Environmental sustainability is everyone’s story.
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# Our Focus Areas

- **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.
Executive Message

Our Sustainability Story

We’re Finding Solutions: Together.

Writing the Story We Want, Now and in the Future

References

Download

VCH Climate Change Accountability Report
Fraser Health EPAR
Providence Health Care EPAR
Provincial Health Services Authority EPAR

Vancouver Coastal Health
In the more than two years since the World Health Organization declared COVID-19 a global pandemic, not a day goes by when I don’t think about how proud I am of our team of more than 26,000 staff and medical staff at Vancouver Coastal Health (VCH). Your dedication to caring for patients and for each other during such a trying time has been inspiring.

Likewise, your continuing commitment to environmental health and sustainability, even as our region has faced many challenges due to the heat dome, wildfires, droughts and flooding, is exemplary. It speaks to the fact that, together, we can create meaningful change for the betterment of our staff, patients and families, as well as our communities.

Given our climate reality, we know that sustainable, low-carbon and climate-resilient health care is integral to the interdependent health of each of us, our communities and our planet. The speed at which people, communities and health organizations adapted throughout the pandemic showed us that through collaboration we can accomplish anything. Now we need to apply that same ingenuity and collaboration to addressing the challenges of the climate crisis.

Over the past year, we saw the need for action more than ever. Many of us can only imagine the devastation and uncertainty faced by hundreds of British Columbians forced to evacuate from their communities under threat of wildfires. This included some of our most vulnerable populations in long-term care and assisted-living homes from the Interior and the Okanagan.

During this time, VCH and Providence Health Care teams worked around the clock with Interior Health and other health-care partners to ensure a safe and caring transition for residents, and to reassure families that their loved ones would continue to receive the best care possible during this time of change.

Even under these circumstances, VCH staff kept working towards environmental sustainability. Our Green+Leaders continued to push for and achieve environmental sustainability innovations and change. We prioritized and executed the design and construction of healthy and green health-care facilities and infrastructure, along with operational changes that resulted in ongoing tangible environmental and health outcomes. We challenged ourselves 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.

In alignment with the B.C. Ministry of Health Mandate Letter and CleanBC Roadmap 2030, VCH aims to accelerate its impact in planetary health, taking further action to significantly reduce harmful environmental impacts of the health system and adapt to be resilient to climate shocks and stressors. In this new sustainability and resilience work, we created a new Regional Medical Director of Planetary Health position, and, for the first time, we have included planetary health as an Exceptional Care Strategic Priority action. As we move forward, VCH will finalize and communicate the Planetary Health Roadmap internally and publicly; engage with staff and external partners, including First Nations; continue the shift to a circular health system; address appropriateness of care; address our food system; carry out seasonal preparedness planning and adaptation; and establish a capital projects advisory task force.

All of this dedicated work has marked a clear path for environmentally sound health care that will not simply help us to reduce the harm our activities can cause to our environment and health, but allow us to maintain a strong health-care system.
1.0 Executive Summary

Environmental sustainability is everyone’s story.
1.1 Executive summary

The 10th annual Environmental Performance Accountability Report (EPAR) acknowledges the hard work, commitment, progress and success of everyone at Vancouver Coastal Health (VCH) 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, VCH 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 VCH 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.
Here’s a summary of our 2021 milestones and achievements, and what to watch for in 2022 and beyond:

First ever!
- VCH Senior Executive Team and the Board approved the proposed priority work of the Planetary Health portfolio presented by the collaborative group consisting of the Energy and Environmental Sustainability (EES) team, Public Health teams within the Office of the Chief Medical Health Officer, and the Sustainable Clinical Services team, with planning leadership and coordination provided by the Transformation Office.
- VCH appointed Dr. Andrea MacNeill to the new role of Regional Medical Director for Planetary Health.
- The Vancouver Acute Care regional cooling strategy was initiated that incorporates climate risk and emission reduction lenses.
- The Circular Health Care Framework was created to support departments at VCH to develop strategies to avoid and reduce waste.
- A net zero carbon emissions assessment was embedded in the Richmond Hospital redevelopment business plan.

