



GreenCare™
2021
Environmental Performance
Accountability Report

**Environmental
sustainability is
everyone's story.**

Providence
HEALTH CARE

How you want to be treated.

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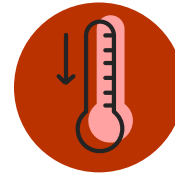
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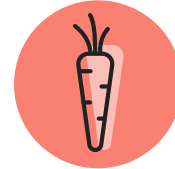
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Climate Change



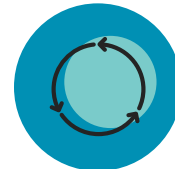
Energy and Carbon



Food



Leadership and Innovation



Materials



Transportation



Water



This is an interactive report. Easily navigate to different sections by clicking on the text headings.

To view a different health organization report, select it from the navigation bar to the left. Each report details progress and achievements in the seven Focus Areas.

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Those of us working in health care over the last two years have seen firsthand how the COVID-19 pandemic has reshaped much of our landscape, both in our health system and society at large. It has been a time of great struggle, stress and loss. At the same time, catastrophic events of our climate reality have brought environmental health to the fore in health care and in the communities we serve. From atmospheric rivers to heat domes to wildfires to drought, no one in British Columbia has been left unscathed.

No one should be in any doubt as to the scale of this crisis — or the urgency of action being taken to address it.

In the face of this climate emergency, Providence Health Care staff have continued to make a real difference, embracing and acting on our commitment to environmentally sound health care that will not simply help us to reduce the harm our activities cause to our environment and health, but allow us to build a truly healing system.

Sustainability is one of the five foundational principles of our Mission: Forward Strategic Plan. At its core, our sustainability plan is about ensuring we can continue to pursue our mission into the future through proactive financial and environmental stewardship. We are committed to reducing our environmental footprint to achieve — and hopefully exceed — national benchmarks for sustainable, green and minimal impact.

We have so much more work to do — but we're making progress, because day in and day out, staff across Providence are doing the work.

Our **Green+Leaders** continued to push for and achieve environmental sustainability innovations and change. Our Capital Project and Facilities Maintenance & Operations teams prioritized and executed the design and construction of healthy and green health-care facilities and infrastructure, along with operational changes that have resulted in tangible environmental and health outcomes. Departments across our health organizations challenged themselves to find ways to access resources and co-develop projects that stand as models of sustainability. And individuals at all levels

of responsibility made decisions to expand active and clean transportation, improve energy and water-use efficiency, build greater health system climate resilience, support and strengthen opportunities for staff engagement, and develop new strategies to further reduce waste.

I'm proud to be part of Providence, and I'm very thankful for the passion for sustainability that Providence staff bring to their jobs, our organization and our health system.

This 2021 Environmental Performance Accountability Report is evidence of our united efforts to address our climate reality. Read more to learn about how we can achieve better health and well-being for our teams, communities, planet and the patients for whom we care.



Fiona Dalton,
President and Chief Executive Officer
Providence Health Care | Driven by compassion
and social justice, we are at the forefront of
exceptional care and innovation

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Environmental sustainability
is everyone's story.



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1.1 Executive summary

The 10th annual Environmental Performance Accountability Report (EPAR) acknowledges the hard work, commitment, progress and success of everyone at Providence Health Care in their continuing efforts to achieve environmental sustainability in all facets of our health system.

2021 was a year of many firsts and changes, along with continued work and new challenges. Over the course of the year, Providence reached sustainability milestones and achievements that we are proud to share, as exemplified by the many staff who have shown initiative and commitment to the meaningful change necessary to meet the 2025 and 2030 targets for environmental sustainability.

We also recognize that we are not trending to meet all of the targets necessary to achieving a truly sustainable health system. In some areas, pandemic and extreme weather events have presented challenges to our progress. In others, more work is needed due to complex, multiple department engagement and systemic change. Although older facilities and increasing demand for facility space present a challenge, they are also an opportunity to rethink health-care design, construction and operations. To ensure that we get back on track to meet our 2025 and 2030 targets, we know that there must be continued progress in decision-making and the action that we take.

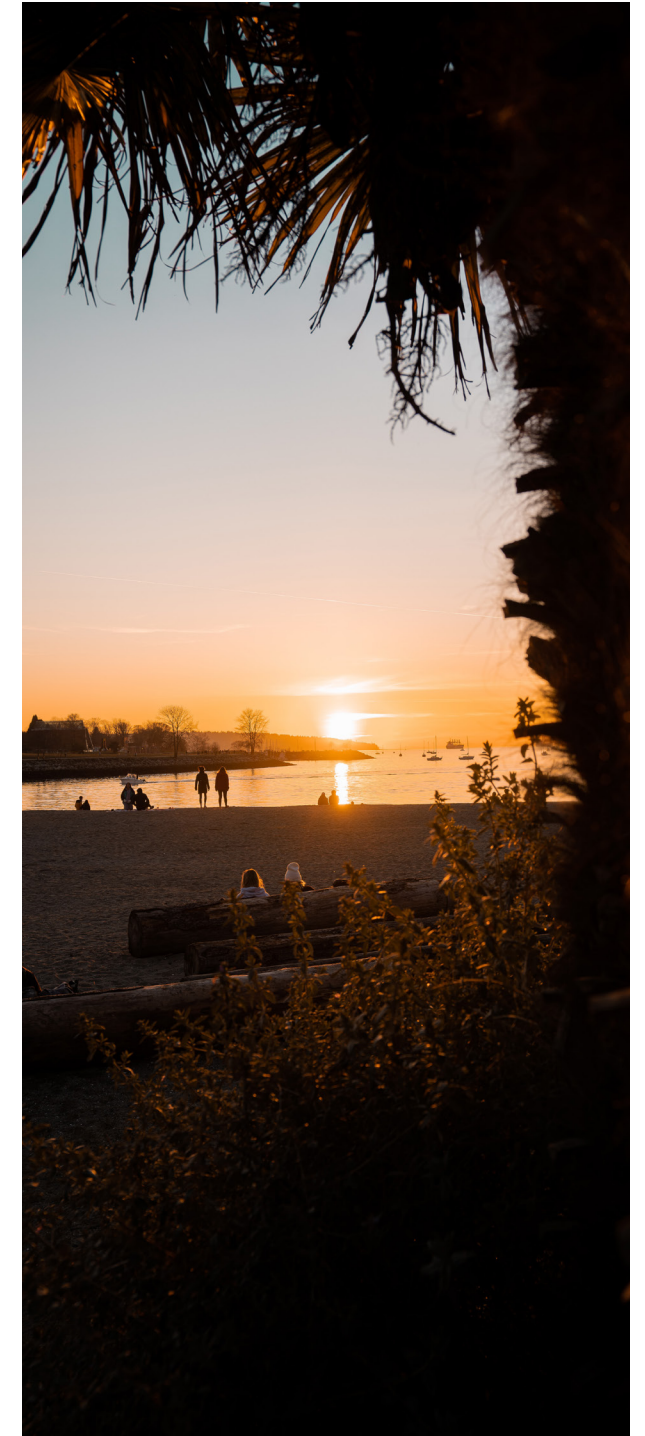
No individual, department or group can do it alone.

As this report shows, there is both a need and opportunity for staff and medical staff across Providence to continue to collaborate more closely in clear, consistent and invested efforts for change. Together we must:

- ▶ Inform and motivate each other to take action to nurture and protect our planet.
- ▶ Share, learn about and co-develop action plans for sustainability.
- ▶ Innovate, and scale up and out the approaches that are working.
- ▶ Transform our processes and health system away from business as usual.
- ▶ Reinforce and celebrate the change we want to see.

Addressing climate change and restoring health to our health system, environment and planet is something we need to work on every day. From departmental meetings, to short- and long-term planning, to decision-making and budgeting, environmental sustainability must be a priority in all aspects of our workplace and in our daily lives.

We are confident that we can face the challenges head on and do the work necessary to deliver low-carbon, resilient and environmentally sustainable care for the health of people, place and planet.



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Here's a summary of our 2021 milestones and achievements, and what to watch for in 2022 and beyond:

First ever!

- ▶ Circular Health Care Framework created to support departments at Providence to develop strategies to avoid and reduce waste

Refreshed and updated

- ▶ Energy and Environmental Sustainability (EES) team's Strategic Framework updated to reflect the importance of collaboration for low-carbon, resilient and environmentally sustainable health care
- ▶ GreenCare website launched, resulting in an average of 1,300 users a month and an increase in Green+Leader registrations by 75% (from 3/month to 5.25/month)

Infrastructure projects

- ▶ 24 infrastructure projects that are expected to reduce carbon emissions by more than 8,000 tCO₂e per year

Environmentally preferable decision-making

- ▶ Environmental questions were used in annual pre-qualification for Facilities Management contractor services and in the disposable surgical packs, drapes and gowns requests for proposals (RFPs).
- ▶ Staff sustainable commuting choices have increased by 7% compared to 2020.

Awarded

- ▶ [2021 FortisBC Public Sector Energy Efficiency In Action](#) winner
- ▶ Three grants totalling \$2,850 were sponsored by the Providence Health Care Workplace Initiative Fund for environmental sustainability projects focusing on waste reduction and staff well-being.

2022 highlights

Cross-health-authority and departmental participation in the [2021-2023 Nourish Anchor Cohort Collaborative](#) to tackle interconnected challenges related to a lack of low-environmental-impact, healthy and culturally appropriate food choices in health-care facilities

PHSA Supply Chain (the procurement group for all B.C. health authorities) initiation of a working group on sustainable procurement

Sharing the [Low Carbon Resilience & Environmental Sustainability Guidelines for New Construction \(LCRES Guidelines\)](#) with Capital Project teams and other infrastructure project partners

Modifying our environmental sustainability policy to align with updates to legislation, mandates and other guidance from government

Sharing the [Climate Change and Health Adaptation Framework](#), developed as part of the HealthADAPT project including current actions and new priorities up to 2026

“
Given our climate reality, changing how we approach environmental sustainability at an organizational level is one of the most fundamental challenges of our time. But people are taking action, and it's so encouraging and rewarding to work alongside them across teams and departments, in such a spirit of collaboration.

– Mauricio Acosta, Executive Director, Facilities Management and Business Performance

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1.2 The 2021 Dashboard: Setting sustainability targets and measuring results

2021 was a year of reflecting on progress and shifting gears to determine action moving forward. The Energy and Environmental Sustainability (EES) team refreshed its purpose and approach; identified 2025 key performance indicators (KPIs); and, in some Focus Areas (Climate Change, Leadership and Innovation, and Transportation), identified new targets to help us on our journey. Captured in the 2021 Dashboard are some, but not all, of the targets and KPIs that reflect progress in each of the Focus Areas. There are no targets and KPIs related to the Climate Change and Food Focus Areas in this year's dashboard as these are still relatively new for Providence. They are, however, covered in section 3.0: We're Finding Solutions: Together.

Targets and KPIs help us all to determine challenges, recognize achievements and guide the actions we need to take to transform our health-care system toward environmentally sustainable and climate-resilient care for healthy people, place and planet. Strengthening our partnership approach to how we take action and measure progress will be vital to increasing our impact as we move towards our 2025 and 2030 targets. For information on the methodology behind the KPIs below, look [here](#).

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Energy and Carbon

Goal: Reduce our carbon footprint by increasing energy efficiency and reducing reliance on fossil fuels.

2025 Target (baseline 2007)	2021 Results	Traffic Light	2030 Target
Reduce energy-use intensity (ekWh/m ² /year) by 7%	0.7%	●	15%
Reduce absolute in-scope GHG emissions (tCO ₂ e/year) by 16%	-2.7%	●	50%
Reduce in-scope GHG-emissions intensity (tCO ₂ e/year/m ²) by 32%	2.2%	●	50%

- 2025 target on track
- 2025 target behind schedule
- 2025 target requires attention

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Leadership and Innovation

Goal: Collaboratively foster a culture of transformative leadership and innovation for environmental sustainability in health care.

