2016 CARBON NEUTRAL ACTION REPORT

Interior Health

Interior Health
Every person matters

CONTENTS

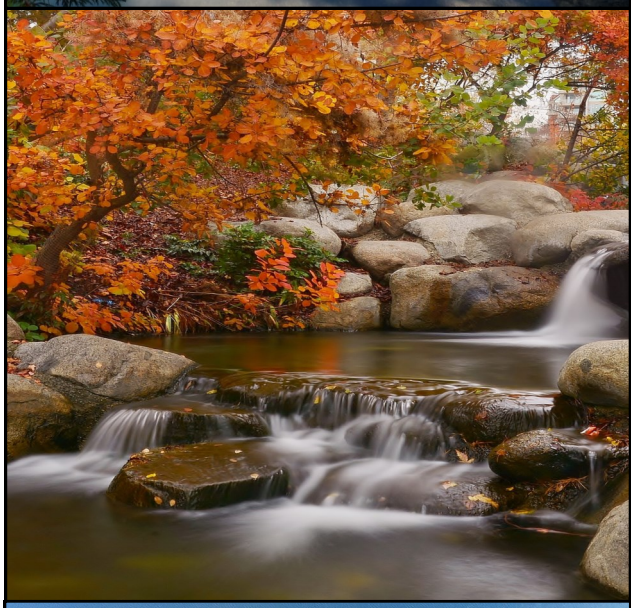

Photo credits: Interior Health Employees

Cover Photo: Lenka Kolar, Community Health and Services Centre, Kelowna, B.C.

Top: Carole Pugle - Berg Lake, Mount Robson Provincial Park, B.C.

Middle: Holly Prediger—Kelowna, B.C.

Bottom: Gina Eubanks—Kalamalka Lake Provincial Park, B.C.

Message

FROM THE CEO

Decisions made in all aspects of healthcare including energy use, waste creation and disposal, water consumption, transportation, and purchasing have an impact on the environment and the health of those who live in it. We bear all of this in mind as we work toward achieving our goals in Interior Health.

Over the last year, we have been significantly focused on transforming our primary and community care system, to reduce pressure on our hospitals, while also taking actions to ensure a safe and healthy workplace.

The transformation of the system is about the long-term sustainability of health care in the province of B.C., and this has an environmental connection because it will eventually mean fewer resources needed for hospital care – whether that's energy, water or supplies.

The health and wellbeing of our people is also an ongoing priority. In IH, we say "every person matters," and that can be expanded to "every person's actions matter," especially when it comes to the environment. That phrase certainly rings true when we look at how many employees have actively worked on projects or are involved in weaving sustainability into Interior Health's DNA. It also speaks to a more engaged workforce that cares about doing the right thing – for our patients and for the planet.

I regularly see and hear tangible examples of how environmental sustainability has become part of the way we work together – and how it's making a difference.

In 2016, we rolled out our new Sustainability Associates program, which is an interdisciplinary engagement program to influence behaviour change and conservation actions. It uses sustainability principles and actions to help balance the economic, environmental, and social impacts of our operations and has built our employees' capacity to drive results. This contributes to our broader goals of leveraging sustainability to reduce Interior Health's environmental impact, improve efficiency, and reduce costs, while improving the quality of patient care.

> "....employees have actively worked on projects or are involved in weaving sustainability into Interior Health's DNA."

We continue to make steady progress on our commitments to reduce operational greenhouse gas (GHG) emissions and I am pleased to use this report to share key highlights of our climate action initiatives implemented in 2016.

For us, sustainability encompasses the collective work of employees across IH through day-to-day practices. Our progress to date is a reflection of those efforts. However, there is always more to be done and we'll continue to strive to set the bar higher each year.

Chris Mazurkewich
President and CEO

Interior Health
Every person matters

Please consider the environment before printing

EXECUTIVE CHAMPION

MESSAGE FROM VP, SUPPORT SERVICES AND CFO

As a CFO who advocates for sustainability, I'm always looking for ways to allocate resources effectively and create efficiencies. My approach to sustainability has been guided by two tenets: we have a responsibility to contribute to society and the environment and that every investment we make in healthcare should return value to our patients, clients and operations.

Determining how to use limited internal resources to generate the greatest impact in a hard-to-measure realm like sustainability is a tough challenge. Because of this, we use multiple lenses when evaluating projects competing for limited resources. Our project evaluations include assessing the strategic, financial, operational, marketing and employee recruitment/retention perspectives as well as the environmental. By using a variety of perspectives our goals include identifying the fundamental business reasons for being more sustainable, for example, looking at how things can be done more efficiently and effectively with less resources and less impact.

Since 2010, we have focused on projects that have an environmental benefit while at the same time improving Interior Health's operational efficiencies and patient care. We are now seeing the cumulative savings from multiple energy efficiency measures. The cumulative savings from all projects implemented since 2014 is now estimated to be around $1,000,000, a significant reduction in energy costs.

By finding operational efficiencies, such as managing our energy costs, we are able to reallocate resources to patient care while at the same time lessening our impact on the environment.