Refreshed and updated
- The 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
- Implementation of 10 energy and emission reduction projects that are expected to reduce carbon emissions by more than 1,500 tCO₂eq per year
- Largest electric vehicle installation in the province at Richmond Hospital, featuring 30 Level 2 chargers
- Air Quality Monitoring Project at three VCH sites helped to identify the impact of wildfires on indoor air quality

Environmentally preferable decision-making
- Planetary Health Advisory Task Force for Lions Gate Hospital and Richmond Hospital redevelopments was formed.
- 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 commuting by electric vehicle increased by 3% compared to 2020.

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
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 VCH. 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.
**Energy and Carbon**

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

<table>
<thead>
<tr>
<th>2025 Target (baseline 2007)</th>
<th>2021 Results</th>
<th>Traffic Light</th>
<th>2030 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce energy-use intensity (ekWh/m²/year) by</td>
<td>15%</td>
<td>12.1%</td>
<td>30%</td>
</tr>
<tr>
<td>Reduce absolute in-scope GHG emissions (tCO₂e/year) by</td>
<td>30%</td>
<td>16.6%</td>
<td>50%</td>
</tr>
<tr>
<td>Reduce in-scope GHG-emissions intensity (tCO₂e/year/m²) by</td>
<td>40%</td>
<td>31.3%</td>
<td>50%</td>
</tr>
</tbody>
</table>

*2025 target on track*

*2025 target behind schedule*

*2025 target requires attention*
# Leadership and Innovation

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

<table>
<thead>
<tr>
<th>2025 Target</th>
<th>2021 Results</th>
<th>Traffic Light</th>
<th>2030 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase total number of <a href="#">Green+Leaders</a> (registrations) to</td>
<td>269</td>
<td>165</td>
<td>395</td>
</tr>
</tbody>
</table>

- 2025 target on track
- 2025 target behind schedule
- 2025 target requires attention
Materials
Goal: Choose materials and products that contribute to human and environmental health, while avoiding waste and unnecessary chemicals.

<table>
<thead>
<tr>
<th>2025 Target</th>
<th>2021 Results*</th>
<th>Traffic Light</th>
<th>2030 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase waste-diversion rates (% of waste diverted, annual average) to</td>
<td>44%</td>
<td>37.0%</td>
<td>50%</td>
</tr>
<tr>
<td>Decrease waste-intensity rates (kg/m²/year) to</td>
<td>10.5</td>
<td>12.4</td>
<td>8.0</td>
</tr>
</tbody>
</table>

* 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.
## Transportation

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

<table>
<thead>
<tr>
<th>2025 Target</th>
<th>2021 Results</th>
<th>Traffic Light</th>
<th>2030 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase proportion of staff commuting by sustainable transportation modes to</td>
<td>60%</td>
<td>47.5%</td>
<td>75%</td>
</tr>
</tbody>
</table>

*2025 target on track*
*2025 target behind schedule*
*2025 target requires attention*
## Water

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

<table>
<thead>
<tr>
<th>2025 Target (baseline 2010)</th>
<th>2021 Results</th>
<th>Traffic Light</th>
<th>2030 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce building water (use) performance intensity ($m^3/m^2/year$) by</td>
<td>20%</td>
<td>11.2%</td>
<td>30%</td>
</tr>
</tbody>
</table>

*2025 target on track*
*2025 target behind schedule*
*2025 target requires attention*
2.0 Our Sustainability Story

VCH’s commitment
The Energy and Environmental Sustainability team
Building and operating for energy and environmental sustainability

We’re Finding Solutions: Together.

Writing the Story We Want, Now and in the Future

References
2.1 Vancouver Coastal Health’s commitment to planetary health care

With climate change as the greatest global health threat, the urgency to move this work forward at a faster pace is clear. Now is the time to harness the long-term presence, mission and resources of VCH to anchor planetary health in our communities and be seen as a global health-care leader for planetary health.

**Strategic plan**

Planetary health is an objective under the goal of Exceptional Care. The work includes finalizing and communicating the Planetary Health Roadmap internally and publicly; engagement of staff and external partners, including First Nations; the shift to a circular health system; addressing appropriateness of care; addressing our food system; seasonal preparedness planning and adaptation; and capital projects advisory.

