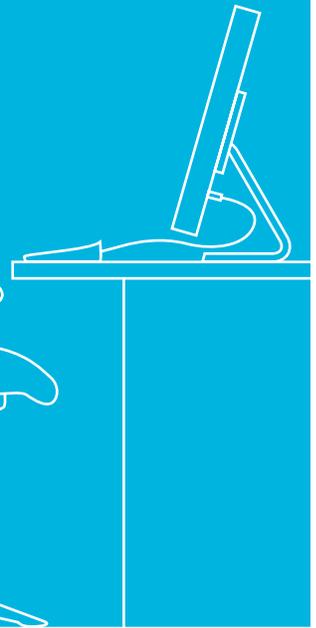
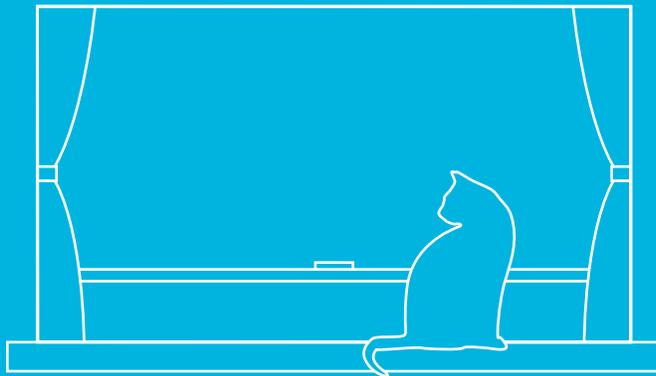


Powering the new normal:

How COVID-19 has changed
British Columbians' daily habits
and electricity use



Report

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BCH20-505

 **BC Hydro**
Power smart

Powering the new normal: How COVID-19 has changed British Columbians' daily habits and electricity use

From staying up late and sleeping in, to cooking more and showering less, many British Columbians have made significant changes to their daily routines since COVID-19 stay-at-home measures were implemented in mid-March, and while residential electricity use has remained average overall, new BC Hydro data reveals how residential electricity use patterns have shifted in the province.

Highlights

- Despite not seeing an overall increase in residential electricity use for this time of year, new BC Hydro data shows a significant shift in how British Columbians are using electricity – especially on weekdays – since the COVID-19 pandemic began.
- A recent survey¹ commissioned by BC Hydro found this shift in demand can be explained by the nearly 90% of British Columbians that have drastically shifted their daily routines.
- Data shows weekday electricity use is peaking later in the morning and earlier in the evening, and more closely resembling typical weekend patterns. For example:
 - Instead of a sharp rise at about 8 a.m., early morning power load rises at a slower rate, flattening out around 9 a.m., before moderately rising again until after lunch.
 - The evening peak now arrives earlier between 6 and 9 p.m. instead of between 7 and 10 p.m.
- With no commute to the office, many British Columbians are going to bed later and sleeping longer, especially on weekdays.
 - Nearly 40% wake up later on weekdays and of those, over 60% are waking up more than an hour later than they normally would.
 - 30% are going to bed later than they did pre-pandemic – and of those, nearly 80% are going to bed more than an hour later than they used to.
- And, leaving the house less has changed some grooming habits – 24% of British Columbians are showering less often in the morning and for shorter periods of time than they used to.
- Being home more on weekdays has also changed the frequency and timing of cooking and chores for many British Columbians. For example:
 - Almost half of British Columbians are cooking more now than they were pre-pandemic, and almost a quarter said they are making dinner earlier these days, which helps explain the shift in the evening peak.
 - Baking is also up – more than 40% indicated they are baking more.
 - 15% of are doing more laundry than they were pre-pandemic, and of those, 76% are doing more laundry during the day on weekdays.
- When it comes to entertainment, British Columbians are turning to traditional television or streaming services to get them through tough times:
 - Nearly 60% are watching more TV and almost a quarter said they are spending a lot more time watching TV than they did before.
 - 67% of those surveyed said they have finished at least one TV series since the pandemic began.

