Case Studies: Organizational Change for Sustainability

Employees can significantly impact the environmental performance of their organization. Many factors influence an organization's use of resources. Changing an organization to improve environmental performance can be daunting.

The FEMP Institutional Change Team provides expertise grounded in social science principles to help organizations make the change to sustainability.

The case studies presented in this series build on this expertise. The studies are:

- Specific to the unique aspects of federal workplaces
- Descriptive of real-world conditions
- Examples of strategies for institutionalizing change.

We encourage you to contact the team to discuss possible applications of the case study material to your organization's specific needs.

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Summary

Rock the Watt was a direct application of the Framework for Organizational Change that included building sustainability champions, integration of a sustainability checklist, and support for employees to come up with their own energy saving actions.

The Rock the Watt campaign logo. *Image courtesy of PNNL.*

Rock the Watt: An Energy Conservation Campaign at Pacific Northwest National Lab

Pacific Northwest National Laboratory (PNNL), one of the seventeen Department of Energy laboratories, implemented the 3-month Rock the Watt campaign in FY2015 to reduce energy use at its main campus in Richland, Washington. The campaign objectives were to educate PNNL employees on energy conservation opportunities in their workplace and to motivate them to help PNNL to save energy and costs and reduce greenhouse gas emissions. The Rock the Watt team utilized Federal Energy Management (FEMP) Framework for Organizational Change to design and implement its campaign. Laboratory sustainability assessments, walk-throughs of workspaces, and sub-metering of equipment were used to better understand employees and the overall context before finalizing their action plan.

A key strategy behind the Rock the Watt campaign was relying on volunteer Building Sustainability Champions (BSCs) to engage with building occupants. BSCs for 14 of the largest and most heavily occupied buildings were trained on energy conservation and tasked with scanning the building for opportunities, discussing them with occupants, sending a monthly email message to occupants, and documenting actions taken. Lab-wide communications supplemented the BSC efforts. BSCs were also provided with messaging material such as draft emails, instructions for more complicated energy use actions, stickers, and various signage.

One example of the messaging material was an infographic with the dollar amount of the Lab's weekly energy bill, specific energy savings actions employees could take, and the cost savings of each action. Actions for office spaces ranged from installing power strips to eliminating personal printers. For lab spaces, actions included storing samples at the warmest temperature required and turning off all unused equipment. Prizes were used as an incentive to reduce energy use and for employees to come up with their own ideas of how to save energy.

PNNL documented over 200 actions taken to reduce energy use during the 3-month program. The estimated energy savings was 117,000 kWh/year annualized.

Roles, Rules, and Tools

Roles

Occupants of office and lab spaces were the main focus of this campaign to reduce energy use. The Rock the Watt team also gathered input from facilities management and specifically asked research and development lab operations managers to commit to sustainability actions. The Rock the Watt team worked closely with the IT team to agree on actions employees could take reduce energy use of electronics. A new role, the BSCs, was created at the building level.

Rules

In both office and lab spaces informal energy-saving and procedural rules were launched that did not previously exist. An example of a new office rule was that computers should go into sleep mode after 30 minutes. In lab spaces, the sash on fume hoods should be closed when not in use. If building occupants identified new opportunities to reduce energy use, they were to communicate those ideas and do so through the BSCs.

Tools

Existing tools were amended and new ones were created to reduce energy use. For example, a sustainability checklist was created and integrated into existing safety checks. Metered data was used to see reductions in energy use.

Principles Applied

The Rock the Watt campaign educated, engaged, and enabled employees and evaluated effectiveness using the following principles:

Social Network

The campaign tapped into social networks at the Lab by primarily communicating through the BSCs. These individuals were in-building volunteers that were locally recognized and respected by their peers. A competition across buildings was also conducted.

Multiple Motivations

Applying the multiple motivations principle, the campaign made appeals that did not focus specifically on saving energy. For example, they asked building occupants to report on HVAC repair needs, which meant occupants could get the comfort they needed and the building managers could reduce energy use by removing space heaters. Outreach material was also tailored to office spaces or labs, which demonstrates the importance of defining your audience and targeting messaging.

Information & Feedback

Employees were not only encouraged to reduce energy use but were provided with actionable information on steps they could take. Further guidance was also available if needed. Feedback on a building's performance was provided to occupants and efforts were recognized with awards and prizes.

Social Empowerment

Occupants were encouraged to convey their own ideas about how to reduce energy to BSCs and the Rock the Watt team. Employee ideas were often very specific to their workspace and resulted in valuable energy saving opportunities. By having an open line of communication in both directions, the campaign applied the social empowerment principle.

Lessons Learned

The use of building-level champions was effective to spur dialogue and action. However, designated champions within specific laboratory spaces, not just at the building level, may increase the number of energy saving actions taken within labs. Occupants of both office and lab spaces are a potentially overlooked resource to uncover energy conservation opportunities. The most common actions taken to reduce energy use were changing computer and monitor settings to go to sleep mode, installing power strips, and using more task/natural lighting instead of overhead lighting.

Keywords

PNNL, energy conservation, employee engagement, Rock the Watt

For more information about PNNL's Rock the Watt campaign contact Kathleen Judd: Kathleen.Judd@pnnl.gov

Evidence-Based Principles Applied

- **Social Network**
- **Multiple Motivations**
- Leadership
- Social Commitment
- **Information & Feedback**
- Infrastructure
- **Social Empowerment**
- Continuous Change