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**A River of Energy Solutions**

MOVING THE NEEDLE TOWARDS  
ENERGY CONSERVATION THROUGH BEHAVIOR CHANGE<sup>®</sup>

JASON BONDRA      NORESKO

# SESSION LEARNING OBJECTIVES

- What Occupants Really Think/Why It Matters
- Individual Behaviors & Cultural Norm
- Shouldn't Have To Be Mandated
- Culture Change Takes Time
- Potential Solutions

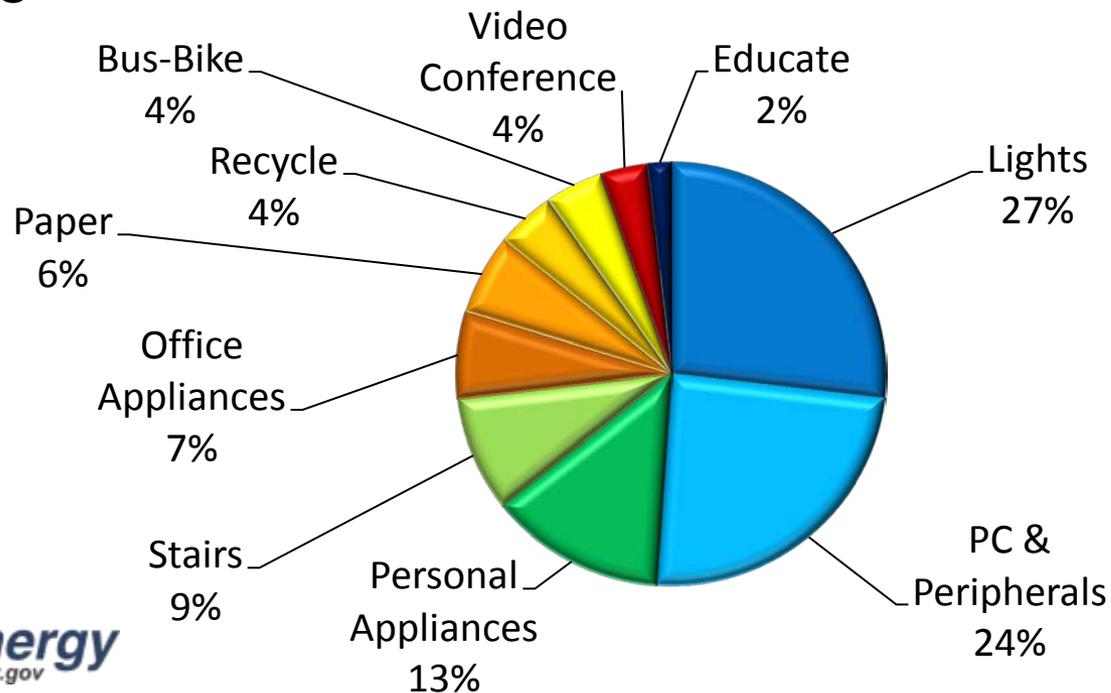
# TO CHANGE A CULTURE...

- You must understand and measure the culture.
- Human Behavior Energy Audit<sup>SM</sup> to Identify...
  - Impactful energy wasting behaviors
  - Motivations driving desirable/undesirable behavior
  - Personal, departmental, organizational barriers
  - How the measurement itself can change behavior
  - Baseline levels of energy attitudes, knowledge, social norms, perceptions of control, and behaviors



# WHAT OCCUPANTS THINK/WHY IT MATTERS

- Solutions May Already Exist
- They Want To Know
- Change Comes from Them



# INDIVIDUAL BEHAVIORS/CULTURAL NORM

- Individual Behaviors
  - Resonate to me/you/everyone
  - Are actionable
  - Are digestible
  - Are memorable
- Cultural Norms
  - 33/33/33
  - What is everybody else doing?