¹ Online survey conducted by Majid Khoury of 500 British Columbians between May 15 and May 17, 2020

Solutions

There are a number of ways British Columbians can save on energy while social distancing and working from home:

- Using a laptop over a desktop – laptops use 80% less energy.
- Use energy-saving features on office equipment – energy-saving modes on devices and equipment typically use around 70% less energy.
- Use task lighting rather than turning on additional overhead lights.
- Open window shades and blinds, as a single south-facing window can illuminate up to 100 times its area.
- Cook with smaller appliances such as microwaves and slow cookers that use up to 75% less energy than a conventional oven.
- When streaming movies or TV shows, consider using a device other than a game console as these use 40% more electricity compared to other streaming devices, such as a smart TV.
- Track electricity use with MyHydro to see how at-home activities impact a household's electricity use.

The new normal

Over the past few months stay-at-home measures designed to slow the spread of COVID-19 have resulted in many British Columbians spending more time at home and adjusting to new daily routines.

Despite seeing an initial increase in residential electricity use in mid-March when stay-at-home measures were put in place, residential electricity use was lower in May than it was in March. Warmer weather is a contributing factor; however, in May, it was tracking only slightly higher – at 2% – than our pre-COVID-19 load forecast. As a result, most customers should not see an increase in their BC Hydro bill.

So while overall residential electricity use is at near predicted levels for this time of year, new BC Hydro data shows how these new routines have led to a significant shift in how British Columbians are using electricity since the COVID-19 pandemic began. Electricity use patterns have changed – with later morning electricity use peaks and earlier evening peaks, weekday electricity use now more closely resembles traditional weekend patterns of later morning usage peaks and less variation throughout the day.

A recent survey² commissioned by BC Hydro found this shift in demand can be explained by British Columbians' drastically different weekday routines – almost 90% indicated their routine has changed since the COVID-19 pandemic began. From sleeping in and staying up later, to grooming less and streaming more TV, this report examines how COVID-19 is shifting lifestyles and residential energy use in B.C.

Shifting electricity patterns

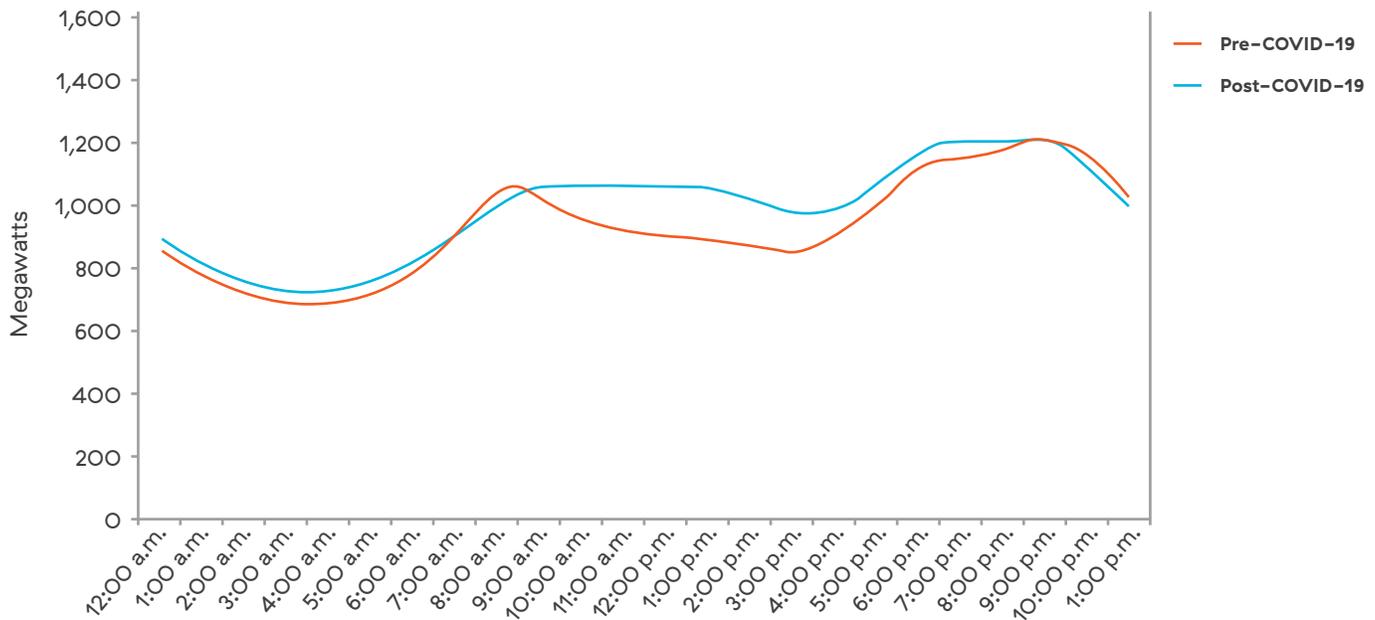
Prior to the COVID-19 pandemic, weekday electricity use in B.C. followed a predictable pattern that mirrored the 9 a.m. to 5 p.m. workday schedule of many British Columbians. For instance, on a typical pre-pandemic weekday, there was a steady climb in electricity use starting at 6 a.m. as British Columbians woke up for work, switched on lights, showered, and turned on coffee makers and other appliances for breakfast. Electricity use peaked around 8 a.m. and tapered off after that as British Columbians began their commute to work, school or daily errands.

