Building Benchmark BC Year Two Annual Report

BUILDING BENCHMARK BC

March 2022

Building Benchmark BC is a local- and regional-government-led initiative working to inform and inspire public and private sector leadership on built-environment climate change solutions. The 16 participating jurisdictions seek to better understand the role of building energy benchmarking and disclosure within a larger suite of climate regulations, policies, and incentives.

OPEN Technologies, a privately owned software company, developed and maintains GRID, the data visualization platform that is at the heart of Building Benchmark BC. And OPEN Green Building Society, the company's non-profit arm, manages and administers the program. Our team gratefully welcomes the support of our partners who contributed funding or in-kind resources to make this program possible.

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Produced by Glave Strategies for the OPEN Green Building Society on behalf of Building Benchmark BC.

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Glave Strategies, Slow & Steady Design, and OPEN Technologies are based in Vancouver, British Columbia, on the unceded territory of the Coast Salish Peoples including the territories of the xʷməθkwəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and Səl̓ílwətaʔ/ Selilwitulh (Tsleil-Waututh) Nations.

This document is available via buildingbenchmarkbc.ca

Buckle Up: Big Changes Are Coming

On behalf of the broader project team I'm delighted to present this, the Second Annual Report of Building Benchmark BC. We've had a terrific year, with many new jurisdictions and property participants coming on board, and strong validation that this program is supporting industry in the shift to high-performance buildings. And as someone with roots in British Columbia's Interior, I'm personally thrilled that we're now representing the regional hubs of Kamloops and Kelowna.

On climate, Canadians have shown they are ready for their governments to go faster and further. It is now a consensus issue, not a political one, and policy makers are responding with new initiatives to drive massive performance improvements in British Columbia's buildings. Similarly, asset owners are grasping the full scope of the risks that major climate and weather events pose to the operations (and insurability) of their properties. A summer and fall of severe climate-related impacts have only underscored the urgency.

If you are returning to this program, welcome back! And if you're a jurisdiction or property owner or manager who is on the fence about participating, here's a quick recap of why it's a smart move.

First, Building Benchmark BC helps participants prepare for a future of efficient, very-low-emissions buildings. The scorecards we provide participants show where each of their properties ranks on energy and emissions relative to others, as well as some insights on what they can do to start down the path of reducing their climate impact. The pool of data is growing steadily larger—we now have 8.4 million square metres of heated floor space in the database, and the bigger it gets for each property type, the more useful it is.

Finally, I've saved the best for last: The Province of British Columbia's CleanBC program will fund Building Benchmark BC for a third year. We're looking forward to delivering on the promise of that investment with our partners in the year ahead.

Sincerely,
Donovan Woollard

CEO, OPEN Technologies
Managing Director, OPEN Green Building Society

Ps We are now welcoming participants for our next reporting cycle.
Join us via buildingbenchmarkbc.ca.

Welcome back!

This, the Second Annual Report of Building Benchmark BC, updates partners, participants, and stakeholders on the initiative's progress to date. It compiles high-level energy and emissions data voluntarily shared by building owners and managers across the 16 partner jurisdictions, details the current and emerging regulatory landscape, and offers some analysis of the trends that have emerged since the previous year. This report covers the second reporting period in the program, compiling data collected in the 2020 calendar year.

What is building performance benchmarking?

Building energy benchmarking is the process of collecting and monitoring energy and greenhouse gas emissions data from a large number of buildings over time. This allows owners, managers, occupants, and jurisdictions to compare the performance of similar participating properties. With this data in hand, property owners, policy makers, incentive designers, and capital providers can funnel resources towards the best interventions, in the right buildings, to achieve the highest climate benefit.

What does benchmarking offer?

With more than ten years of applied experience, the benefits of mandatory building energy benchmarking are now well understood. The practice has been shown to:

- Increase conservation behaviours and sharpen energy management practices among both occupants and owners by revealing operational energy use.
- Help property owners make more targeted and strategic capital investments.
- Promote further efficiency by improving commissioning and maintenance regimens.
- Incentivize friendly competition in the commercial real estate sector to deliver better energy performance.
- Inform energy policy development at municipal, regional, and national governments, allowing them to better substantiate GHG targets and design more efficient programs to direct support where it is needed most.

In summary, benchmarking is an effective tool for reducing greenhouse gas emissions in the built environment.

By the Numbers

Some key facts and stats gleaned from Year 2 of the Building Benchmark BC initiative.

