



Interior Health



2020

Climate Change

Accountability Report

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Interior Health acknowledges the land that we live, work, and play on as the traditional territories of the Dakelh Dene, Ktunaxa, Nlaka'pamux, Secwepemc, St'at'imc, Syilx and Tsilhqot'in peoples. We also recognize the Métis Nation of British Columbia and the 15 Métis Chartered Communities in the Interior Region.

This report would not have been possible without contributions from many individuals across Interior Health, the Energy Management team, the Environmental Sustainability portfolio and leadership feedback during the development of this report.

About this Report

This report was produced by Interior Health (IH) and represents the collective work of many individuals, all of whom continue to collaborate to transform their workplaces and the health-care system, to improve wellness for staff, patients and their families.

It provides a high-level overview of the actions taken across IH to reduce carbon emissions, with a focus on the in-scope reporting, legislated through the *Climate Change Accountability Act*, as well as additional initiatives that support IH's commitment to being a sustainability leader.

The Logic Behind Carbon Offsetting

Being carbon neutral is about taking responsibility for the carbon pollution or greenhouse gas (GHG) emissions generated through our operations.

A carbon offset represents a reduction in carbon (GHG) emissions that can be used to compensate for, or offset, emissions from other sources. Through the Carbon Neutral Government, B.C. invests in carbon offset projects and each offset project reduces or sequesters GHGs. Offsetting is all about balance – because our atmosphere is like an ocean of gases, a reduction in carbon emissions at any one location benefits the whole system.

Environmental Sustainability

By definition, sustainability means: maintaining the integrated health of the environment, society, and economy for today and in the future.

While this report focuses primarily on environmental sustainability actions relevant to Interior Health's carbon footprint, it recognizes that there are mutually reinforcing connections to financial and social responsibility. In the context of this report and for brevity, the term "sustainability" will refer to environmental sustainability.

Declaration Statement

2020 Carbon Emissions and Offsets Overview

This Climate Change Accountability Report, for the period January 1, 2020 to December 31, 2020, summarizes Interior Health's emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2020 to reduce our carbon emissions, and our plans to continue reducing emissions in 2021 and beyond.

GHG Emissions and Offsets for 2020	
Total Emissions (tCO ₂ e ¹)	40,362
Total BioCO ₂ ²	42
Total Offsets (tCO ₂ e)	40,320
Adjustments to Offset Required GHG Emissions Reported in Prior Years ³	
Total Offsets Adjustment	-3,793
Grand Total Offsets for the 2020 Reporting Year	
Grand Total Offsets (tCO ₂ e) to be Retired for 2020 Reporting Year	36,527
Offset Investment (\$25 per tCO ₂ e) (includes 5% GST)	\$958,833

Retirement of Offsets

In accordance with the requirements of the Climate Change Accountability Act and Carbon Neutral Government Regulation, Interior Health (the organization) is responsible for arranging the retirement of offsets obligation reported above for the 2020 calendar year, together with any adjustments reported for past calendar years (if applicable). The Organization hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy (the Ministry) ensuring that these offsets are retired on the Organization's behalf, the Organization will pay within 30 days, the associated invoice to be issued by the Ministry in an amount equal to 25 dollars per tonne of offsets retired on its behalf plus GST.

¹tCO₂e = tonnes of carbon dioxide equivalent. It was estimated that fugitive emissions from cooling equipment do not comprise more than 0.01 per cent of Interior Health's total emissions and have been deemed out-of-scope and have not been included in our total greenhouse gas emissions profile.

² As outlined in the Carbon Neutral Government Regulation of the Climate Change Accountability Act, some emissions do not require offsets.

³ Total emissions from previous years are subject to adjustments/corrections, following analysis by the Climate Action Secretariat and Interior Health.

A message from our

President and Chief Executive Officer & Executive Sponsor

As this report goes to press, the outbreak of COVID-19 will have been with us for more than a year. The pandemic has changed the way we live and, in some cases, how we operate in health care.

While this response has been unprecedented and required us to adapt, it has also been a testament to our resilience. We have another on-going challenge ahead of us with our efforts to mitigate climate change to ensure a healthy environment and we are pleased to be part of the Province's public sector commitment to be net zero by 2050.

In the journey toward net zero, we will reduce greenhouse gases as much as possible, while offsetting the remaining emissions.

In 2020, we looked for more opportunities to build climate literacy and focused our efforts with employees, physicians, volunteers, and external stakeholders to identify efficiencies in our buildings, innovative collaborations, and new project funding mechanisms. This work enabled us

to lower our carbon footprint, engage key departments on climate risk management and work with communities on climate action planning.

Beyond 2020, we will continue to mitigate our carbon emissions to slow the effects of climate change, while working toward measures to prepare and adapt to future climate change already underway. The climate crisis is not a challenge we can ignore and leave for future generations. It is here right now and we have already started to see examples of more extreme climate, more wildfires and natural disasters in many parts of B.C. and throughout Canada.

In the face of incredible challenges in 2020, Interior Health has emerged stronger, more resilient, and better positioned to improve health care for British Columbians. We know every individual can make a difference and by working together across our organization, we are able to provide both quality care and a greener health care environment for our patients, families and communities.



Susan Brown
President and CEO



Donna Lommer
VP, Clinical and Corporate Services

About Interior Health

Who We Serve

Interior Health (IH) was established as one of the five geographically-based health authorities in 2001 by the Government of British Columbia. It is responsible for ensuring publicly-funded health services are provided to over 800,000 residents of the Southern Interior.

