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Peers feedback scheme will lift energy savings

BY ALLAN LOI



Sustaining energy: Many studies have already shown that information enabling households to compare electricity consumption with others resulted in electricity use decreasing by as much as 28 per cent.

- PHOTO: REUTERS

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Social influences are seen to play a huge impact on individual behaviour. From musical interests to the purchase of the latest fashion and electronic products, social influences often bring conformity in society towards perceived social norms.

Such conformity can be achieved in propelling households towards energy savings when they learn that people around them are doing so. The mean energy consumption of "neighbours" and "peers", who can be households living in either dwellings or families of similar size within the neighbourhood, could serve a baseline or guide for this purpose.

Currently, electricity bills are compared against the national average, which brings about inaction as it does not relate the agents of change "close" enough to the consumer. Many studies, such as those by Nolan (2008) in the Personality and Social Psychology Bulletin and Schultz (2007) in Psychological Science Journal,

SEPTEMBER, the Energy Market Authority (EMA) of Singapore announced an upcoming pilot initiative to redesign electricity bills such that they can allow residential consumers to effectively compare their consumption levels to that of their neighbours and peers. Introducing such a feedback scheme will be a significant step towards nudging locals to bring their sympathies for climate change into real, pro-environmental actions in the households.

Simply providing data on own-use electricity consumption in feedback initiatives is not enough to sustain energy conservation behaviour. A field experiment conducted on 1,065 households in the US, published in the Energy Journal by the International Association of Energy Economics this year, found that electricity-use reductions were significant only within the first three months of implementing a real-time consumption feedback scheme based on the Google Power meter.

The impact of this meter, which displays graphs relating to electricity use in 10-minute intervals and a host of other features, faded over time. Thus, more effective interventions must be taken to ensure the persistence of feedback effects over time.

have already shown that information enabling households to compare electricity consumption with others resulted in electricity use decreasing by as much as 28 per cent.

A more recent example of a monthly feedback-based "nudge" by the American company, O power, have cumulatively saved more than US\$200 million and 2.7 terawatt hours of energy from 2008 to 2012, demonstrating the scale of its impact. If applied consistently on a regular basis, and coupled with injunctive messages that appeal in the moral sense, such as phrases like "Your neighbours are playing their part for climate change mitigation. Are you?", such feedback will also promote individual responsibilities against climate change, which could do well to instil values that can change bad energy habits permanently.

In addition to social references, consumers also respond to design features that could increase the salience of energy nudges, making consumption data more prominent, and hence attract consumers' attention. Currently, the provision of information relating to historical electricity consumption is in the form of a simple, monotonous bar graph located on the reverse side of the utility bill.

As the total cost payable is clearly indicated on the front page of the bill, consumers will simply make payment for their bills without turning the page. Even if they were to turn the page, the charts do not stand out boldly enough for them to take notice.

To emphasise the importance of energy savings, the "nudges" should be stand-alone energy reports sent on a monthly or quarterly basis, containing visually attractive charts containing historical electricity consumption for both own-use and neighbours' use. The significance of these reports being located separately is to grab the reader's attention to an issue apart from mere monetary savings that are secondary to the utility bill.

Such reports, if possible, can also include graphics such as smileys to create a "feel good" effect for those who consumed less electricity than others. Providing framed information on energy savings in the form of extra costs with respect to others, as well as the presence of recommended actions that our citizens can take to reduce electricity consumption, are also possible inclusions that will help make electricity costs more "visible" and help people make more informed decisions with respect to electricity use.

In the future, such "nudges" will need to be tied in together with more detailed capture of data with SMART meters and surveys to incorporate targeted approaches that can account for heterogeneity in energy use patterns, income and demographics.

Providing regular feedback with social referencing and salient design features are necessary interventions, serving as a medium of social change to help save energy costs on an individual level and reduce Singapore's carbon footprint in the global context, hence bringing our country on track towards a more sustainable future.

The writer is an Energy Studies Institute analyst