1,163 Total buildings registered
As of last year: 551

111% Increase since previous year

54 Total participants
As of last year: 38

16 Partner jurisdictions
As of last year: 11

30 Included building typologies

8.5M m^2 Total gross floor area of submitted properties

70% Increase since previous year

190 Office Buildings

61 Fire Stations

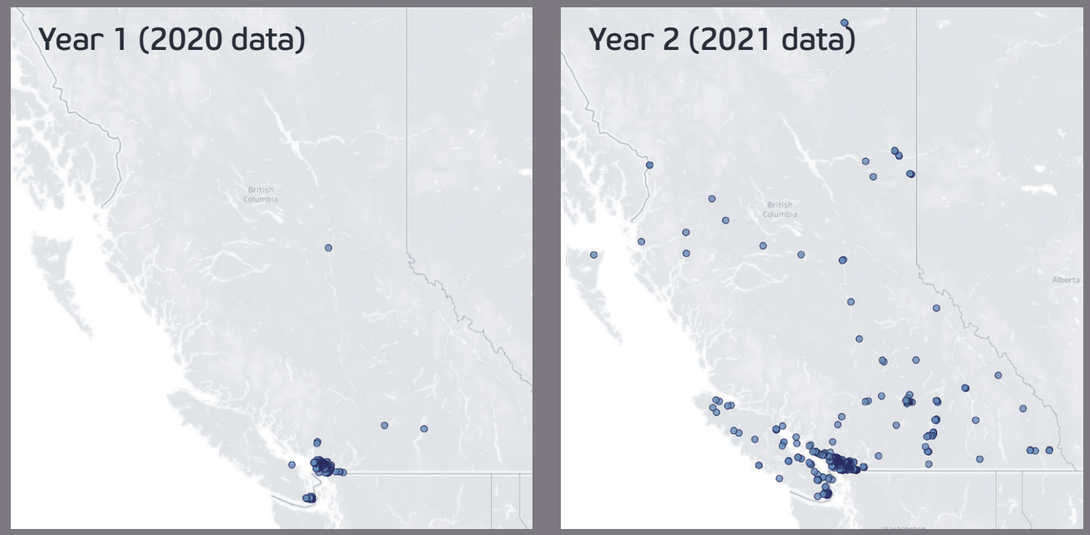
81 Recreation Centres

165 Schools K-12

162 Multiple unit residential buildings (MURBs)

5 MURBs that are 100% electric

» See page 7 for full list of building typologies



These maps plot the locations of participating properties in 2019 and 2020.

Partner Jurisdictions

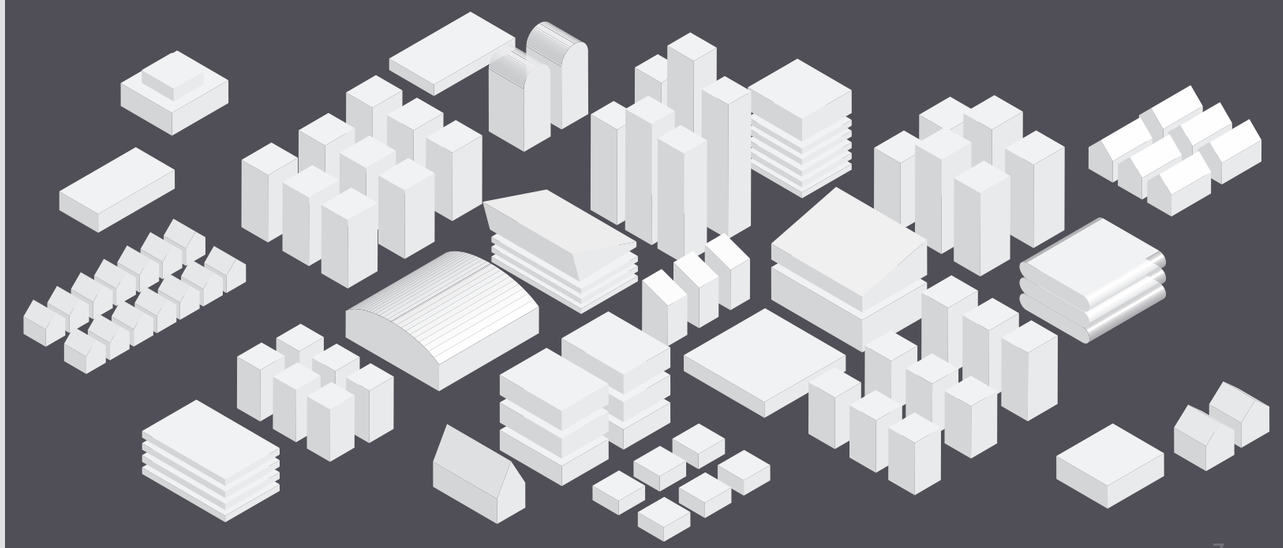
This year, we welcomed four additional jurisdictions to the program, expanding our scope beyond Southwestern British Columbia. Welcome aboard to the District of North Vancouver, City of Kamloops, City of Abbotsford and Capital Regional District. (For a sample of the policies and regulations some of these cities are working on, see pages 8 and 9.)

Tracking Data Gaps and Friction Points

We track large and complex buildings and group them according to common typologies, such as multi-unit residential buildings, shopping malls, and libraries. Typologies place a given building on a performance spectrum alongside other similar properties. This allows building owners and managers to compare apples with apples. Tracking such a wide array of building types also allows us to identify trouble spots in the data collection pathways.

Here's the full list of typologies covered in the Building Benchmark BC database, with the number of registered buildings for each.

- Energy Or Power Station (4)
- Fire Station (61)
- Hospital (8)
- Hotel (1)
- Hotel Or Residential (14)
- Housing, Multifamily (162)
- Ice Rink (23)
- Library (19)
- Medical Office (11)
- Museum (12)
- Office (190)
- Office, Municipal (34)
- Office, with Warehouse (49)
- Public Service (22)
- Recreation (22)
- Outdoor Pool (7)
- Parking Garage (13)
- Police Station (14)
- Post Secondary (139)
- Public Assembly (8)
- Recreation Centre (51)
- Recreation Centre, With Pool (20)
- Recreation Centre, With Pool And Rink (10)
- Residential Care Facility (29)
- School, K-12 (165)
- Shopping Mall (17)
- Social Or Meeting Hall (28)
- University Residence Or Dorm (20)
- Urgent Care Or Other Outpatient (5)
- Warehouse, Non-Refrigerated (4)



How Local Governments Will Leverage Building Data

The 16 jurisdictions that have so far elected to partner in Building Benchmark BC are gaining insight into their building stock in advance of future regulation.