Interior Health covers a very large and geographically diverse area of over 215,000 square kilometres. The Interior Health region is a cross section of more rural, remote areas and also some of the fastest growing urban centres in the province.

What We Do

Interior Health is responsible for providing services spanning population health, Aboriginal health and well-being, primary health care and chronic disease management, home and community care, long term care, mental health, substance use, and acute care services.

As well, IH is responsible for clinical and administrative support services, including diagnostic services, information management and information technology, research, education and public communication.



Measuring our Carbon Footprint

We know the health of our planet affects the well-being of all people and communities alike

Our ecosystems are under immense strain. As a health care leader, we know that mitigating our impact on the environment can help us be part of the solution – in combating a warming climate, achieving cleaner air and water, and ensuring a healthier environment for future generations.

Embedding environmental sustainability in our daily approach

Interior Health is committed to embedding sustainability throughout our operations. With approximately 21,000 staff working in two tertiary hospitals, four regional hospitals, 16 community hospitals and 24 health centres, numerous field and corporate offices and a fleet of 285 vehicles, we are making environmental sustainability improvements across many aspects of our organization. These improvements reduce our carbon footprint, energy use, waste and water consumption, while embedding a culture of sustainability.

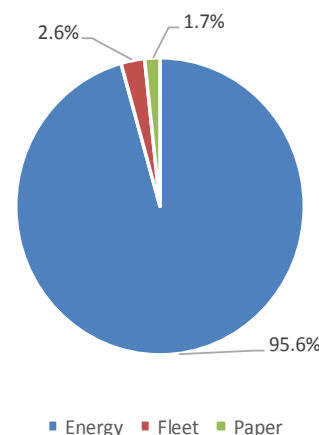
Since 2010, Interior Health has been carbon neutral under the Province's Carbon Neutral Government program – legislated under the *Climate Change Accountability Act*. Included in this commitment is our shared objective of reducing carbon emissions in alignment with the provincial mandate.

Our current objective as a public sector organization is to contribute to reducing B.C.'s carbon emissions 40 per cent below 2007 levels by 2030, 60 per cent by 2040, and 80 per cent by 2050. The Province has also introduced an interim target of 16 per cent by 2025.

At Interior Health, our goal is to reduce our overall carbon footprint, beyond the measured greenhouse gas (GHG) emissions we track from our building energy consumption, fleet vehicle fuel use and office paper use.

Working on initiatives that reduce our overall carbon footprint, in many cases, offers other co-benefits to our organization, while also minimizing our impact on the environment.

Sources of Greenhouse Gas Emissions



Greenhouse Gas Emissions* Trending (2018-2020)

Source	2018	2019	2020	Change from 2019
Energy	36,532	38,214	38,563	↑ 1%
Fleet	1,661	1,669	1,068	↓ 36%
Paper	801	849	690	↓ 19%
Total	38,994	40,732	40,320	↓ 1%

*all values in tonnes of carbon dioxide equivalent (tCO_{2e})

Actions Taken to Reduce Our Carbon Emissions

Buildings

While hospitals are dedicated to healing, they are also some of the most resource-intensive buildings. On average, they use twice the energy of most other building types. Many of these buildings are complex and large and operate 24/7. While essential, this results in higher energy use than a typical building. Due to higher energy use, IH has focused efforts on addressing energy consumption in our buildings. We have done so to reduce emissions, lower operating costs, extend the life of our assets and equipment and prepare our facilities to adapt to future climate change.

Meeting targets through energy reduction

Our Strategic Energy Management Plan (SEMP)* outlines our detailed project plans for energy optimization including:

- implementing energy retrofits to existing buildings;
- optimizing building automation systems;
- constructing energy efficient buildings; and,
- deploying innovative solutions that mitigate the effects from climate change.

In 2020, Interior Health continued to work with our partners and staff on initiatives to reduce energy consumption across the 230 facilities we track carbon emissions on. Partners in energy management and conservation initiatives include not only our Energy Management Team, but also our Capital Projects and Capital Planning teams - who manage the implementation of energy conservation projects and new building design - as well as the Plant Services team. These are the people that keep our buildings operating every day. Exploring and implementing energy conservation opportunities during our asset renewal project prioritization is key to our energy management program.

Additionally, realizing non-energy benefits, or co-benefits **above and beyond** direct energy savings is also a factor during the project prioritization phase. Although sometimes difficult to quantify, the co-benefits of energy conservation projects are identified and can sometimes exceed the value from electrical or fuel savings alone.

Co-benefits to energy and environmental initiatives may include **operational benefits**, such as:

- climate change **adaptation** and **resiliency** planning;
- improved **comfort** control;
- increased **reliability** of systems;
- lighting **quality** improvements;
- water utility **savings** and **quality** improvements;
- **preventative/predictive** maintenance tools;
- facility **renewal**;
- operational and maintenance **improvements** (labour, parts, fuel).

* <https://www.interiorhealth.ca/AboutUs/Accountability/EnvironmentalSustainability/Documents/StrategicEnergyManagementPlan.pdf>

Employee co-benefits may include:

- **improved safety;**
- employee **engagement;**
- increased **morale;**
- employee **productivity;**
- **less** noise;
- **improved** health.