**Advocacy**

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

**Policy**

Achieving energy and environmental sustainability is a priority for VCH. 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.

**Approach**

The Planetary Health Care portfolio is a cross- VCH collaborative consisting of the Energy and Environmental Sustainability (EES) team, Public Health teams within the Office of the Chief Medical Health Officer, and the Sustainable Clinical Services team, with planning leadership and coordination provided by the Transformation Office.

A healthy environment is inextricably linked to a healthy population. Our Indigenous partners have long recognized an imperative to environmental stewardship; if we take care of the land, it will take care of us. We have an incredible opportunity to collaborate across our organization and with partners to create a climate resilient health-care system that focuses on the interdependence of human and environmental health.

– Darcia Pope – Chief Transformation Officer and Vice President, Innovation and Planetary Health

Learn about who Vancouver Coastal Health is and what they do, here.
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 VCH sites, over 98% are from buildings, while the remaining 2% are from supplies (paper usage) and transportation (fleet vehicles) combined. To achieve carbon neutrality, VCH 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.”
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.

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
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, VCH 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

728,050m²
usable facility space

184
distinct buildings

“Facilities Maintenance & Operations’ (FMO) connection with building systems and their constant care for the internal environment make them a natural ally for the sustainment of efficient, resilient facilities. The strong collaboration between FMO and the EES team has not only improved building performance throughout VCH but has also empowered FMO staff to effect meaningful change within their maintained facilities.

– Leanne Porter, Director, Facilities Maintenance & Operations
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.

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>3 buildings</th>
<th>26,356m² of building space</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>GOLD CERTIFICATION</th>
<th>3 buildings</th>
<th>26,356m² of building space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joseph and Rosalie Segal and Family Health Centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hope Centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sechelt Hospital</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REGISTERED (set to be certified)</th>
<th>1 building</th>
<th>21,775m² of building space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Myers Tower – acute care facility</td>
<td></td>
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</table>

Our LEED projects: Joseph and Rosalie Segal and Family Health Centre, Hope Centre, Sechelt Hospital, Paul Myers Tower – acute care facility.
3.0
We’re Finding Solutions: Together.

Our Focus Areas
- Climate Change
- Energy and Carbon
- Food
- Leadership and Innovation
- Materials
- Transportation
- Water

Writing the Story We Want, Now and in the Future

References
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 VCH 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, VCH 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](#).
1. Climate Change

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

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.

10% 2025 target
30% 2030 target
10% 2025 target
30% 2030 target
HealthADAPT update

The EES team partnered with the Population and Public Health teams for Fraser Health and VCH, 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).
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 Northern Health
Pacific Climate Impacts Consortium Simon Fraser University
University of British Columbia VCH Facilities Maintenance & Operations
VCH Population and Public Health VCH Projects and Planning

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 two climate hazard exposure screens and risk assessments for capital projects, including the long-term care facilities, Hilltop House North and RLM Fentiman
▸ Completed a physical risk report for numerous VCH facilities to understand potential risk costs under changing climate conditions

Where there’s fire, there’s smoke
In B.C., smoky summers are becoming the norm. For more vulnerable populations, including pregnant people, young children, the elderly and those with chronic conditions, smoke is not just an inconvenience, it can be a deadly hazard.

Since populations most vulnerable to smoke events are highly represented in health facilities, the EES team collaborated with researchers from PHSA, VGH, BCCDC, UBC and Health Canada to understand how smoke affects those receiving treatment.

To gather data, researchers installed one outdoor and seven indoor sensors to assess fine particulate matter infiltration at a large inpatient rehabilitation facility in Vancouver. Though the research is ongoing, data collected in 2020 showed up to 41% more particulate matter when wildfire smoke is in the air.

The results of this study underscore the need to carefully consider indoor air quality during wildfire season. The research includes recommendations that can reduce staff and patients’ exposure to smoke, including deploying portable air cleaners and implementing larger-scale upgrades to filtration systems.

While it is unnerving to consider wildfire smoke events as a normal part of B.C. summers, the information gathered from this study can help patients and facility staff to breathe a little easier.
What do VCH staff and medical staff have to say about the impact of climate change hazards on their work?