Here's what some of them are cooking up.

District of North Vancouver

The District's Community Energy and Emissions Plan includes low carbon regulations and benchmarking requirements for new buildings. The District has had an energy management program in place for its own facilities since 2008. To date, it has reduced emissions in municipal buildings by more than 25 per cent. Emissions have been reduced by 50 per cent in the District Municipal Hall and by 30 per cent in the Operations Centre—two of its largest facilities.

City of North Vancouver

The City is developing a new Climate and Environment Strategy that staff anticipate bringing forward for council consideration in 2022. The new plan will be the City's guide to achieving net zero emissions by 2050 and include strategies to accelerate low carbon building retrofits, decarbonize the city's district energy system, and make new buildings net zero. The Climate and Environment Strategy will build upon existing policies and programs, including the City's low carbon Energy Step Code compliance pathway for new homes and consumer awareness campaign for heat pump retrofits, Jump on a New Heat Pump.

District of Saanich

Under its 2020 Climate Plan, the District aims to halve the emissions of its own corporate buildings by 2025, and reach net zero emissions in those buildings by 2040. The plan endorses mandatory energy and emissions benchmarking for privately owned Part 3 buildings, and encourages the province to take leadership. In the meantime, by participating in Building Benchmark BC, the District hopes to improve energy literacy, drive market transformation, and improve building energy performance.

Capital Regional District

In September 2021 the District adopted a new Climate Action Strategy. It includes commitments to implement a Regional Energy Retrofit Program, support acceleration of regional building energy benchmarking and local government regulation approaches, and also to "collect and share data and research on building energy use and emissions."

Metro Vancouver

Under its Climate 2050 Buildings Roadmap, Metro Vancouver will require owners of all buildings in the region to reduce their greenhouse gas emissions 35 per cent below 2010 levels by 2030. It will also develop regulatory requirements to ensure existing large buildings will be decarbonized before 2050. Metro Vancouver is already working with its member jurisdictions to develop a proposed regional regulation to limit GHG emissions from existing large buildings.

City of Vancouver

Several measures in the Climate Emergency Action Plan address buildings—the city's single largest source of carbon pollution. The City is working with industry to roll out the first mandatory building performance benchmarking program in Western Canada. In 2022, staff will bring recommendations to council on building energy benchmarking in large commercial and multifamily buildings.

City of Kelowna

Kelowna's Community Climate Action Plan examines actions that will reduce emissions in the City and lead to GHG reductions from buildings and other key sectors. The plan includes a commitment to "develop a community energy retrofit strategy, including regulation and incentives to encourage existing building stock to become more energy efficient."

City of Burnaby

The City of Burnaby is making progress on its commitments to climate action to make Burnaby a carbon neutral community by 2050. Recently the City partnered with SFU and Vancity to begin a Building Retrofit Taskforce that will in turn inform development of a Citywide Zero-Emission Building Retrofit Strategy.

DATA STORIES // We are pleased to share insights on the buildings in our dataset, and offer a few insights on what the numbers reveal.

British Columbia Tweaks Carbon Intensity Factor of Electricity

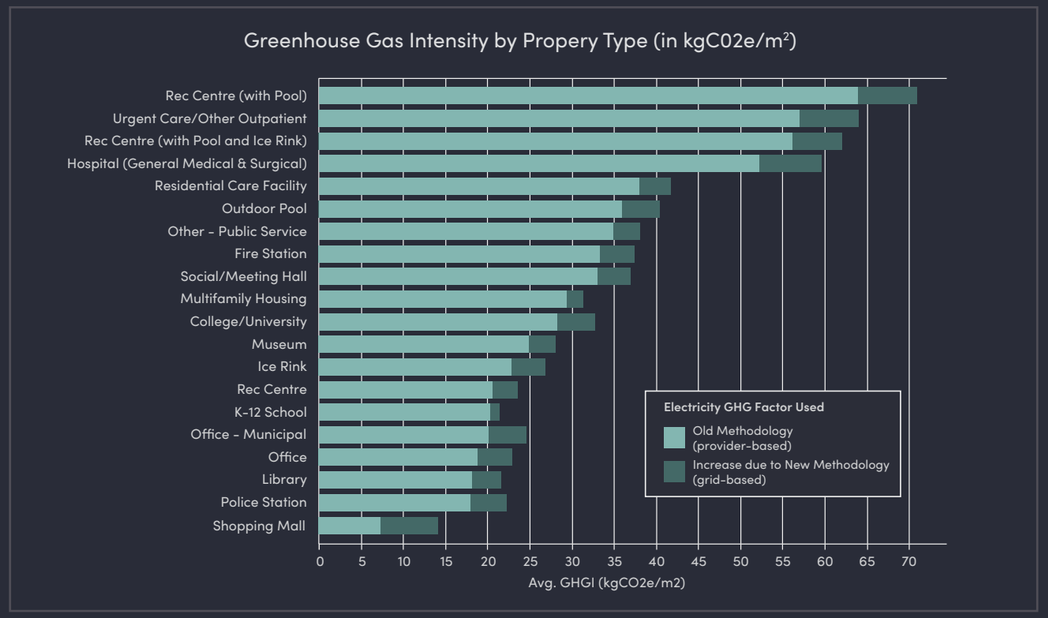
British Columbia's overwhelmingly renewable electricity grid is the envy of other jurisdictions. Yet, as a result of power trading with our neighbours to the east and south, the electricity we actually consume does have some carbon in the wires.