Societal/Organizational co-benefits may include:

- public **health** effects;
- emissions **reductions;**
- economics and **cost savings;**
- **reputation** as environmental stewards;
- **carbon** tax and offsets.

Carbon Emissions - Buildings

Energy in our buildings is used to provide heat, water and electricity and equals approximately 95.6 per cent of our GHG emissions and totals 38,563 tonnes of CO₂e. Approximately 96.5 per cent of our total building carbon emissions comes from energy used in our owned buildings; close to another 3.5 per cent from energy used in leased buildings.

There has been a 1 per cent increase in emissions from our buildings compared to 2019. This growth is attributed to a two per cent increase in floor space, weather (2020 was modestly warmer than 2019, thereby more cooling required), and because our facilities operated differently from previous years due to the pandemic response measures. With the above contributing to more energy use, the increase was minimal due to the steady reductions we are making in our propane use, which has a higher GHG conversion factor. The space growth trend will continue, with a new patient care tower in development for Royal Inland Hospital (24,294 m²) in Kamloops, the expansion of Cariboo Memorial Hospital (9,500 m²) in Williams Lake, and a number of long-term care (LTC) facilities being planned. With continued space growth, there is more energy use, however our investments in emissions reductions projects continue to be effective and strategic.

Emissions Source	2020 GHG Emissions (Tonnes of CO ₂ e)	2019 GHG Emissions (Tonnes of CO ₂ e)	Change
Buildings (Stationary Fuel Combustion)	38,563	38,214	 1 %

"IH's Energy Management team has made significant strides over the number of years to lower our consumption of high emission energy sources, toward cleaner energy sources. The Team continues to form strong relationships with our utility providers to explore opportunities to do more. It is our responsibility to continue making progress and turning ideas into reality."

- Trevor Fourmeaux, Director, Plant Services

FortisBC efficiency in Action Award, Provincial Public Sector category

Celebrating Excellence in Saving Energy

Interior Health was recognized as a provincial public sector leader by FortisBC for the Efficiency in Action Award. Energy-efficiency upgrades to Penticton Regional Hospital earned close to \$386,000 in natural gas and electricity rebates. Applications were also made for new construction incentives for Royal Inland Hospital in Kamloops. As well, IH realized significant energy-efficiency upgrades at Cariboo Memorial Hospital in Williams Lake. Through FortisBC, IH also benefited from custom bundling rebates for the East Kootenay Regional Hospital in Cranbrook.



Energy Performance: The Payback

Beginning in 2019, IH began examining energy performance contracts. The goal: to identify avenues for capital investments to deal with aging infrastructure, while concurrently meeting our energy efficiency and conservation goals.

Through a competitive bidding process, energy performance contracts were considered at East Kootenay Regional Hospital (Cranbrook), Kootenay Lake Hospital (Nelson) and Shuswap Lake Hospital (Salmon Arm). At East Kootenay Regional Hospital (EKRH) in Cranbrook, eight energy conservation measures are underway, with a guaranteed payback over a 15-year period of the two million dollar capital investment. The goal is to address the hospital's aging building systems, while also reducing greenhouse gas (GHG) emissions by 23.5 per cent or the equivalent of 5700 tCO₂e over the 15 year payback period.

The project's sustainable implementations include: retro-commissioning; building envelope updates; demand control ventilation upgrades; conversion to variable air volume systems; LED lighting; occupancy controls; solar walls; and, pre-heating remediation.

"It's important to us to support provincial initiatives, while also being strategic in utilizing partnerships and funding to optimize our investments to address multiple goals, including the reduction of greenhouse gas emissions".

- Lorne Sisley, Corporate Director, Facilities Management and Operations

Energy Efficiency Highlights

Kelowna General Hospital Boiler Room Upgrade

The boiler room upgrade included upgrading components, adding control systems and insulating piping in order to create a more efficient plant and less heat loss. Specifically, upgrades were made to the steam plant including control upgrades, demand control ventilation and insulation of exposed steam and condensate piping.



523 tCO₂e/year will be avoided
Same as CO₂ emissions from
57 homes' energy use for 1 year

Estimated annual carbon offset payment of \$13,075 avoided yearly.

Total emissions at the site reduced by 8%.

Co-benefits: improved comfort control and increased reliability

- ⇒ Natural gas will be reduced by 10,482 GJ with estimated natural gas savings of \$66,457 per year.
- ⇒ Electricity will be reduced by 72,072 kilowatt-hours with estimated electricity savings of \$7,928 per year.

**Estimated total annual energy savings \$/year plus
avoided carbon offsets = \$ 87,456**

Cariboo Memorial Hospital Boiler and Chiller Retrofit

This project includes a number of energy conservation measures to the mechanical systems, which will include solar wall heating, installation of variable speed drives and variable air volume and heat recovery retrofits. This will allow the boiler used for heating to reduce its demand in warmer months and the smaller, more efficient system for the domestic hot water to continue to be available.



414 tCO₂e/year will be avoided
Same as CO₂ emissions from 870 barrels
of oil consumed

Estimated annual carbon offset payment of \$10,355 avoided yearly.

Total emissions at the site reduced by 37%.

Co-benefits: improved reliability and efficiency

- ⇒ Natural gas will be reduced by 8,262 GJ/year with estimated natural gas savings of \$61,062 per year.
- ⇒ Electricity will be reduced by 204,323 kilowatt-hours per year, with estimated electricity savings of \$11,129 per year.

