

## 2017 Carbon Neutral Action Report

### Executive Summary

Northern Health is pleased to submit our 2017 Carbon Action Neutral Report summarizing our emissions profile and total offsets, and outlining the actions we have taken to address greenhouse gas emissions in this past year and our plans for the future.

During our 2017-2018 fiscal year, Northern Health implemented energy conservation projects at the University Hospital of Northern BC, with overall energy savings of up to 1% annually.

A 15% increase in heating degree days in 2017 resulted from a colder and longer winter. This directly impacted the energy use related to heating our facilities, which has resulted in a year over year increase of 6% in energy use.

In addition, the newly built and well-equipped Haida Gwaii Hospital & Health Centre led to an overall increase in energy use of over 1%. This increase is due to the larger 1406 square meters versus 892, and the heating energy source changing from primarily electricity to propane.

Ongoing projects are being funded through the Carbon Neutral Capital Program, with significant incentive contributions from FortisBC and program support from BC Hydro.

As we move forward into 2018 and beyond, we're continuing our efforts to identify the best available opportunities to reduce carbon emissions. Northern Health remains committed to sustainable actions and leaving a healthy environment for the future populations of northern British Columbia.



Cathy Ulrich  
President and CEO, Northern Health

---

## **2017 Greenhouse Gas Emissions**

Heating, lighting, ventilation and other building operations necessary to maintain a healthy patient and workplace environment resulted in the emission of 21,518 tonnes of carbon and carbon equivalents into the atmosphere.

Paper consumption resulted in an additional release of 323 tonnes of carbon equivalent emissions.

Fleet vehicles resulted in an additional release of 736 tonnes of carbon equivalent emissions.

In total, Northern Health had a measured carbon footprint of 22,577 tonnes for the delivery of quality healthcare in the most challenging climate in the Province.

## **Offsets Applied to Become Carbon Neutral in 2017**

NHA's total carbon footprint for 2017 was 22,577 tonnes, 22,550 of which are offsettable. Northern Health purchased 22,500 tonnes of carbon offsets to counter the emissions identified above, thereby achieving carbon neutrality in accordance with government legislation. An adjustment of one tonne for 2016 was reported.

Twenty-eight tonnes CO<sub>2</sub>e of emissions resulting from the combustion of bio-fuel were reported as part of our emissions profile in 2017. However, they were not offset as they are considered carbon neutral in accordance with the government carbon accounting legislation.

## **Emissions Reduction Activities**

Northern Health continued to implement energy conservation projects in 2017 to reduce carbon emissions from its operations. This is a strategic process which began in 2008, with additional opportunities already identified through 2018-2019 which will utilize the annual Carbon Neutral Capital Program funding.

## **Actions Taken to Reduce Greenhouse Gas Emissions in 2017**

In 2017, Northern Health retrofitted the grooved couplings within the hot water loop at our largest hospital in Prince George. This has allowed for the system to be run at a

lower temperature. Up to 1% overall energy savings and carbon emissions reductions are expected, and this retrofit will accommodate other systems changes in the future.

### **Plans to Continue Reducing Greenhouse Gas Emissions in 2018**

In the summer of 2018, the domestic hot water system at the University Hospital of Northern BC will be decoupled from the existing heating system, resulting in natural gas savings and a reduction in carbon emissions. There will be additional work in the boiler plant to improve efficiency, and metering of condensate return will begin in order to help detect systems issues and prevent energy losses.

Capital investments made at facilities to improve energy performance over the last nine years are resulting in annual cost avoidance of more than \$1 million.

Northern Health continues to receive support from our utility partners at FortisBC and BC Hydro, who provide funding for personnel, programs and projects.