2025 Target	2021 Results	Traffic Light	2030 Target
Increase total number of Green+Leaders (registrations) to 74	39	●	116

- 2025 target on track
- 2025 target behind schedule
- 2025 target requires attention

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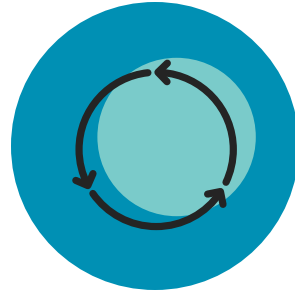
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Materials

Goal: Choose materials and products that contribute to human and environmental health, while avoiding waste and unnecessary chemicals.

2025 Target		2021 Results*	Traffic Light	2030 Target
Increase waste-diversion rates (% of waste diverted, annual average) to	42%	35.0%	●	50%
Decrease waste-intensity rates (kg/m ² /year) to	13.5	16.6	●	10.0

- 2025 target on track
- 2025 target behind schedule
- 2025 target requires attention

* Our waste diversion reflects only waste segregation, as our recycling provider paused the collection of recycling for most of 2021 due to concerns for staff safety during the COVID-19 pandemic. All recycling and general garbage streams were instead taken to a local waste-to-energy facility. Recycling was restarted in smaller facilities in November 2021.

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Transportation

Goal: Increase access to and use of transportation modes that reduce negative environmental impacts and benefit human health and wellness.

2025 Target	2021 Results	Traffic Light	2030 Target
Increase proportion of staff commuting by sustainable transportation modes to	60.3%		

- 2025 target on track
- 2025 target behind schedule
- 2025 target requires attention

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Water

Goal: Minimize water consumption to reduce demand on natural resources and impact on our living environments.

2025 Target (baseline 2010)	2021 Results	Traffic Light	2030 Target
Reduce building water (use) performance intensity (m³/m²/year) by 	12.5%		

-  2025 target on track
-  2025 target behind schedule
-  2025 target requires attention

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2.0 Our Sustainability Story



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2.1 Providence's commitment to sustainability

Providence's strategic priority

Sustainability is a foundational principle of Providence's Mission: Forward Strategic Plan. At its core, our sustainability plan is about ensuring we can continue to pursue our mission into the future by reducing our environmental footprint to achieve — and hopefully exceed — national benchmarks for sustainable, green and minimal impact. Everyone at Providence has a role to play. As you read this report, we encourage you to draw inspiration from the actions of your colleagues and Providence's foundational commitment to the sustainability in your own actions. Our goals include:

- ▶ Ensuring Providence's financial plan is sustainable and has diversification of our revenue sources to support capital infrastructure and innovations needed to deliver our Mission: Forward Strategic Plan
- ▶ Being the public health-care sector environmental sustainability leader in B.C. by achieving the goals laid out in the [CleanBC plan](#)

Policy

Achieving energy and environmental sustainability is a priority for Providence. Our [environmental sustainability policy](#) highlights the importance of developing a triple-bottom-line approach to sustainability, which balances ecological, societal and economic imperatives, and recognizes the link between a healthy environment and a healthy population. As such, we recognize our duty to minimize our environmental impact through leadership and strategic partnerships, facility construction and operations. Further, we recognize the need to modify this policy to align with updates to legislation, mandates and other guidance from government, an activity that will be initiated in 2022.

Staff

95% of staff agree^A that health-care organizations should demonstrate leadership when it comes to environmental health and wellness in the workplace and our community. 94% agree^A that health-care organizations should work to support healthy policies that support action on climate change and biodiversity loss.^E

We would like to humbly and gratefully acknowledge that the work guided by our Mission: Forward strategic plan will be delivered on the unceded, traditional and ancestral lands of the Coast Salish people — in particular, the Musqueam, Squamish and Tseil-Waututh.

We acknowledge that there is much to be learned about environmental stewardship from these nations and communities.

“
In alignment with and in support of the efforts of everyone at Providence, sustainability is one of the five foundational principles of Providence's Mission Forward: Strategic Plan. At its core, our sustainability plan is about ensuring we can continue to pursue our mission into the future through proactive financial and environmental stewardship. We are committed to reducing our environmental footprint to achieve — and hopefully exceed — national benchmarks for sustainable, green and minimal impact.

– Fiona Dalton, President and Chief Executive Officer

Learn about who Providence is and what they do, [here](#).

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Regulatory guidance

The [Climate Change Accountability Act](#) (CCAA) and the [CleanBC plan](#) have set ambitious targets for public sector organizations, requiring a reduction in emissions by 40% by 2030, 60% by 2040, and 80% by 2050. The CleanBC plan is the pathway to achieve these targets and (over the 2007 baseline) has set even more aggressive targets of:

50%

reduction in emissions for public sector buildings by 2030

40%

reduction in fleet vehicle emissions by 2030

Of the total measured in-scope emissions generated by Providence sites, over 98% are from buildings, while the remaining 2% are from supplies (paper usage) and transportation (fleet) combined. To achieve carbon neutrality, Providence minimized greenhouse gas (GHG) emissions, reported the remaining GHG emissions, and then purchased carbon offsets. In addition, the CCAA also requires public sector organizations to “manage the risks to the public sector organization that could reasonably be expected to result from a changing climate.”

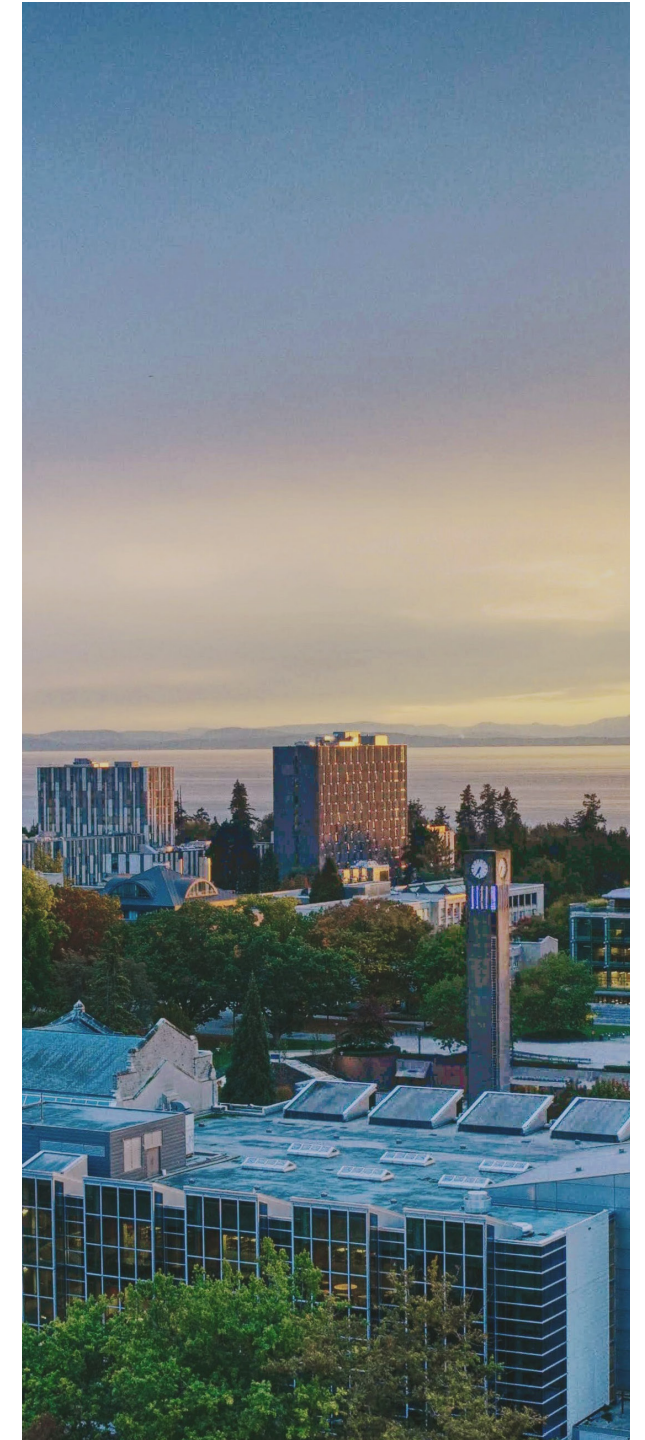


The Providence Climate Change Accountability Report

Each year, along with all public sector organizations, B.C.'s health organizations submit a Climate Change Accountability Report (CCAR) (formerly Carbon Neutral Action Report (CNAR) to the Climate Action Secretariat of the provincial government. This is a mandated reporting of GHG emissions and other data, and current and planned actions to reduce GHG emissions.

In 2021, and including prior year adjustment, Providence had a carbon footprint offset of 11,838 tonnes of carbon dioxide equivalent (tCO₂e), which was offset at a total cost of \$295,950. This represents a 2.2% decrease in emissions per floor area relative to the carbon footprint base reporting year, 2007.

[Download the Providence Climate Change Accountability Report](#)



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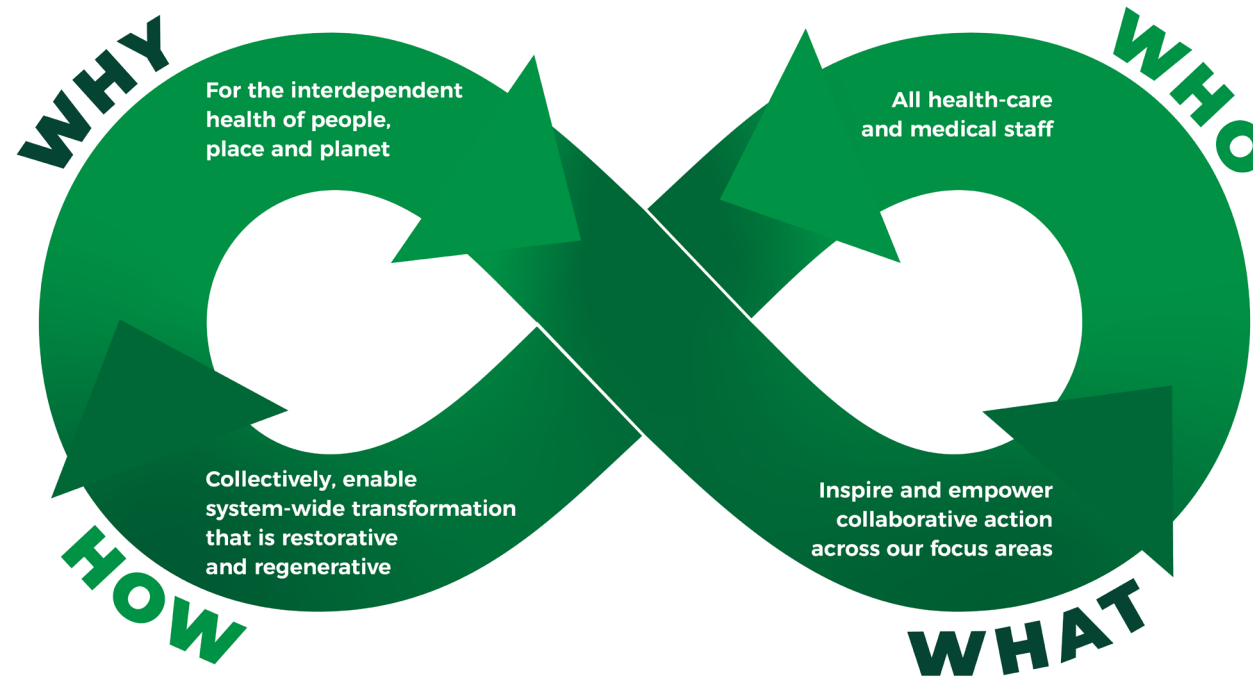
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2.2 The Energy and Environmental Sustainability team

The Energy and Environmental Sustainability (EES) team is driving the push for low-carbon, climate-resilient and environmentally sustainable health care, but realize it can't be done alone.

In 2021, the EES team updated its strategic framework. Because environmental sustainability work is a journey that doesn't end, but continually refines the why, the what, the who and the how, in order to have increasing and meaningful impact, the framework is presented as an infinity symbol. This symbol also reminds us of the interrelationships of all aspects of environmental sustainability.

The EES Strategic Framework



THE EES TEAM'S PURPOSE:

To inspire and empower everyone we work with to collaboratively enable systemic transformation so that we can restore and regenerate the interdependent health of people and planet — now and for future generations.

“

I am very passionate about our environment and the need to reduce our emissions and adapt to climate change — and the interrelationship between the GreenCare Focus Areas and meaningful impact is so essential to this. Leading and being part of a collaborative dynamic team that wants to inspire change is the most rewarding aspect of my work.

