

Power smarter:

Enhancing energy efficiency to support British Columbians



June 2024

Power smarter: Enhancing energy efficiency to support British Columbians

Making smart choices about how we use our clean electricity resources has been core to our business for 35 years. Through BC Hydro's Power Smart program, we have become energy efficiency leaders in North America, transforming how British Columbians use electricity by fostering conservation in homes and businesses across the province. Since 2008, we have achieved over 7,000 gigawatt hours in energy savings through these initiatives, which is equivalent to the energy consumption of over 700,000 homes.

As British Columbians look to increasingly transition from using fossil-fuels to clean and renewable energy sources, embracing the Power Smart movement will be even more important. Access to energy efficiency tools and resources provides our customers with opportunities to save energy and money, while reducing energy use (both overall and at peak times), relieving pressure on our electricity grid, and reducing the need for new clean electricity resources. In fact, it is the best and most cost efficient way to meet the growing demand for electricity, helping to keep electricity affordable for our customers.

We are gearing up to support customers by stepping up our Energy Efficiency Plan—a key action to meet the growing demand for electricity. Through the plan, BC Hydro is investing over \$700 million in tools, technology, and programs for customers over the next three years to encourage more energy efficient choices to support the energy transition. This investment is a 60% increase over previous budgets and will help us reach our energy and capacity savings targets, resulting in up to 2,000 gigawatt hours of energy savings from energy efficiency programs by 2030, which is the equivalent of powering 200,000 homes, and over 400 megawatts of capacity savings from demand response programs and optional time-of-day rates.

Why energy efficiency matters

Energy efficiency is about reducing energy waste in our everyday consumption in order to preserve our clean electricity resources for other important uses. For individuals and businesses, it's simple—use less and save more. Whether it's taking advantage of rebates and incentives, making behavioral changes like switching off the lights or turning down the heat, and optimizing business processes and technology, the more you improve your energy efficiency, the more you will save on your bill.

Like building a new dam or adding wind and solar to our integrated system, energy efficiency is a resource. For BC Hydro, it's the best and least expensive way to meet increasing demand for energy. Energy savings from these programs help us to defer the need for additional capital infrastructure and provide additional flexibility to our electricity system.

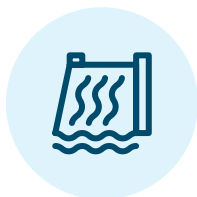
BENEFITS OF ENERGY EFFICIENCY



**Customers
save money**



**Conserve
resources**



**Add flexibility
to the system**



Help environment



**Delay need for more
infrastructure**

Power Smart, powering energy savings for 35 years

In 1989, BC Hydro launched the Power Smart program, which revolutionized the way British Columbians think about electricity. The program encourages customers to make smart energy choices, like using low-energy LED light bulbs and energy efficient appliances, and provides information about how small behaviour changes like turning down their thermostat can lead to big energy and money savings.

Illuminating energy savings—The power of LEDs

From holiday lighting to everyday use across homes and businesses in B.C., BC Hydro has been a leader in LED adoption in North America. And today, LEDs are now the most widely used lighting type in B.C. homes, saving British Columbians energy and money. LED bulbs use at least 75% less energy than incandescent lighting and can last up to 25 years. We estimate that since LEDs became more widely available in 2012, residential lighting usage has decreased by about 700 gigawatt hours per year—the equivalent of powering 70,000 homes.



BC Hydro has been a recognized leader in North America for energy efficiency programs that have helped customers across all sectors—residential, commercial and industrial—to reduce or shift the timing of their electricity use by offering technical support, financial incentives, resources and tools. And the power of energy efficiency has been impressive. Since 2008, we have achieved over 7,000 gigawatt hours in energy savings through these initiatives, which is equivalent to the energy consumption of over 700,000 homes and more than 35% greater than the expected energy output of Site C. These energy savings have helped save customers money and delayed the need for new electricity resources—a big accomplishment, and there is much more ahead.

