

# Lights out: Why Earth Hour is dimming in B.C.



## Report

March 2018

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# Lights out: why Earth Hour is dimming in B.C.

Participation in Earth Hour – an annual worldwide event to turn lights off for an hour in support of conservation and climate change – has dropped in B.C. in recent years. British Columbians say Earth Hour is still important, but they say saving money on their bills is their big motivation to reduce electricity use. This makes sense since BC Hydro generated 98 percent clean electricity last year.

Province-wide electricity reductions during Earth Hour in 2017 were a small fraction of what they were five and 10 years ago. In the run-up to Earth Hour 2018 on March 24, BC Hydro surveyed British Columbians to see what they thought of the event, and what drives them to save electricity year round.

## Highlights

- In a recent survey conducted for BC Hydro, 7 in 10 British Columbians say they are going to participate in Earth Hour 2018, and nearly 8 in 10 said it's an important event. But actions around Earth Hour are on the decline in B.C.
- Participation in Earth Hour, at least in terms of energy saved in B.C., has dipped significantly in recent years. In 2017, B.C. reduced its electricity use during Earth Hour by just 0.3%, or only 15% of the 2% savings achieved in 2008.
- At 98% clean, BC Hydro's largely hydroelectric generation makes Earth Hour's link to climate change a tougher sell in B.C. Electricity generation accounts for only 1% of greenhouse gas emissions in B.C.
- 69% of British Columbians say that their biggest motivation for cutting electricity is saving money on bills.
- Only 15% of British Columbians surveyed for BC Hydro said their prime motivation for saving electricity is "the environment" and 14% said the motivation is that "it's the right thing to do."
- 94% of respondents said they already turn off lights to save energy. However, they're much less likely to be delivering on other ways to save electricity.
- Only 33% of those surveyed said they turn off the heat-dry setting on the dishwasher, and less than half said they take shorter showers to save energy.
- When asked how much they would need to save on their bills to be motivated to conserve, more than 80 per cent said they would make the changes if they saved \$300 or more per year.

## Solutions

- BC Hydro residents who act on 10 no-cost tips with the most potential for cutting electricity use, including unplugging a second fridge or lowering the thermostat, can save up to \$455 a year on their BC Hydro bills.
- Through programs, online tools, tips and education campaigns, BC Hydro offers help – including seasonal rebates on energy-efficient products – for customers looking to reduce their electricity use and BC Hydro bills.
- There is a \$50 reward available to customers who join Team Power Smart, start a 10% Reduction Challenge, and who save 10% or more over 12 months.
- Without BC Hydro's Power Smart conservation program, British Columbia homes would use 16% more than they do now, increasing their bills by an average of \$170 a year.

## Born in a coal-powered nation, Earth Hour turns 11

Earth Hour made its debut on March 31, 2007 in Sydney, Australia when 2.2 million individuals, business and organizations turned off their lights to show the government that climate change was an issue they cared about. It made sense that the movement would start in Australia, where even today, 84% of electricity generation comes from coal or gas.

Organized by the World Wide Fund for Nature (formerly the World Wildlife Fund or WWF), Earth Hour became a global movement in 2008, with more than 50 million people across 35 countries participating. The WWF says the event has seen record participation in every year since, including in 2017 when 187 countries and territories took part.

But while organizers boast that lights went off at 12,000-plus landmarks around the world in 2017, including the Eiffel Tower, the CN Tower and the Golden Gate Bridge, participation in Canada has been declining. The decline has been particularly steep in B.C., where there was only a 0.3% reduction in electricity use during Earth Hour 2017, compared to 2% in 2008. BC Hydro compares electricity use during Earth Hour to the usage during the same hour on the previous Saturday. Toronto Hydro also reports a decline, from a high of 15.1% in 2009 to a record low of 2.8% in 2017.