# SHOULDN'T HAVE TO BE MANDATED

- Green Police
- Intrinsic vs. Extrinsic Rewards
- Do Competitions Work?
- What Does YOUR Behavior Change Program Look Like?
  - Adaptive
  - Customized
  - Flexible
  - Long-lasting



# CULTURE CHANGE TAKES TIME

- Remember it's all about the data
- Inclusive approaches require smaller steps
- 33/33/33 → 33/0/66 → 0/33/66 → 0/0/99
- We don't do that here
- This is how we operate (Day 1)



# POTENTIAL SOLUTIONS

- Top Down (Directive)
- Bottom Up (Grass Roots)
- Aligned with Technology
- Integrate with Existing Efforts
- Tell Everyone
- Doer/Leader/Executive
- GET HELP!



# POTENTIAL SOLUTIONS

- Executive Sponsor
- State of Hawaii
  - Credibility
  - Gravity
  - Longevity
  - CULTURE CHANGE



# POTENTIAL SOLUTIONS

- Green Champions



# USING NEW PROGRAMS FOR CHANGE

## NORESCO Energy Savings Performance Contracting

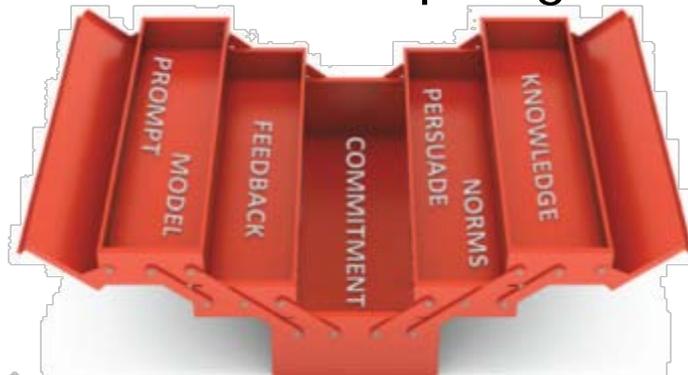


# CHANGE EMPLOYEE BEHAVIORS

- Communicate specific information (not generic)
- Remove barriers for engaging desirable behaviors
- Keep the message positive and relevant
- Utilize behavior change tools
- Provide frequent feedback
- Assess program, revise, repeat, assimilate

# BEHAVIOR CHANGE TOOLBOX

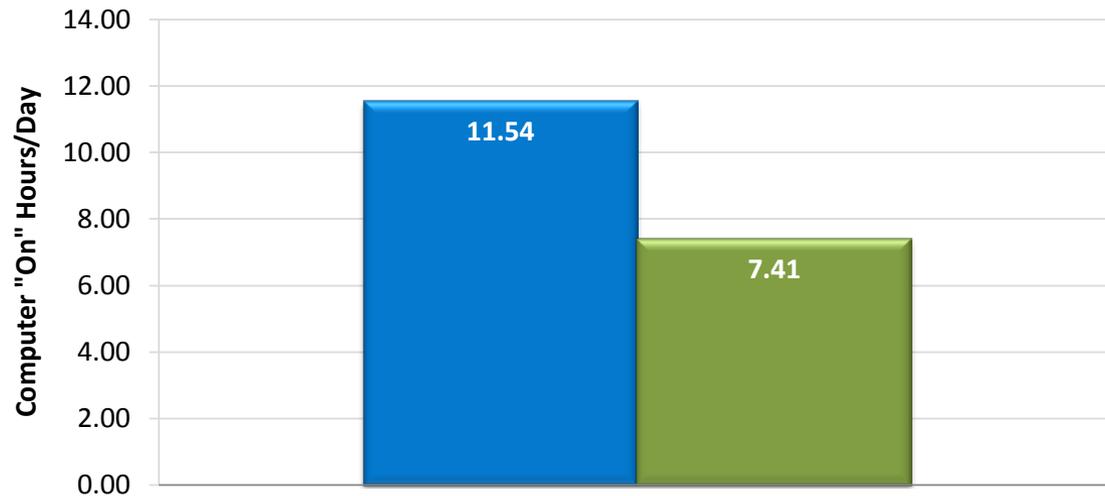
- Knowledge – Share what you know
- Model – Be what you want others to be
- Persuade – Encourage conservation
- Prompt – Signs proximally located to behavior
- Culture Shift – Make conservation part of your culture
- Feedback – Share the results to show progress
- Commitment – Get others to pledge to conserve