This year, the Province updated the methodology it uses to calculate the emissions intensity factor of BC Hydro's electricity, expressed as tonnes of carbon dioxide equivalent per gigawatt-hour (tCO2e/GWh).

Previous methodology, provider-based GHG factor (2020): 10.7 tCO2e/GWh
New methodology, grid-based GHG factor (2020): 40.1 tCO2e/GWh

We can see the results in the chart below. As a result of this new approach, GHG emissions increased for all buildings, across the board - and this is especially true for buildings that tend to be electrically heated, such as shopping malls. That said, they remain far lower than the GHG intensity of buildings that rely on natural gas for their space and water heating.

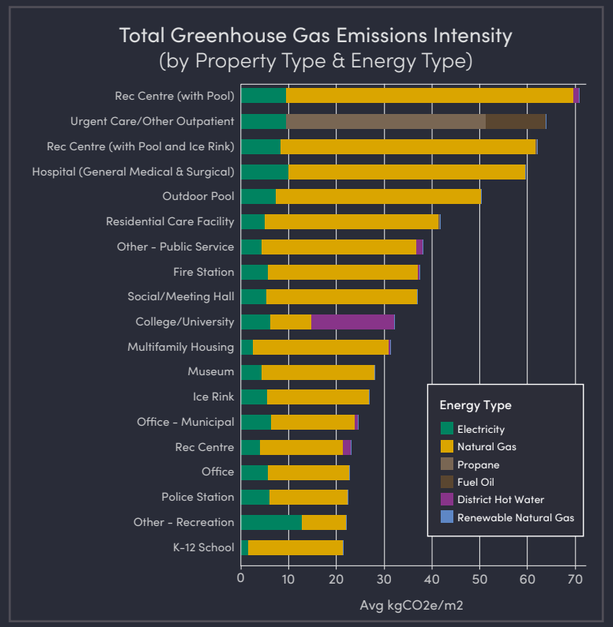
Fortunately, in its Roadmap to 2030 climate plan, the province committed to establish a 100 Per Cent Clean Energy Delivery Standard. The timeline on that new rule is still unknown, but when it happens, those bar chart lines will fall to zero and British Columbia will claim bragging rights to a truly emissions-free electricity system.



Electrify Everything. And Maybe Start Here?

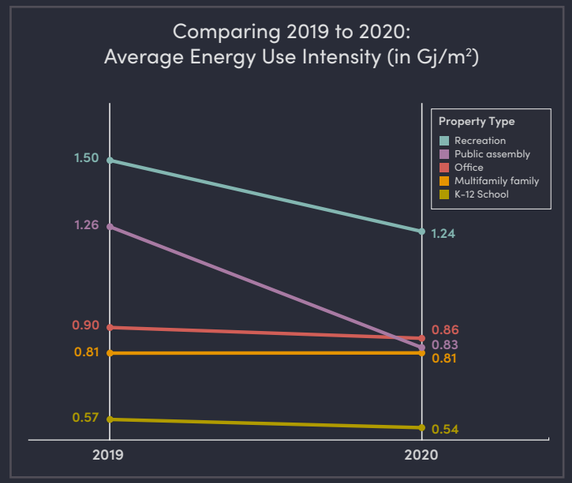
In October 2021, BC Hydro announced a five-year $260 million electrification strategy. The plan seeks in part to help owners and managers of large buildings make the switch from natural gas to electricity. Electricity has a much lower GHG emission factor than gas, and heat pumps are three times more efficient than the best gas-fired equipment. It allocates more than $5 million in incentives and other support for commercial building retrofits and electrification of new buildings, plus an expanded Energy Manager program and increased study and implementation funding for commercial customers.

The Building Benchmark BC data set highlights the commercial and institutional building types that may be worth special attention in electrification incentive efforts: recreation centres with pools and ice rinks, urgent care centres (in remote areas), large hospitals, outdoor pools, and residential care facilities. If policy makers want to electrify and ultimately decarbonize all buildings, they may wish to start with these.



The Curious Case of the Missing Work-From-Home Data Spike

Unsurprisingly, the Building Benchmark BC 2020 data set reveals a significant drop-off in energy use intensity (EUI) for rec centres and other buildings where large groups typically congregate. As these buildings shut their doors to reduce the spread of COVID-19, building energy managers effectively shifted the heating, cooling, and ventilation systems into idle. But what about schools and offices?



Energy use declined somewhat in office buildings and primary and secondary schools, as many employees began to work from home and teachers delivered their lessons remotely. We expected to see a corresponding increase in energy use intensity in condos and apartment buildings as a result of this shift in working and learning location. But we didn't.