**Estimated total annual energy savings \$/year plus
avoided carbon offsets = \$82,546**

East Kootenay Regional Hospital Energy Conservation Measures

This project includes a number of energy conservation measures to the mechanical systems, which include LED (light-emitting diode) lighting upgrades, control upgrades, improvements to the building envelope and the replacement of a heat exchanger.

392 tCO₂e/year will be avoided

Same as CO₂ emissions from 77 passenger cars driven for 1 year



Estimated annual carbon offset payment of \$9,790 avoided yearly.

Total emissions at the site reduced by 23%

Co-benefits: greater reliability and less maintenance costs (by replacing aging infrastructure), improved energy efficiency and decrease in GHG emissions

- ⇒ Natural gas will be reduced by 7,633 GJ/year, with estimated natural gas savings of \$47,094 per year.
- ⇒ Electricity will be reduced by 1,025,260 kilowatt-hours/year, with estimated electricity savings of \$74,109 per year.

Estimated total annual energy savings \$/year plus avoided carbon offsets = \$130,993

Dr. Helmcken Memorial Hospital Domestic Hot Water System

This project includes decoupling of the domestic hot water production from the main boiler plant by installing three dedicated domestic hot water carbon dioxide (CO₂) heat pumps and storage tanks, piping and controls. Low temperature returns will be connected to the existing condensing boilers to improve the efficiency.

61 tCO₂e/year will be avoided

Same as CO₂ emissions from 61,164 pounds of coal burned



Estimated annual carbon offset payment of \$1,524 avoided yearly.

Total emissions at the site reduced by 31%.

Co-benefits: increasing reliability and extending use of existing system, improved energy efficiency and decrease in GHG emissions

- ⇒ Propane will be reduced by 10,482 GJ/year with estimated propane savings of \$23,553 per year.

Estimated total annual energy savings \$/year plus avoided carbon offsets = \$25,077

Operational Energy Improvements

Funded through reinvestment of rebates and incentives from our utility partners, seven other facilities were able to implement energy conservation measures.

LED Lighting Upgrades

LED lighting lasts much longer than fluorescent lighting. In 2020, nearly 3200 bulbs with various wattages were converted at Brookhaven Care Centre (West Kelowna), 100 Mile District General Hospital (100 Mile House), Overlander Extended Care (Kamloops) and Creston Valley Hospital and Health Centre (Creston).

0.9 tCO₂e/year will be avoided

Same as CO₂ emissions from 382 litres of gasoline consumed



Co-benefits include:

- less energy use - 50% less electricity;
- reduces service calls;
- reduces replacement bulbs;
- improves lighting quality;

Electricity is estimated to be reduced by 369,201 kilowatt hours per year

Estimated total annual energy savings of \$33,389

Direct Digital Control Upgrades - Retro-commissioning Projects

Direct Digital Control (DDC) systems are much more precise than conventional analog controls, meaning the right amount of energy is used, at the right time and unoccupied space is not heated or air conditioned during off hours. DDC systems were upgraded through retro-commissioning projects at Princeton General Hospital (Princeton), Swan Valley Lodge (Creston) and Castlegar and District Health Centre (Castlegar).

142 tCO₂e/year will be avoided

Same as CO₂ emissions from driving 574,333 kilometres



Co-benefits include:

- Reduced operating and maintenance costs
- Improved reliability;

Fuel savings will be reduced by 2870 GJ per year and electricity will be reduced by 108,887 kilowatt hours per year

Estimated total annual energy savings of \$32,866

Designing More Energy Efficient Buildings

Designing and constructing new facilities with energy efficiency targets is essential to ensuring low impact and low cost health care to best serve our population. IH has energy performance standards to support adoption of energy efficiency for the designs of all new construction projects. This ensures new health care infrastructure is fiscally responsible, energy efficient, and built to the highest standard of human and environmental health.

Energy management standards and principles were incorporated throughout the design-build phases at Royal Inland Hospital in Kamloops, Penticton Regional Hospital (Penticton), Kootenay Boundary Regional Hospital in Trail, Arrow Lakes Hospital in Nakusp and Cariboo Memorial Hospital in Williams Lake.

In Williams Lake, a redevelopment project is underway at the Cariboo Memorial Hospital (CMH). This project will include a three-storey new addition to the hospital and renovation to part of the current facility. As one of the requirements at CMH, a **net-zero energy** modelling study was completed, which demonstrated that net-zero emissions using the identified measures are not feasible at this time for this facility.

“Cariboo Memorial Hospital serves patients and families across a large region and includes several Aboriginal communities, as well as an aging population. This brings us one step closer to breaking ground on this important project, which we know will expand access to health-care services for people in Williams Lake across the entire Cariboo-Chicoutin region.”

- Susan Brown, Interior Health President and Chief Executive Officer

Redevelopment of Cariboo Memorial Hospital is moving forward with detailed design work.



Significant emergency department renovations were completed at Kootenay Boundary Regional Hospital in Trail and Arrow Lakes Hospital in Nakusp. These upgrades enable better energy efficiency simply by upgrading older infrastructure to new, more efficient systems.

Along with expansions and improvements in Trail and Nakusp, energy efficient design is incorporated into the patient care tower project in Kamloops at Royal Inland Hospital (RIH) including:

- a heat recovery chiller;
- changes to conventional air-to-air exchange systems to more efficient designs;
- high efficiency boilers;
- high efficiency chillers;
- high performance building envelope;
- LED lighting, including occupancy and daylight sensors;
- variable speed drives to ensure motors are optimized and used efficiently.

