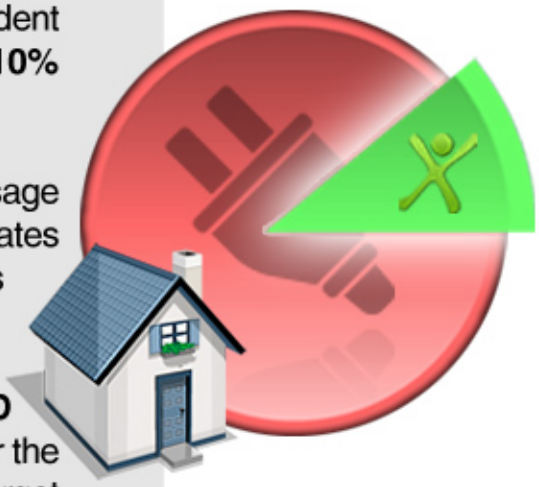
The Energy Services Platform (ESP) Savings Potential

In a whole home analysis scenario where People Power examined the usage of the Top 5 energy consuming devices in two different categories; Consumer Electronics and Home Office Equipment, it was evident that there is an immediate savings potential of approximately **10% through plug load management alone.**

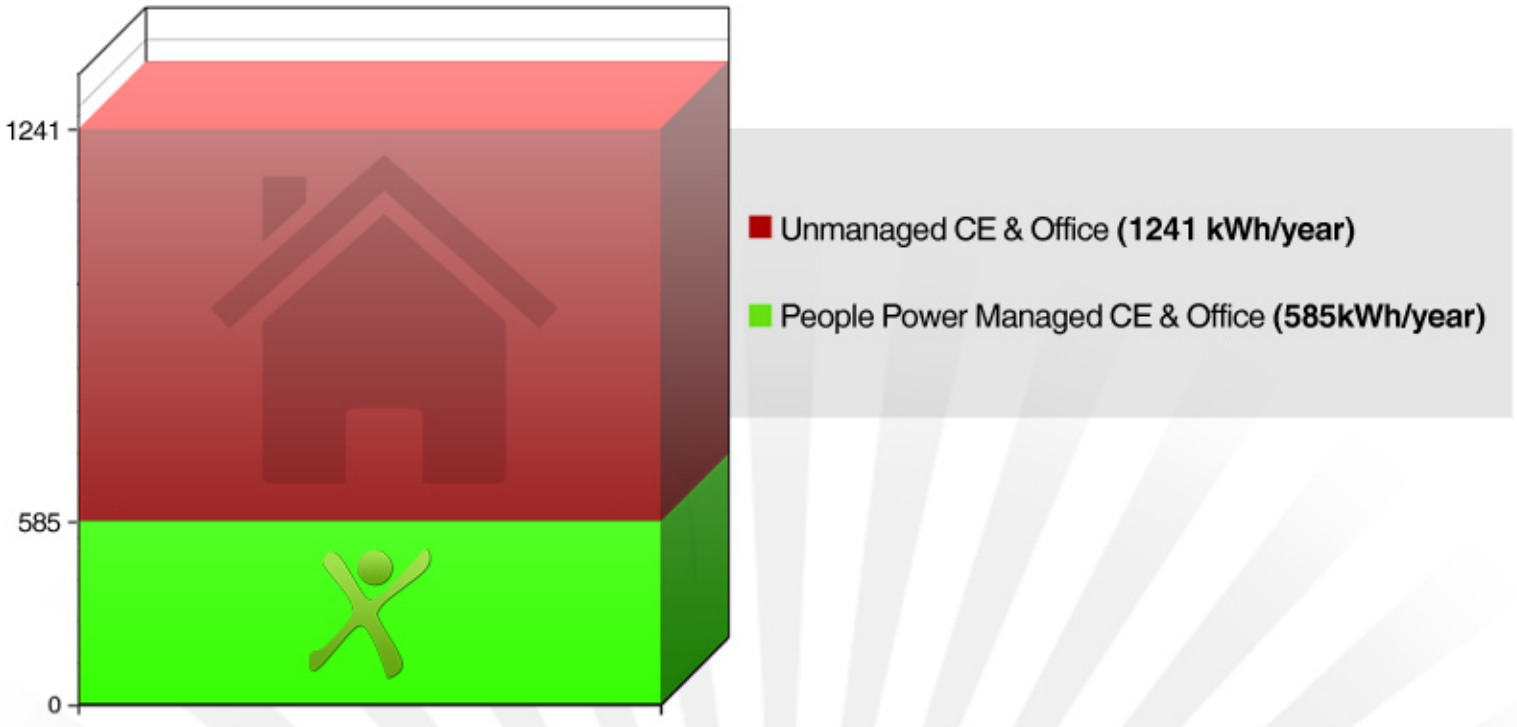


The devices were analyzed by calculating their respective kWh usage in ON, OFF and STAND BY modes*. People Power created estimates of usage time (for example people watch TV on average 4-5 hours a day, etc.).