THE POWER OF ENERGY EFFICIENCY



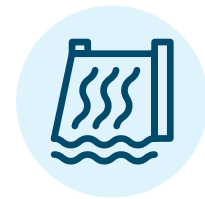
7,000 GWh in energy savings since 2008

=



Energy consumption of over **700,000 homes**

+



More than 35% greater than the expected energy output of Site C

Stepping up energy efficiency is vital to the energy transition

The continuation and expansion of energy efficiency will play a vital role in the energy transition. Through our new Energy Efficiency Plan, we are investing over \$700 million in tools, technology, and programs for customers over the next three years to encourage more energy efficient choices and a shift away from using energy during peak times to support the energy transition. This investment is a 60% increase over previous budgets and adds up to about 2,000 gigawatt hours of savings, which is the equivalent of powering 200,000 homes.

BC HYDRO'S ENERGY EFFICIENCY PLAN



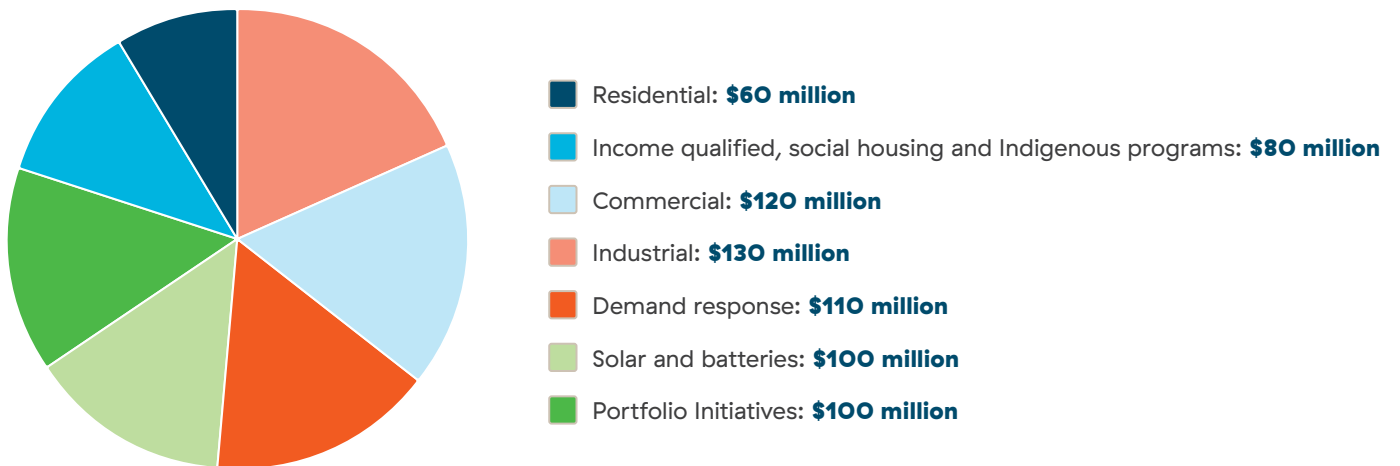
\$700 million investment over three years including tools, technology and programs to help customers.

Measures outlined in our new plan are a key support for electrification and the reduction in emissions associated with electrification. Energy efficiency reduces demand on BC Hydro's system, meaning more homes and businesses can electrify with less need for new renewable energy resources.

We already have a good track record on energy efficiency, but there are additional measures we can take to better align with the Province's CleanBC Plan and Clean Energy Strategy. Our new Energy Efficiency Plan consists of two major elements: a plan that incorporates new and expanded programs for residential, commercial, and industrial customers, as well as a new solar program with targeted incentives for the installation of solar panels and batteries.