# Part 1: CNAR Survey

## 1. General Information

Name: Ken Van Aalst, Michael Hoefer

Contact Email: Ken.VanAalst@northernhealth.ca

Organization Name: Northern Health Authority

Sector: Health

## 2. Stationary Sources (eg. Buildings, Power Generators): Fuel Combustion, Electricity use, Fugitive Emissions.

During 2017, did your organization take any of the following actions to support emissions reductions from buildings? (please select all that apply)

Conducted an energy audit/study of building(s) in the organization's portfolio.; Performed energy retrofits of the organization's building(s)

If you selected "*Performed energy retrofits of the organization's building(s)*":

How many buildings were retrofitted?: 1

If you selected "*Built, or are building new LEED Gold or other "Green" buildings*":

How many new "Green" buildings?:

Did your Organization perform any retrofits during 2017? Please describe briefly:

The grooved couplings in the hot water loop at the University Hospital of Northern BC were replaced. The return temperature of the hot water loop was thereafter able to be lowered, resulting in natural gas savings, and in addition, having completed this retrofit, additional projects will be able to be implemented in the future.

## 2a. Stationary Sources (eg. Buildings, Power Generators): Fuel Combustion, Electricity use, Fugitive Emissions.

Please briefly describe your organization's plans to continue reducing emissions from its stationary sources:

### a) Over the next 1-5 years

Northern Health has a Strategic Energy Management Plan which is updated annually. In addition, Capital Planning directors and other energy team members meet quarterly to review progress and ongoing commitments to reduce greenhouse gas emissions through energy conservation projects. Projects are being identified 12-24 months prior to beginning implementation, and facilities are selected based on their relative building energy performance indicator score.

### b) Over the following 6-10 years

Northern Health's energy team members are engaged with the broader energy management community and are looking for new opportunities and technologies which will help further reduce energy use at facilities where the implementation of such retrofits is shown to be both reliable and cost efficient.

## 3. Mobile Sources (Vehicles, Off-road/portable Equipment): Fuel Combustion:

During 2017, did your organization take any of the following actions to support emission reductions from its mobile sources? (please select all that apply)

Replaced existing vehicles with more fuel efficient vehicles (gas/diesel)

3) Mobile Sources - Other? Please specify: As fleet replacement happens through attrition, vehicles with higher fuel efficiency are added to the fleet.

If you selected "*Replaced existing vehicles with more fuel efficient vehicles (gas/diesel)*":

How many vehicles?: 10

If you selected "*Replaced existing vehicles with hybrid or electric vehicles*":

How many vehicles?:

### 3a. Mobile Sources (Vehicles, Off-road/portable Equipment): Fuel Combustion:

Please briefly describe your organization's plans to continue reducing emissions from its mobile sources:

a) Over the next 1-5 years

b) Over the following 6-10 years

### 4. Supplies (Paper): Indicate which actions your PSO took in 2017:

During 2017, did your organization take any of the following actions to support emissions reductions from paper supplies? (please select all the apply)

None of the above

4) Supplies (Paper): Indicate which actions your PSO took in 2017: - Other? Please describe briefly: Northern Health has invested significantly in multi-function printing: we don't print as much, and we scan to digital more. We scan all archive documents, we don't print them. Much more is handled by by e-mail - we don't even print invoices for payment, all are scanned now directly to accounts payable.

If you selected "*Had a policy requiring the purchase of recycled content paper*":

State the required recycled content here (30%, 50%, 100%):

If you selected "*Had a policy requiring the purchase of alternate source paper (bamboo, hemp, wheat, etc)*", which type of alternate source paper did you use?

Please briefly describe your organization's plans to continue reducing emissions associated with its office paper use in future years.

On the clinical side, paper documentation is still needed, so further improvements are still forthcoming until implementation of additional technology and process improvements.

## 5. Other Sustainability Actions

### a) Business Travel

During 2017, did your organization take any of the following actions to support emissions reductions from business travel? (please select all that apply)

None of the above

5) Other Sustainability Actions - Other? Please specify: Tele-conferences are often used as opposed to physical in-person meetings where possible. Technology has allowed for greater connectivity online.

### b) Education/Awareness

During 2017, did your organization have any of the following programs or initiatives to support sustainability education and awareness? (please select all that apply)

A Green, Sustainability or Climate Action Team; Support for professional development on sustainability (e.g. workshops, conferences, training)

### c) Other Sustainability Actions

During 2017, did your organization have any of the following programs or initiatives to support sustainability? (please select all that apply)

None of the above