Why not? Why did working and learning from home not noticeably increase power consumption in multiple unit residential buildings? It's possible that people may have been routinely leaving their lights and home computers on when they weren't home in 2019, or that the heating and cooling loads in these buildings don't adjust for occupancy. Or it could be that the increase in home energy use shows up more sharply in single-family detached homes, which we don't track.

We're not certain, but it is an intriguing mystery. We hope to unravel this one as we close out another year and begin to crunch the 2021 numbers. Stay tuned!

The Building Performance Scorecard

When a property owner or manager submits their building's energy and emissions data to Building Benchmark BC, they receive back a performance scorecard. Here we offer a scorecard of one building chosen at random from the full collection of 1,163 properties. We've removed identifying info, and highlighted some of the information it provides.

This year, we've boosted the Scorecard with more insights, including:

- A year-over-year comparison of energy and emissions performance.
- Percentile ranking based on property type for various performance metrics.
- Month-to-month performance (weather normalized, when possible) compared with other buildings.
- An end-use breakdown of energy and greenhouse gas intensity.
- Suggestions on how to improve performance.

Each building gets its own scorecard. The basics appear up here.

The "key stats" give you a snapshot of performance. This building improved its GHGi, but poorly compared to its peers.

BUILDING BENCHMARK BC grid by open

Building Name
555 Main St.
Reporting Period: **2020 Calendar Year**
Property Type: **Office**
Square Footage: **17,578m²**
Year Built: **1968**

85	Number of properties of the same type as yours.
-17%	Your trend in GHGi since the previous year. (greenhouse gas emission intensity, $kgCO_2e/m^2$)
68 / 84	Your rank in GHGi compared to the same property type. (where 1st is the lowest emitter)
525 / 854	Your rank in GHGi compared to the whole Building Benchmark BC dataset.

Year-Over-Year

A snapshot of your yearly performance metrics compared to buildings of the same property type, including your recent trend. Note for percentiles: a high percentile means "good" performance and 100% means "best performer".

	2019	2020	Since 2019*
GHGI Greenhouse Gas Intensity	34.2 $kgCO_2e/m^2$ 11th percentile	**28.4** $kgCO_2e/m^2$ 20th percentile	-17% avg building -2%
GHG Total Greenhouse Gas	604.4 tCO_2e 5th percentile	**498.7** tCO_2e 10th percentile	-17% avg building -2%
Site EUI Site Energy Use Intensity	308.4 kWh/m² 15th percentile	**261.0** kWh/m² 23rd percentile	-15% avg building -8%
ENERGY STAR	56 39th percentile	**66** 36th percentile	+18% avg building +12%

Energy use intensity is an indicator of energy efficiency, expressed as the energy consumed by the building in a year, divided by its total area.

How did you do compared to last year? Find out here...

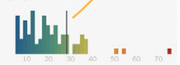
... and see how that compares to your class.

Visualize how your building stacks up against the group on greenhouse gas emissions and energy.

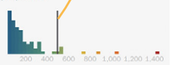
Current Year Benchmarks

For the most recent year of data, a comparison of your building performance (the black line) against buildings of the same property type.

GHG Emissions Intensity
68 out of 84 properties
28 $kgCO_2e/m^2$



Total GHG Emissions
77 out of 84 properties
499 tCO_2e



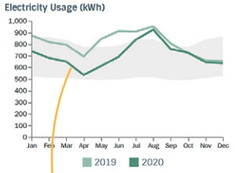
Site EUI
66 out of 84 properties
261 kWh/m²

Energy Star Score
51 out of 78 properties
66

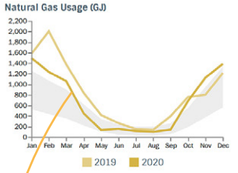
Monthly Performance

A comparison of your building's monthly energy consumption, by energy type, year-over-year. Note that the data here is "raw", i.e., it represents billed data, and is not weather normalized.

Electricity Usage (kWh)



Natural Gas Usage (GJ)



See your monthly performance...

... and the average performance of the group (the grey band).

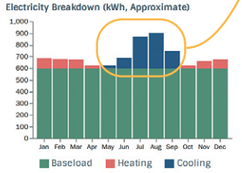
Ever wonder where your energy goes? Find out if it's baseload, heating, or cooling.

Here, electricity consumption bumps up in the warmer months, as active cooling equipment kicks in.

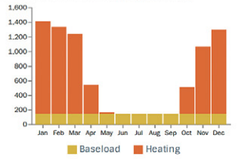
Energy Load Breakdown

A breakdown of your building's monthly energy consumption, by energy type, into its main components: heating load, cooling load, and baseload. The data is modelled based on this year's performance.

Electricity Breakdown (kWh, Approximate)



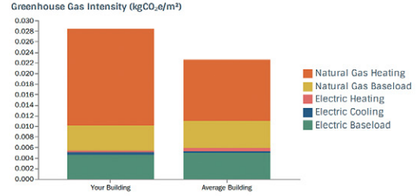
Natural Gas Breakdown (GJ, Approximate)



Greenhouse Gas Intensity Breakdown by End-Use

A breakdown of the total greenhouse gas intensity of your building by end-use. In other words, this graph shows you which end-use(s) are the main culprits for GHGs at your property.

