

# Using Messaging to Increase Energy Conserving Behavior

The LRC investigated a potential method for modifying commercial office occupants' behavior in order to encourage energy savings. An experiment evaluated the effectiveness of using dynamic message displays that encouraged occupants to turn off their lights each time they left their office. Twenty different messages were randomly presented on small display screens near light switches every time the occupants exited the office. The messages included reminders to turn off the lights, encouragement to utilize daylighting, facts, and jokes.



Example of a dynamic message display mounted near an office doorway.

Positive feedback was presented on the screen when occupants turned off the lights. Additional offices served as an experimental control with a device that showed one static message. The experiment was conducted over three months in 40 private offices without automatic lighting controls at the State University of New York System Administration building in Albany, NY.

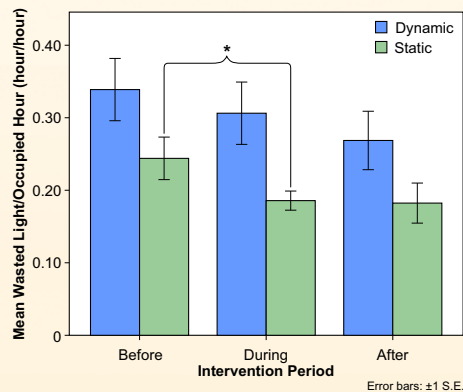
The LRC analyzed the amount of wasted light (the amount of time overhead lights were on while the office was unoccupied) per hour of occupancy. The results showed that for all analyzed offices collectively, the average wasted light per occupied hour was reduced by 15% ( $p < 0.027$ ). The dynamic message devices

showed no advantage over the static message devices. Only the static message offices showed a statistically significant decrease (23.8%) in wasted light.



Static display, message enlarged.

Besides using messaging to encourage light switch use, the experiment pointed to additional behavioral methods that may be helpful. For example, calculations showed that manually switching lights in conjunction with automatic lighting controls saves energy compared with manual switching or controls alone, and messaging can be an effective way of encouraging occupants to use their light switches. Also, many occupants indicated that cultural reasons discouraged them from turning off the lights when leaving their office, such as using the lights as an attendance indicator and a belief that switching off the lights would not save energy. So, having alternative attendance indicators and training could be effective in reducing energy use.



Mean wasted light per occupied hour by device type and time period. \* = statistically significant,  $p = 0.048$

## Sponsor

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