80% of VCH staff said their job duties were impacted by extreme weather events in 2021. The most disruptive events were wildfire smoke, snow or ice storms, wind storms, heat waves, and wildfires.

The most common impacts on job duties were:

- Workspace was physically impacted.
- Supply chain disruptions occurred.
- Staff and/or family members experienced illness related to extreme weather events.
- 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.

“I find that climate events have a more noticeable impact on my work while working in home care as opposed to working in a climate-controlled hospital. Doing wellness checks related to extreme heat events, rescheduling appointments due to [it being] unsafe to exercise in extreme heat, [and] checking road conditions for local closure during flooding/extreme rain events all take extra time.”

– VCH GreenCare Survey Respondent
2. Energy and Carbon

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

Our 2025/2030 targets

Reduce energy-use intensity by:

- 15% 2025 target
- 30% 2030 target

Reduce absolute in-scope GHG emissions by:

- 30% 2025 target
- 50% 2030 target

Reduce in-scope GHG-emissions intensity by:

- 40% 2025 target
- 50% 2030 target

Snapshot in numbers

- $1.2 million invested in energy efficiency initiatives from the Green Revolving Fund
- $3 million invested in carbon reduction projects from Carbon Neutral Capital Program funding
- 29 initiatives, including energy studies, cooling strategies and electrical capacity studies
- 1,500 tCO₂e of projected carbon emissions reduced
- $1,094,783 carbon offsets paid to become carbon neutral
- Nearly $1 million in utility incentives received from BC Hydro and FortisBC in fiscal year 2021/2022
2021 actions

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

- Implemented energy efficiency and carbon reduction measures identified through participation in the Continuous Optimization program at Jim Patterson Pavilion North at Vancouver General Hospital (VGH)
- Completed a heating, ventilation and air conditioning (HVAC) controls system upgrade at the Jim Patterson Pavilion South at VGH
- Implemented a chiller upgrade and heat recovery project, including integration into the geo-exchange system, at Sechelt Hospital
- Completed a glycol run-around-loop heat pump project that recovers waste heat at the Minoru Residence adjacent to Richmond Hospital (RH)
- Completed the second phase of a complex heat recovery and cooling upgrade in the main central cooling plant at VGH
- Began four energy efficiency lighting upgrades in 2021, at the Blusson Spinal Cord Centre and Energy Centre at VGH, GF Strong Rehabilitation Centre and the Pemberton Health Care Centre
- Initiated an electrical load capacity study, in partnership with the Infrastructure and Risk team, to better understand our electrical challenges, metering needs and low-carbon electrification constraints
- Initiated a regional cooling strategy that addresses climate change for the Vancouver Acute Community of Care
- Submitted an application to Natural Resources Canada for funding support under the Zero Emissions Vehicle Infrastructure Program
- In partnership with Facilities Maintenance & Operations, moved forward with steam trap replacement programs to reduce energy and carbon emissions at three hospitals: RH, Lions Gate Hospital and VGH
Our partners

- BC Hydro
- BC Emergency Health Services
- BC Ministry of Environment and Climate Change Strategy
- BC Ministry of Health Capital Services Branch
- FortisBC
- Municipal governments
- PHSA Supply Chain
- VCH Infrastructure and Risk team
- VCH Facilities Maintenance & Operations (FMO)
- VCH Finance
- VCH Projects & Planning teams

Our achievements

- 1st ever net zero carbon emissions assessment embedded in the RH Redevelopment business plan
- 10 capital and operational projects, including three that were Carbon Neutral Capital Program funded, projected to result in 1,500 tCO₂e carbon emissions reduction and estimated to reduce energy consumption by 9 GWh
- 1st VCH is the first health organization in Canada to receive a grant and pursue ISO 50001 Energy Management Systems compliance at VGH
- $670,000 in project incentives received from our utility partners to further support energy and emission reduction projects
Energy Use and Intensity

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

Energy-use intensity has decreased by 12.1% since 2007, and, despite an increase of 16% in core facility space, our energy use only increased by 2.2%.
31.3%↓
GHG intensity has decreased by 31.3% since 2007, and, despite a 20.8% increase in total usable facility space, absolute emissions have decreased by 16.6%.
Challenges to reaching our targets