Since the pandemic began, BC Hydro data indicates early morning electricity load increases at a slower rate and plateaus around 9 a.m. Instead of tapering off, load rises moderately until after lunch – likely the result of more British Columbians working from home – and peaks around 1 p.m. After 1 p.m., electricity use dips, perhaps due to British Columbians going out for some fresh air or going grocery shopping – a pattern typical of residential load on weekends, especially Sundays.

² Online survey conducted by Majid Khoury of 500 British Columbians between May 15 – May 17, 2020

Prior to the pandemic, the evening peak was typically between 7 and 10 p.m., as British Columbians arrived home from work, began cooking dinner and completed chores like washing laundry and dishes. The evening power use peak has since shifted to be earlier, around 6 and 9 p.m., likely the result of many British Columbians not having to commute home from work, or attending activities or social events in the evening.

POWER DEMAND SHIFTING



All work and no Starbucks

One explanation for this shift is for many British Columbians, the office is now just a few steps away from their kitchen – a recent survey conducted on behalf of BC Hydro found that since the COVID-19 pandemic began, 65% of employed British Columbians are working from home at least one day a week and 37% are working from home five days a week. In addition, many are playing double duty as caregivers during the workday with 21% of British Columbians caring for at least one school-aged child that is doing virtual classes during the day.

This new work from home routine has changed many habits, including when British Columbians are eating breakfast as well as the frequency of coffee shop visits. The survey found around one-third of British Columbians are making coffee at home more often than they did pre-pandemic and nearly 45% are eating breakfast at a later time, contributing to the electricity use shift.

Sleeping more and grooming less

The survey also found many British Columbians have altered their sleep routines – going to bed later, sleeping in longer – as a result of no longer having to commute to the office or school. Nearly 40% are waking up later on weekdays, and of those, over 60% are waking up more than an hour later than they normally would. The opportunity to sleep in is also encouraging some night owl behaviour – 30% are going to bed later than they did pre-pandemic. Of those, nearly 80% are going to bed more than an hour later than they used to.

When it comes to grooming habits, it seems leaving the house less has taken away some motivation – close to one-quarter of British Columbians are showering less often in the morning and for shorter periods of time than they used to.

Cooking and baking are on the rise

With British Columbians home more on weekdays, many are unleashing their inner Martha Stewarts in the kitchen and changing up the timing and frequency of household chores. For instance, almost half of those surveyed said they are cooking more now than they were pre-pandemic, and almost a quarter are making dinner earlier these days. In addition, around 40% are baking more than they did pre-pandemic as many try their hand at Instagram-worthy banana bread.

In fact, there has been such a surge in the popularity of baking at home that Google Trends shows searches for the word “flour” at an all-time high in early April.³ Related searches such as “sourdough” and “bread flour” were also at record-breaking search levels, and anecdotal evidence such as Instagram pictures of empty grocery store baking aisle shelves suggest that baking supplies are the most sought after pandemic goods, second only to toilet paper.

As for ordering takeout from restaurants, almost 40% of British Columbians are ordering out less often than they did pre-pandemic, while almost a quarter are ordering out even more.

