Greening Work Styles: Energy Behaviour Programmes for the Workplace

In the greening of the built environment, much of the focus has been about the infrastructure and building systems. Less focus has, however, been given to the greening of the users, that is, the human occupants of the buildings even though their attitudes and behaviour have both direct and indirect impacts on the building energy use.

Offering a timely introduction into how energy behaviour programmes are carried out in a variety of workplace environments, the American Council for an Energy Efficient Economy (ACEEE) has released a report on selected workplace-based energy behaviour programmes which were designed and implemented towards effecting change in the energy use behaviour and activities of building occupants.

The five case studies are ‘My Green Office’ at the US House of Representatives; ‘Tenant Energy Management’ at the historical landmark Empire State Building and part of an ongoing retrofit project; ‘Conservation Action!’ at BC Hydro, the largest electric utility company in British Columbia; ‘TLC-Care to Conserve’ at the University Health Network of the University of Toronto; and a Behaviour Campaign at a provincial government building in Canada.

With energy savings ranging from 4% for a standalone project to nearly 75% (when approached as part of a comprehensive retrofit project), the results tracked to the change behaviour programmes are by no means insignificant and clearly show their promise and potential.

Even though all the selected programmes are similar in that they were implemented in “institutional buildings” or buildings used by established organizations, yet they are unique by the nature of workplace environments, profile of building occupants, the types of attitudes and behaviours that the programmes chose to focus on.

Here are brief descriptions of two energy behaviour projects:

- My Green Office project at the U.S House of Representatives characterized behaviour changes into core actions, defined as easy to complete such as use of compact fluorescent bulbs; and stretch actions, defined as less easy to complete such as adjust your thermometer by +/- 2 degrees. The programme had a website providing a track record of actions taken by participating offices, and feedback featuring estimated energy savings. By enabling participants to visualize the actual impact of behaviour changes, the website helped improve commitment to the project.
In TLC-Care to Conserve project at the University Health Network of the University of Toronto, the target energy behaviours included turning off monitors and computers when stepping away from workstations, turning off electronics and applications when not in use, and turning off task lighting. Besides email and meetings, community-based social marketing tools, such as prompts, posters and banners were extensively used to engage all staff to participate in project activities. The activities targeting simple changes in energy-related behaviour included programme pledges, programme branding and social marketing champions. Ideas and suggestions from employees were encouraged involving use of rewards. The use of pilots, by selecting areas for initial pilot sites, allowed materials to be tested in a more receptive environment and contributed to the programme success.

![Poster Examples in Review for Energy Behavior](image)

**Common Approaches for Energy Behaviour Programmes**

Varied as they were, common strategies or intervention approaches in all five energy behaviour programmes could be clearly discerned. These include setting the tone, building a team, utilising communication tools; and engaging the target audience.

- **Setting the Tone**
  Because workplaces have their own rules and norms, the strong support of upper management is important if the programmes are to succeed. Top officials set the tone such as when they publicly endorse the programmes or make organisational pledges. By being a role model and leading by example, they pave the way for employees’ personal pledges.

- **Building a Team**
  Building the team for energy behaviour programmes starts with a Programme Committee responsible for developing the programme, coordination and communication, followed by the Peer Champions who are acknowledged for their significant role in shaping the attitudes and behaviour of their colleagues.
• **Utilising Communication Tools**
A wide variety of online and offline communication tools and activities can be employed to present information and to engage the building occupants. Given the widespread use of email in the workplace, it is not surprising that email and websites are the main communication tools. Offline methods are events like public meetings to launch the programmes, and the use of prompts, posters, banners.

• **Engaging Target Audiences**
Sustained engagement of the building occupants can involve the applications of social norms, feedback, peer pressure and competition, as well as rewards.
  - Social norms seek to motivate the employees to conform to particular norms endorsed by upper management and to establish these as new norms in the workplace.
  - Feedback, as a means of providing information to people on the consequences of their actions, can take many forms.
  - Benign peer pressure encourages preferred actions and behaviour. Internal competition can accelerate the setting in of new norms while giving rewards sends positive signals and reinforces the learning process.

**Figure ES-1. Strategies for the Development of an Energy Behavior Program in the Workplace**

Excerpt from *Greening Work Styles: An Analysis of Energy Behaviour Programs in the Workplace*

**Development of an Evaluation Framework for Energy Behaviour Programmes**

Although the programmes demonstrated their potential in the form of energy savings delivered, yet industry researchers keen to gain a better understanding and to assess the effectiveness of energy behaviour programmes were hindered by a lack of evaluation information. These included the attitude and behaviour changes resulting from the programmes and the persistence of energy savings from behaviour changes beyond the projects.
Many organisations expect to conduct a cost-benefit analysis to help decide whether to invest in a workplace-based energy behaviour programme. However, an evaluation framework for that purpose is now missing and has to be developed by the research community. By providing a practical tool for organizations to plan, design, implement and evaluate change behaviour programmes, the framework could comprise:

- Direct impact evaluations – to measure the tangible and easily quantified impact of energy behaviour programmes, such as programme costs, reductions in energy use, energy expenditures, carbon emissions.

- Indirect impact evaluations – to focus on the intangible benefits of energy behaviour programmes, such as positive effects upon professional ethics, company image, and spill-over impacts on participants’ homes and communities.

- Attitude and behaviour impact evaluations - these concern the impact of energy behaviour programmes on the attitude and behaviours of participants, particularly the use of information channels and engagement techniques.

- Process evaluations – to assess the entire process of programme development, including the management of programme committees, peer champions, and the effectiveness of programme branding.

In summing up, it appears there’s a need for the energy research community, policy decision makers, and energy professionals to work together to develop an evaluation framework, including a cost-benefit assessment approach, if more organizations are to be encouraged to conduct energy behaviour programmes in the workplace.

Given the impact on user attitudes and behaviour, the potential of these energy behaviour programmes to bring important broader benefits – by helping to establish a culture of energy conservation in the workplace and beyond, to homes, communities and society at large – cannot be overlooked.

The report by the American Council for an Energy-Efficient Economy (ACEEE) *Greening Work Styles: An Analysis of Energy Behavior Programs in the Workplace*, January 2012 from which this article is adapted, is available for download at:


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