

Small acts produce big results

January 22, 2007

TYLER HAMILTON

Canadians should loosen up when it comes to energy conservation. That's what they do in Chile, after all.

You may have seen a report last week that the Chilean government, in a bid to reduce the country's electricity use on hot days, is officially recommending that all male government employees ditch the suit jacket and loosen up the necktie – or get rid of it altogether. The hope is that private-sector employers will advise likewise, and that the recommendation will evolve into a national habit.

Now, you can laugh at this because, well, it is kind of funny. But it also makes a whole lot of sense to encourage such modest changes in behaviour if it lowers electricity use.

Between December and March, air conditioning typically accounts for as much as 60 per cent of power consumption in Chilean workplaces. Make the environment more comfortable and the thermostat can be turned up a degree or two.

Japan has successfully tested a similar approach during its cold winter season. By encouraging workers to wear sweaters and men to wear long johns under their suits, employers are able to turn down heating systems.

Behavioural changes, such as simply shifting our energy use to different points in the day, can have a tremendous impact on power consumption. Paul Murphy, chief executive officer and president of the Independent Electricity System Operator, cited some interesting statistics in a speech last week.

We know that the peak demand record was broken last summer, just surpassing 27,000 megawatts for the first time. But did you know that for all of 2006, which equates to 8,760 hours, Ontario's peak energy consumption only surpassed 25,000 megawatts for 32 hours? That's less than 0.4 per cent of the time.

Murphy makes a valid point: "Traditionally, we have built generation to meet demand. But does it make sense to build 2,000 MW of generating plants that may run only 32 hours of the year?"

This is where smart meters become important. In one of the most ambitious smart meter deployments in North America, Ontario is on track to install 800,000 of the devices by the end of this year. The rest of the province will be set up by 2010.

As reported in the *Star* last week, IBM Canada Ltd. has been hired by the electricity system operator to build a central database that will collect and manage the smart meter data, which in most cases will be transmitted from residential and small business customers via a wireless link.

The data will be invaluable. Local electric utilities, such as Toronto Hydro, will be able to create time-of-use pricing – that is, jack up the electricity rate per kilowatt-hour during traditional daytime peaks and offer discounted rates during periods of low use.

Suddenly, an economic choice becomes an influencer of behaviour. Nudge enough of the population in the right direction and you can shave – if not eliminate – those 32 hours of peak consumption.

"Not only will consumers save money by shifting energy use to lower-priced periods, but Ontario will

benefit if we can avoid the need to build new generators as a result of reducing the peak demand," said Murphy.

"Not having to build a generating plant that would have been otherwise needed can save Ontario customers a lot of money."

The big fear with conservation is that people, by their very nature, tend to fall back into their old ways. Most people who have made a New Year's resolution to lose weight or quit smoking know that quite well.

It's why governments, if they're going to promote ideas like the efficient use of energy, prefer to stick with more permanent approaches. Mark Winfield, director of environmental governance at the Pembina Institute, calls this a "hardwiring" of behavioural change through technology.

We can see such a bias reflected in a new report from Natural Resources Canada called "Sustainable Development Strategy 2007-2009," which at first glance is an uninspiring document.

"The development and deployment of new technologies offer promising prospects for improving the sustainability of personal transportation and housing for Canadians," the report states. "By building efficiencies into industrial practices and products, *changing consumer behaviour remains an important goal but becomes less critical*" (emphasis added).

The report continues that new technology "has the potential to significantly reduce the impacts of consumption practices, *even without changing the behaviour of end-users.*" Again, my emphasis added.

Should we really be trying to *not* change our behaviour? It's a question we all need to ask ourselves. That said, there's no debating the effectiveness of the "hardwire" approach.

A new report on energy-efficiency opportunities in Texas, commissioned by the Natural Resources Defense Council and sustainability think-tank Ceres, found that aggressive electricity "demand-reduction measures" would have a net economic benefit compared to building a new fleet of power plants for the U.S. state.

"Over the next 15 years, boosting markets for more efficient products, lighting, cooling, heating and industrial processes can eliminate over 80 per cent of forecast growth in electricity demand, while lowering consumers' energy bills," the report concluded.

It went on to say that Texas could eventually completely eliminate its "load growth" to the point where, by 2021, its total electricity demand would be 9 per cent below current levels. This potential, requiring an \$11 billion (U.S.) investment in "proven" programs, would result in \$49 billion worth of economic benefits, with the net benefit being \$38 billion.

Not bad. And in fact, Winfield points out that the Ontario Power Authority's own revised discussion paper on conservation and demand management (CDM) found similar benefits under a far less ambitious proposal.

The paper estimates that the cost of the power authority's CDM proposal would run between \$4 billion and \$5 billion (Canadian), and that the resulting cost savings in not having to build more generation and transmission lines would run between \$10 billion and \$13 billion – not including any avoided environmental and health-care costs.

"That's a net benefit of \$5 to \$9 billion," says Winfield, wondering why the power authority isn't pushing the CDM bar higher. "Despite this, they don't propose a more ambitious CDM program."

But back to changing our own individual habits. Again, should we avoid this in favour of a bunch of technological silver bullets?

While it's true that some (many? most?) people slip back into old habits, there's strong evidence that – against the backdrop of proper policies and effective educational campaigns – the citizen-consumer will willingly make permanent behavioural changes.

"I've always wished we had the City of Toronto's Waste Management engineers on-the-record on the green bins, which they argued (early on) would have very low participation rates," says Keith Stewart of WWF-

Canada.

It turns out the participation rate has been more than 90 per cent in areas where the green bin program is offered.

Turns out we can, if we want to, change our behaviour.

Perhaps it's time we all loosen up a bit?

Tyler Hamilton can be reached at thamilt@thestar.ca.

TheStar.com [Corrections](#) | [Contact Webmaster](#) | [RSS](#) | [Star P.M.](#) | [FAQ](#)

Toronto Star [About Us](#) | [Subscribe](#) | [Subscriber Self Services](#) | [Contact Us](#) | [News Releases](#) | [Star Int
at the Star](#)

Advertise With Us [Media Kit](#) | [Online Advertising](#) | [Print Advertising](#) | [Special Sections](#)