# ENERGY CONSERVATION THROUGH BEHAVIOR CHANGE<sup>®</sup>

## Pre- vs. Post-Program Comparison of Employees Computer Energy Usage

■ Pre-Program Focal Behavior (N=177)      ■ Post-Program Focal Behavior (N=255)



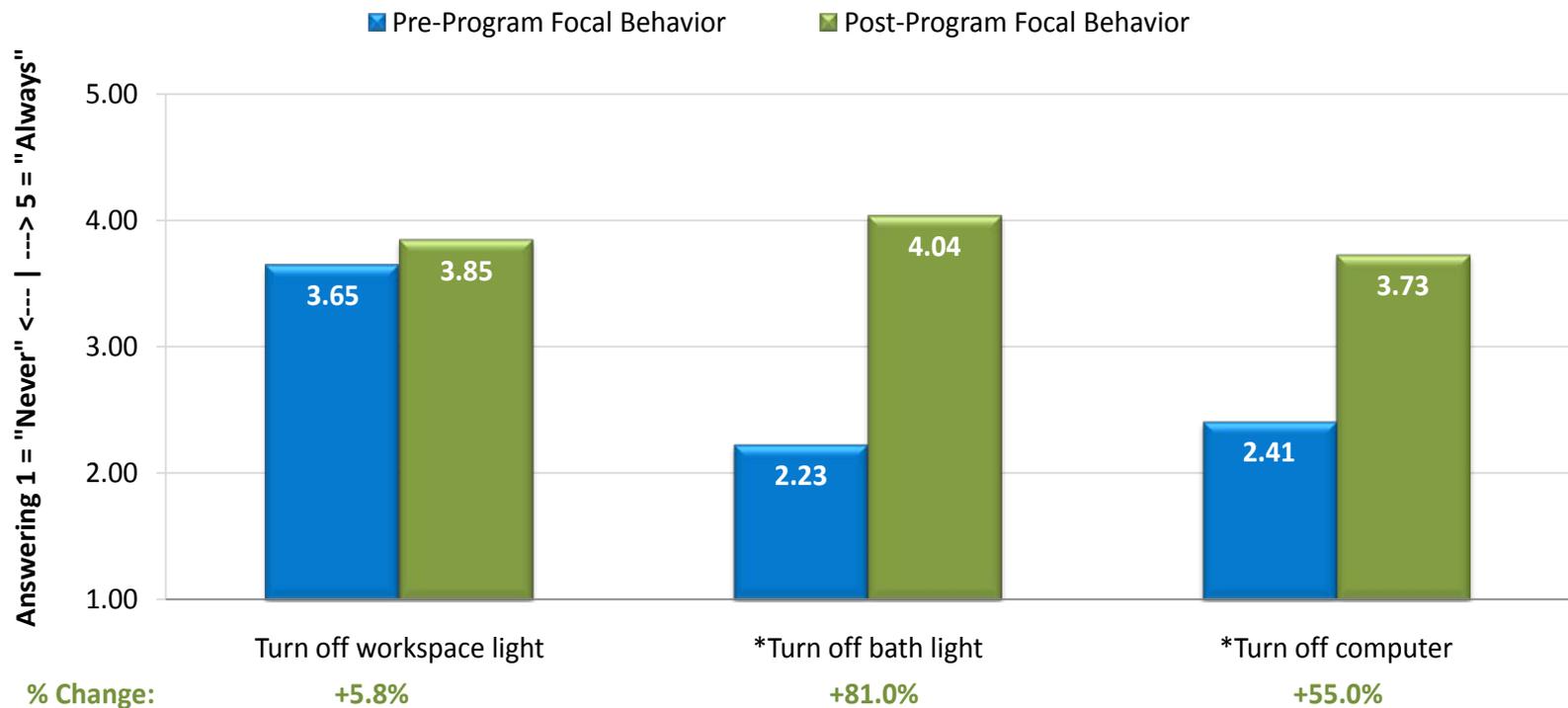
\*Average hours a day my computer is on