– Robert Bradley, Director,
 Energy and Environmental Sustainability

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2.3 Building and operating for energy and environmental sustainability

In the design and construction of new facilities, and in the operation of existing ones, Providence is supporting the highest level of human and environmental health and well-being by:

- ▶ Evaluating and reducing the impacts of climate change on a facility and the surrounding community
- ▶ Assessing how the design, construction and operation strategies of a facility will impact the environment and human health
- ▶ Implementing low-carbon, climate risk and resilience, and environmental sustainability strategies
- ▶ Collaborating with project compliance teams to ensure energy and carbon performance targets are embedded into design and construction agreements
- ▶ Achieving LEED certification (a globally recognized green-building rating system administered by the [Canadian Green Building Council](#))
- ▶ Meeting and exceeding environmental and climate change regulations and targets
- ▶ Drawing on credible evidence that links health outcomes to planning and design of the built-environment (e.g. [The Healthy Built Environment Linkages Toolkit](#))

Our buildings^c

182,550m²

usable facility space

45

distinct buildings

“

The driving factor in our sustainability endeavours certainly starts with passion and enthusiasm for ensuring that our developments, projects and renovations are sustainable – not only to upgrade our facilities to meet our needs now, but for future Facilities Maintenance & Operations staff to use technology and ideas to minimize the impact to our environment. Our staff believe that all changes – big or small – matter, and they simply want to do the right thing. By empowering everyone to bring their ideas to the table, we can all learn and understand new technologies, expand our skill sets, and feel good about our contribution to sustainability.

– Dave Marier, Director, Facilities Maintenance & Operations



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Our LEED projects

LEED certification is a globally recognized symbol of sustainability achievement and leadership. LEED certified buildings save money, improve efficiency, lower carbon emissions and create healthier places for people. They are a critical part of addressing climate change and meeting environmental, social and corporate governance (ESG) goals, enhancing resilience, and supporting more equitable communities.

TOTAL

1
 buildings

799m²
 of building space

CERTIFIED

1
 building

799m²
 of building space

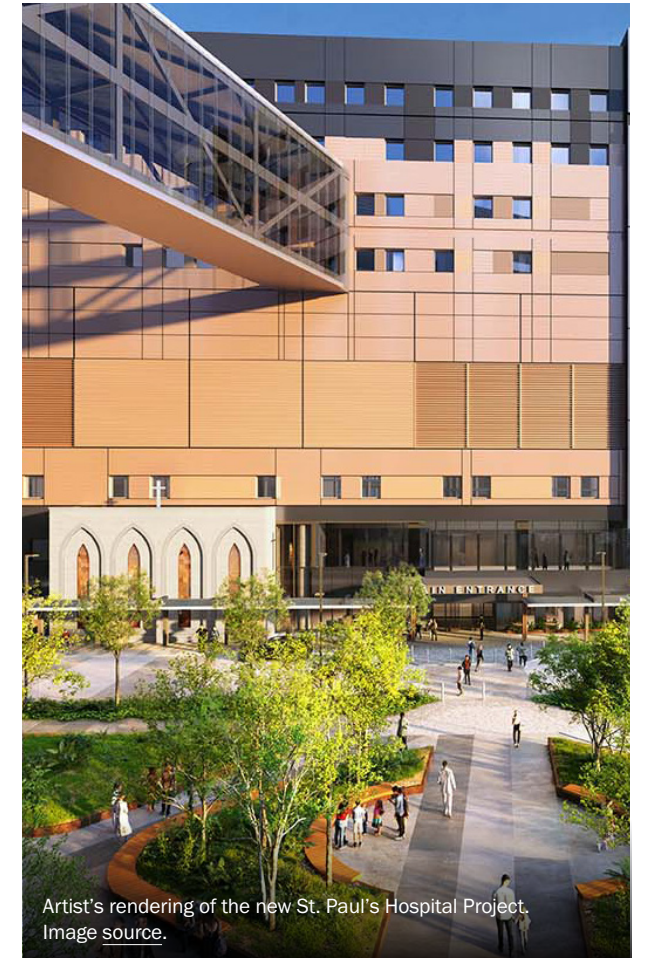
- St. Paul's Hospital 9A Mental Health Unit (Providence Health Care Society)

REGISTERED (set to be certified)

1
 building

137,000m²
 of building space

- The new St. Paul's Hospital



Artist's rendering of the new St. Paul's Hospital Project.
 Image source.

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Vancouver Coastal Health EPAR

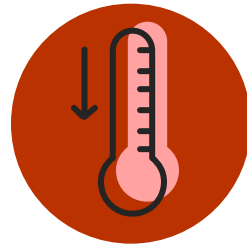
Fraser Health EPAR

**Provincial Health
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3.1 Our Focus Areas

Efforts to transform the system for environmentally sustainable and climate-resilient health care have been categorized into seven Focus Areas. The results in each Focus Area are not limited to work undertaken by the Energy and Environmental Sustainability (EES) team. Results are also a culmination of health-care and medical staff efforts to create environmentally friendly workplaces, along with work undertaken in collaboration and partnership with departments across Providence and B.C. As the title of this section suggests, progress in these Focus Areas is really about finding solutions together.

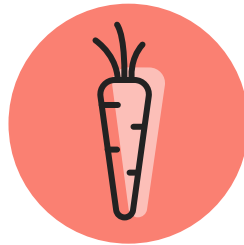
By pursuing meaningful change collaboratively across the health system, Providence can assess its progress and plan for future efforts. Each of the following Focus Areas highlights the associated 2025 and 2030 goals and targets. Each section then outlines 2021 actions and achievements to move towards these targets, as well as stories to highlight each Focus Area. These Focus Areas include:



Climate Change



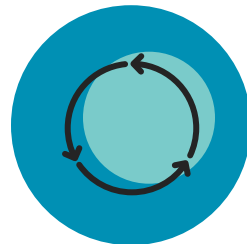
Energy and Carbon



Food



**Leadership and
 Innovation**



Materials



Transportation



Water

In some cases, a target is influenced by but not necessarily aligned with provincial or regional mandates and targets. In others, it is based on aspirational progress that is required based on the urgency of the health system's need to fight climate change.

Want to read stories or find information and resources related to these Focus Areas? Visit [here](#).

Just like the connections between human and environmental health, these Focus Areas are interrelated in that efforts and progress made in one will impact others.

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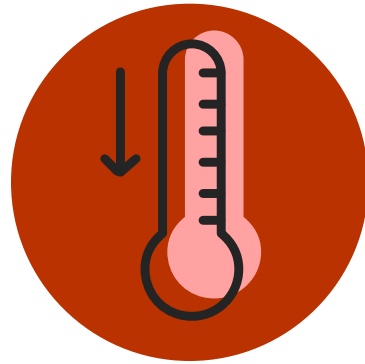
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1. Climate Change

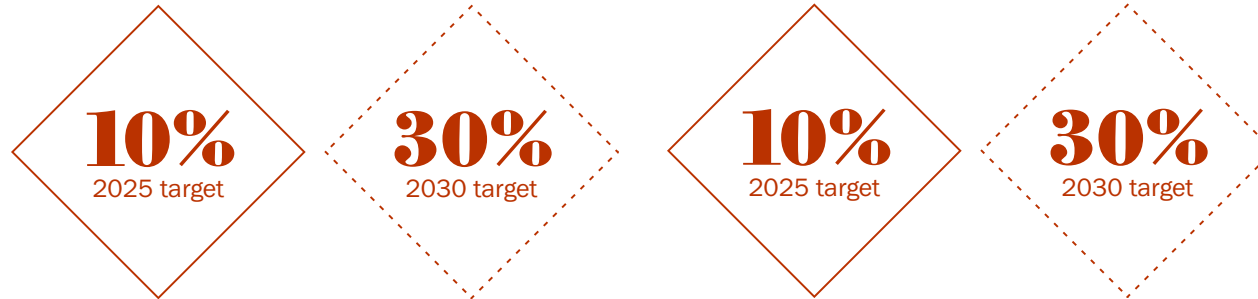
Our goal: Move toward a climate-resilient health system and reduce greenhouse gas (GHG) emissions in facility design and operations.

LEARN MORE

Our 2025/2030 targets (newly created)

Increase the proportion of existing facilities where climate risk and resilience impacts and opportunities are understood.

Increase proportion of relevant infrastructure retrofit projects where climate risk and resilience are considered.



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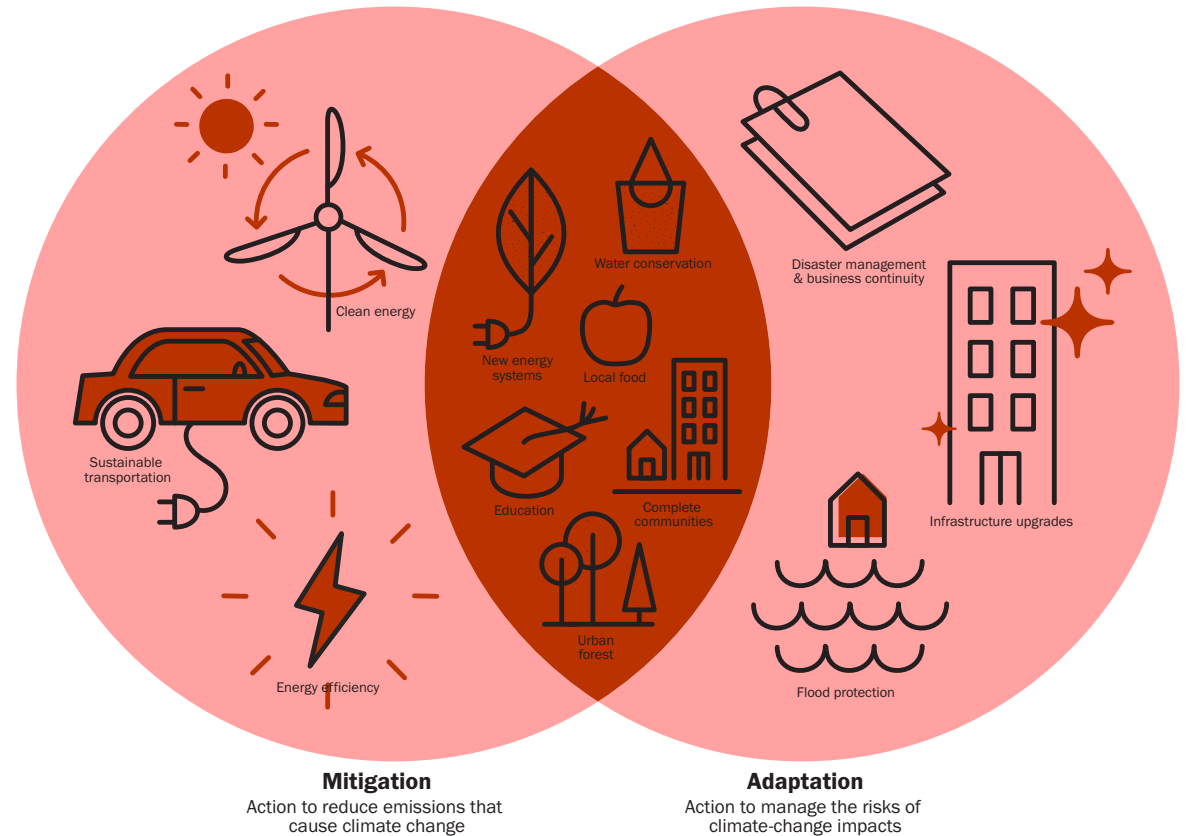
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2021 actions

- ▶ Brought together a range of project stakeholders representing project planning, facilities, clinical service delivery and occupant care, among others, to incorporate climate mitigation and resilience strategies into capital project design and construction, in line with the [Climate Resilience Guidelines for BC Health Facility Planning & Design](#)
- ▶ Worked across EES Focus Areas to strengthen collective understanding of low-carbon resilience
- ▶ Strengthened cross-sectoral relationships and worked with utility partners (i.e. BC Hydro, FortisBC) in relation to integrated planning for existing and new facilities
- ▶ Assessed risks at the site level for owned and contracted facilities across the Providence region

Building climate resilience



HealthADAPT update

The EES team partnered with the Population and Public Health teams for Fraser Health and Vancouver Coastal Health, and Health Emergency Management BC, on the federally funded HealthADAPT project from 2019 to 2022. HealthADAPT began with a climate change and health vulnerability and capacity assessment, which explored the degree to which communities, populations, health facilities and services are susceptible to and prepared for the effects of climate change. Based on the results and extensive engagement, the four partner organizations drafted a [Climate Change and Health Adaptation Framework](#) that outlines current actions and new priorities (finalized in 2022).