- VCH is experiencing an increase in facility floor space due to newly built, acquired and expanded acute and long-term care facilities.
- 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.
- Integration can be improved through more coordination between the EES team and the FMO teams to better integrate energy, emission and water management strategies, infrastructure, and equipment into funding requests.
- Challenges related to supply chain delays in delivery of equipment and restrictions to contractor availability. These challenges have impacted both our mechanical, electrical and lighting projects.
- Current conditions on our funding require project completion within one fiscal year, which is not always possible. The capital funds our team uses are not treated the same as other capital funding sources, leading to additional schedule pressure on the teams supporting this work.
- Due to time-intensive, new construction activity, team capacity to connect with our partners internally and externally to understand the opportunities and challenges for our existing sites has diminished, while our scope and ability to take action on projects and initiatives continues to grow.
3. Food

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

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 VCH and in partnership with efforts at Fraser Health, PHSA and Providence Health Care.
- 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.

2021 actions

- Collaboration 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
- Inclusion of environmental impact questions in retail food and food services requests for proposals
Our partners
Business Initiatives Support Services  
Sustainable Food Operations Committee  
VCH Indigenous Health  
VCH Clinical dietitians  
VCH Population and Public Health  
VCH Quality Improvement

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/spirits, and acknowledging that food is a form of medicine.”  
– GreenCare Survey respondent

Food as therapeutic intervention
Annie Lalande is bringing a whole new understanding to the adage “you are what you eat.” The fourth-year UBC general surgery resident and second-year PhD student at UBC’s Institute for Resources, Environment and Sustainability is passionate about food and its implications for both health care and the environment. While on clinical rotations, Annie struggled with the unsustainable food practices she witnessed and participated in. She also regularly heard from patients about their poor food experiences in the hospital and how it affected their recovery.

With the encouragement of her mentors, Annie began to address these complex food issues through her PhD. Working with VCH and the Nourish Anchor Collaborative Vancouver Cohort team, Annie is developing prototype projects that address issues including healthy food provisions for health-care workers, access to traditional Indigenous foods and information campaigns. She is also working on developing frameworks and educational materials about food systems for other health-care providers.

When we appreciate all the roles food plays in our lives and health, Annie believes we will change the way we make decisions about “how we source food, what type of food we serve, and how we support patients’ health through food, while helping to be better stewards for our planet.”
4. Leadership and Innovation

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

Our 2025/2030 targets

Increase total number of Green+Leaders.

- **2025 target**: 269
- **2030 target**: 395

Snapshot in numbers

- 10 Green+Leader newsletters
- 6 lunch and learn/dialogue sessions
- 2 orientation sessions
- 1 recruitment campaign
2021 actions

- Refreshed GreenCare website with input from the VCH Communications team and Green+Leaders
- 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

- CASCADES Canada
- Clinical and non-clinical direct-care staff
- BC Hydro
- VCH Communications
- VCH Innovation, Planning and Transformation
- VCH People and Culture
- VCH Population and Public Health

Our achievements

- In 2021, 14 new staff registered for the program, bringing the total number of Green+Leaders at VCH to 165 since 2009.
- Launched new GreenCare website; since then we have averaged 1,300 users a month, and have seen an increase in Green+Leaders registrations by 75% (from 3/month to 5.25/month)
- Launched the Planetary Health Spark Campaign to generate ideas on how VCH can contribute to environmental sustainability in the workplace
- Two staff featured in the Green+Leaders Together Campaign

Health care and the well-being of the environment are inextricably linked. The more we acknowledge this, the more we can start changing things for the better.