> "By using a variety of perspectives, our goals include identifying the fundamental business reasons for being more sustainable....."

Along with operational efficiencies, we continue to focus shifting our culture and behaviours, through employee engagement. In 2016 we launched a program branded as Sustainability Associates where employee volunteers work to reduce IH's environmental footprint. We're starting to see the results of employee-driven projects which have a net positive benefit to the environment as well as our operations.

I'm looking forward to future improvements across our organization and pleased with our decision-making which takes into account the connections between the economic , environmental and social impacts.

Donna Lommer
VP, Support Services and CFO

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Part A: Emissions and Offsets Summary

2016 Greenhouse Gas (GHG) Emissions Profile

This *Carbon Neutral Action Report* for the period January 1st, 2016 to December 31st, 2016 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2016 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2017 and beyond.

By June 30, 2017 Interior Health's final *Carbon Neutral Action Report* will be posted to our website at www.interiorhealth.ca.

Interior Health GHG Emissions and Offsets for 2016 tCO_2e*	
GHG Emissions Created in Calendar Year 2016	
Total Emissions (tCO_2e)	41,078
Emissions which do not require offsets	59**
Total Offsets (tCO_2e)	41,019
Adjustments to GHG Emissions Reported in Prior Years	
Total Emissions (tCO_2e)	- 67
Total Offsets (tCO_2e)	- 66
Grand Total Offsets for the 2016 Reporting Year (from SmartTool Homepage)	
Grand Total Offsets (tCO_2e):	40, 953

**tonnes in carbon dioxide equivalent*

Retirement of Offsets:

In accordance with the requirements of the *Greenhouse Gas Reduction Targets Act* and Carbon Neutral Government Regulation, Interior Health **(the Organization)** is responsible for arranging for the retirement of the offsets obligation reported above for the 2016 calendar year, together with any adjustments reported for past calendar years. The Organization hereby agrees that, in exchange for the Ministry of Environment 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 per tonne of offsets retired on its behalf plus GST.

Chris Mazurkewich	May 23, 2017
Signature	**Date**
Chris Mazurkewich	President and CEO
Name (please print)	**Title**

**The totals for tCO_2e are shown rounded to the nearest whole metric tonne as only whole tonnes of tCO_2e can be purchased for offsets. It was estimated that fugitive emissions comprise less than 0.01% of IH's total emissions, and the ongoing effort to collect or estimate emissions from this source annually is disproportionately onerous. These emissions meet both the requirements to be below 1% of IH's total emissions and onerous to collect. For these reasons, emissions from this source have been deemed to be out-of-scope and are not included in IH's total greenhouse gas emissions profile or offset purchase.*

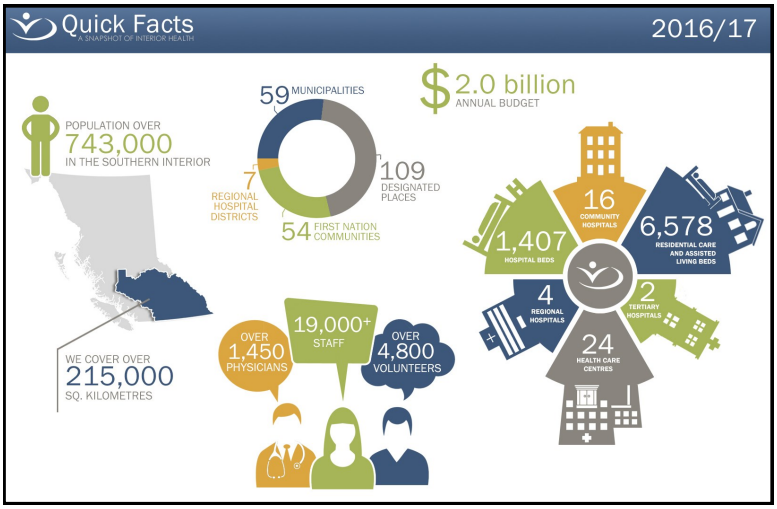
** Under the *Carbon Neutral Government Regulation* of the *Greenhouse Gas Reduction Target Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

Part B: Overview

About Interior Health

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 743,000 residents of the Southern Interior.

IH services a large geographic area covering 215,000 square kilometers and includes larger cities such as Kelowna, Kamloops, Cranbrook, Trail, Penticton, and Vernon, as well as a multitude of rural and remote communities.



2016 greenhouse gas emissions and carbon offsets summary

In 2016, IH's total greenhouse gas (GHG) emissions from operations were 41,078 tonnes of carbon dioxide equivalencies (tCO2e). Energy used in our buildings accounts for just above 94 per cent of our emissions profile, our fleet fuel use accounts for just below four per cent, and our paper use accounts for just under two per cent of our totals.

Offsets applied to become carbon neutral in 2016

Total emission offsets of $1,025,475 for IH's operations have been applied to achieve carbon neutrality in 2016.

2016 emissions and offsets

Under the *Greenhouse Gas Reductions Target Act* (GGRTA), IH has been required to report and offset its emissions since 2010, including emissions from all properties owned and leased by IH.