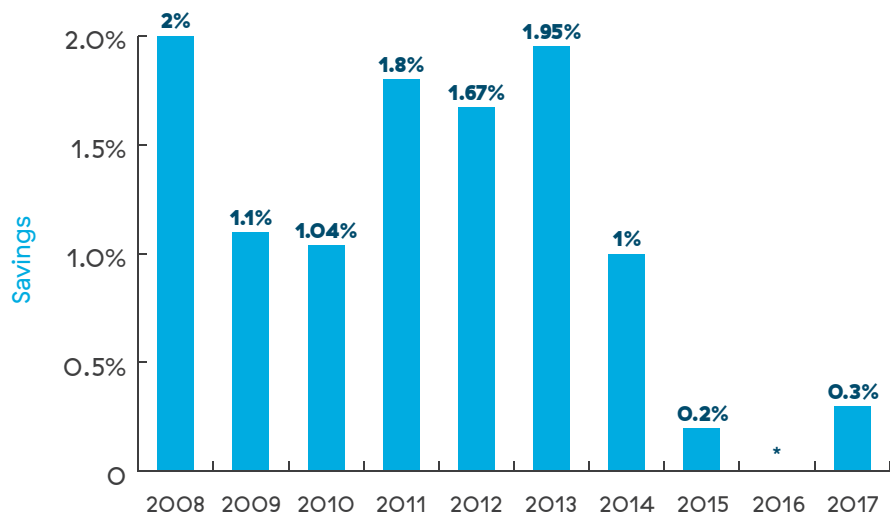
## Earth Hour inspires British Columbians, but participation has declined

A survey recently conducted for BC Hydro found that while 7 in 10 British Columbians say they are going to participate in Earth Hour 2018, actual participation has been on a steep decline in recent years. In 2008, the first year that Earth Hour went global (2008), British Columbia responded with enough lights turned off for one hour across the province to reduce B.C.'s total power use over 60 minutes by 2%. But on the tenth anniversary of the global event in 2017, B.C. reduced its consumption by just 0.3% (or just 15% of the savings in 2008).

While it may seem natural to conclude that a drop in participation in B.C. means British Columbians are less concerned about the environment, the declining Earth Hour participation numbers are not necessarily an indication that British Columbians are not concerned. In fact, the survey conducted for BC Hydro found that 79% of British Columbians think Earth Hour is important. And those surveyed are still interested in conserving electricity; they just have a different motivation than those living in other jurisdictions.

From a climate change perspective, Earth Hour seems to lack the gravity in B.C. that it carries in many other places around the world served by fossil fuel-generated electricity. In B.C., 98% of the power generated last year was from clean or renewable sources. Electricity generation accounts for only 1% of greenhouse gas emissions in the province. By contrast, 39% of B.C.'s greenhouse gas emissions are produced by commercial and personal transportation. In Australia, the birthplace of Earth Hour, about a third of greenhouse gas emissions still come from electricity generation.

### EARTH HOUR ENERGY SAVINGS IN B.C.: SAVINGS ACROSS BRITISH COLUMBIA BY YEAR



\*There is no data available from BC Hydro for 2016 because the World Wildlife Fund, which originated the event, moved Earth Hour to earlier in March. That combined with the move to daylight savings time meant Earth Hour power use could not be properly compared with consumption at the same time the week before.

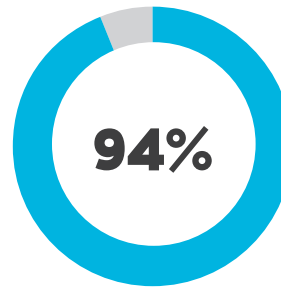
## For most British Columbians, money motivates electricity conservation

The numbers suggest that while Earth Hour still carries powerful symbolism for the broader cause of fighting climate change and protecting the environment, the act of turning the lights off for the event has less meaning in B.C. So if British Columbians are not motivated to conserve electricity in order to reduce carbon emissions, what does motivate them to conserve?

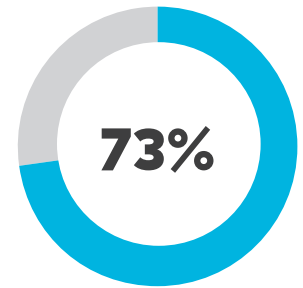
Research conducted for this report found, when it comes to electricity conservation, British Columbians are more interested in saving on their bill than preserving the environment. Of those surveyed, 69% said that saving money on bills was the biggest motivation for cutting electricity use, compared to just 15% for the environment and 14% that see it as the right thing to do. In fact, 94% of respondents said they already turn off lights to save energy. However, they were less likely to be delivering on a list of other no-cost ways to reduce electricity use, such as turning off the heat-dry setting on the dishwasher (33%) or taking shorter showers (46%).

