



Pacific Northwest
NATIONAL LABORATORY

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Behavior Change for Energy Conservation

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Key Points

- ▶ **You can teach old dogs new tricks**
- ▶ **Energy reduction/conservation needs a mother**
- ▶ **Start small**
- ▶ **Combat operations can interfere with research**

Theory Behind the Interventions

- ▶ **Most behaviors under autonomic control – habits, routines**
 - Includes behaviors related to daily energy use
- ▶ **Behavior and behavior change is a function of several factors**
 - Intention
 - Perceived control over behavior
 - Beliefs, values
 - Perceived behavioral norms
 - Value of expected outcomes

Research Description

- ▶ Part of broader Department of Defense net-zero energy effort
- ▶ Five green buildings at FCCO Army Base
- ▶ Three-month intervention to change two behaviors
 - Shut down computers at night
 - Set back thermometers 5-10°F at night

Setting, Method, Intervention

- ▶ **Mix of civilian and military facilities**
- ▶ **Baseline measures**
- ▶ **Intervention**
 - Building Energy Monitors
 - Support from senior leadership
 - Computer network staff support

- ▶ **Deployments affected intervention and measures in the 3 military buildings**
- ▶ **Three weeks to measurable change in the targeted behaviors**
- ▶ **13% - 59% complied with nightly computer shutdown**
- ▶ **23% - 32% complied with nightly temperature setbacks**
- ▶ **Estimated 2% of building energy savings from the two behaviors**

Successful Intervention Strategies

- ▶ **BEMS and Group Supervisors**
- ▶ **Feedback on energy use during intervention period**
- ▶ **Communications from senior leadership**



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Questions or Comments

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