Consumption data was compiled from utility vendors and suppliers to determine Interior Health's carbon footprint for the 2016 calendar year.

IH measures and reports on its GHG emissions under carbon accounting protocols consistent with the Carbon Neutral Government Regulation, using the web-based application known as SMARTTool, and offsets those regulated GHG emissions it cannot avoid.

Photo credit: Jennifer Treger, Community Health and Services Centre, Kelowna, B.C.

Emissions reduction activities in 2016

Interior Health's GHG emissions reduction target was 4 per cent compared to 2015 levels and our utility reduction target was 1.5 per cent compared to 2015 levels and normalized for weather (see Table 1). We are also committed to BC Hydro's Energy Manager Program and an electricity reduction target of 500,000 kilowatt (kWh). As well, we contribute to B.C.'s public sector organizations commitment to reduce GHG emissions provincially by 80 per cent by 2050, based on 2007 levels.

Compared to 2015, IH's total for offsets emissions rose by 2.7 per cent and we did not meet our goal in total GHG reductions. However, we are pleased with our progress because, at the same time, IH's building portfolio grew by approximately 2.6 per cent year over year.

In comparing weather in December 2016 to December 2015, December 2016 was significantly colder. Because of the colder weather, we used more natural gas for heating our facilities. In fact, the GHG emissions for December 2016 alone were more than 800 tonnes than the same time period in December 2015.

However, we did exceed our utility reduction target and reduced our utility use by 2.3 per cent compared to 2015, equating to reduced utility costs. In 2016, we reduced our electricity use by 1,814,860 kWh, when normalized for load growth. The cumulative savings from all projects implemented since 2014 is now estimated at $1,000,000 when normalized for weather variations and load growth.

Table 1: Targets

Commitment	Reduction Target
Interior Health GHG emissions	4 per cent compared to 2015 levels, normalized for weather
Interior Health utility reduction target	1.5 per cent compared to 2015 levels, normalized for weather
BC Hydro	500,000 kWh for fiscal year 2016
BC Public Sector Organizations	80 per cent reduction in GHG's by 2050 by all public sector organizations

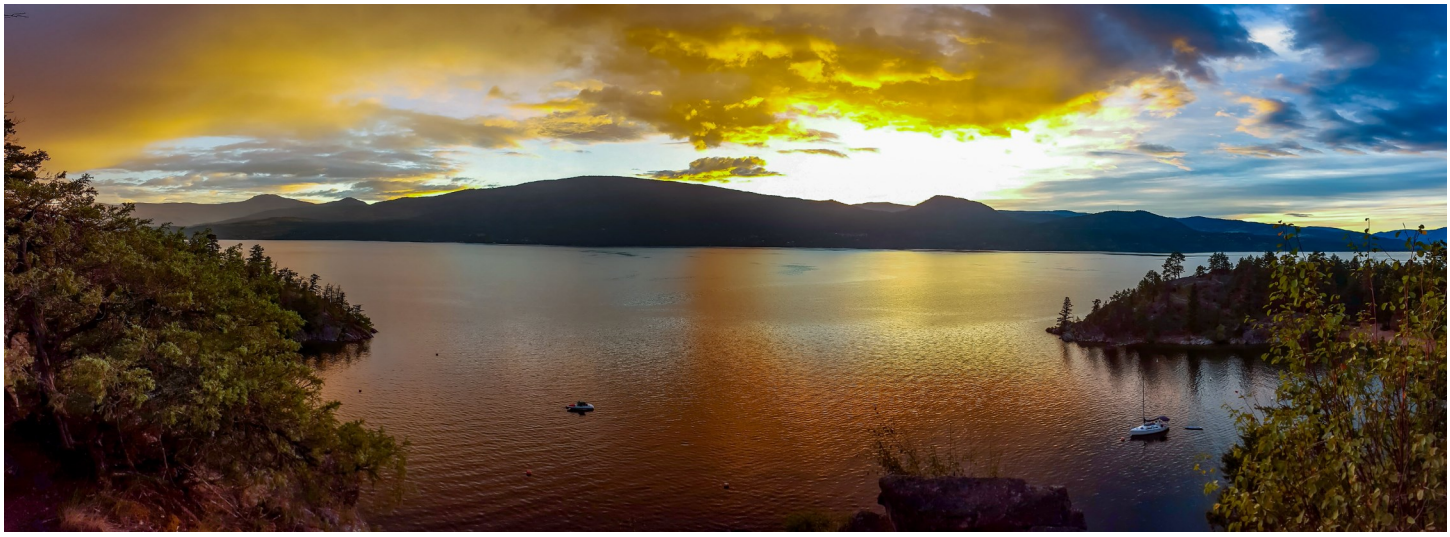


Photo credit: Shawn Berglund, Community Health and Services Centre, Kelowna, B.C.