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Our partners

- BC Housing
- BC Ministry of Environment and Climate Change Strategy
- BC Ministry of Health
- Canadian Coalition for Green Health Care
- Environment and Climate Change Canada
- First Nations Health Authority
- Health Canada
- Health Emergency Management BC
- Interior Health
- Island Health
- Local governments
- National Research Council Canada
- Northern Health
- Pacific Climate Impacts Consortium
- Population and Public Health
- Simon Fraser University
- University of British Columbia

Our achievements

- ▶ Drafted an update to the [Low Carbon Resilience & Environmental Sustainability Guidelines for New Construction \(LCRES Guidelines\)](#), including standard scope of work language for procurement (finalized in 2022)
- ▶ Completed one climate hazard exposure screen for capital projects at the St. Vincent's Honoria Conway-Heather Assisted Living Facility
- ▶ Undertook a climate resilience compliance audit for the new St. Paul's Hospital project, a first for the organization
- ▶ Completed a physical risk report for numerous Providence facilities to understand potential risk costs under changing climate conditions
- ▶ Added cooling at St. Vincent's: Brock Fahrni Long-Term Care to both improve thermal comfort for residents and reduce GHG by switching from natural gas to renewable natural gas

“
Climate change is an existential threat to human health, our health-care system and society at large. We, as health-care professionals, cannot afford to be reactive to this threat.

– Providence GreenCare Survey Respondent

OUR STORY

Auditing resilient design

For the new St. Paul's Hospital, green design starts from the ground up. The new St. Paul's Hospital on the Jim Pattison Medical Campus, expected to open in 2027, will have sustainability and climate resilience baked into the project's foundation.

The new St. Paul's Hospital has been a major part of the EES team's journey in developing its Climate Resilience Guidelines. Appropriately, it is the first project where the team has initiated step 4 of the process: the resilience compliance audit. Integral Group conducted the resilience compliance audit from early 2021 to early 2022, and confirmed that the design for the new hospital meets established resilience requirements.

To enhance resilience, in times of need the hospital will function as a post-disaster facility. In this capacity, the hospital will be able to operate self-sufficiently during and after a potential event, with emergency power and fuel supplies that can support the entire hospital for 72 hours.

“Starting the climate resilience conversation early in the concept planning stage established resilience as a prevalent influence in the new St. Paul's Hospital design,” says Marc Dagneau, Senior Manager, Design & Project Delivery for the new St. Paul's Hospital and Health Campus Project. Not only does this audit strengthen the new St. Paul's Hospital design, but it also creates learnings that can be applied on other design projects to come, enhancing resilience in the face of climate vulnerabilities well into the future.

Read more ▶

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What do Providence staff and medical staff have to say about the impact of climate change hazards on their work?^B

70%

of Providence staff said their job duties were impacted by extreme weather events in 2021. The most disruptive events were drought/water shortage, heat waves, snow or ice storms, wildfire smoke, and extreme cold.

The most common impacts on job duties were:

- ▶ Staff and/or family members experienced illness related to extreme weather events.
- ▶ Workspace was physically impacted.
- ▶ Child care or other service interruptions made it difficult to come into work.
- ▶ Had to miss work due to personal responsibilities/duties related to the impacts of extreme weather events.
- ▶ Couldn't physically get to place of work.

“What is happening with the environment is going to directly affect health-care services and what needs to be provided. Therefore, it's important to develop policies and advocate for system change to address climate change now.”

– Providence GreenCare Survey Respondent

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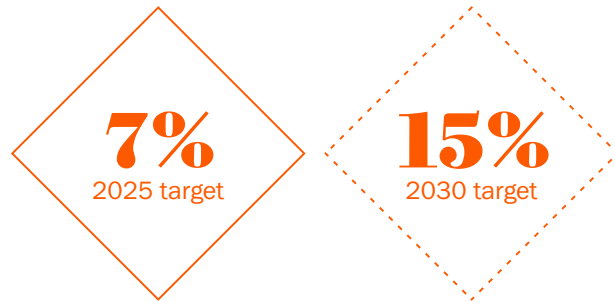
2. Energy and Carbon

Our goal: Reduce our carbon footprint by increasing energy efficiency and reducing reliance on fossil fuels.

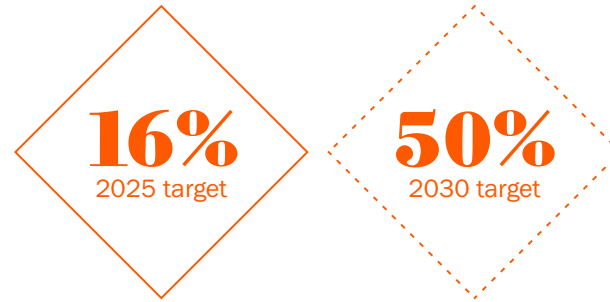
LEARN MORE

Our 2025/2030 targets

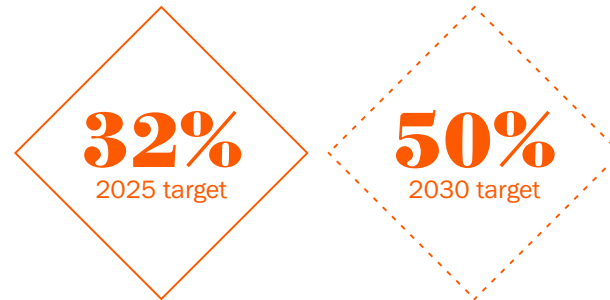
Reduce energy-use intensity by:



Reduce absolute in-scope GHG emissions by:



Reduce in-scope GHG-emissions intensity by:



Snapshot in numbers

\$217,000

invested in energy efficiency initiatives from the Green Revolving Fund

\$3.5 million

invested in carbon reduction projects, including \$1 million from Carbon Neutral Capital Program funding

24

infrastructure projects initiated

80%

reduction in GHG emissions at St. Vincent's: Brock Fahrni

\$295,950

carbon offsets paid to become carbon neutral

\$3 million

in utility incentives received from BC Hydro and FortisBC in fiscal year 2021/2022

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2021 actions

It is important to note that energy and carbon management initiatives work together through coordinated efforts.

- ▶ Implemented 10 energy-saving and GHG-reduction projects, including Thermal Gradient Header technology for waste heat recovery at five core sites (Mount Saint Joseph Hospital, St. Vincent's: Langara, Holy Family Hospital, St. Vincent's: Brock Fahrni and Youville Residence)
- ▶ Invested over \$3.5 million in energy and GHG-reduction studies and project implementation in 2021-2022
- ▶ Completed two lighting energy efficiency projects at St. Paul's Hospital and Mount Saint Joseph Hospital in 2021, which contributed to significant electrical energy cost savings of more than \$100,000
- ▶ Initiated a project at St. Paul's Hospital to switch from a district energy steam to an internal gas steam generation system, which will not only reduce GHG emissions by more than 620 tCO₂/year but will also save more than \$150,000 in operating costs per year. The project study was completed in 2021, and the project will be implemented in 2022. An incentive of approximately \$500,000 from FortisBC was approved for this project.
- ▶ Implemented a controls optimization plan with incentive received from CleanBC for Mount Saint Joseph Hospital, which will improve control and automation of the building
- ▶ Initiated a feasibility study for processing food and organic waste from all sites to convert to useful energy, and we are hoping to move forward with this plan in 2022
- ▶ Initiated a study for St. Vincent's: Honoria Conway-Heather for installation of heat pumps for both HVAC and the hot water system. This study was approved by CleanBC, and implementation will take place in 2022.



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Our partners

BC Hydro²

BC Emergency Health Services

Climate Action Secretariat

Facilities Maintenance & Operations (FMO)

Finance

FortisBC²

Ministry of Environment and Climate Change Strategy

Ministry of Health Capital Services Branch

Municipal governments

Projects & Planning teams

PHSA Supply Chain

Our achievements

- ▶ Implemented Thermal Gradient Header technology for waste heat recovery at St. Vincent's: Brock Fahrni and measurement and verification post-project measures, allowing it to reduce 80% of its fuel consumption compared to 2007 levels
- ▶ Won the [2021 Fortis BC Public Sector Energy Efficiency In Action Award](#)



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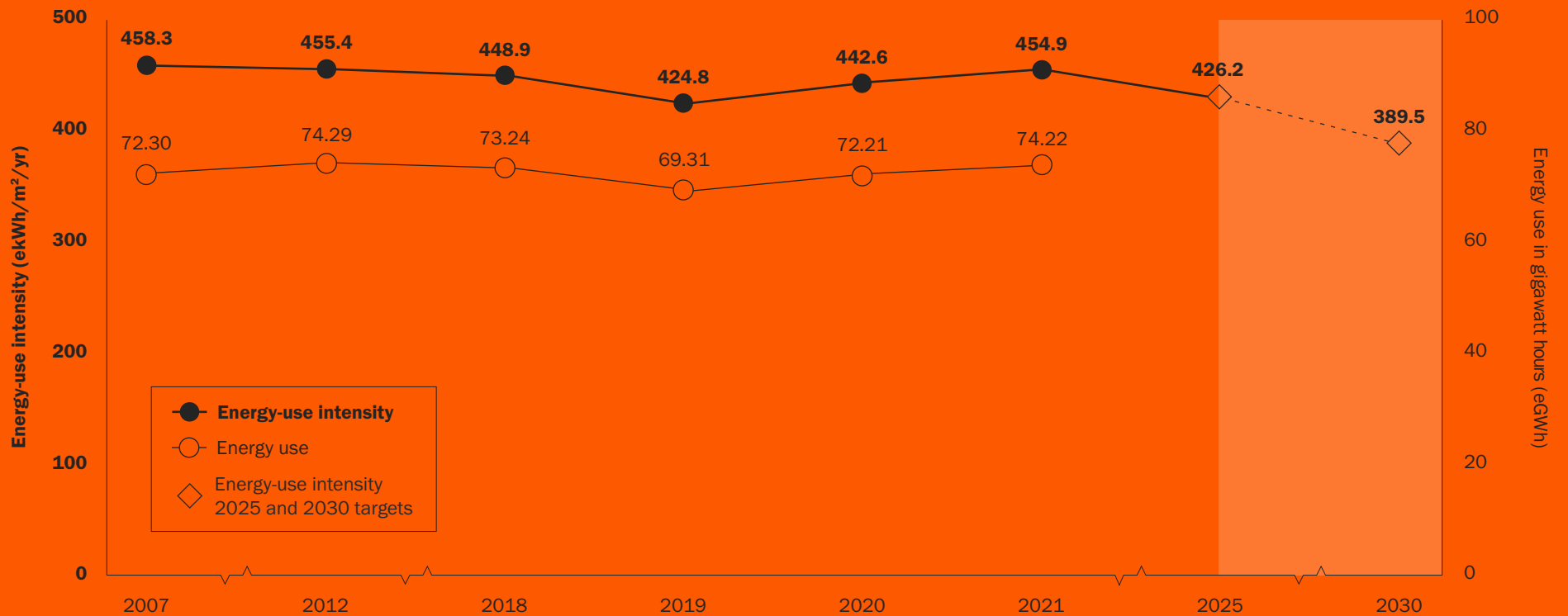
Energy Use and Intensity

Want to learn more about the graphs and how the results are calculated?

VISIT HERE

0.7%↓

Energy-use intensity has decreased by 0.7% since 2007, and, despite an increase of 3.4% in core facility space, our energy use only increased by 2.7%.