Greenhouse Gas Intensity ($kgCO_2e/m^2$)



Need some motivation? We do the math on your annual energy cost savings and carbon savings (if you were to achieve the top quartile of performance)

How can you improve?

This section contains insights and recommendations based on comparing each of your energy loads (heating, cooling, base load) to those from the same property type.

Heating Energy
15th percentile
Reduce: 210 tCO_2e/yr
Save: $55,438.752/yr
If you achieved the **75th percentile** (better than 75% of other buildings), you could save **$55,438.752** in yearly energy costs and reduce your yearly GHGs by **210 tCO_2e**.

Electric Baseload
43rd percentile
Reduce: 16 tCO_2e/yr
Save: $49,342.056/yr
If you achieved the **75th percentile** (better than 75% of other buildings), you could save **$49,342.056** in yearly energy costs and reduce your yearly GHGs by **16 tCO_2e**.

Natural Gas Baseload
36th percentile
Reduce: 65 tCO_2e/yr
Save: $14,244.928/yr
If you achieved the **75th percentile** (better than 75% of other buildings), you could save **$14,244.928** in yearly energy costs and reduce your yearly GHGs by **65 tCO_2e**.

Electrical Cooling
6th percentile
Reduce: 6 tCO_2e/yr
Save: $18,056.288/yr
If you achieved the **75th percentile** (better than 75% of other buildings), you could save **$18,056.288** in yearly energy costs and reduce your yearly GHGs by **6 tCO_2e**.

Visit BetterBuildingsBC.ca for more information about funding and capital incentives available to improve the performance of your building.

Natural gas baseload is typically due to domestic hot water use throughout the year.

BOMA BC: Building Bridges with the Commercial Real Estate Sector

BOMA BC, the industry association representing the interests of the province's commercial building owners and managers, has proven an active partner and strong ally of Building Benchmark BC. President Damian Stathonikos contracted a climate action manager, Jennifer Davis, and the two hosted a webinar and posted a blog focused on educating members on increasing performance requirements.

BOMA BC is also sponsoring the Greater Victoria 2030 District, a collection of 37 buildings hosting 3.6 million square feet of space that will become a hub of thriving high performance buildings. Each participant has committed to reducing operational energy and emissions 50 per cent by the end of this decade. A number of 2030 District buildings are also participating in Building Benchmark BC, and we're sharing data between the programs to reduce reporting. We're grateful for their support and advocacy.

"Many building owners are following Global Reporting Initiative (GRI) principles in their reports to various stakeholders. Benchmarking and setting targets are fundamental to GRI and any standardized reporting platform. Simply put, in the transition to lower-emissions buildings, benchmarking is an integral cog in the wheel."

— Jennifer Davis,
Climate Action Manager, BOMA BC

"We think Building Benchmark BC is a great way for people to understand their building's performance. It is a low-stakes way of getting started, doesn't require a huge investment, and can really pay dividends."

— Damian Stathonikos,
President, BOMA BC

"Benchmarking allows us to find out which buildings are the least efficient compared to others that are of a similar nature, which helps us prioritize."

— Jason Fawcett,
President, Kelson Group

Kelson Group: Bringing Apartment Buildings Up to Date

As president of Kelson Group, Jason Fawcett oversees a diverse portfolio of rental MURBs in 10 cities across British Columbia and Alberta.

The company owns, manages, and develops properties that include mid-century three-storey walk-ups, concrete towers, townhomes, and recent apartment builds in Kamloops, where the company is based.

Fawcett knows that virtually all of them will eventually need upgrades to bring them into compliance with looming building climate regulations, which is why he joined Building Benchmark BC.

"We've got this variety of older properties that we know need to be modernized," he says. "But there's also those that are in the mid-range, performance-wise. And others that are very efficient and new. So we are trying to educate ourselves as much as possible, and learn more about our obligations and the best investments for our buildings."

Fawcett says Building Benchmark BC is giving Kelson unprecedented visibility into its performance.

"Benchmarking allows us to find out which buildings are the least efficient compared to others that are of a similar nature, which helps us prioritize," he says. "We're already doing some benchmarking between our properties, but now we have that information from our peers, to learn if others are doing better or worse than us, and confirm if we are heading in the right direction or if there's more we need to do."

Kelson says that his industry is working hard to figure out the shift to high-performance buildings. "There are a lot of great technologies that are coming, and it's just going to take effort on everybody's part. We all want to do the right thing and make the right decisions, for our companies and for our residents."