Energy use in buildings: 2016 Results

The majority of our in-scope GHG emissions are derived from buildings which comprise 94 per cent of our emissions profile. Within that profile, natural gas accounts for 91 per cent of our total buildings emissions. Because natural gas accounts for a significant portion of our GHG emissions, we have implemented a number of natural gas measures including boiler replacements, building performance optimization, and installation of heat pumps. These projects are estimated to reduce our emissions in future years by over 250 tCO2e.

Kelowna General Hospital (KGH), Kelowna, B.C.

Energy conservation projects implemented in 2016 continued to provide a positive return on investment and helped to save operational costs through reduced energy use. Figure 1 shows energy use reduction and cumulative savings since 2014. The reduction and savings have been normalized for load growth and weather to allow for a more accurate comparison.

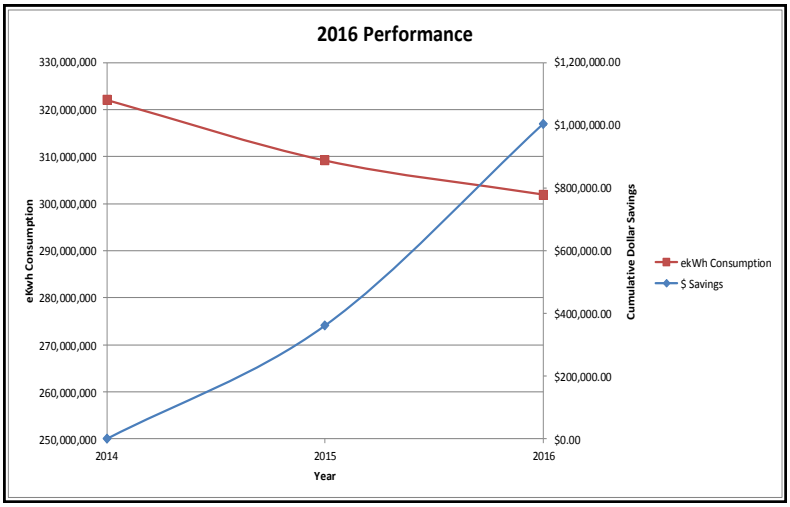


Figure 1: 2016 Performance

In terms of utility consumption, there has been a downward trend in cost per square metre (see Figure 2).

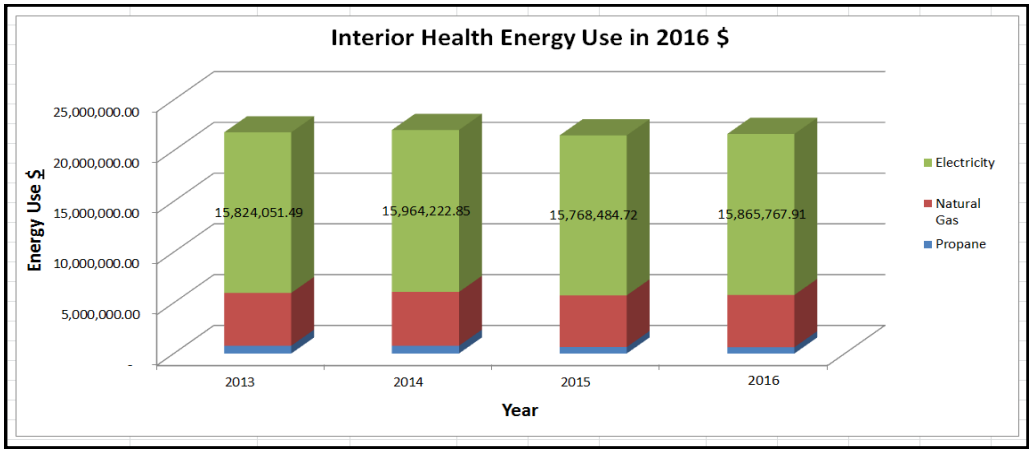


Figure 2 : Interior Health Energy Use

Energy use in buildings: 2016 Results (cont'd)

We are pleased to have implemented a number of key energy conservation measures in 2016 that will also contribute to reducing our building's emissions and operational costs in future years. Some highlights include:

- Installing new digital direct control (DDC) systems at:
    - Sparwood Primary Care in Sparwood, B.C. This upgrade enabled us to remotely manage the electrical and mechanical systems in our facility through a web-based application. It is expected to reduce our emissions by 91 tCO_2e or the equivalent of 1800 gigajoules (GJ) and 155,000 kilowatt hours (kWh) of energy fuel savings per year. This is equivalent to 11 homes' energy use for one year.
    - Elk Valley Hospital in Fernie, B.C. This upgrade will reduce our natural gas and electricity use, as well as our GHG emissions while also increasing staff and patient comfort. It is expected to reduce our emissions by 61 tCO_2e or the equivalent of 1,200 GJ and 112,000 kWh of energy fuel savings per year. This is equivalent to 6 homes' energy use for one year.

- Installing new boilers to reduce utility costs and emissions from natural gas at:
    - Overlander Extended Care in Kamloops, B.C.;
    - Royal Inland Hospital in Kamloops, B.C.