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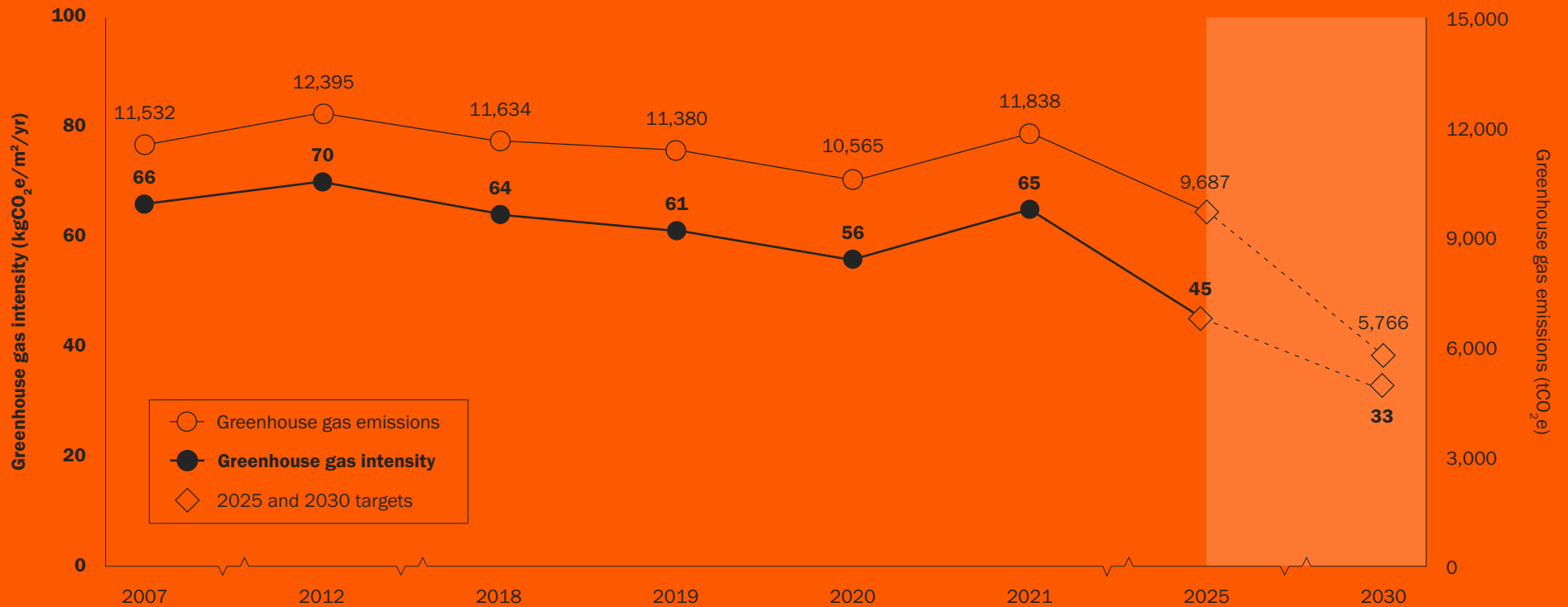
Greenhouse Gas Emissions and Intensity

Want to learn more about the graphs and how the results are calculated?

[VISIT HERE](#)

2.2%↓

GHG intensity has decreased by 2.2% since 2007, and, despite a 4.9% increase in total usable facility space, absolute emissions have only increased by 2.7%.



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Challenges to reaching our targets

- ▶ Meeting the 2030 target for 50% reduction in carbon emissions will require a combination of net zero emission designs for new construction, combined with very aggressive retrofits to existing facilities. To make this shift, designs and technologies to achieve these targets require close, multi-stakeholder collaboration, clear leadership direction, adequate funding, and support from FMO teams.
- ▶ There are challenges related to supply chain delays in delivery of equipment and restrictions to contractor availability.
- ▶ Low-carbon projects are limited by existing electrical capacity, and infrastructure expansion is cost prohibitive.
- ▶ Although renewable gas is a viable low-carbon alternative, at this time provincial supplies are too limited to supply all Providence facilities.
- ▶ Maintaining efficiency and carbon reductions for complex heating and cooling systems requires specific and ongoing training for FMO teams.
- ▶ Detailed measurement and verification plans are needed to confirm the effectiveness of the retrofit projects.
- ▶ There are competing priorities for capital funding.

“

We should be bringing environmental priority into every department meeting and make it a standing agenda item.

– GreenCare Survey respondent

OUR STORY

Long-term care is cooling down

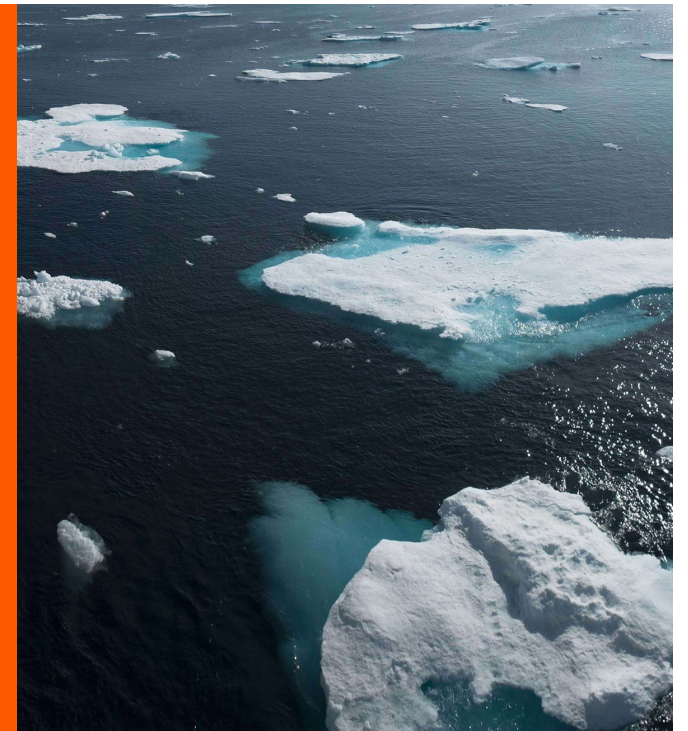
The 148 residents at St. Vincent's: Brock Fahrni and 217 residents at St. Vincent's: Langara are living a little more comfortably during the summer months thanks to cooling systems installed in 2021.

In 2020, Tony Munster, executive director – Projects, Planning & Facilities Management, made the decision to install cooling systems at both long-term care residences. Instead of a conventional air conditioning system, a more energy-efficient option was implemented: both facilities are cooled by innovative systems that extract waste heat from the facilities that would otherwise be lost to the atmosphere, and use it to heat the buildings and produce domestic hot water.

This solution was made possible thanks to a FortisBC program designed to incentivize the use of heat recovery systems that reduce gas consumption and emissions.

Partly due to this innovative approach to protecting patients from climate change, both facilities are on track to meet or exceed their goal of reducing GHG emissions by 80% by 2024 — and that's pretty cool.

Read more ▶



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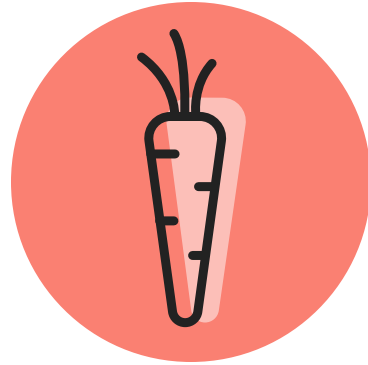
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3. Food

Our goal: Develop plant-based, local, culturally relevant and equitable food service to advance food as medicine.

LEARN MORE

A new Focus Area in 2021, this is a great example of how a Focus Area can be interrelated with others and how meaningful impact requires working together. This collaborative work includes the following:

- ▶ Improving patient and staff options for food in our facilities will reduce waste and GHG emissions. This is the work of many dietitians and medical and food services staff at Providence and in partnership with efforts at Fraser Health, PHSa and Vancouver Coastal Health.
- ▶ New facilities and major renovations at our facilities offering opportunities for capital project teams to consider food assets (places where people can grow, prepare, share, buy, receive or learn about food) on site or adjacent
- ▶ Public health staff working on community-led solutions towards sustainable, equitable and just local food systems in order to keep populations healthy, reducing pressure on the health-care system

As a partner in these efforts, the EES team is helping to identify the environmental impacts of food choices, food-related climate resilience measures and best practice in other health systems. In addition, we are providing Green+Leaders with seed-funding for projects that include workplace gardens and food initiatives. The momentum for this work is palpable, and it is highly collaborative. Staff are increasingly expressing their interest in healthy, local and culturally

appropriate food. Moreover, the annual GreenCare Survey results continue to show that direct care staff support the development of a menu that would aim to improve inpatient satisfaction and decrease environmental impact.^B

2021 actions

- ▶ [Explored Indigenous Foodways at Providence](#)
- ▶ Collaborated with Nutrition Services on the creation of a [toolkit](#) for sustainable food choices
- ▶ Successful application and selection to the [2021-2023 Nourish Anchor Cohort Collaborative](#), leading to innovative cross-health authority collaboration around healthy, sustainable and culturally appropriate food in health care
- ▶ Included environmental impact questions in retail food and food services requests for proposals (RFPs)

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Our partners

Business Initiatives & Support Services

Clinical dietitians

Indigenous Health

Population and Public Health

Quality Improvement

Sustainable Food Operations Committee

Our achievements

- ▶ Successful application to the [2021-2023 Nourish Anchor Collaborative Cohort](#)

“

Part of decolonizing health care is acknowledging the ecological harm climate change and environmental exploitation has on our minds/bodies/and spirits, and acknowledging that food is a form of medicine.

– GreenCare Survey respondent

OUR STORY

Good food is medicine for people and planet

As a physician, Dr. Eileen M. Wong thought there was little she could do to improve the quality of life for the elderly long-term care (LTC) residents at Holy Family Hospital in South Vancouver. Then she noticed that after meals, trays were often barely touched and at times her patients openly voiced that they didn't enjoy eating the food served.

So she kickstarted the Food Quality Improvement project at Holy Family Hospital LTC, which aimed to decrease residents' food-related complaints by 20%. Food waste is an issue that is personal to Eileen. "I grew up in a socially disadvantaged household where we never wasted food because we could not afford to waste it," she shares.

Using a data-driven approach, the long-term care team adjusted portion sizes, making lunch smaller and dinner larger, while keeping the daily calories the same. The team also trialled lipped plates with residents who had difficulty scooping food into their mouths. As a result of the changes, entrée wastage was reduced by half.

Today, Eileen continues to engage dietitians and nursing clinical leaders to find ways to reduce food waste while improving residents' satisfaction with their food. "If food is medicine and food for the soul, we need better food for patients and residents! Together, we can find a solution to 'awful hospital food.'"

Read more ▶



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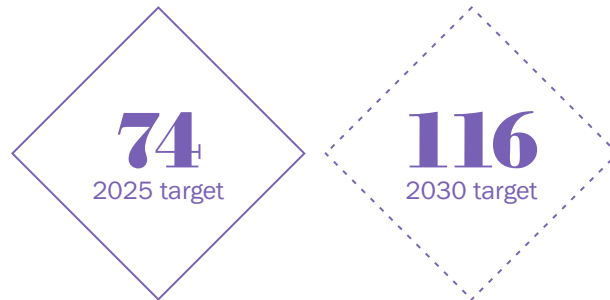
4. Leadership and Innovation

Our goal: Collaboratively foster a culture of transformative leadership and innovation for environmental sustainability in health care.

LEARN MORE

Our 2025/2030 targets

Increase total number of **Green+Leaders**.



