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A River of Energy Solutions

Achieving
Energy Conservation Through Behavior Change[®]

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Session Learning Objectives

- Current state of energy-behavior research
- Psychology of employee-energy motivations
- Case studies: desirable behavior change results
- Using existing programs to accelerate change
- Adapting other techniques to maximize change

Residential vs. Organizational Research

- Most energy-behavior research is residential based
- Residential strategies aren't generalizable
 - Residents control more energy use (amount and time)
 - Residents are directly responsible for energy costs
 - Residents receive feedback (i.e., meters, energy bill)
- 10% - 20% desirable behavior gap @ home vs. work

Organizational Energy Behavior

- Scant published research
 - Fleet, rideshare/commute, factory, office gas heat, etc.
- Goal-setting/Competition
 - Requires some type of assessment
 - Individual vs. group issues
 - Perception of fairness
 - External reward problems
- So What to Do?



Motivations for Consuming Energy

- Tailor a program specifically for each organization
 - Every organization is different on multiple variables
- Human Behavior Energy AuditSM
 - Identify impactful energy wasting behaviors
 - Identify motivations driving desirable/undesirable behavior
 - Identify personal, departmental, organizational barriers
 - Establish baseline levels of energy attitudes, knowledge, social norms, perceptions of control, and behaviors

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

Primary Behavior Change Tools

- **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



Using Existing Programs for Change



County Nursing Home - Staff



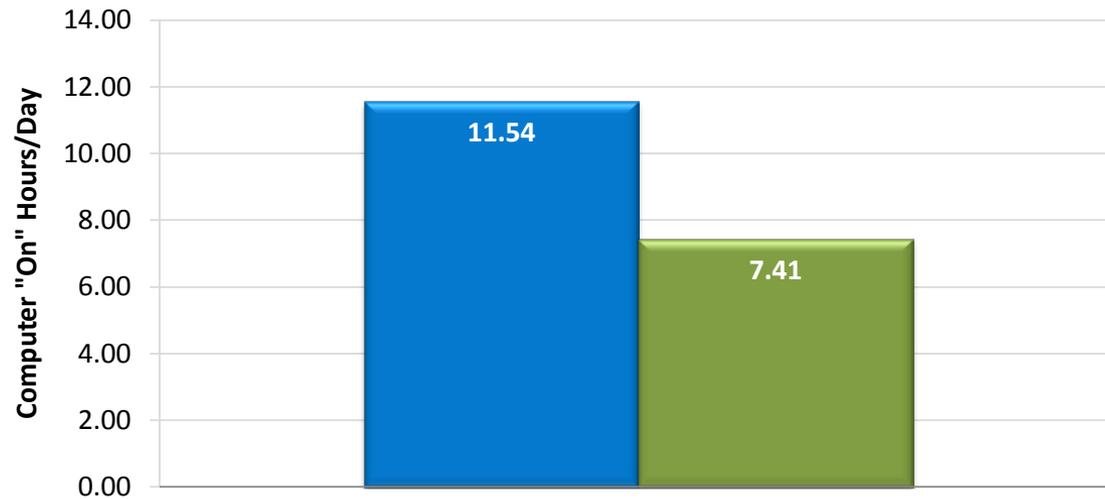
Timecard/Lunch Room – Energy Expo



ENERGY CONSERVATION THROUGH BEHAVIOR CHANGE[®]