The survey also asked how much respondents would need to save on bills over a year before they would be motivated to act on no-cost ways to cut their electricity use. About 80% of British Columbians said they would make changes if they saved \$300 or more per year.

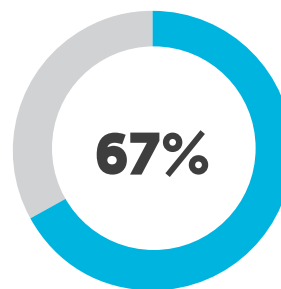
### NO-COST ACTIONS ALREADY TAKEN IN B.C. HOMES



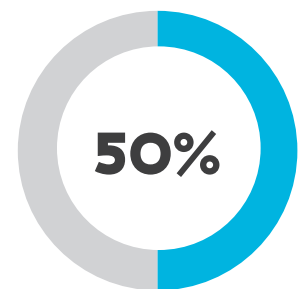
Turning off unnecessary lights



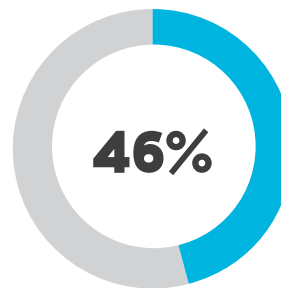
Lowering the thermostat overnight/when no one is home



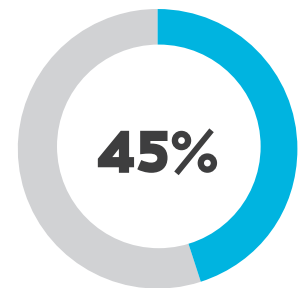
Washing laundry in cold water



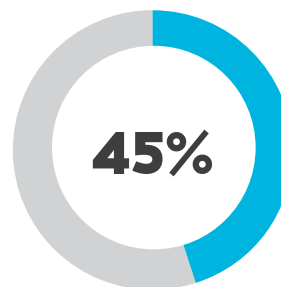
Unplugging used electronics



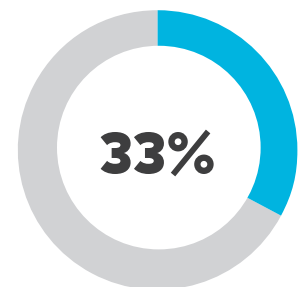
Taking shorter showers



Turning off the air conditioner when not home



Hang-drying laundry



Turning off the heat-dry setting on the dishwasher

## B.C. household electricity use vs. the world

While British Columbians have a strong focus on reducing electricity to save money on bills, homes in B.C. use more electricity than many places in the world. That relatively high electricity use is a product of many factors, including home size, reliance on electric heat, and having among the lowest electricity prices in North America. Without years of Power Smart conservation activities, that electricity use would be even higher. British Columbia homes would use 16% more than they do now, increasing their bills by an average of \$170 a year.