Snapshot in numbers

10

Green+Leader newsletters

6

lunch and learn/dialogue sessions

2

orientation sessions

1

recruitment campaign

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2021 actions

- ▶ Refreshed the GreenCare website with input from the Providence Communications team and Green+Leaders
- ▶ Sponsored the Providence Health Care Workplace Initiative Fund
- ▶ UBC Sustainability Scholar supported the EES team to research monitoring and assessment frameworks for engagement
- ▶ Supported implementation of the B.C. Ministry of Health's chapters on Carbon Neutral and Climate Resilient Health Care Facilities and Environmental Sustainability and LEED Gold Certification in the Health Capital Policy Manual as part of business planning for major strategic projects

Challenges to reaching our targets

- ▶ Engagement activities shifting from face to face to virtual due to COVID-19
- ▶ Staff and medical staff experiencing COVID-19 fatigue
- ▶ Undertaking effective and customized communications and engagement efforts to connect with such a large group of diverse staff roles, positions and departments
- ▶ Competing staff priorities, and environmental sustainability not seen as part of everyone's job description
- ▶ Supporting staff to go from passive engagement to active action-taking as GreenCare network members and Green+Leaders
- ▶ Sustaining active participation of Green+Leaders and growing the community

Our partners

BC Hydro

CASCADES Canada

Clinical and non-clinical direct-care staff

Communications

Innovation, Planning and Transformation

People & Health Informatics

Population and Public Health

Our achievements

- ▶ In 2021, five new staff registered for the program, bringing the total number of Green+Leaders at Providence to 39 since 2011. This is a low number compared to registrations in previous years but, due to the pandemic, it was not unexpected.
- ▶ Launched the new GreenCare website; since then it has averaged 1,300 users a month, and has seen an increase in Green+Leader registrations by 75% (from 3/month to 5.25/month)
- ▶ Three grants sponsored by the Providence Health Care Workplace Initiative Fund for environmental sustainability projects, and approximately \$2,850 distributed to recipients of the grant. Projects that qualified for the fund were required to coordinate a healthy living project in the workplace and promoted themes of waste reduction, with several co-benefits including improvements to staff well-being.
- ▶ Two staff featured in the Green+Leaders Together Campaign

“
**Health care has an extremely
important role to play in
addressing climate change,
and we need to step up!**

– Providence GreenCare Survey Respondent

OUR STORY

Leading the way

Providence's Director of Research and Knowledge Translation Aggie Black realized she had an opportunity to use her position as a health-care leader to support bolder environmental initiatives. Joining the Green+Leaders program and being a part of the newly formed Sustainability Committee at Providence have allowed Aggie to advance sustainability practices within the health system.

Leveraging her voice as a trusted clinician, Aggie has rallied alongside other nurses, physicians and concerned health providers to urge others to take meaningful action in reducing GHG emissions. “As health-care providers, we are committed to healing and helping, and we should be leaders in addressing the climate crisis,” she says. Aggie firmly believes all nurses and clinicians can have a powerful impact against climate change.

She stresses that there are plenty of ways that health-care practitioners can take action in their workplaces, including small steps, such as printing less or using recycled paper, or bigger initiatives like pushing for health-care buildings to rely on clean electricity rather than fossil fuels. “I want to encourage other health-care providers to use their voices as trusted professionals to advocate for bold climate action ... For me, climate action is the best antidote to climate despair.”

[Read more ►](#)

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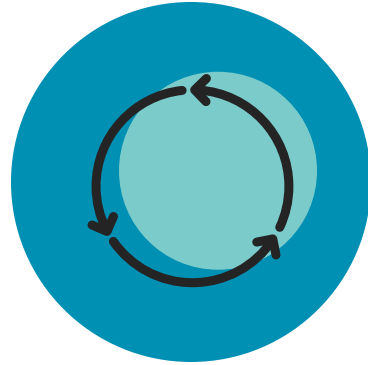
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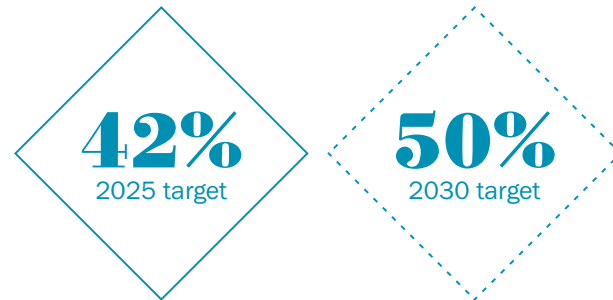
5. Materials

Our goal: Choose materials and products that contribute to human and environmental health while avoiding waste and unnecessary chemicals.

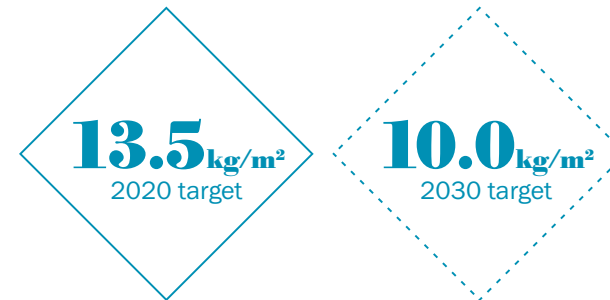
LEARN MORE

Our 2025/2030 targets

Increase waste-diversion rates at existing acute and long-term care sites to:



Decrease waste-intensity rates at existing acute and long-term care sites to:



Snapshot in numbers

657

staff took the Waste Management module on the Learning Hub

2,700

tonnes of non-hazardous waste were generated, equivalent to 542 elephants

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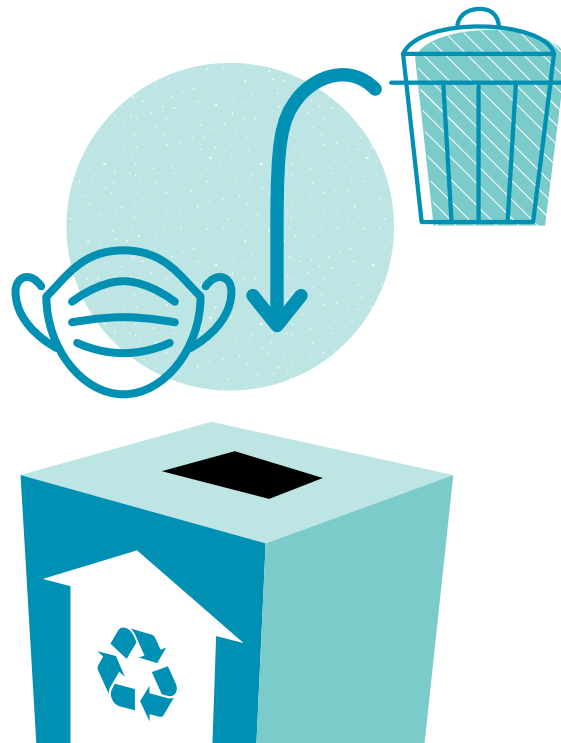
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Our 2021 actions

- ▶ St. Paul's Hospital participated in a mask recycling pilot project in collaboration with the B.C. Ministry of Health
- ▶ Avoided personal protective equipment (PPE) waste by switching to virtual appointments
- ▶ Researched best practice communications for circular economy in health care

Our partners

- Business Initiatives & Support Services
- Environmental Vendor Services
- Facilities Maintenance & Operations
- Facilities Management Procurement
- Infection Prevention and Control (IPAC)
- PHSA Supply Chain
- Projects & Planning teams
- Provincial Nursing Skin and Wound Committee (PNSWC)
- Quality Improvement
- Sustainable Food Operations Committee
- Workplace Health & Safety

Our achievements

- ▶ Created Draft Circular Health Care document, intended to provide tangible actions for Providence to avoid and reduce waste
- ▶ Included weighted environmental sustainability questions in requests for proposals (RFPs) for disposable drapes, gowns and surgical packs
- ▶ Added environmental sustainability questions in the Facilities Management Procurement annual request for proposal and quote (RFPQ)

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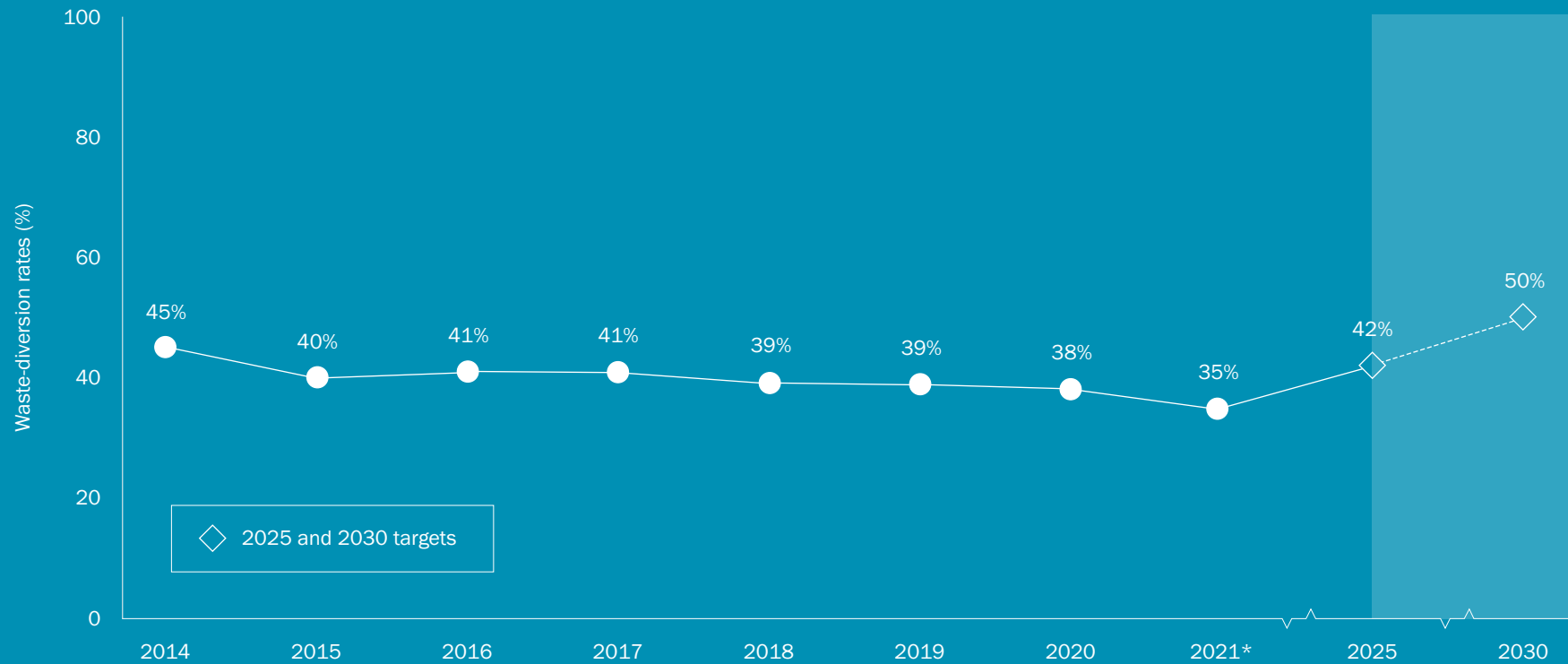
**Provincial Health
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Waste-Diversion Rates

Want to learn more about the graphs and how the results are calculated?

VISIT HERE

We have not made tangible progress toward our waste diversion goal and aggressive garbage waste reduction is needed.



* Our waste diversion reflects only waste segregation, as our recycling provider paused the collection of recycling for most of 2021 due to concerns for staff safety during the COVID-19 pandemic. All recycling and general

garbage streams were instead taken to a local waste-to-energy facility. Recycling was restarted in smaller facilities in November 2021.