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

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



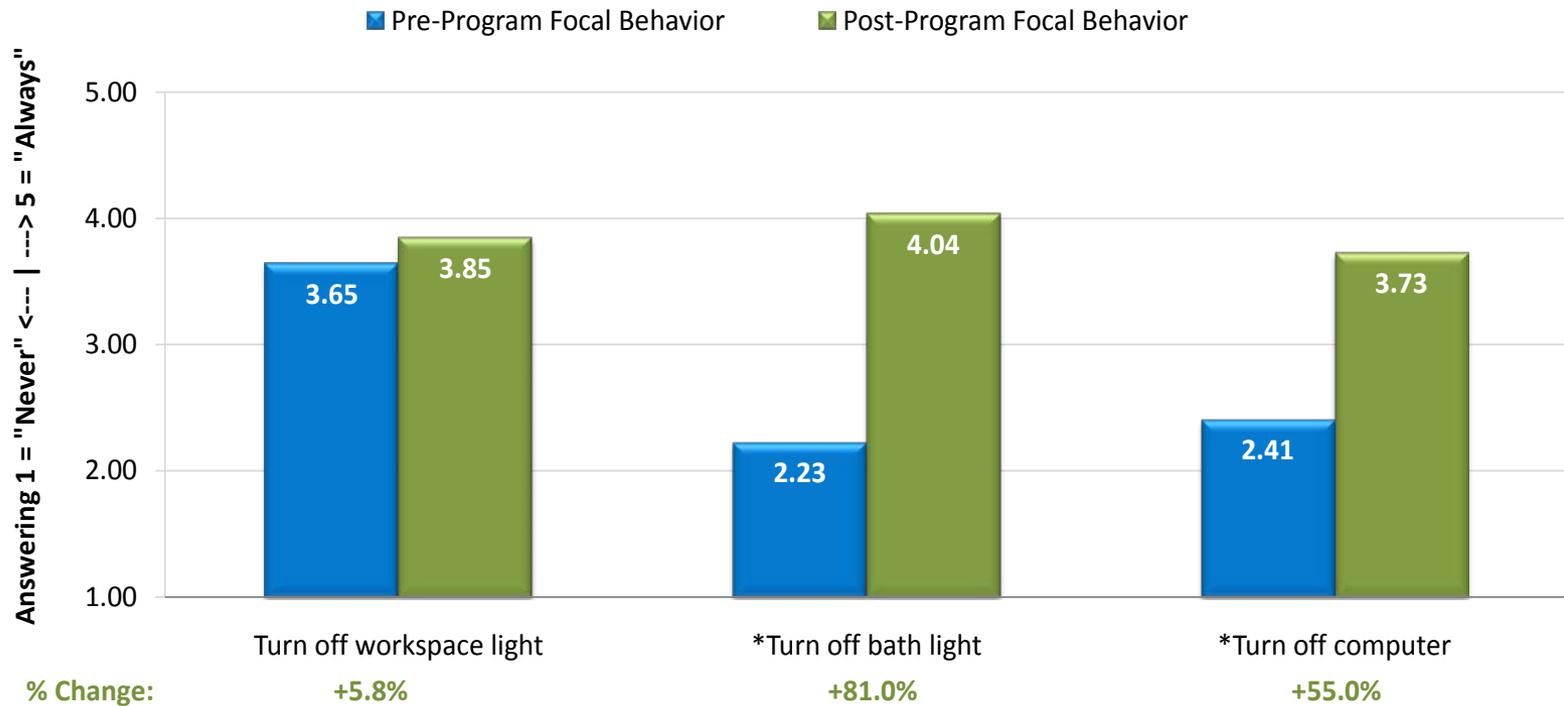
*Average hours a day my computer is on

% Change: -35.8%

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

ENERGY CONSERVATION THROUGH BEHAVIOR CHANGE[®]