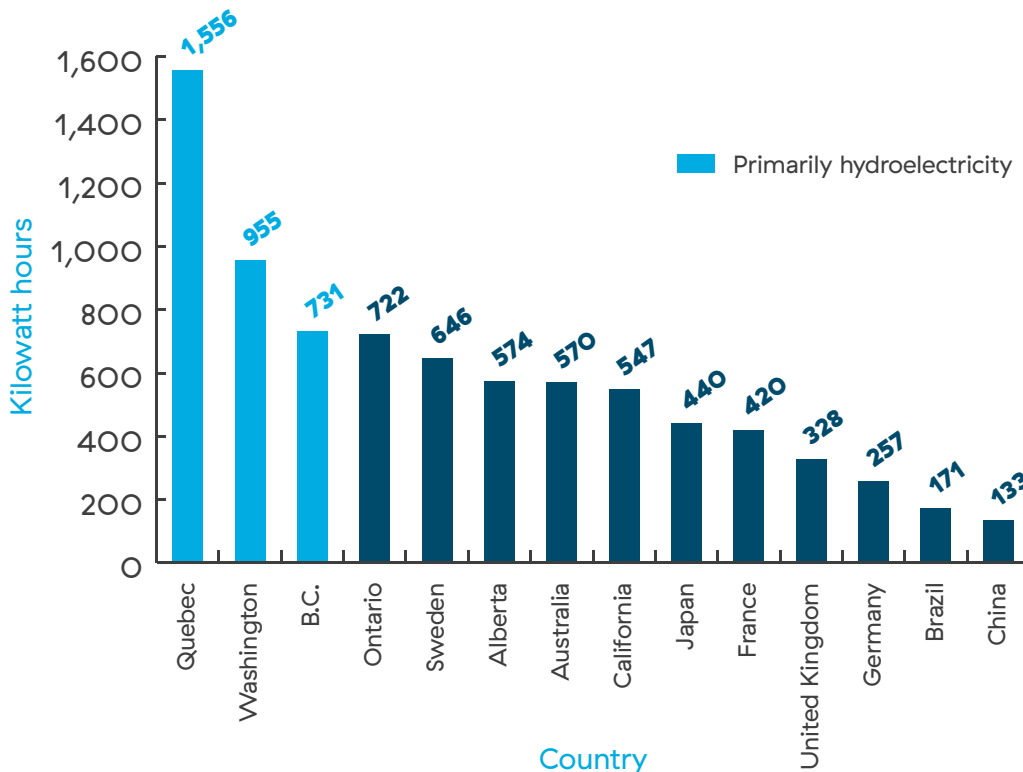
Larger homes and the availability of clean and relatively affordable hydroelectricity combine to drive high electricity usage in B.C.'s homes, including more than six in 10 that use electricity (rather than natural gas) as their primary or secondary heating source. In fact, B.C. homes use more electricity on average than homes in three other provinces, many U.S. states, and most other countries. That said, compared to other areas with primarily hydroelectric power, B.C. homes use significantly less.

The latest StatsCanada (2015) data shows the average B.C. home uses 731 kilowatt-hours of electricity per month, or about 35% more than in California, 27% more than in Alberta, and almost three times that of homes in Germany. But B.C. homes use far less than other jurisdictions with similarly clean and relatively affordable hydroelectricity, including Quebec, Washington, and Oregon. Meanwhile, homes in Quebec, with the lowest residential electricity rates in North America, used more than twice the electricity of the average B.C. home at 1,556 kilowatt-hours a month in 2015.

Internationally, the combination of higher electricity prices and/or smaller average home sizes tends to drive dramatically reduced usage. In a 2017 survey by point2homes.com<sup>1</sup>, Canada ranked third in average home size in a survey of nine countries. Only Australia and the U.S. had larger homes, Germany's were 21% smaller than Canada's average of 1,792 square feet, and Brazil's were 39% smaller.

The past two unusually cold winters have seen electricity use in B.C. homes rise to an average of 826 kilowatt-hours per month in 2017. But home size really matters. In December 2017, detached homes in Vancouver spent a median amount of \$132 on electricity, compared to \$111 for townhomes and \$53 for condos.

### MONTHLY USAGE COMPARISON VS. OTHER JURISDICTIONS



<sup>1</sup> <https://www.point2homes.com/news/canada-real-estate/how-large-are-canadian-homes.html>

## Solutions

With a little help, most British Columbians can lower their home electricity use and their BC Hydro bills. Here is a look at 10 of the most cost-effective actions that can add up to considerable energy savings in B.C. None of these tips require the purchase of any products. Acting on a full list of 10 tips could save up to \$455 a year.