Building Performance Requirements Advance

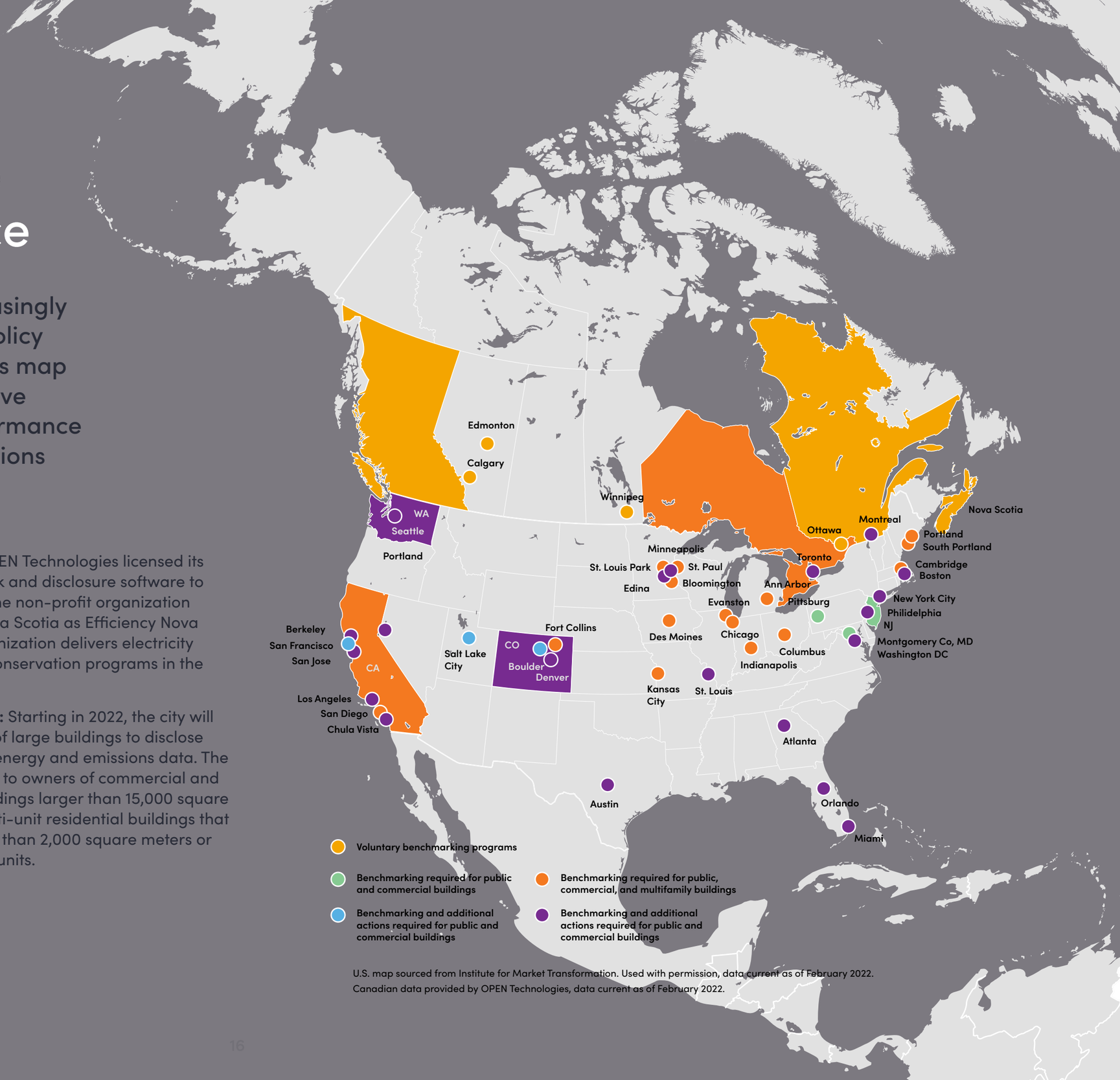
Governments across the continent are increasingly turning to carbon pollution standards as a policy mechanism to reduce building emissions. This map identifies cities, states, and provinces that have some mandatory or voluntary building performance benchmarking in place. Here are a few additions from this past year:

City of Toronto: In July 2021, the city passed an Existing Building Net Zero Strategy that sets the stage for the phasing in of mandatory emissions performance standards for buildings. Those will kick in starting in 2025.

State of Colorado: In June 2021, the State of Colorado passed a building performance standard, becoming the second U.S. state to do so after Washington. The two states join the cities of New York City, St. Louis, and Washington DC in requiring that buildings meet minimum energy and emissions performance levels.

Nova Scotia: OPEN Technologies licensed its GRID benchmark and disclosure software to EfficiencyOne, the non-profit organization operating in Nova Scotia as Efficiency Nova Scotia. The organization delivers electricity efficiency and conservation programs in the province.

City of Montreal: Starting in 2022, the city will require owners of large buildings to disclose their property's energy and emissions data. The new rule applies to owners of commercial and institutional buildings larger than 15,000 square meters, and multi-unit residential buildings that are either larger than 2,000 square meters or with 25 or more units.



U.S. map sourced from Institute for Market Transformation. Used with permission, data current as of February 2022.
Canadian data provided by OPEN Technologies, data current as of February 2022.

Monica Samuda, District of North Vancouver

"Part of what is both exciting and frustrating is that the result of this work is often invisible. When you waste energy, it doesn't spill on the ground or make a big pile in the middle of the road. You can't see what that impact is. Building Benchmark BC offers us a way to share our data and put it on a map, and literally be able to see it with these dots."

People don't typically get choked up when an old and inefficient building heating system is decommissioned. Someone unplugs it, and someone else hauls it away.

But District of North Vancouver energy manager Monica Samuda found herself *verklempt* last fall as she watched a crane lift an obsolete chiller off the roof of the District Hall—one of the last steps of a five-year retrofit project she's been working on.

"I actually cried," Samuda recalls. "Only the District's swimming pools and ice arenas have larger energy-using equipment." (The chiller was long past its best-before date, and the facilities team did not need to replace it with a new version of the same machine, as a new high-performance air-source electric heat pump was taking over its duties.) Eventually, with additional equipment and controls to follow, and pending a final energy model, she expects the upgrades will reduce District Hall's emissions 75 per cent below 2011 levels by 2023.