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



+ 47.3% Average Behavior Change

*Statistically Significant $p < .01$

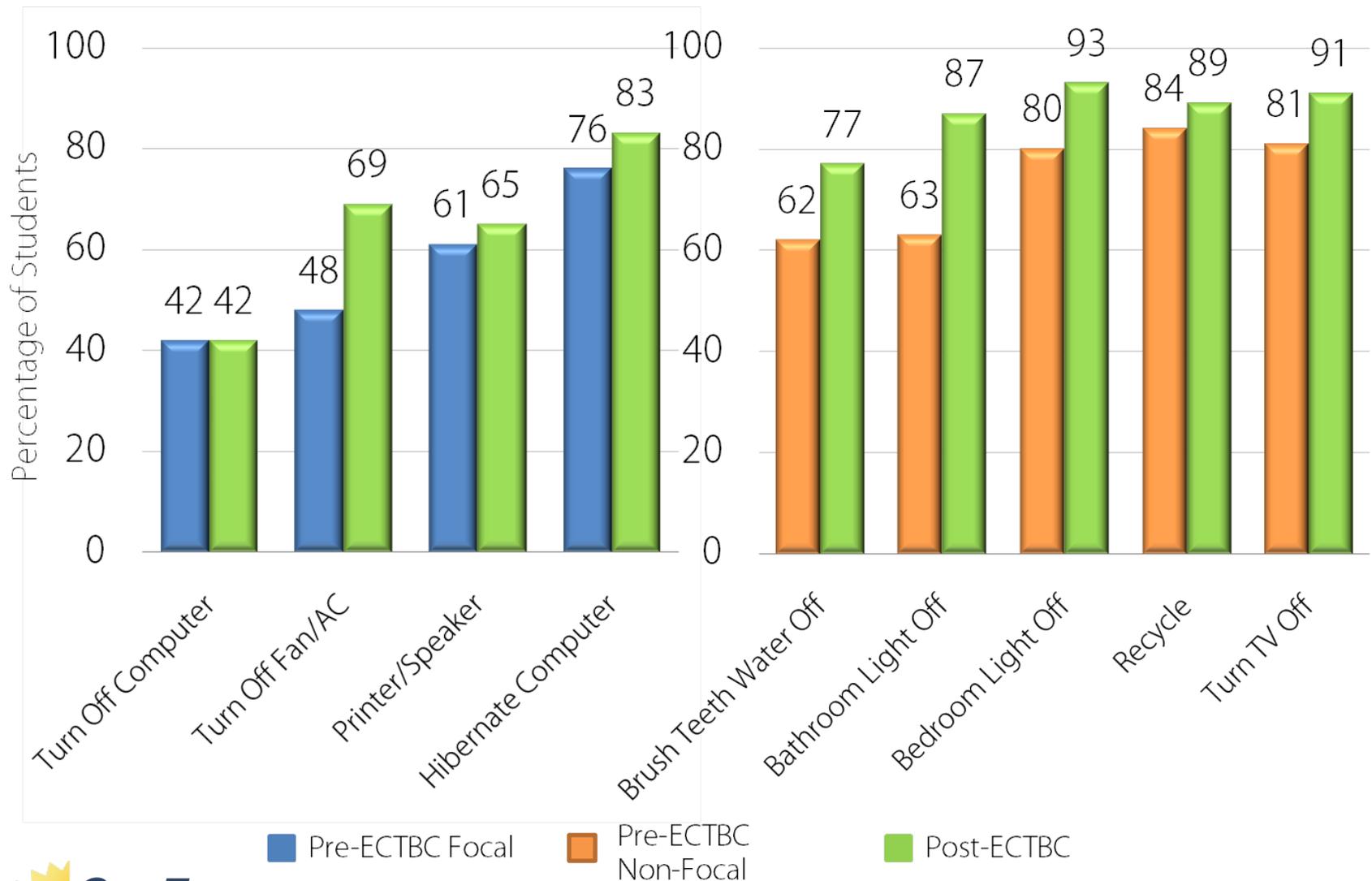
Using New Programs for Change

NORESCO Energy Savings Performance Contracting



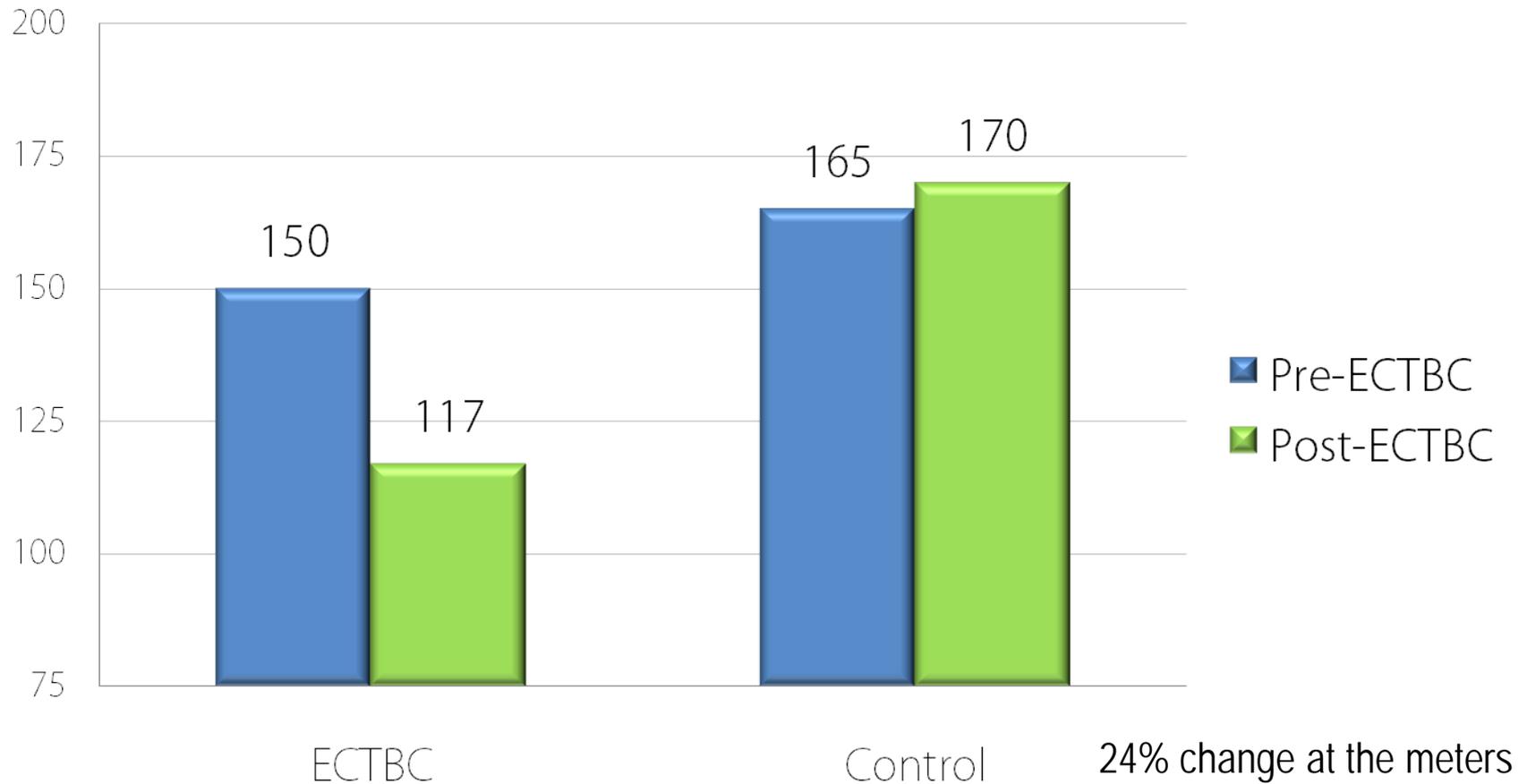
ENERGY CONSERVATION THROUGH BEHAVIOR CHANGE®

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



ENERGY CONSERVATION THROUGH BEHAVIOR CHANGE®

Building-Level Metered Water Consumption Comparison



Adapting Other Techniques



PERSUASIVE ENERGY REAL TIME FEEDBACK

Thank You

- Feel free to contact me
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