ENERGY EFFICIENCY PLAN INVESTMENT



Programs and rebates for residential customers to save energy and money

For residential customers, we are making significant investments in programs such as home renovation rebates, retail discounts on energy efficient products, and behavioural programs such as Team Power Smart and HydroHome. With the flick of a light switch or the press of a button, our customers are the key to making any energy efficiency program a success. Residential programs will continue to focus on delivering a variety of technologies and initiatives that will help customers achieve energy savings, capacity savings from reducing or shifting when they consume electricity and increasing energy literacy. These programs help British Columbians in optimizing their energy use, by increasing their energy management literacy through access to energy data and energy management tools.



For example, the Team Power Smart program encourages residential customers to adopt more energy conscious behaviours and practices that lead to electricity savings and lower bills—and they get a financial reward for doing so along with additional support from our team on how to reach their goal. More than 100,000 British Columbians have successfully completed the challenge to date.

Another important component of encouraging energy efficiency for our residential customers is providing them with the option to purchase energy efficient products through our retail programs by offering rebates. Retail initiatives provide rebates for energy efficient products in partnership with retailers and manufacturers throughout B.C.

BC Hydro also provides customers, with electrically heated homes, rebates for performing home envelope improvements (insulation, windows, draft proofing) and heating system (heat pumps) upgrades that will ultimately lower their space heating usage and lower their electricity bill. BC Hydro and CleanBC both offer rebates for heat pumps and installation, and the savings, can be impressive.

Supporting income qualified customers and social housing to increase their energy efficiency

BC Hydro's income qualified, and social housing efficiency programs help lower income customers to reduce their energy consumption. There are a range of key components to address the needs of our lower income customers including free basic energy saving kits, weatherization upgrades, and growing the installation of heat pumps over time.

Over the next three years, we will invest in these programs, and will increase the focus on measures that provide opportunities for deeper savings including heat pumps for electrically heated homes that provide the benefit of cooling and improved safety during heat events and providing needed weatherization upgrades. These measures will be coordinated with Provincial programs such as the CleanBC Energy Savings Program.

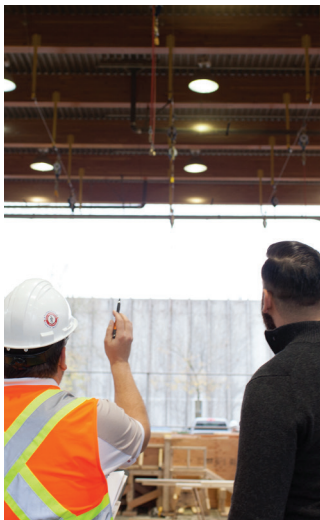


Support for Indigenous customers

BC Hydro has energy efficiency programs in place to enable Indigenous communities and organizations to plan and implement energy efficient upgrades in their homes and buildings. The offers provide support for capacity development in Indigenous communities, assessment and planning of energy efficiency opportunities and financial incentives to undertake energy efficiency upgrades in residential buildings. These offers are available in both the integrated system and Non-Integrated Areas (NIAs), with additional support for energy efficiency upgrades in non-residential buildings available in the NIAs.

Indigenous programs provide a range of offers to Indigenous customers and housing providers such as: free energy saving products, installation training support and funding to complete minor energy efficiency upgrades, and financial incentives for energy efficient upgrades such as building envelope improvements, heat pumps for space and water heating, and appliances.

Over the next three years we are increasing our investment in Indigenous programs to provide additional capacity development support to Nations and Indigenous organizations, offer higher incentives on existing energy-saving measures, and introduce new offers.



Support for businesses and industry

BC Hydro has over 220,000 commercial and industrial customers—they are our largest customers, and present a huge opportunity for investment in energy management and integration across energy efficiency and capacity opportunities in this sector.

Through our new energy efficiency plan, commercial and industrial customers will see significant investments in energy management solutions, including funding for Energy Managers, energy use assessment tools, energy audits and studies to identify integrated energy efficiency opportunities, and incentives to help offset implementation costs for projects whether they are smaller retrofits or large and complex redesigns.