**% Change: -35.8%**

**\*Statistically Significant  $p < .01$**

# ENERGY CONSERVATION THROUGH BEHAVIOR CHANGE<sup>®</sup>

## Pre- vs. Post-Program Comparison of Employee Engagement in Three Energy Conserving Behaviors

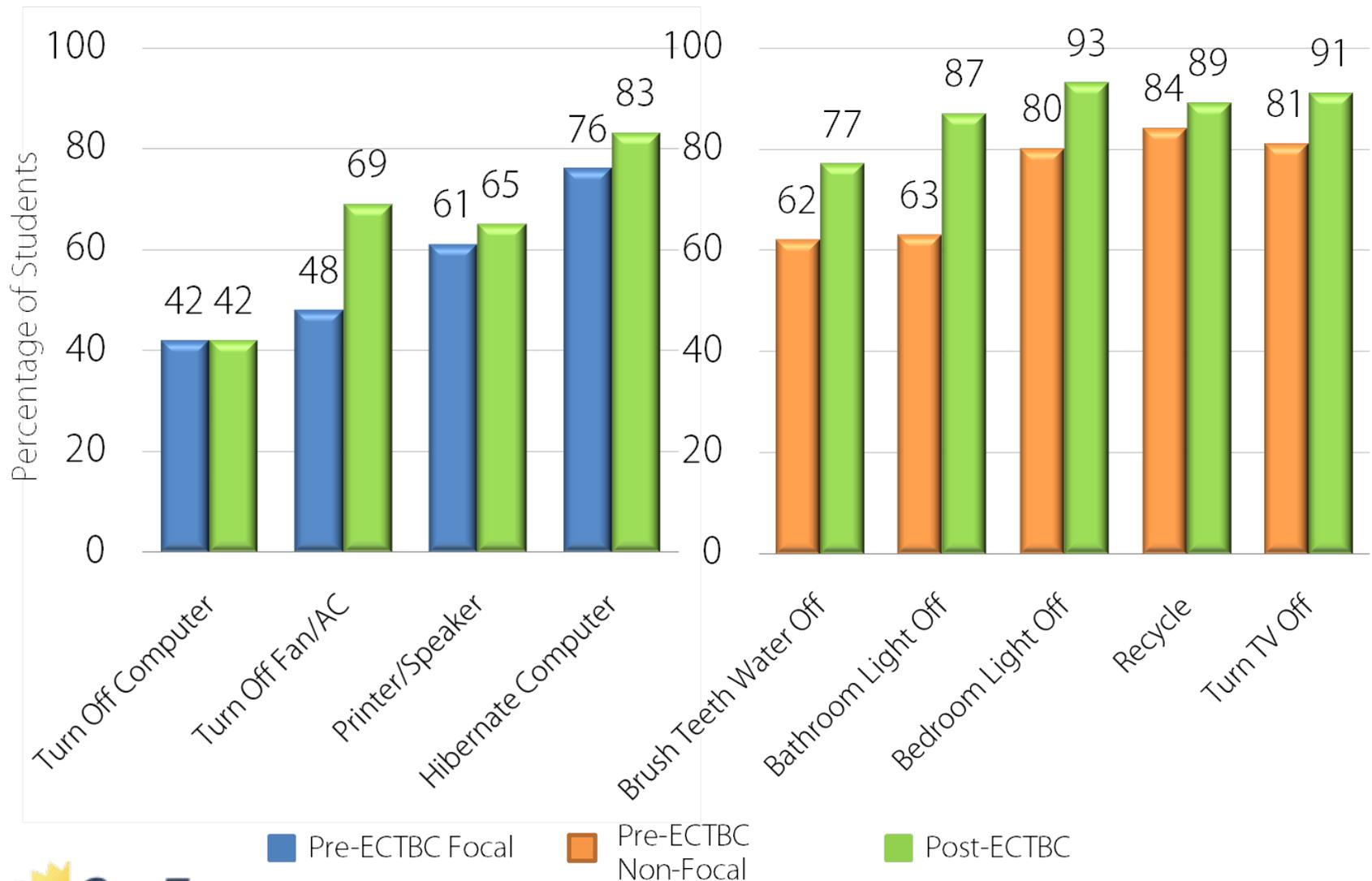


+ 47.3% Average Behavior Change

\*Statistically Significant  $p < .01$

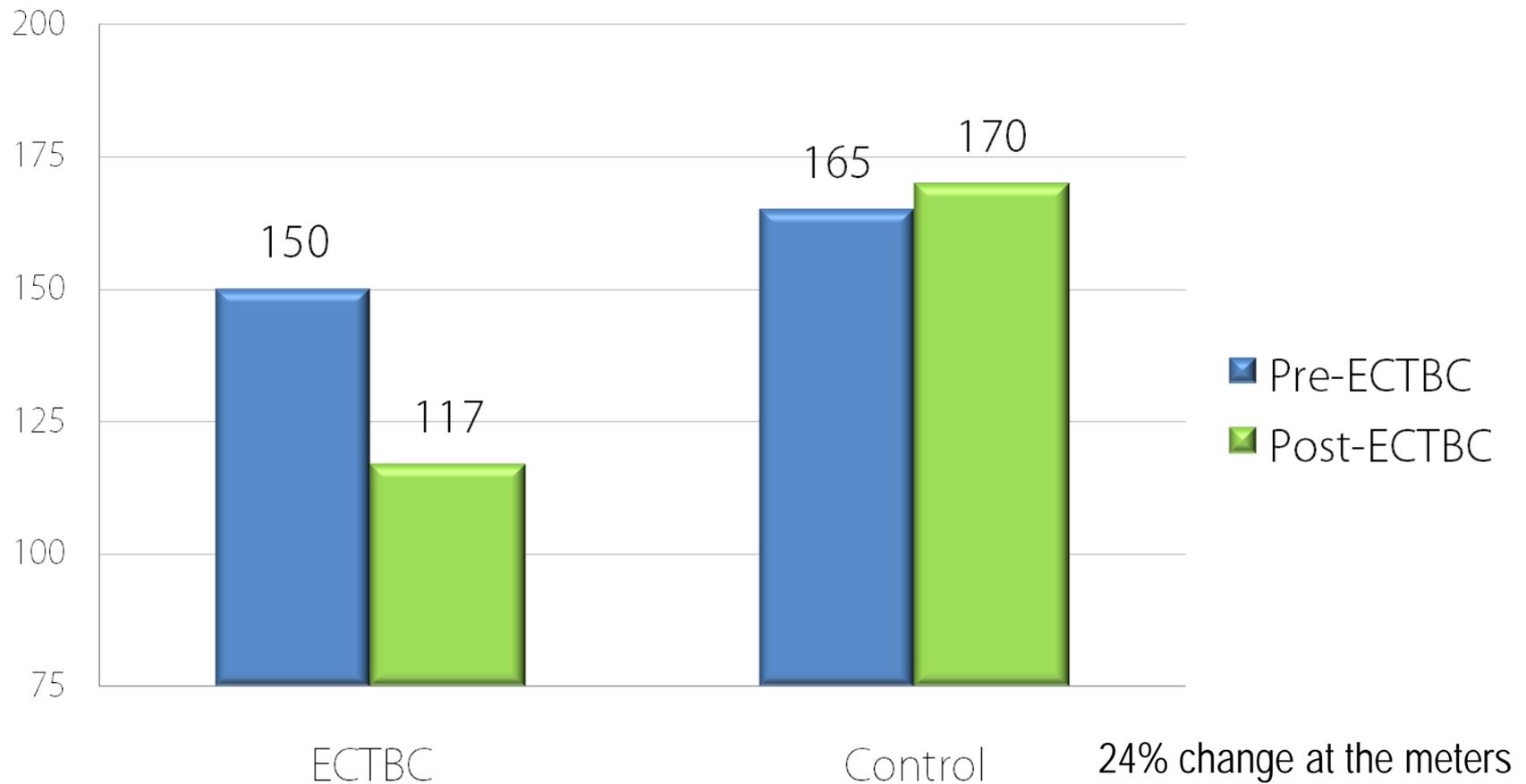
# ENERGY CONSERVATION THROUGH BEHAVIOR CHANGE®

Students Who Engage in Energy Conservation Behaviors "Often" or "Always"



# ENERGY CONSERVATION THROUGH BEHAVIOR CHANGE®

## Building-Level Metered Water Consumption Comparison



# THANK YOU

- Feel free to contact me
  - Jason Bondra
    - [jbondra@noresco.com](mailto:jbondra@noresco.com)