  Combined, the above boiler projects should reduce natural gas consumption by 3078 GJ and further reduce our emissions by 155 tCO_2e. This is equivalent to 16 homes' energy use for one year.

Dwight Wakefield, Royal Inland Hospital, Kamloops, B.C.

Energy efficient lighting at Royal Inland Hospital, Kamloops, B.C.

Energy use in buildings: 2016 Results (cont'd)

In 2016, Interior Health began to see the results from natural gas and GHG reductions from five boiler replacement projects completed in early 2016. Started in 2015, these natural gas boilers were replaced at Boundary District Hospital (Grand Forks, B.C.), South Okanagan General Hospital (Oliver, B.C.), Princeton General Hospital (Princeton, B.C.), Invermere and District Hospital (Invermere, B.C.) and Noric House (Vernon, B.C.). Results indicate that these projects have reduced our GHG emissions by over 200 tCO_2e annually.

There were also energy efficient retrofits of aging equipment, more lighting retrofits, and preventative maintenance projects which contributed to reducing our overall energy use in IH buildings. We also implemented energy conservation measures (ECMs) in several facilities under the final phase of the BC Hydro Continuous Optimization Program (COP), projected to save 20 tCO_2e annually. Additionally, audits of lighting systems in buildings and parking lots were completed to inform future lighting upgrades.

There were a number of operational changes in 2016, specifically through lease consolidations, which are also expected to reduce energy use due to more efficient use of space, energy efficient building and components, and through streamlining equipment.

In 2016, we were awarded the Fortis BC Energy in Action award from Fortis BC Gas and our participation in the Carbon Neutral Government Program was also recognized by the BC Government's 2016 Premier's Awards.

New boiler replaced at South Okanagan General Hospital, Oliver, B.C.

To inform future planning related to capital projects, IH benefited from incentives through our utility providers to offset the costs of energy studies. Five energy studies were completed at Cariboo Memorial Hospital (Williams Lake), Cottonwoods Care Centre (Kelowna), Boundary District Hospital (Grand Forks and Elk Valley Hospital (Fernie).

The results of these studies are now incorporated into a capital project prioritization exercise, and are also used to support applications for funds from the Ministry of Health's Carbon Neutral Capital Program (CNCP) to help us reduce energy costs and lower carbon emissions.

Energy in Action Awards recipients featuring Fortis BC and Interior Health employees

Fleet fuel: 2016 results

Our fleet vehicles' GHG emissions account for approximately four per cent of our total GHG emissions. In 2016, GHG emissions from fleet fuel decreasd one per cent from 2015 emissions, which is equivalent to a reduction of 15 tCO_2e. IH's region covers over 215,000 square kilometers, and in most instances, vehicles are the most economical method of travel. We continue to promote fuel-efficient driving and are committed to anti-idling practices. In 2016, we continued to implement measures to reduce reliance on fleet vehicles by encouraging carpooling and the use of technology such as video-conferencing, Skype for Business as well as WebEx.

IH employees from Kelowna, B.C. carpooling using fleet vehicle

Supplies/Office paper: 2016 results

Our paper consumption GHG emissions account for approximately two per cent of our total GHG emissions. In 2016, our paper use increased by 577 packages of paper compared to 2015, resulting in an increase of 10 tCO_2e in 2016. Although paper accounts for less than two per cent of our overall emissions, we are continually encouraging employees to reduce their paper use and identify opportunities for improvement.

In 2016, employee reminder campaigns to reduce paper use and waste rolled out across the organization. A paperless meetings toolkit has been used by many employees to encourage the elimination of paper copies of agendas, minutes, presentations or other documents in order to decrease paper use in meetings. This practice continues to be promoted by our employee engagement network of sustainability associates.

Our Document Services department is responsible for printing services across IH. They print forms, posters, brochures, envelopes, booklets, pads, and Business cards using both wheat sheet and sugar sheet paper. As a result, we have saved the equivalent of 1028 trees and over 41 tCO_2e of GHG emissions.

In order to determine feasibility of more widespread use of agricultural paper across IH, we partnered with Island Health and the BC Clinical and Support Services Society (BCCSS) to identify a competitive supply chain for alternative sources of paper. Efforts are ongoing to obtain competitively priced agricultural paper, such as wheat sheet, sugar sheet or bamboo paper in order to lower GHG emissions associated with paper use.

As mentioned earlier, IH consolidated nine leases into one new building in downtown Kelowna in 2016. This lease consolidation is expected to reduce paper use due to business process redesign. Prior to the move, 39 multifunctional printers were receiving and automatically printing an average of 14,500 faxes per month. With the lease consolidation, many business practices were re-evaluated and these faxes are now converted to a portable document format (PDF), and reviewed prior to printing. This will eliminate thousands of monthly print jobs. As well, with this lease consolidation, we were able to reduce our total printer fleet by 50 printers.

Supplies /Office paper: 2016 results (cont'd)

Efficiencies in operations have been a core focus in IH. At the recently opened North Shore primary care sites in Kamloops, printers are configured to store the majority of print jobs prior to printing. This process improvement eliminated automatic print jobs, as well as reprinting of reports. This is becoming a more common configuration to help us reduce waste as we deploy new print devices.