### 10 WAYS TO SAVE ELECTRICITY

BRITISH COLUMBIANS COULD SAVE UP TO \$455 A YEAR BY ACTING ON 10 NO-COST TIPS



## A commitment to conservation

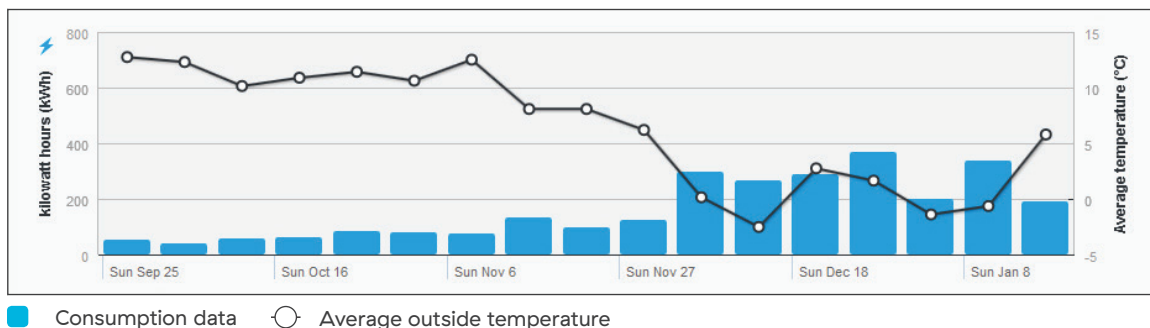
Over the past 10 years, BC Hydro has spent approximately \$1.2 billion on conservation – known as demand-side management – including incentives, education, and codes and standards designed to reduce incremental growth in electricity demand.

Over the next three years, BC Hydro plans to spend \$330 million on conservation programs (an average of \$110 million per year).

## Conservation initiatives to help British Columbians

- Through programs, online tools, tips and education campaigns, along with work with municipalities, retailers and manufacturers, BC Hydro offers help for customers looking to reduce their electricity use and BC Hydro bills.
- Each spring and fall, BC Hydro offers seasonal rebates on energy-efficient products available at BC Hydro's partner retailers across the province. Last year, BC Hydro rebates for lighting and appliances were offered at more than 400 retail locations across B.C. – More than 7,000 appliances and 500,000 ENERGY STAR® LED bulbs were purchased using BC Hydro rebates.
- The Home Renovation Rebates Program offers homeowners rebates of up to \$6,000 for a variety of energy-efficiency upgrades focused on reducing water and space heating costs, such as heating and hot water systems and insulation. Homeowners that complete these upgrades can reduce their energy bills by up to 30%.
- BC Hydro works closely with provincial and federal authorities to increase energy-efficiency standards for everything from lighting to appliances. Earlier this month, the B.C. Government updated provincial energy efficiency standards for gas fireplaces, residential heat pumps, general service lighting, windows for smaller buildings, and consumer electronics. The changes will come into effect from June 2018 to January 2020.
- BC Hydro has also increased funding by \$2.2 million – for a total of \$10 million over the next three years – funding for conservation programs supporting the more than 300,000 BC Hydro residential customer account holders who qualify for lower-income program assistance.
- BC Hydro customers can actively track their energy use on bchydro.com to help find ways to reduce their electricity use and save on their BC Hydro bills. There are currently 1.2 million customers signed up for MyHydro, which offers free online tools and includes:
  - Current and historical electricity use, right down to the hour
  - Comparisons to electricity use in similar homes nearby
  - Tracking of electricity use against outside temperature
  - Year-over-year electricity use comparisons
  - Estimated bills, reminders and alerts
  - Downloading of electricity use for offline analysis
- Customers can join Team Power Smart for free and start a Reduction Challenge by logging into their online account and committing to reduce their household's electricity use by 10% over 12 months. After 365 days, customers earn a \$50 reward if they are successful in meeting that 10% goal. Over 135,000 customers are currently members of Team Power Smart, and since the inception of the 10% Reduction Challenge in 2008, there have been more than 194,000 Challenges.

### WEEKLY CONSUMPTION FOR SEP 25, 2016 – JAN 21, 2017



\* Above is an example of electricity tracking on MyHydro, showing the relationship between outside temperature (black line) and electricity use during B.C.'s record-setting winter of 2016–2017.

## Conservation support for lower income customers

Of BC Hydro's more than 1.7 million residential customer accounts, 20% qualify for lower-income program assistance. That's the result of a recent change in which the household income point for low-income qualification was increased from \$44,000 to \$57,000.

Over the next three years, BC Hydro will spend \$10 million on low income conservation programs to help customers in need, including:

- The Energy Conservation Assistance Program (ECAP) provides free energy assessments and energy-saving products such as new ENERGY STAR® refrigerators and insulation upgrades. Over 11,000 customers have participated in ECAP, including more than 3,600 First Nation homes in 80 communities.
- In addition, energy savings kits – which include a number of simple, easy-to-install products such as energy-efficient LED light bulbs and weather stripping – have been provided to more than 100,000 customers across the province since the program launched in 2008. These products can help customers save up to \$80 in electricity costs each year.