New Emergency Department at Kootenay Boundary Regional Hospital, Trail



Before/After – Exam Bays at Arrow Lakes Hospital

Leadership in Energy and Environmental Design

To date, IH has eight buildings built to Leadership in Energy and Environmental Design (LEED) standards with one at the certification stage.

Status	Facility Name	Location
In Progress	Penticton Regional Hospital/David E. Kampe Tower	Penticton
2018	Royal Inland Hospital/Clinical Services Building	Kamloops
2018	Vernon Jubilee Hospital/Polson Tower	Vernon
2017	Kelowna General Hospital/Interior Heart & Surgical Centre	Kelowna
2012	Kelowna General Hospital/Walter Anderson Building	Kelowna
2012	Kelowna General Hospital/Centennial Building	Kelowna
2010	Kelowna General Hospital/Clinical Academic Campus	Kelowna
2006	Royal Inland Hospital/Hillside Centre	Kamloops

Retro-Commissioning

Due to aging systems, space-use changes, equipment replacements, operator turnover, and sequence adjustments, over time a building's system performance degrades. Retro-commissioning is the first stage in the building upgrade process and accounts for the interactions between all the energy flows in a building, and is a systematic method for planning upgrades to increase energy savings. This process also helps to identify improper equipment performance, equipment requiring replacement, opportunities for saving energy and money, and strategies for improving building system performance.

In 2020, four retro-commissioning studies were completed at Golden and District Hospital, Invermere and District Hospital, Lillooet Hospital and Health Centre, and Victorian Community Health Centre in Kaslo targeting our propane sites having high carbon emissions intensity and fuel costs. These studies focused on low to no cost operational improvements for the facilities. These four reviews evaluated the potential for energy upgrades. Energy upgrades, ranging from small to large capital investments were identified to the mechanical, electrical, and controls systems for future consideration.

Technical Research and Energy Audits

In 2020, three ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) Level 3 Energy Audits were completed at East Kootenay Regional Hospital, Kootenay Lake Hospital and Shuswap Lake Hospital, along with an energy study at Kootenay Boundary Regional Hospital. Audits and studies are completed at sites with the highest emissions reduction potential, to support planning for infrastructure upgrades.

Building Capacity Through Education

This past year, IH's energy management team worked with staff across Plant Services to raise the level of energy and climate literacy within the organization and to enhance a culture of energy conservation. A series of six webinars, sponsored by the Canadian Health Care Engineering Society (CHES), continue in order to educate and raise more awareness of energy management principles and opportunities for our Facilities Management Operations teams.

Fleet

IH operates a fleet of 285 vehicles. These vehicles are primarily used for site visits, materials delivery, and inter-office travel within our region, which covers 215,000 square kilometres. As well, the fleet category includes fuel use from non-standard vehicles, such as lawnmowers, snow blowers, and other equipment to maintain our facilities.

The practice at IH is to replace all end-of-life vehicles with more fuel efficient models. An annual fleet review ensures optimal usage of vehicles, including right-sizing, strategic placement and budget management.

The health authority is committed to provincial goals toward making 10 per cent of light-duty vehicle replacements zero-emission vehicles, whenever possible. In 2020, IH began a pilot to replace three gasoline-powered vehicles with electric vehicles (EVs), while also replacing three further vehicles with plug-in hybrids. The EVs and the hybrids will reduce the amount of GHG emissions from our IH fleet.

“As a public health organization, it’s our responsibility to address the challenges that come with climate change when we can. At IH, we are committed to reducing our emissions and are exploring many different options to reduce energy usage. When travel is necessary, the addition of electric vehicles and plug-in hybrids is an exciting step forward.”

- Donna Lommer, Executive Sponsor and Vice President,
Clinical and Corporate Services

Carbon Emissions - Fleet

Approximately 2.6 per cent of our total carbon emissions profile comes from the fuel used by our fleet vehicles. In 2020, our fleet emissions represented 1,068 tCO₂e.

There has been a decrease in emissions from our fleet fuel use compared to 2019. This is due in a large part to reduced travel during the COVID-19 pandemic.

Emissions Source	2020 GHG Emissions (Tonnes of CO ₂ e)	2019 GHG Emissions (Tonnes of CO ₂ e)	Change
Fleet (Mobile Fuel Combustion)	1,068	1,669	↓ 36 %*

* as of April 30, 2021, up to 20 per cent of the 2020 fleet transactions are not available, therefore we are expecting the decrease to be lower when data is available.



Electric Vehicle Fleet Pilot

In an effort to reduce GHG emissions from fleet vehicles use and demonstrate environmental leadership, IH embarked on a pilot project to gather information on the impacts of adding electric vehicles (EVs) to our fleet. As part of a one-year pilot project, three gasoline-powered vehicles were replaced with three EV's by partnering with Fortis BC to install charging stations for the vehicles.

The benefits of piloting EV's in our fleet include:

- Reducing carbon emissions;
- Lowering operating costs – EV's do not need oil changes or gasoline. They are powered by an electric motor that can be charged at a dedicated charging station;
- Increasing EV infrastructure with the addition of EV charging stations; and,
- Detailed data collection on energy consumption, cost savings for future EV purchases and determining the viability of using EV's in our fleet.