Beyond operational efficiencies, technological platforms encourage employees to reduce paper use. All workstations are equipped with collaborative software, enabling employees to edit documents electronically; by the end of 2016, over 50 SharePoint TeamSites were in use across IH. As well, we have a number of electronic- based systems to reduce the amount of printed paper, such as the Clinical Document eXchange (CDX), which clinicians use to electronically exchange information. This not only reduces paper use, but also any transportation fuel used to move files from location to location.

To ensure all toner ink is used up prior to recycling cartridge, employee Cindy Reed shakes toner cartridge.

ABOVE AND BEYOND: Measures to reduce emissions beyond mandated requirements

Interior Health's commitment to sustainability goes beyond those requirements that are mandated and account for our carbon footprint. It also touches on resource efficiency, employee education and engagement, waste management, and community engagement. In a large organization like ours, success hinges on the collective actions of multiple initiatives as well as individual employees.

One initiative rolled out at multiple facilities includes sourcing locally-grown food. As much as possible, we use locally grown produce, cheeses, herbs, meet products, etc. in our care homes and hospitals. We also highlight locally grown foods in our cafeteria menus and purchase as much fresh fruit in season as possible. Our Support Services team estimates that approximately 25 per cent of the produce we buy is locally grown, depending on seasonal availability, and another five per cent of the dairy and bread is purchased locally. As well, in many cafeterias, patient areas, and staff lounges, the majority of containers are re-usable, and in some regions, eliminating polysterene containers such as Styrofoam™ is under review.

Our Support Services teams, responsible for the operational management of IH's food, laundry and housekeeping services, continually identify changes within their operations that result in improvements to our overall environmental performance. For example, at South Okanagan General Hospital in Oliver, a staff member collects coffee grounds and food waste as compost for their personal garden, reducing food waste to the landfill. This facility is also exploring opportunities to partner with local agriculturists to identify if there is an opportunity to divert food waste to an existing composting process already underway as there are no municipal composting facilities in this area. As well, some of our cafeterias offer re-usable china plates and soup bowls for both the salad bar station and hot food, or offer discounts to customers (Diagram 1) who bring their own reusable mugs. In many facilities, polycarbonate glasses are available at ice and water dispensers to reduce waste to landfill .

Diagram 1: example of signage offering discounts for using reusable mugs

Water conservation is also a priority for our operations. IH's Plant Services team ensures drips, leaks, and unnecessary flows in bathrooms, laundry rooms, kitchens, labs, etc., are addressed immediately to limit water waste. When toilet or urinal replacements are necessary, low flush or dual flush toilets and urinals are installed in most cases. Routine maintenance on equipment, such as irrigation systems, is also in place to ensure water is used appropriately. As well, our cleaning practices changed as early as 2005 to include microfibre mops, which year-over-year have reduced water requirements.

Employee Engagement

Interior Health has a two-pronged approach to engagement. Through the newly developed Energy-Wise Network Program, Plant Services employees are engaged in energy roundtables, energy efficiency webinars, and regional competitions to build on the awareness and education aspect of energy management. The team members are leaders in creating momentum because they have a direct role in turning energy conservation projects into reality. To further foster energy-reduction behaviour change among building occupants and support energy efficient actions, a campaign called "Scout the Savings" and "Hog and Seek" (Diagram 2) geared to Plant Services staff and also rolled out to font-line staff has initiated conversations about energy management best practices and energy savings opportunities.

Diagram 2: example of employee staff engagement poster

Employee engagement (cont'd)

To engage employees beyond Plant Services, we implemented a new employee engagement program in 2016 to attract dedicated, passionate employees to be involved in initiatives to lower our overall environmental footprint. These team members, branded as Sustainability Associates (Diagram 3), collaborate and drive key sustainability projects within their sphere of influence. These projects were highlighted in a promotional internal video created this year, with support from BC Hydro.

Diagram 3: example of recruitment poster for Sustainability Associates

The intent of the video is to further educate and engage more employees to be Sustainability Associates. To demonstrate senior management commitment, both the CEO and CFO/VP Support Services were featured, along with employees who described their roles in implementing:

- an organics recycling pilot project to reduce kitchen landfill waste at Shuswap Lake Hospital and Bastion Place residential care facility in Salmon Arm;
- a three-day recycling education event for staff, patients, and visitors at Kelowna General Hospital to improve recycling behaviour;
- smaller team initiatives such as promoting reusable mugs, "print-less" campaigns, and paperless meetings to reduce waste and paper use.

Following the rollout of the new program, 14 new Sustainability Associates volunteered to lead on initiatives within their sphere of influence in 2017.

Paper conservation

Captured earlier in the report, Interior Health, Island Health, and the BC Clinical and Support Services Society (BCCSS) participated in a pilot project to identify alternative sources of paper. Although the results of the pilot project did not meet the cost-threshold to promote use within IH, one outcome was our supply chain now has more knowledge on the health authority's desire to purchase environmentally-preferable supplies when cost-effective. As well, a number of Sustainability Associates have committed to driving "print-less" campaigns in 2017, focused on behaviour change in their work areas.