- VCH GreenCare Survey Respondent
5. Materials

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

Our 2025/2030 targets

- **Increase waste-diversion rates at existing acute and long-term care sites to:**
  - **44%**
    - 2025 target
  - **50%**
    - 2030 target

- **Decrease waste-intensity rates at existing acute and long-term care sites to:**
  - **10.5 kg/m²**
    - 2020 target
  - **8.0 kg/m²**
    - 2030 target

### Snapshot in numbers

- **1,268** staff took the Waste Management module on the Learning Hub
- **6,600** tonnes of non-hazardous waste was generated, equivalent to 1,338 elephants
Our 2021 actions

- Researched best practice communications for circular economy in health care
- Initiated facility waste assessment at Richmond Hospital, with staff interviews (work continued in 2022)
- Supported an Operating Room Sustainability Ideas Generation campaign
- Staff from the EES and Quality and Patient Safety teams attended a Sustainable Quality Improvement course to learn how to embed environmental sustainability into the quality improvement model

Our partners

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

Our achievements

- Created a draft Circular Health Care document, intended to provide tangible actions for VCH to avoid and reduce waste
- Launched the Perioperative Services Sustainability Spark campaign, which generated 39 unique ideas for greening the operating room, with 24 selected for implementation
- Included weighted environmental sustainability questions in requests for proposals (RFPs) for disposable drapes, gowns and surgical packs
- Added environmental sustainability questions in Facilities Management Procurement annual request for proposal and quote (RFPQ) for facilities contractor services
Waste-Diversion Rates

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

VISIT HERE

7%

We are 7% away from our 2025 target.

* 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.
Waste-Intensity Rates

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

VISIT HERE

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

In health care, we produce an enormous amount of waste. For obvious infection control reasons, this is inevitable. But when it comes to non-clinical waste and reducing our carbon footprint, health authorities must take meaningful action. There are myriad opportunities for health authorities to make changes in the right direction!

– VCH GreenCare Survey respondent

VCH partners with ShareWares to make safe and reusable cups an option for their customers

Waste reduction strategies in health care have been gaining considerable momentum as more of us become aware of the impact disposable items have on our planet and human health. Cafe Ami, with locations at VGH and UBC Hospital, is tackling the problem by partnering with ShareWares, a Vancouver-based company that aims to create localized sustainable circular ecosystems.

During the height of the pandemic in 2020 and 2021, Cafe Ami’s staff were not allowed to handle customer’s personal mugs. ShareWares allows them to offer customers reusable takeaway cups for a $1.50 fully refundable deposit. To receive the refund, customers return used cups to designated ShareWares bins using QR code technology. The used cups are then cleaned and sanitized at an off-site facility, meeting Infection Prevention and Control criteria.

ShareWares has reported that VGH has been one of its most successful program participants, and the number of regular users continues to grow. With strong support from IPAC, cost neutrality for customers and hands-off operations, it’s a great example of sustainability at VGH and some clever thinking.

Read more
6. Transportation

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

Our 2025/2030 targets

- **Increase staff commuting by sustainable transportation modes.**
  - **60%**
  - 2025 target
  - **75%**
  - 2030 target

- **Increase staff commuting by active transportation.**
  - **25%**
  - 2025 target
  - **30%**
  - 2030 target

**Snapshot in numbers**

- **37**
  - Level 2 electric vehicle (EV) charging stations and 4 Level 1 EV charging stations
- **5**
  - hospital shuttles providing a total of 311,015 rides in 2021
- **1,152**
  - staff per month participated in the VCH transit incentive program

Writing the Story We Want, Now and in the Future

References
Our 2021 actions

- Completed an EV Baseline and Feasibility Study, to inform a regional EV strategy inclusive of staff/public charging, as well health organization fleet electrification
- Completed EV feasibility studies at eight sites
- 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
- BC Ministry of Environmental and Climate Change
- Integrated Protection Services, Commuter Services
- PHSA Supply Chain
- VCH Facilities Maintenance & Operations
- VCH Population and Public Health
- VCH Projects & Planning teams
- VCH Transportation Services

Our achievements

- Commuting by internal combustion engines (gas/diesel) single occupancy vehicle decreased by 6% (from 2020 to 2021).
- Commuting by public transit and carpooling each increased by 3% (compared to 2020).
- Commuting by EV increased from 5% to 8% of commutes (compared to 2020).
Sustainable Commuting

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

VISIT HERE

Sustainable commuting by VCH staff increased by 6% since 2020.