Funding remains the largest challenge to increasing zero-emission vehicles. Even with government rebates, electric vehicles are more expensive to purchase and require funds to install the electric vehicle charging infrastructure. As well, in the Interior region, the range and infrastructure currently in place presents problems for longer distance travel at this time. Regardless of these challenges, IH's Fleet Services program and senior leadership endorse developing a strategy to identify optimal fleet vehicle conversions to new zero-emission vehicles and identifying avenues for funding of the charging infrastructure.



Jessica Campbell, IH's Fleet Coordinator and Craig Paynton (former Manager of Protection, Parking and Fleet Services) test out one of IH's three electric vehicles.

"Our long-term plan is to look at electric vehicles and hybrids across the fleet as a way to reduce the carbon footprint and enhance the fleet," said Gregory Smith, Interior Health's Manager of Protection, Parking and Fleet Services. "Adding electric vehicles and hybrids might seem like a small thing, but we are trying to do our part to promote sustainability and reduce our impact on the environment."

- Gregory Smith, Manager of Protection,
Parking and Fleet Services

Paper

IH continues on a path to digitize a number of processes, whereby we are expecting decreases in our paper use. Many corporate reports are posted on-line only, and web-based technologies such as WebEx, Skype for Business and other on-line platforms such as Zoom and Microsoft Teams also contribute to reduced paper use. Although paper use accounts for a small fraction of our overall emissions inventory, we will continue to promote actions to reduce paper use wherever appropriate.

Our partnership with Royal Printers has proactively increased the sustainability of IH's printing at no additional cost to IH. Royal Printers is BC's first and only clean energy print shop, powered with zero-emission wind power, and heated by zero-emission landfill natural gas. Additionally, much of IH printing is supplied on paper made from left-over agricultural products, namely sugar cane fibre.



441 trees saved



27,762 kg CO₂ saved

There is ongoing effort across the organization to minimize use of paper in day-to-day workflow, with IMIT and lead departments working through initiatives to identify workflows for digitization, resulting in less paper use

As well, we continue to work with our supply chain partner, the Provincial Health Services Authority (PHSA) on new supply arrangements and in 2020 to identify suppliers with a large supply of eco-friendly paper such as sugar sheet, hemp and bamboo as well as high recycled content paper at a cost-competitive price.

Carbon Emissions - Paper

Approximately 1.7 per cent of our total carbon emissions profile comes from our paper use. The greenhouse gas emissions associated with our paper use accounts for 690 tCO₂e. There has been a decrease in emissions from our paper use compared to 2019.

Emissions Source	2020 GHG Emissions (Tonnes of CO ₂ e)	2019 GHG Emissions (Tonnes of CO ₂ e)	Change
Paper (Supplies)	690	849	↓ 19%



Electronic Process Improvements Continue

Launched in January 2020, the White Clinic in Penticton is now able to send referrals electronically to the local Quick Response Team (QRT). This pilot marks the first time in the province that private physicians are able to send a **completely electronic referral** to a Health Authority – meaning no need to print or fax them! This advance in information exchange is the direct result of the South Okanagan Innovation Hub team, which is a partnership between the BC Ministry of Health Virtual Care Strategy team, the SOS Division of Family Practice, TELUS Health, and Interior Health.

The technical project created connectivity between MEDITECH and the TELUS MedAccess primary care electronic medical records (EMRs) and opened the door for clinical documents to be shared between team members who use two completely different systems. It was all made possible by an integration between Interior Health's Clinical Data Exchange system and TELUS's distribution system. It is a first, but significant, step forward in solving the challenge of sharing clinical documentation across teams.

"We appreciate that QRT (and other teams) can now see a history of White Clinic referrals when reviewing client information on Meditech."

– Holly Enns, Quick Response Team Occupational Therapist

Even more solutions will be introduced in the future to other locations in a phased approach. The next deliverable of the project will focus on identifying and making available clinical documents out of MEDITECH to be sent to the TELUS MedAccess EMRs.



The two IH facilities participating in this innovative work are the Quick Response Team (QRT) and Martin Street Outreach Clinic (MSOC).

Managing Unknowns, Future Climate

Adapting to Future Climate and Managing Risks

The Province recently completed a climate risk assessment that identified 15 climate-related risks that will be faced by the province by 2050 – the greatest risks to B.C. are severe wildfire season, seasonal water shortage, heat waves, ocean acidification, glacier loss and long-term water shortage. Nearly all the risk events would have major province-wide consequences. In development, the Province is exploring processes for a customized risk assessment method to support provincial ministries, regional governments and public sector organizations to better understand and respond to emerging risks.

To align with future provincial direction, IH has taken a **proactive approach** to **understand climate risks** to the IH-region, how our health care system needs to adapt and become more resilient - not only in relation to slow onset changes such as in temperature, precipitation or sea level rise, but also in the frequency and magnitude of extreme weather events.

Existing Infrastructure Risk Assessments

Using information provided through the Pacific Climate Impacts Consortium (PCICS), a regional climate services organization at the University of Victoria, IH analyzed future climate variability to identify future climate stressors and regions within IH's service area that are expected to see the greatest change from today. In 2020, IH undertook seven climate risk and resilience assessments of our building assets in the regions of concern. This assessment is a building block to better understand how our building assets will perform under future climate stressors such as higher precipitation, warmer summers, fire-related air pollution and climate change shocks, such as severe flooding, fire, and windstorms.