Energy Services Platform can potentially **eliminate OFF & STAND BY usage** from a variety of devices that are either inconvenient for the user to turn off completely (pull plugs every day) or they simply forget (for example coffee machine).

The analysis calculated the overall impact on average US Home electrical use when the People Power solution is applied to manage it.

*Source for individual device usage in different states: Lawrence Berkeley National Laboratory



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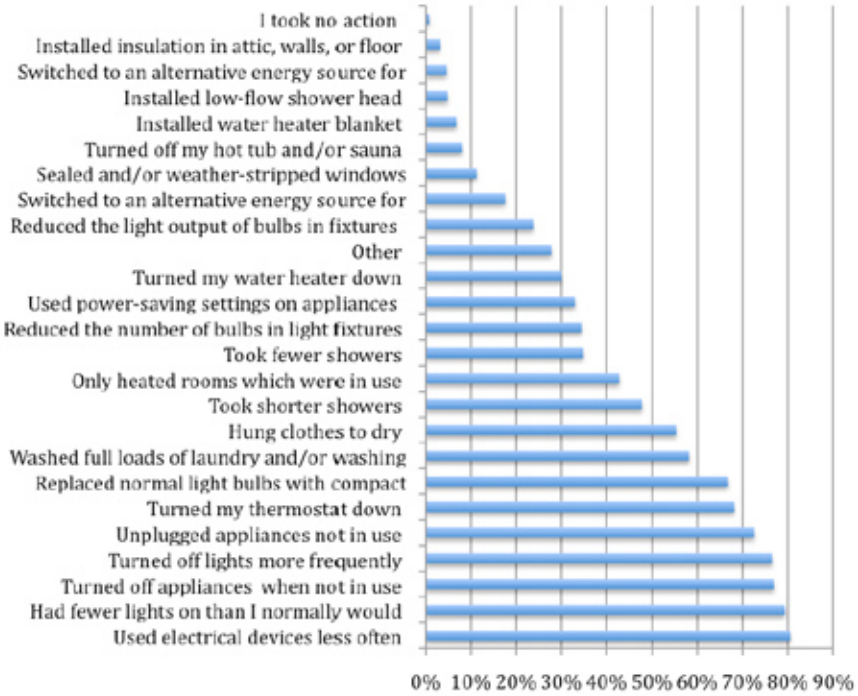


The figures shown on this page describe the most common actions people take to reduce energy use and where they most commonly go to find information on saving energy.

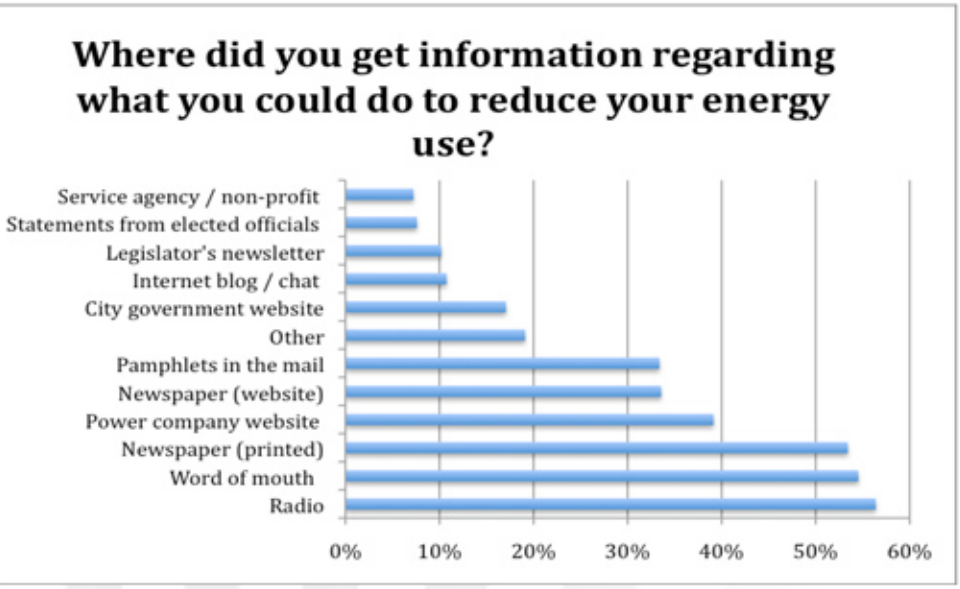
People Power addresses the most common actions directly:

- Reduced use of electrical devices – **80%**
- Turned off devices when not in use – **78%**
- Unplugged devices not in use – **73%**

Source for figures: Karen Ehrhardt-Martinez et al, "People-centered Initiaves For Increasing Energy Savings", 2010

If you examine the plethora of different sources that people have to rely on to get valuable information on saving energy, it is immediately evident that the sources are scattered. Word of mouth, newspaper and radio are almost tied as the primary sources of information.

