oath.

Employees identify their energy vampires and mark those devices with decals.

Week 3
START SLAYING
Encourage employees to unplug their energy vampires when not in use or risk being caught.

Week 4
TRACK YOUR PROGRESS
Conduct periodic audits of energy waste and collect self-reported results from your employees.

Week 7
CELEBRATE SUCCESS
Share your results and recognize employees.

©Empower Efficiency, LLC, October 20, 2016, Slide 15
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

©Empower Efficiency, LLC, October 20, 2016, Slide 18
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
KDonnelly@AZENTIVE.com