Recycling event held at Kelowna General Hospital

Waste management

Minimizing our waste protects people and the environment, but also reduces operating costs. In partnership with our waste service providers, we have identified that we currently send approximately 63 per cent of our waste to the landfill and divert approximately 37 per cent from the landfill through wood, organics, recyclables, yard waste, and Styrofoam diversion programs, as well as community take-back programs.

We estimate more opportunities for diversion from the landfill and are working toward diverting closer to 46 per cent from the landfill in the future. To reach these goals, a number of optimization exercises are underway and include the right-sizing of waste and recycling bins and reducing the frequency of waste hauling. This optimization exercise has reduced truck traffic to and from sites, thus reducing emissions associated with fuel use. As well, at some key sites such as Kelowna General Hospital, the waste compactor was optimized, generating over $14,000 in yearly savings. Diverting waste from the landfill continues to be a key area of focus at specific sites. For example, over 68 cubic metres (m^3) of yard waste was diverted at Shuswap Lake Hospital in Salmon Arm, BC. Improvements to mixed recycling at other sites have further contributed to more than 320 m^3 being diverted from the landfill.

Regina Black, Support Services Supervisor

Working with a consumer battery stewardship organization, staff across multiple facilities have adopted a free battery recycling program. This ensures batteries don't end up in the landfill and at the same time, avoids unnecessary costs for battery waste disposal. In 2016, over 1468 kg of batteries were recycled, compared to 2015 where IH recycled 690 kg. That's a very impressive 112 per cent increase!

As well, throughout our facilities, retired IH assets are recycled by other stewardship associations such as the Electronic Recycling Association (ERA). Both our Information Management and Information Technology (IMIT) and Biomedical departments have been ensuring our electronic waste does not end up in the landfill. As well, our Plant Services team are actively recycling T8 lamps. In many facilities, T8 lamps are being replaced with LED lighting technology. Expired lamps are recycled through LightRecycle, a non-profit industry association specializing in product stewardship on behalf of the manufacturers, distributors, and retailers of products regulated under the provincial Extended Producer Responsibility (EPR) laws. Some departments such as the Biomedical department at Kelowna General Hospital have initiated recycling beyond the institutions' current processes, due to the large volume of Styrofoam packaging that passes through this department. In 2016, one biomedical department diverted over 5 cubic yards of Styrofoam from the landfill and will aim to increase their diversion rate even further in 2017.

Although limited organics or food-waste recycling is available in communities across IH, pilot projects were initiated in two streams to determine feasibility of rolling out more organics recycling in the future. As well, organics recycling at a new corporate facility in Kelowna began in 2016. Both projects will determine best practices and provide a roadmap for other facilities in IH's region.

Beyond recycling, some employees have taken an innovative approach to re-purposing items instead of sending them to the landfill. Staff at 100 Mile House had hopes of recycling hundreds of pieces of used clean plastic cutlery. However, due to limited commercial recycling in this rural area, recycling was not cost-effective. A partnership was formed with a residential care facility and the cleaned plastic cutlery was transported and turned into art by the residents.

Example of used, clean plastic cutlery reused by residents for art projects at Gateby Place, Vernon, B.C.

Other waste diversion and sustainability projects included re-purposing older, used medicine carts and converting these carts to palliative care carts. The carts are stocked with comforting materials such as: CD players, books with short stories and uplifting quotes, palliative care information, tissues, and a selection of materials to assist during the palliative care journey. Another item, a display cart destined for the landfill, was also re-purposed. This display cart was converted to a seasonal display to visually demonstrate to residents the change in seasons, as well as stimulate conversation. As well, an old rain barrel was converted into an outdoor garden for residents' use. We continue to promote re-purposing of items throughout IH, and look forward to our employees' taking initiative and using their creativity to reduce our waste.

Example of rain barrel repurposed as an outdoor garden at IH facility.

Promoting sustainable transportation options

We continue to encourage staff to take sustainable forms of transportation, whether that is for commuting to and from work or traveling for business.

Currently, IH has twenty-two electric vehicle charge stations. Eleven of these stations are located at Kelowna General Hospital and the other 11 are located at Vernon Jubilee Hospital. As well, over 35 electric vehicle charging stations are under construction at the Clinical Services Building at Royal Inland Hospital in Kamloops and at Penticton Regional Hospital.

Vernon Jubilee Hospital, Vernon, B.C.

In 2016, transit education sessions were held at two key sites in Kelowna in order to encourage future transit use. Employees from nine leased sites have moved into a new office tower, located in downtown Kelowna and near a major transit bus exchange. At the sessions, over 100 employees learned more about bus routes and many have opted to take public transit, ride a bike, walk to work or in some cases swim to work due to the location of the new building.


Employees commuting to work by swimming in Okanagan Lake

We also promote ride sharing and cycling to work, have bicycle lock-ups as we as bike cages at some facilities.