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Waste-Intensity Rates

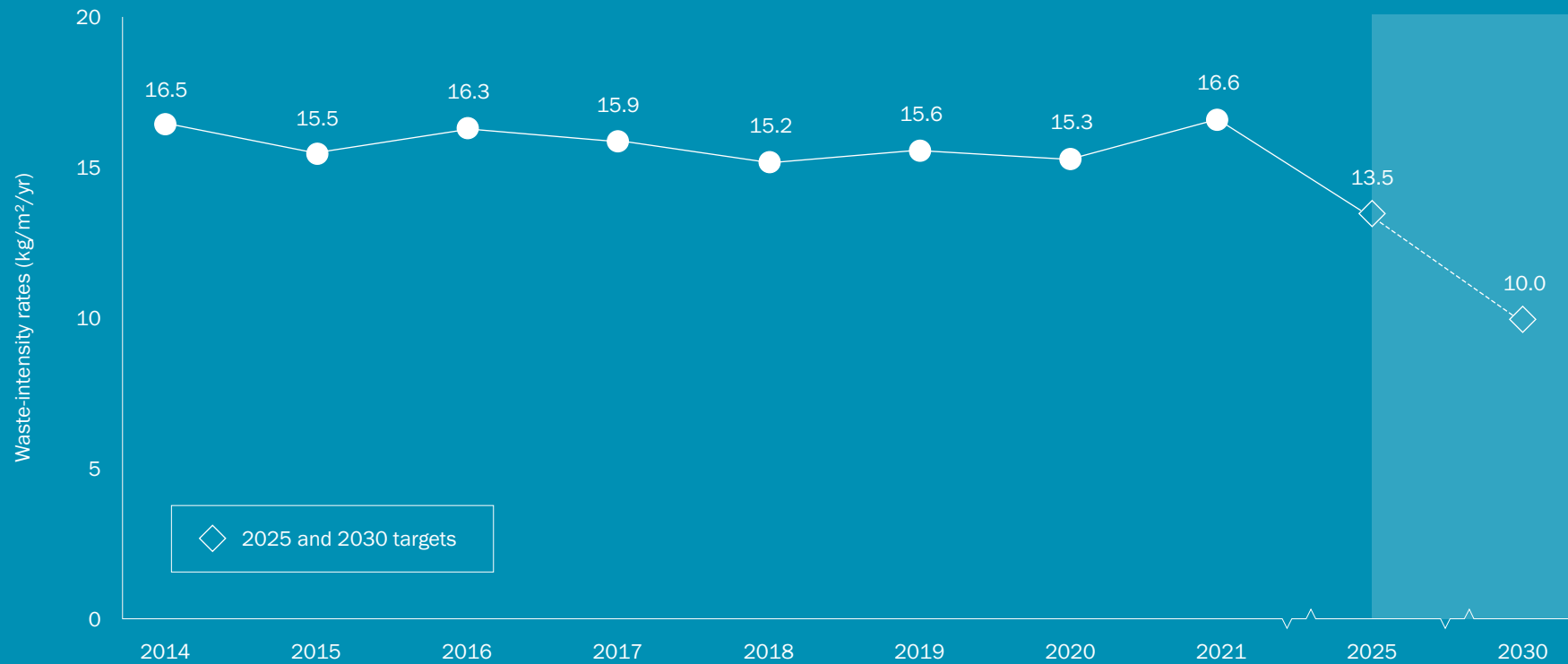
Want to learn more about the graphs and how the results are calculated?

VISIT HERE

0.6% ↑



Total waste intensity has not changed significantly since data collection was initiated in 2014.



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Challenges to reaching our targets

- ▶ Recycling is limited by [global market demand](#), ability of local processors, complexity of materials and facility logistics.
- ▶ Clinical engagement on waste reduction is hindered by competing priorities and lack of time, capacity and resourcing.
- ▶ Organizational priorities need to shift away from recycling alone and toward reusables over disposables, using an asset-sharing platform to prevent usable items from going into landfill, and prioritizing repair over replacement.

OUR STORY

Finding sustainable solutions to reduce COVID-19 waste

At the St. Vincent COVID-19 testing site, Green+Leader Yasmin Hamzah significantly cut down on unnecessary plastic waste by looking at how staff were staying hydrated. The project came to life when Yasmin, a clerk at the site, noticed exactly how much waste was created by giving staff single-use plastic water bottles during their 12-hour shifts, especially during the summer months.

Yasmin discovered the Green+Leaders Sustainability Workplace Funding Initiative and applied for a grant to gift large reusable water bottles to her colleagues. With sizeable containers, staff could quench their thirst during long shifts without needing to refill their bottles at a communal water cooler — an important detail in adhering to infection prevention and control guidelines.

Yasmin also spearheaded an awareness campaign to encourage her team to bring reusable bottles to work. Thanks to this campaign, site staff were inspired to revisit the idea of recycling the single-use plastic bottles that, while reduced, were still being used. This recycling program was successfully implemented, directing St. Vincent's COVID-19 testing site plastics, paper and cardboard away from landfill.

Read more ▶

“
Infection control policy should be evidence-based and consider environmental impact in single-use items.

– 2021 Providence Health Care GreenCare
Survey respondents



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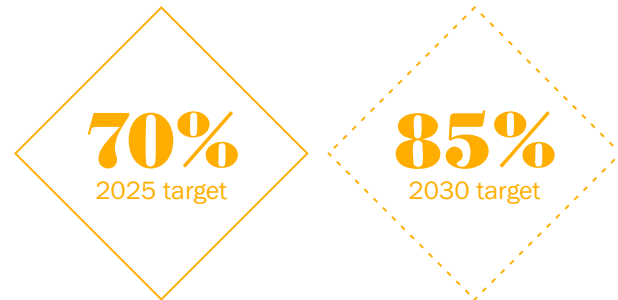
6. Transportation

Our goal: Increase access to and use of transportation modes that reduce negative environmental impacts and benefit human health and wellness.

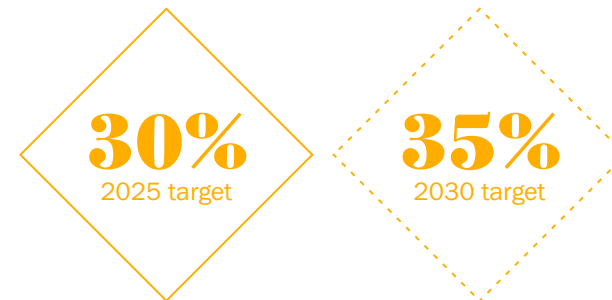
LEARN MORE

Our 2025/2030 targets

**Increase staff commuting by sustainable
 transportation modes.**



**Increase staff commuting by active transportation.
 (new target)**



Snapshot in numbers

8

Level 2 electric vehicle (EV) charging stations
 and 6 Level 1 EV charging stations

64

staff per month participated in the
 Providence transit incentive program
 (a 15% monthly subsidy)

1

of 7 cores sites has secure bicycle
 storage (i.e. a bike room or cage)
 and showering facilities

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Our 2021 actions

- ▶ Completed an EV baseline and feasibility study to inform a regional EV strategy, inclusive of staff/ public charging, as well as health organization fleet electrification
- ▶ Completed electrical studies at four core sites to inform the feasibility of EV charging infrastructure
- ▶ Created the Sustainable Transportation webinar series to inform, enable and empower health-care staff to make changes to how they get around

Our partners

BC Hydro

Climate Action Secretariat

Facilities Maintenance & Operations

Integrated Protection Services, Commuter Services

PHSA Supply Chain

Projects & Planning teams

Our achievements

- ▶ Commuting by internal combustion engines (gas/ diesel) single occupancy vehicle decreased by 7% (from 2020 to 2021).
- ▶ Commuting by public transit increased by 9% (compared to 2020).
- ▶ Commuting by electric vehicle increased from 2% to 5% of commutes (compared to 2020).



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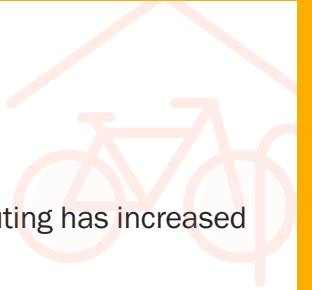
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Sustainable Commuting

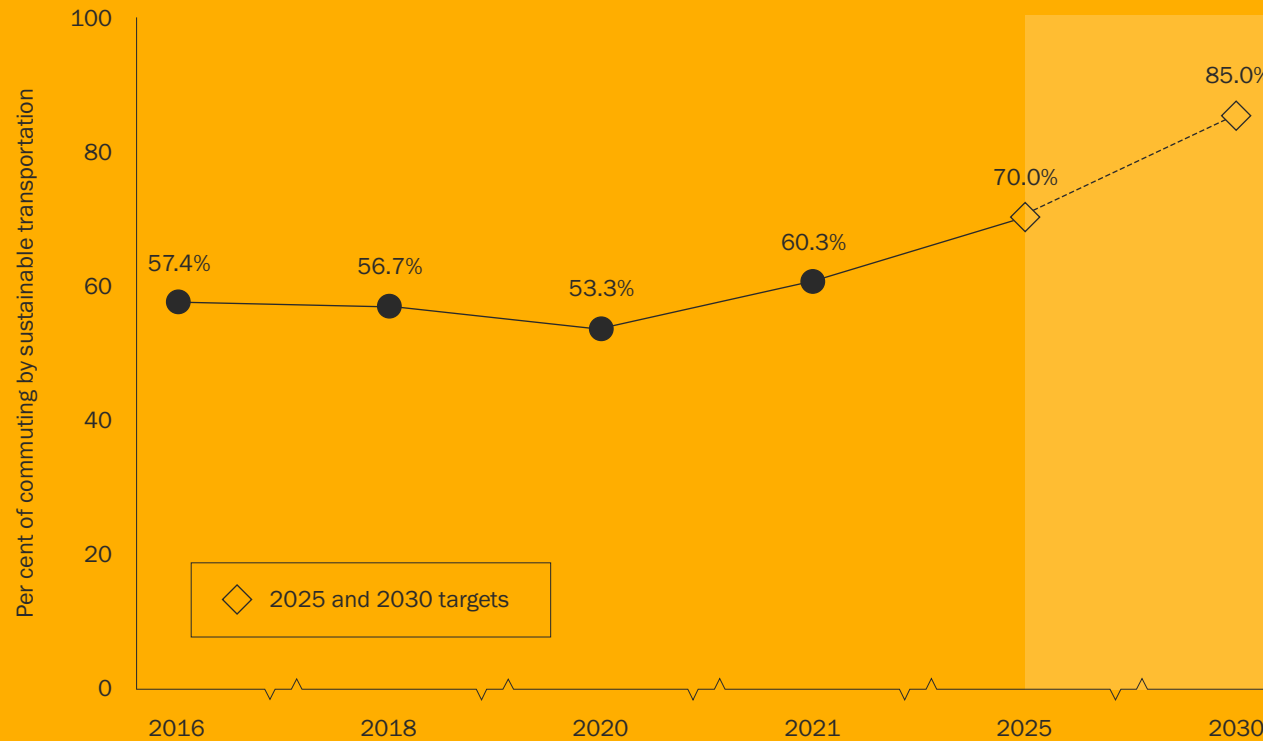
Want to learn more about the graphs and how
 the results are calculated?

VISIT HERE

3% ↑



Sustainable commuting has increased
 by 3% since 2016.



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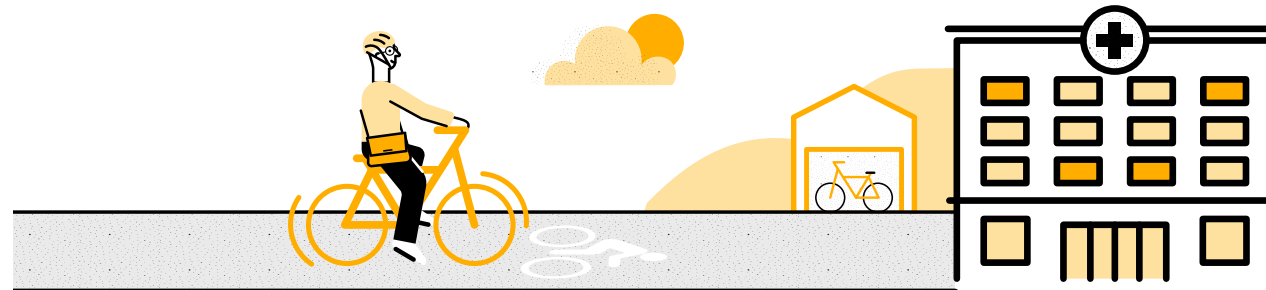
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Challenges to reaching our targets

- ▶ Access to sustainable commuting is dependent on municipal and regional transportation infrastructure between home and work locations.



OUR STORY

Setting green goals

While others were tending to their sourdough starters, Providence Health Care Orthopaedics Departmental Administrator Suzan Lee decided to assuage some of the stress of the COVID-19 pandemic by challenging herself to reduce her carbon footprint.

She began by intentionally purchasing items with less or no plastic packaging, repairing objects and clothing instead of buying new and travelling less. In time, she further committed to vacationing locally, swearing off personal air travel and continuing her decision to go car free, relying on Vancouver's car share and public transit services instead.

Her goals took effort to achieve, but for Suzan, they felt necessary and invigorating. They also helped foster a feeling of greater connection to her loved ones and to her neighbourhood. "Environmental sustainability is about making a sincere effort to improve the health of our ecosystem. This ecosystem is everyone's home, including my own and those I love," she says.

Next, Suzan hopes to work towards a future with more walkable neighbourhoods and mixed housing and amenities — one where it's convenient for everyone to be less reliant on personal transportation and move at a more sustainable pace.