A new offer focusing on apartment buildings will also provide access to Energy Advisors, integrated Whole Building Assessments including building recommissioning, and project incentives for things such as in-suite heat-pumps and upgrades of common area lighting and controls, building envelope and windows.

Shifting energy use

There are times when the electricity system is experiencing high demand and we use demand response (capacity focused) programs to provide customers with the option to reduce their energy use in exchange for a financial reward. Demand response means encouraging customers to shift the timing of their electricity use from peak periods. We are investing over \$110 million in these programs for residential, commercial, and industrial customers over the next three years.

For example, the Peak Rewards program provides incentives to customers to allow BC Hydro to manage connected devices during peak periods (e.g., EV chargers and thermostats). The program also provides incentives to customers to respond manually (e.g., by using the delayed start settings on their dishwasher and dryer or simply turning things off) to a notification 24 hours in advance to reduce or shift their usage during peak periods. Customers can opt-out of the Peak Rewards program at any time.

Another way to shift electricity use and potentially save energy and money is to switch to our new optional time of day rate. This rate offers residential customers the option to pay lower rates if they shift their electricity use to periods when demand for electricity is lower and there is more system capacity. Customers who voluntarily sign up for this option can save money by shifting their energy-intensive activities to off-peak hours.

Participating customers will receive a 5-cent discount for each kilowatt hour of electricity consumed during overnight periods (11 p.m. to 7 a.m.), and a 5-cent surcharge for each kilowatt hour of electricity consumed during the on-peak period (4 to 9 p.m.). The rates for the remaining hours of the day will stay the same. BC Hydro has acknowledged that this option may not be right for everyone, which is why the choice is completely optional and customers can opt in or out without penalty.

Demand response programs are also available to our commercial and industrial customers. These programs encourage customers to reduce or shift their energy use during times when the electricity system is experiencing high demand. The demand response program for business also offers incentives to our business customers to support the acquisition, installation, and operation of Energy Storage Systems. These systems provide many benefits to our customers, including the ability to manage their peak demand to reduce costs and provide reliability and resiliency. We are also launching an Industrial Load Curtailment program.

In addition, our Non-Wires Alternatives program investigates and implements opportunities to geographically focus our energy efficiency and demand response programs to address localized constraints, for example, at substations and feeders.

New solar and battery incentives

In addition to allocating more funds to existing programs, for the first time, BC Hydro will be exploring rebates for the installation of rooftop solar and battery storage systems, making it easier for people and businesses to generate their own electricity, reduce their energy bills and deliver clean energy back to the province's electricity grid. Homeowners can receive BC Hydro rebates totaling up to \$10,000 for installing an eligible solar photovoltaic (PV) system and battery storage system. Rebates of up to \$50,000 will be available for apartment buildings and small-medium sized businesses. Enhanced rebates of up to \$150,000 will make the installation of solar and battery systems more affordable for social housing providers and Indigenous communities.

Our program will also provide targeted incentives for solar installation for large commercial and industrial customers, and will explore the benefits of combining individual projects with batteries.

In addition to rebates, the program will work with industry contractors and associations to support the delivery of training, and to improve the availability and capability of solar and battery installers in B.C.



The path forward

Energy efficiency is a long-standing way in which British Columbians have risen to the challenge of managing a growing electricity system. Over the next three years, British Columbians will be able to take on new challenges in the fight against climate change supported by our \$700 million investment in energy efficiency. We are excited to support our customers through the challenges of this once in a century energy transition from fossil fuels to using more clean, renewable electricity at home, at work and in industry—and more efficiently.

We are proud to provide the tools, technology, and programs for customers over the next three years to encourage more energy efficient choices and ways to manage their electricity use—helping our customers save more than \$80 million per year by 2026, deferring the need for additional capital infrastructure and offering additional flexibility to the BC Hydro system.