That was just one project in a long list of building performance upgrades across the District of North Vancouver—one of five new jurisdictions to join Building Benchmark BC this year. Samuda has earned a reputation among her peers for effectively using building performance data to leverage the asset management process and gradually decarbonize the district's building stock.

"Benchmarking is the second step after measuring," she says. "Measure, benchmark, do better. Those are the first steps."

Samuda has so far added about 36 of the District's buildings to the Building Benchmark BC database. She hopes benchmarking will encourage local governments to compare their buildings with those of their neighbouring jurisdictions, and also increase data transparency with industry and residents.

Maxwell Sykes, City of Surrey

As the City of Surrey's Climate and Energy Manager, Maxwell Sykes is the point person on building performance in one of British Columbia's fastest-growing communities. The City has added its own buildings to Building Benchmark BC—and is encouraging private-sector building owners to follow its lead.

On why it makes sense for jurisdictions to join:

"It is really useful for the City of Surrey to have a centralized place where the performance of a whole bunch of other buildings, just like ours, are captured using the same methodology. Building Benchmark BC is now step one, the first place we'll check to learn how our buildings are performing relative to others. It tells us where we could be performing better. But, more importantly, it helps us identify which buildings to focus on next."

On the importance of having good performance data in the energy transition:

"There are tens of thousands of buildings in Surrey, and all of those buildings have their own little unique pieces to them. So if we, as authorities having jurisdiction, or as collaborators with the Province, have a better sense as to what is happening in those buildings, we can do a better job of designing, developing, and offering policies, programs, and regulations that are targeted towards our community's real building stock."

On why it makes sense for property owners:

"There are a series of commitments in the Clean BC 2030 Roadmap and in Metro Vancouver's Climate 2050 Strategy that will involve imposing GHG requirements on buildings. These sorts of 'building performance standards' are getting a lot of attention, with some cities already adopting them. If you're a building owner subject to these forthcoming regs, you will want to make sure that you understand where you're at. And, ideally as soon as you can, you can account for them in your equipment and capital replacement and maintenance plans. If you don't want to do anything—or really think about this—until a reg comes in, that's fine. But if you get that data and information done now, especially with an easy and low-cost program like this one, you'll have a much easier time figuring out where to go when you get there."

"Building Benchmark BC is now step one, the first place we'll check to learn how our buildings are performing relative to others. It tells us where we could be performing better. But, more importantly, it helps us identify which buildings to focus on next."

The Coming Era of Building Performance Requirements

British Columbia policy makers at all levels of government are broadcasting loud and clear signals to building owners and managers. The landscape of building performance regulations is shifting, and new requirements are in the works. Here's where we are and what lies ahead.

2021

In March, the Province of British Columbia announced a sector-specific target range for buildings and communities. By 2030, industry must reduce emissions from buildings and communities between 59 and 64 per cent below 2007 levels.

In November, the province increased its climate ambition with the Roadmap to 2030, an update to its CleanBC plan. The Roadmap includes a number of building-sector commitments, which we have detailed in this timeline.

2022

City of Vancouver staff will bring forth recommendations on building energy benchmarking in large commercial and multifamily buildings.

In partnership with industry associations, the City of Vancouver will launch programs to support building owners on building energy benchmarking.

2023

The City of Vancouver will require owners of commercial and multi-family buildings larger than 5,000 square meters to benchmark and report the energy and emissions performance of their properties.

2024

The Province of British Columbia aims to release a "retrofit" building code that will require increased building performance at the time of alterations.

2025

The Province of British Columbia will require greenhouse gases across the economy to drop 16 per cent below 2007 levels. It will also review its buildings and communities target and consider narrowing its percentage range.

The City of Vancouver will implement its first building performance standards to reduce climate pollution from existing buildings. Initially, limits will only apply for detached homes and commercial office and retail buildings larger than 10,000 square metres. The rules will target the city's worst performing buildings that can be improved with simple, low-cost, and high-savings measures.

2030

The Province of British Columbia will require all new buildings to be zero carbon, and all new space and water heating equipment will "meet the highest standards for efficiency." The government has since defined this as 100 per cent or greater, which essentially eliminates replacement fossil fuel furnaces and boilers.

Metro Vancouver will require all existing buildings in the region to reduce their greenhouse gas emissions 35 per cent below 2010 levels.

2032

All new buildings in British Columbia will be required to achieve a net-zero energy ready performance level.

2050

British Columbia will meet net-zero emissions across the economy.

Join the Movement.

On the Building Benchmark BC disclosure site, visitors can sift and sort the benchmarking data. Use sliders to filter the data set by community, building type, emissions intensity, and more, all rendered in real time at buildingbenchmarkbc.ca/data.

Intrigued by what you've seen here? We welcome anyone to take a deeper dive into the data.

→ buildingbenchmarkbc.ca/data

Building Benchmark BC is now inviting building owners and managers to participate in the program's third year. Take the first step towards dramatically improved visibility of your property's energy and climate performance by completing our registration form.

We are also welcoming additional jurisdictions on board as partners.

To learn more and receive a welcome package, please contact support@buildingbenchmarkbc.ca.

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