[Read more ▶](#)

“

I bike to work as much as possible weather permitting (50 km round trip) and have no safe place to store my good bike on site at work — but hey, free parking for cars! I struggle with these extremes.

– GreenCare survey respondent

What do Providence staff have to say about electric vehicles (EVs)?^B

10%
 currently own an EV.

42%
 plan to own an EV in the next five years.

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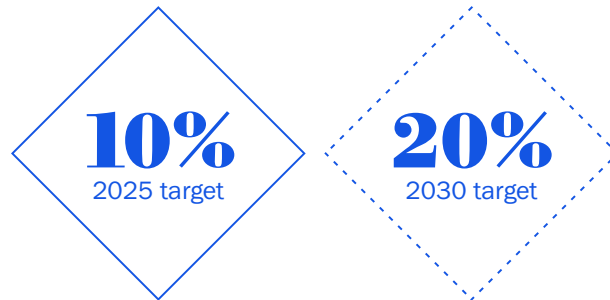
7. Water

Our goal: Minimize water consumption to reduce demand on natural resources and impact on our living environments.

[LEARN MORE](#)

Our 2025/2030 targets

Reduce building water-utilization intensity.



Snapshot in numbers

6

LEED points being targeted for the Water Efficiency credits for the new St Paul's Hospital design

2

sites working towards a five-year Pollution Prevention Plan to improve and reduce wastewater effluent, in compliance with the Metro Vancouver bylaw

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Our 2021 actions

- ▶ UBC Sustainability Scholar helped identify water-saving opportunities for health-care facilities in [new report](#)
- ▶ Researched innovative ozonator technology for laundry equipment, which supports water as well as energy savings

Our partners

BC Emergency Health Services

Climate Action Secretariat

Facilities Maintenance & Operations

Finance

Ministry of Environment and Climate Change Strategy

Ministry of Health Capital Services Branch

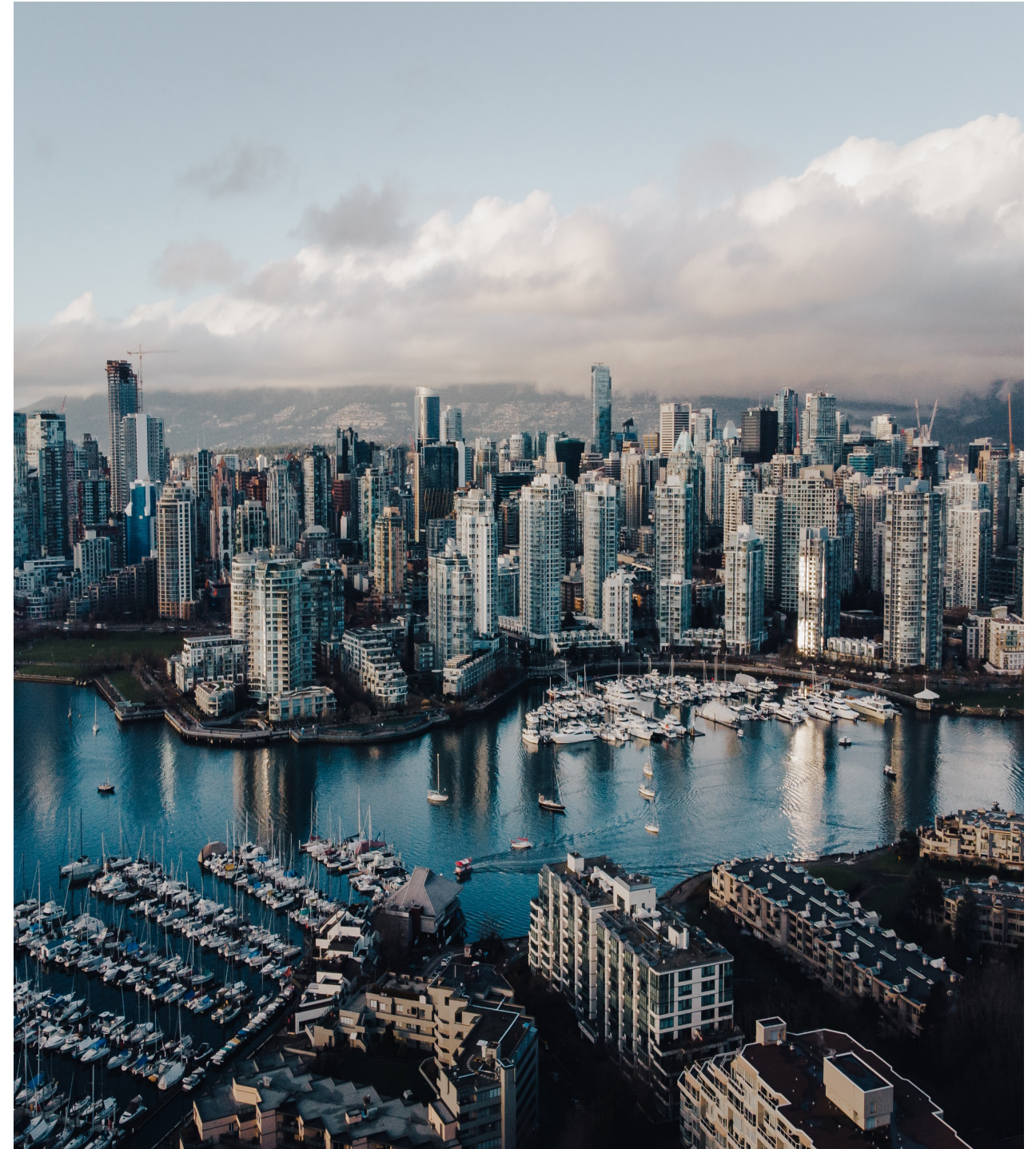
Municipal governments

Projects & Planning teams

PHSA Supply Chain

Our achievements

- ▶ Identified several water saving projects for 2022 and 2023, which would introduce new technologies such as LUX Laundry and electrical sterilizer and waste-water recovery
- ▶ Undertook planning feasibility for installation of electrical sterilizers in Mount Saint Joseph and St. Paul's Hospitals, which are projected to reduce water consumption from 200 L/cycle to 1 L/cycle



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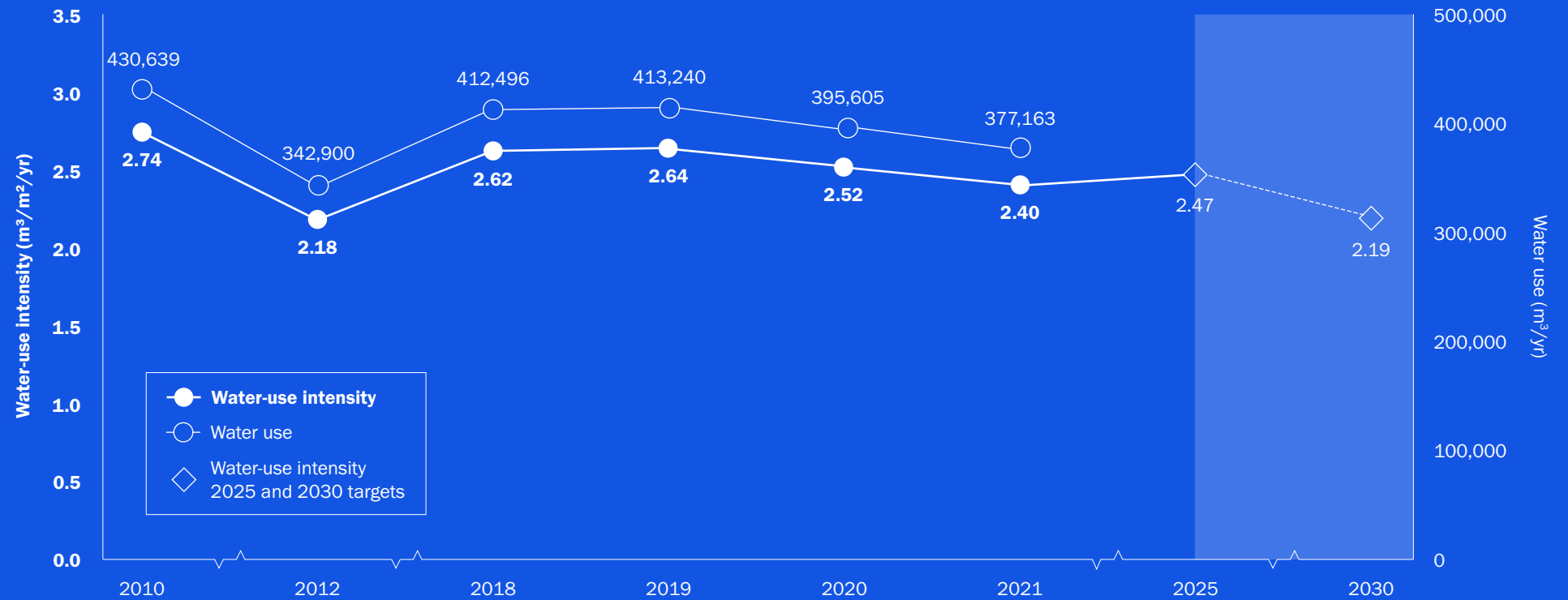
Water Use and Intensity

Want to learn more about the graphs and how the results are calculated?

VISIT HERE

12.5% ↓

Water-use intensity and absolute water use have decreased by 12.5% since 2010.



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**Challenges to reaching
our targets**

- ▶ Lack of prioritization of funding and resources
- ▶ Perceived risks to facilities operations and infection control
- ▶ Lack of awareness about water consumption, and educational barriers that reduce willingness to conserve water
- ▶ No existing Water Management Plan

OUR STORY

Water-saving opportunities for health-care facilities

Sustainable water use and conservation practices in health-care facilities can have a significant impact on human health and the environment. With the health-care sector being one of the most intensive water users in North America, the EES team has been undertaking research to identify best practices for water conservation.

Under the supervision of Ghazal Ebrahimi, energy and carbon emissions manager at PHSA, UBC Sustainability Scholar Monika Korczewski worked with the EES team on the study. The study reviews opportunities for water management, as well as recommendations for operational, maintenance and training strategies. The final report will offer a range of water-saving opportunities and water management guidance.

“Soon we will have more drought problems, more wildfires, and more and more water restrictions,” says Sabah Ali, a regional energy coordinator. So the EES team is taking a proactive approach to water management instead of letting the well run dry.

Read more ▶

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Thank you for your ongoing support.

Given the challenges posed by climate change, it's clear that environmental sustainability is everyone's story. If we are to continue to offer staff, volunteers and patients the very best quality of life possible, and support the health and well-being of our families and communities, we must all take responsibility for the environment.

As the many achievements at Providence Health Care demonstrate, much is already being done by so many. But as this report also shows, much more remains to be done. The Energy and Environmental Sustainability team invites the whole health-care community to take actions that will restore and regenerate the interdependent health of people, place and planet — now and for future generations.

There are a number of ways in which you can make a difference.

- Inform and motivate each other to take action to nurture and protect our planet.
- Share, learn about, and co-develop action plans for sustainability.
- Innovate, and scale up and out the approaches that are working.
- Transform our processes and health system away from business as usual.
- Reinforce and celebrate the change we want to see.

LEARN MORE ABOUT SUSTAINABLE
AND RESILIENT HEALTH CARE.

Check out the GreenCare website [here](#).

MEET OTHERS INTERESTED IN
ENVIRONMENTAL SUSTAINABILITY.

Find out more about the Green+Leaders
program [here](#).

INSPIRE.

Share your environmental sustainability
story [here](#).

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References

- A GreenCare survey respondents were asked to select from a scale of 0-10 (0=strongly disagree, 5=neither agree nor disagree, 10=strongly agree). The reported percentage of staff who “agree” includes all staff who selected 6-10 for their response.
- B 2022 Providence GreenCare Survey [Internet]. British Columbia, Canada: GreenCare Community; 2022 [cited 2022 Jun 8]. Available from: <https://bcgreencare.ca/wp-content/uploads/2022/05/GreenCare-Survey-Infographic-Providence.png>
- C ARCHIBUS and Providence Real Estate Department
- D Partnership with BC Hydro and FortisBC that provides guidance, advice and incentive support for ongoing funding for energy and emissions reduction support projects

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