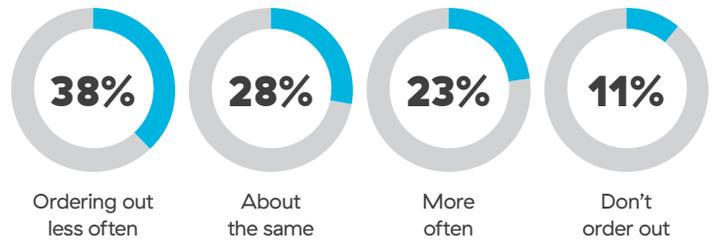
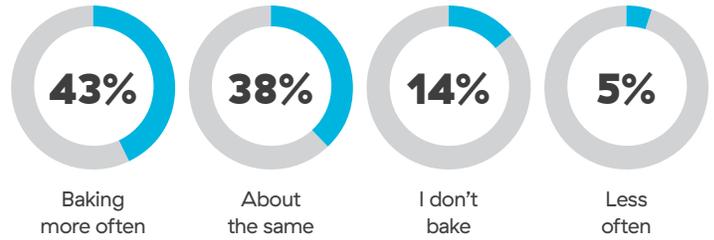
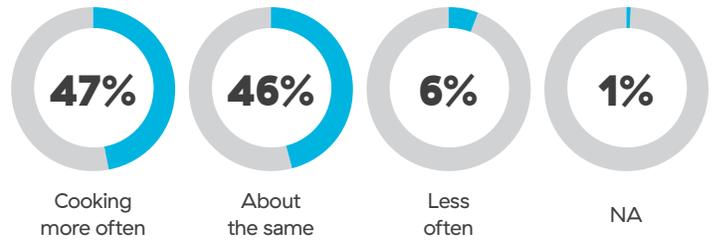
Being home a lot also means more weekday chores for some – 15% of those surveyed said they are doing more laundry than they were pre-pandemic. Of those, 76% are doing more laundry during the day on weekdays – likely one of the reasons the evening electricity load peak is not as significant.

Evenings in

With limited opportunities to go out for dinner with friends or go to the movies, traditional television or streaming services are the entertainment of choice to get through these tough times. The survey found nearly 60% of British Columbians are watching more television than they were pre-pandemic, and almost a quarter are spending a lot more time watching streaming services than they did before.

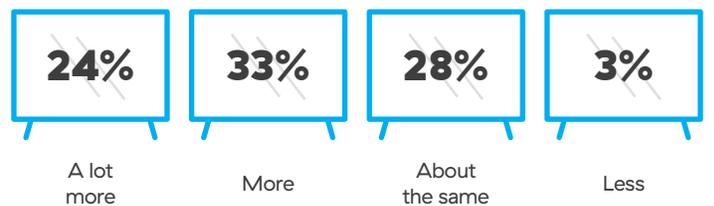
Of those watching more TV, 15% are watching more during the days, 51% during the evenings and 26% are doing so all day. There is also evidence of binge-watching with 67% of those surveyed finishing at least one series since the pandemic began.

³ Google Trends



In addition to watching more TV, 21% of British Columbians have purchased at least one new electronic device to help pass the time since social distancing measures began, including an ambitious 2% who have purchased exercise equipment such as a Peleton or treadmill to get moving.

TIME WATCHING TV SINCE PANDEMIC



Saving energy while physical distancing

Now that the home is doubling as an office, school and entertainment hub for many British Columbians, it is more important than ever to pay attention to home energy use.

There are a number of ways British Columbians can save energy while working from home and social distancing. For instance, when working from home, using a laptop over a desktop computer uses 80% less energy. About 40% of those surveyed use a desktop computer every day to work from home.

In addition, turning on the energy-saving features on office equipment uses around 70% less energy than full power mode.

A few lighting adjustments can also go a long way – use task lighting rather than turning on additional overhead lights, or open window shades and blinds – a single south-facing window can illuminate up to 100 times its area.

For those that are cooking and baking more, when possible, try using smaller appliances like multi-use pressure cookers, microwaves and toaster ovens that use up to 75% less energy than a large electric oven.

When streaming movies or TV shows, consider using a device other than a game console as these use 40% more electricity compared to other streaming devices, such as a smart TV.

Lastly, one of the very best ways to cut down on energy use is to hone in on your habits by tracking electricity use with MyHydro to see how at-home activities impact a household's electricity use.