Per cent of commuting by sustainable transportation

2016 2018 2020 2021 2025 2030

0 20 40 60 80 100

47.9% 49.7% 41.7% 47.5% 60.0% 75.0%

2025 and 2030 targets

Our Focus Areas
- Climate Change
- Energy and Carbon
- Food
- Leadership and Innovation
- Materials
- Transportation
- Water

Writing the Story We Want, Now and in the Future

References
Challenges to reaching our targets

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

"I really appreciated the little amount that was subsidized through the Transportation Centre, for when I used to use monthly transit passes. As costs soar, I'd like to see more incentives like that, as well as WAY MORE electric charging ports available near the workplace.

– VCH GreenCare Survey respondent

OUR STORY

Shuttling for sustainability

Having worked with VCH’s shuttle program for 26 years, Angelo Longo had been thinking about more sustainable transportation options for years. However, after meeting Sustainability Consultant Emily Lomax, Angelo realized hospitals had a responsibility to create lighter carbon footprints — and that he wanted to be part of this change.

For over a year now, Angelo has served as Shuttle Coordinator for the Cambie Corridor Consortium, a non-profit that operates out of VCH and provides transportation options for VCH, Providence and PHSA staff, as well as others, and for the UBC health program members who need to travel for health-care business. The Consortium’s five vans transport hundreds of people back and forth every day — greatly reducing VCH’s carbon footprint with every trip. To date, the Cambie Corridor Consortium has transported more than three million passengers and couriered over 600,000 items.

Angelo loves his work and being able to make meaningful environmental contributions in his role. Looking to the future, Angelo is excited to explore opportunities to use plug-in hybrids and electric vehicles as part of the shuttle fleet. The Consortium has already purchased and leased two hybrid vehicles to serve the health-care sector for years to come.

Read more
7. Water

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

Our 2025/2030 targets

**Reduce building water-utilization intensity.**

- **20%**
  - 2025 target
- **30%**
  - 2030 target

**Snapshot in numbers**

- 3 studies completed for elimination of inefficient "once-through" cooling refrigeration units
- 2 energy-saving projects completed, which also contributed to water savings
- 12 LEED water efficiency points embedded in long-term care facility business plans, by choosing low-flow plumbing fixtures and air-source chillers
- 4 acute sites working towards a five-year Pollution Prevention Plan to improve and reduce wastewater effluent, in compliance with the Metro Vancouver bylaw
Our 2021 actions

- UBC Sustainability Scholar helped identify water-saving opportunities for health-care facilities in [new report](#).
- Added additional water meters and linked this to the building automation system to better understand and track water flows at VGH.
- Completed three once-through cooling mechanical systems studies to inform future capital projects and identified any potential heat recovery opportunities.
- Investigated and promoted the use of low-flow devices, where applicable, for existing facility and new construction projects.
- Implemented heat recovery projects at Sechelt Hospital and Vancouver General Hospital, which will reduce the cooling tower water and chemical consumption.
- Carried out FMO engagement to identify water consumption, including identification of steam condensate return water losses.
- Included LEED Building Design and Construction water efficiency credits in two long-term care and one acute-care facility business plans.

Our partners

- BC Emergency Health Services
- BC Ministry of Environment and Climate Change Strategy
- BC Ministry of Health Capital Services Branch
- Municipal governments
- PHSA Supply Chain
- VCH Facilities Maintenance & Operations (FMO)
- VCH Finance
- VCH Projects & Planning teams

Our achievements

- The EES team successfully partnered with the FMO team and the Infrastructure and Risk team to pursue once-through cooling audits at UBC Hospital, Vancouver General Hospital (VGH) and GF Strong; these studies will enable water reduction projects in 2022.
- The VGH FMO team has been actively addressing steam condensate leaks that have been causing system water losses.
Water Use and Intensity

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

Water-use intensity has decreased by 11.2% since 2010, and despite an increase of 9.3% in core facility space, absolute water use has only increased by 3.1%.
Our Sustainability Story

We’re Finding Solutions: Together.

▸ Our Focus Areas
– Climate Change
– Energy and Carbon
– Food
– Leadership and Innovation
– Materials
– Transportation

▸ Water-saving opportunities in 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

Challenges to reaching our targets

▸ A regional list of once-through equipment has been identified, but locating funding resources to implement water saving alternatives remains challenging
▸ 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 for water conservation
▸ No existing Water Management Plan
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 Vancouver Coastal Health 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.
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.


C VCH 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 project

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Suggested citation:


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