Resilient Building Design Guidelines – New Builds and Major Expansions

Understanding local impacts from future climate change are still emerging, with some of these impacts expected to have significant implications for the built environment. Standards and codes do exist, however the fundamental issue with these methodologies is that they use historic weather data and do not reflect the effects of climate change that are occurring and that will accelerate in the future. Design strategies that have been used to maintain comfortable internal environments and that remain operational under acute or chronic climate stressors are not expected to be sufficient for the climates of the 2050s or 2080s.

As a result, to ensure newly built facilities or major expansions take future climate into consideration, IH was invited by Vancouver Coastal Health and Fraser Health, alongside the other B.C. health authorities, to participate in a joint-health authority initiative to develop **best practices for new building design and major expansions**.

Following this year long project, the B.C.-based health authorities now have a better understanding, guidelines and processes on how to incorporate and assess future climate in new building design and major expansions.



Jared Fehr, a participant in the Working Group for the Resilient Building Design Guidelines, and Bonnie Garson, Buyer, Capital Procurement review schematic drawings of a new building.

Heat Alert and Response System (HARS)

Led by the Population Health portfolio, the Heat Alert and Response System (HARS) helps communities and service providers, emergency management officials, and public health prepare for and respond to extreme heat events. Developed as a pilot with the Village of Ashcroft, the HARS process identified needs within community to create plans to help citizens cope with high temperatures and prolonged hot weather conditions, expected today and into the future.

On July 27th, 2020, the HARS was put into action. In association with an extreme heat warning from Environment Canada, IH's Population Health issued its first Heat Alert Notification in partnership with the Village of Ashcroft. This alert triggered the implementation of the Heat Alert Response System in Ashcroft and the HARS was rolled out across the community.

In March 2020, the Population Health Team facilitated HARS workshops in Lytton and Osoyoos, two of IH's hottest communities.



Participants in the HARS workshop in Osoyoos and Lytton, March 2020.

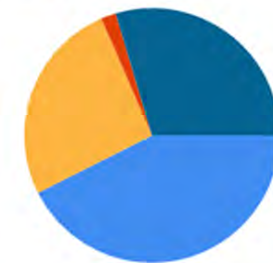
Extreme Weather Events Survey

With climate change representing increasing risks to business continuity, life, property and the environment, IH's Sustainability portfolio collaborated with teams from the B.C. regional health authorities to survey our clinical departments to better understand perceptions and opinions on extreme weather impacts to staff, patients and health care delivery. Of the 888 responses, 417 came from IH participants. Results from this survey are intended to inform and strengthen Interior Health's preparedness and adaptation measures to extreme weather related to climate change.



We want to know...

Has your clinical role delivering patient care and/or services been impacted by extreme weather events in the past?



Yes (292)
No (178)
Not sure (13)
I am not in a clinical or direct patient care role (203)

Poll Hint:

Share your clinical experiences through the [Extreme Weather Events Survey](#) running until Nov. 20, 2020.

Taking More Steps on Climate Action

Influencing Policy and Decision-Makers

Continuing throughout 2020, IH actively participated in dialogue with policymakers, advocates, staff and patients in provincial government consultations to develop new policies on climate action within public sector organizations (PSOs).

Greenhouse Gas Emissions Reporting

In 2020, all PSO's implemented a new carbon emissions reporting tool, called the Clean Government Reporting tool (CGRT), that allows us to better track carbon emissions and target reduction areas in our operations and embed energy usage reduction strategies across our organization.

Public Parking Infrastructure to support Electric Vehicle Charging

In support of the provincial efforts, we have 34 level one or level two charging stations are available for either staff or public parking, with plans to upgrade or install more in the future. Facilities with charging infrastructure include: Royal Inland Hospital (Kamloops), Kamloops Health Centre, Kelowna General Hospital, David E. Kampe Tower (Penticton) and Polson Extended Care (Vernon).

Sustainability Associates: Educate, Engage, Sustain

Through our Sustainability Associates program, we actively listen to feedback provided by our colleagues, collaborators and industry experts to understand their expectations and gain insights that help inform decisions or specific initiatives to improve our environmental footprint. This program is meant to work across our organization to make environmental sustainability a part of every colleague's role and responsibilities.

Front line staff drive greener health care

Following the lead from BC Women's Hospital, IH also reduced plastic waste by using the sitz-basin product without the plastic bags and tubing, which were often discarded and not used. Since IH uses around 350 sitz basins per year. IH's PHSA Liaison and Project Lead, Surgical Services ensured our staff were aware of the product change, to benefit from reduced waste and cost savings. Change doesn't always mean products will more expensive; this started with a goal to reduce waste, and in the end – also **reduced costs** by 20 per cent, by using the bag free sitz-basins.



Alicia Brubacher, IH's PHSA Liaison and Product Lead, Surgical Services

Supply Chain Responsibility

By responsibly working with our Supply Chain, we can create positive impact on the communities and ecosystems on which our supply chain relies. In 2020, the BC health authorities continued collaborating with the Provincial Health Services Authority, responsible for our supply chain, to embed environmentally-preferable purchasing principles in sourcing arrangements, with a goal to ensure the environment is not harmed by products, ingredients, or material sourcing practices.

Decreasing Waste, Improving Recycling

Although not part of our reportable emissions, we continue looking for more opportunities to improve our waste management.