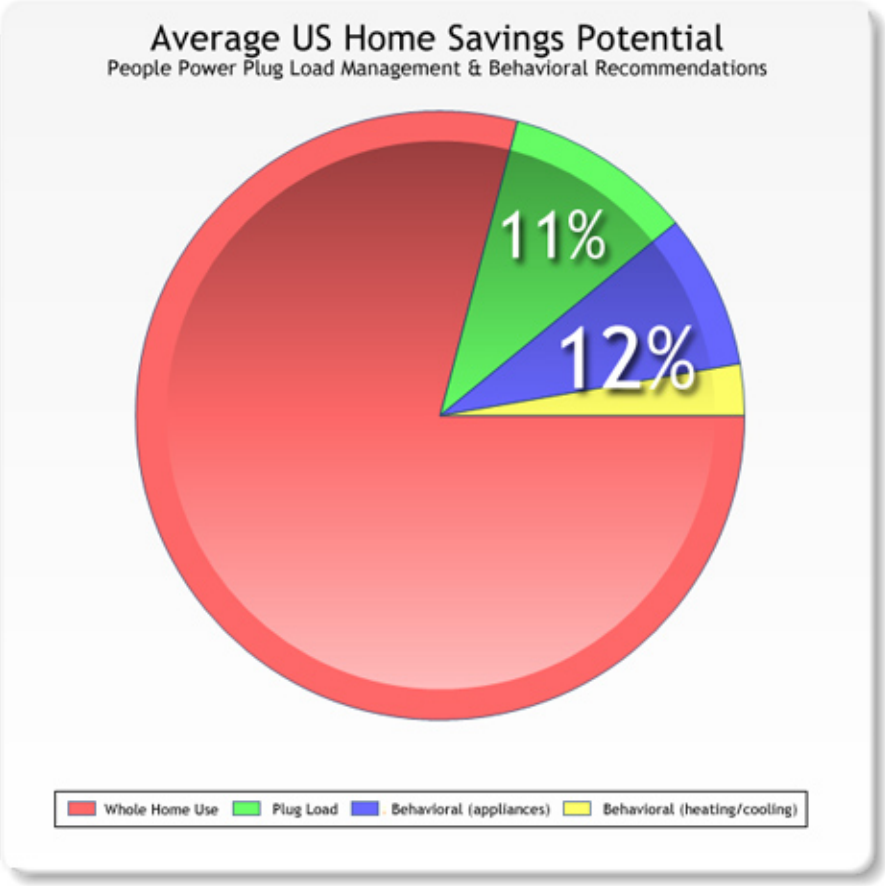
ESP has the power of gathering all this information into one neat package: a one-stop solution for getting information on how to save energy and an easy source for user relevant recommendations.



The Energy Services Platform (ESP) Savings Potential

In a whole home overview, as found earlier, ESP can account for a 11% in total savings in Plug Load Management. If we add Behavioral changes into this equation we actually find by very, very simple actions, **one can reduce their whole home use by 12%**. In our example, we merely took the findings of changing behavior in heating/cooling rooms and changing behavior in appliance use* (for example, turning down refrigerator thermostat), now imagine what other measures are available: changing light bulbs, changing when rooms are lit, changing usage patterns to off-peak hours, the list goes on - and so do the savings. Some research has shown **30% reductions**** via behavioral change alone.

Behavioral changes are extremely powerful, even in a commercial or industrial space. For example a Cargill pork processing plant was able to save **2 million dollars a year** by very simple behavioral changes***



*Source: Karen Ehrhardt-Martinez et al, "Changing Habits, Lifestyles and Choices: The Behaviors That Drive Feedback-Induced Energy Savings", 2006
**Source: Karen Ehrhardt-Martinez et al, "People-centered Initiaves For Increasing Energy Savings", 2010 (A case study on the Juneau energy crisis referred)
***Source: Cargill Inc. - www.cargill.com/connections/behavior-based-energy-savings/
Source for US home electricity use and derived savings potentials: US Energy Information Administration – "Table 5A. Residential Average Monthly Bill by Census Division, and State 2009"

In conclusion, in terms of feedback, information gathering and taking action, **ESP makes it effortless and nearly automated** for the user to understand and take measures to save energy in their home or business.

ESP has the potential to harness **23% in savings** in whole home energy use with intelligent plug load management tools and relevant recommendations.