New in 2020, our IMIT department forged a partnership with Sphere Canada to recycle used mobility devices, such as phones and i-Pads. By the end of 2020, IH had recycled 364 devices, and prevented 56,056 lbs of CO₂ emissions.



*364 devices equals the same
amount of carbon sequestered
by 420 tree seedlings grown
for 10 years*

Also, **new in 2020**, our Support Services department rolled out a new soiled linen bag, initially to support a healthier, safer IH, and reduce injuries with each bag having a max fill line. To realize **co-benefits** to the environment, the team sourced bags made from plastic material that is more desirable to recyclers, preventing approximately 1.8 million bags from ending up in the landfill annually.

Partnering with Communities and Stakeholders on Climate Action

Community planning for **climate action** is a key focus for our Medical Health Officers, Healthy Communities Program and the Epidemiology and Surveillance Unit. By partnering with communities and stakeholders on climate action, we will improve the health of the environment, which is inextricably linked to human health.

In early 2020, the Healthy Communities team presented to City of Vernon's Climate Action Committee and to Vernon City Council to describe the links between climate change and health.

In October 2020, Interior Health's HARS was showcased at the Canadian Public Health Association conference in October 2020.

As well, in Nelson the Healthy Communities team members, along with other community stakeholders, participated in Nelson's Climate Adaptation Workshop, which provided input to the larger Climate Action Plan.



Dr. Sue Pollock MHO and Heather Deegan, Director Healthy Communities, hosted a workshop to understand the relevance to, and involvement of, emergency management personnel in health impacts of climate change, particularly the impacts of extreme heat on community health and wellness.

Beyond 2020

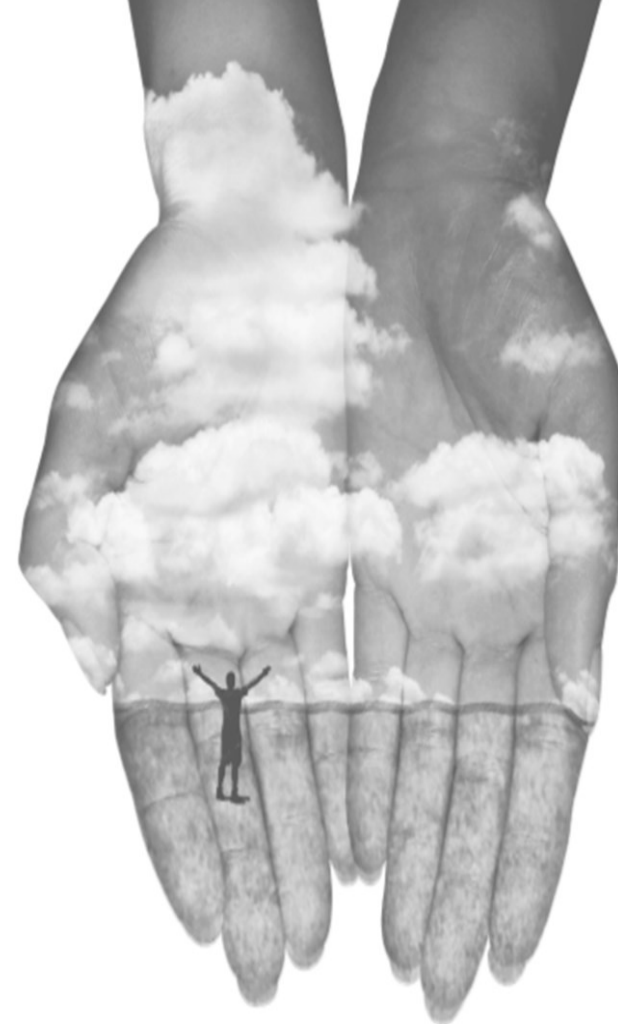
Plans to Continue Reducing Carbon Emissions

For many, the focus of 2020 was on current public health challenges. Despite this, our 2020 Climate Change Accountability Report demonstrates that sustainability action is continuing across many areas of Interior Health. These efforts are critical to changing behaviours, increasing involvement, and building a culture that embraces sustainability and developing a sustainable system and infrastructure.

Ongoing engagement efforts will be made, with a focus on clinical operations and a redesign of the Sustainability Associates Program. This redesign will include more education to advance climate literacy and to create a shared sense of purpose, encouraging involvement in developing innovative solutions, with co-benefits to the environment and the organization as a whole.

We will look for more opportunities to increase our energy efficiency and reduce carbon emissions. A ten-year Carbon Emissions Reduction Plan is being developed with a goal to reduce overall emissions by 40 per cent by 2030 and to ensure all new buildings will be 20 per cent more energy efficient by 2022, 40 per cent by 2027, and 80 per cent by 2032. As well, there are plans to continue retro-commissioning projects through BC Hydro and Fortis BC's Continuous Optimization program in 2021-2022, to ensure our facilities are running optimally and efficiently. Continuing into 2021, we will continue to collaborate with the Provincial Health Services Authority (PHSA) Supply Chain leads on the environmentally preferable purchasing initiative. The goal of this initiative is to demonstrate leadership and products and services that are better for the environment.

Alongside our GHG mitigation efforts, we will continue building our understanding of future climate risks and their impacts on service delivery, IH infrastructure and the health of our communities. With continued support from across our organization, these efforts and their cascading effects will contribute to combating a changing climate, achieving cleaner air and water and ensuring a healthier environment for future generations.



Thank you for taking the time to read the 2020 Climate Change Accountability Report.