Bicycle cages at the Community Health Services Centre, Kelowna, B.C.

In 2016, our employees were enthusiastic participants in the province-wide Bike to Work Week held from May 30 to June 5. Over 425 IH employees participated and collectively rode more than 11,500 kilometres (km) and burned 487,773 calories. That's the equivalent of diverting over 3 tonnes of carbon dioxide or the same emissions from driving over 13,595 km.

To lower GHG emissions from business travel, we have corporate guidelines directing employees to minimize business travel whenever possible, and promote the use online options such as video and teleconferencing for meetings and training. As well, employees have access to collaborative tools such as Skype for Business across our networks, enabling staff to attend online meetings, share screens and view presentations.

Promoting sustainable transportation options (cont'd)

Carpooling is promoted across the organization and numerous campaigns remind employees of the benefits of carpooling. Between Oct. 17–21, IH participated in Carpool Week where B.C. residents were encouraged to share a ride on their way to work. As well, using IH's internal site called Marketplace, IH employees were able to solicit matches for ride-sharing opportunities across all regions.

Employee transit education and promotion sessions


Example of reflective roof at Royal Inland Hospital, Kamloops, B.C.

Green construction and renovation

In the last several years, IH has targeted Leadership in Energy and Environmental Design (LEED) Gold status from the Canada Green Building Council (CaGBC) at a number of facilities. At the Kelowna General Hospital (KGH) campus, there are four buildings that have achieved LEED Gold status:

- Clinical Academic Campus LEED Gold – obtained June 2011;
- Centennial Building LEED Gold – obtained September 2013;
- Clinical Support Building LEED Gold – obtained November 2013;
- Interior Heart & Surgical Centre LEED Gold – obtained February 2017.

As well, the Polson Tower at Vernon Jubilee Hospital was designed and built to LEED Gold Standards; and the Royal Inland Hospital Clinical Services Building in Kamloops is aiming for LEED Gold certification in the future. The Clinical Services Building features a green roof contributing to future energy savings as well helping to meet the requirement of 22 per cent above the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) rate of 90.1-2007 for LEED Gold status.


Example of green roof at Royal Inland Hospital, Kamloops, B.C.

In some IH facilities, we have been able to take the principles of green construction and renovation to the next level and create unexpected possibilities while eliminating waste. Using the premise that 15 per cent of all materials brought to the construction site end up in the waste stream and that 35 per cent of all waste is construction debris, some newly constructed sites have utilized pre-fabricated interiors constructed offsite, thereby reducing construction waste to landfill.

Plans to continue reducing emissions in 2017 and beyond

Operational efficiencies often complement our efforts to reduce our GHG emissions. The consolidation of nine leased spaces into one building in Kelowna in 2016 is expected to see energy efficiency improvements, due to more efficient use of lease space and a newer energy efficient building. As well, this lease consolidation should reduce fleet fuel use because more than 800 employees are now co-located in one space. This co-location has also enabled business process efficiencies such as printer fleet reductions and automatic printing of reports, including minimizing service contracts—all of which contribute to our overall environmental footprint.

IH has made a commitment to reduce energy consumption in its buildings, both old and new. Working alongside our partners in developing new infrastructure, a new patient care tower at Penticton Regional Hospital was approved for approximately $375,000 in future utility incentives based on the current energy efficiencies identified in the design of the building.

To continue reducing GHG emissions and improve sustainability in 2017, IH will focus on:

Capital improvements:

- Continue to assess our capital planning process to determine linkages to energy efficiency conservation measures, such as natural gas reductions through end-of-life boiler replacements.
- Implement Carbon Neutral Capital Program (CNCP) projects, as funding permits, including right-sizing and replacement of multiple boilers and improving efficiency of domestic hot water production, the installation of a biomass boiler plant, and connectivity to a geothermal geo-exchange loop.
- Determine the feasibility of linking a facility to a district energy biomass plant in the community, which could reduce energy costs by 25 per cent as well as reduce GHG emissions by 135tCO_2e .

Partnerships

- Continue collaboration with utility companies to optimize incentive opportunities and increase energy retrofit initiatives resulting in longer term savings.

New technologies

- Focus on leading technologies, including bulk LED upgrades at a number of facilities and continuing to pursue LED lighting projects that permit occupancy controls and dimming to allow daylight harvesting.
- Identify opportunities to roll out new printer technology to reduce energy use. A new colour ink-based PageWide technology is now available as an option to standard toner-based laser technology. Along with reduced operating costs and increased reliability, these devices use up to 84 per cent less power while printing. Using this option, 50 watts of electricity will be used compared to the 600 watts previously used, contributing to reductions in energy use.

Planning and integration

- Link business planning and adaptation planning related to climate change to better enable IH to understand how climate change may affect our buildings portfolio. This project would also help identify adaptation strategies involving clinical operations (social impacts) as well as the impacts on the facility's physical structure and assets (physical impacts).
- Continue to work with our supply chain to identify cost-effective supplies, such as agricultural paper (wheat, bamboo, hemp), with lower GHG emissions.

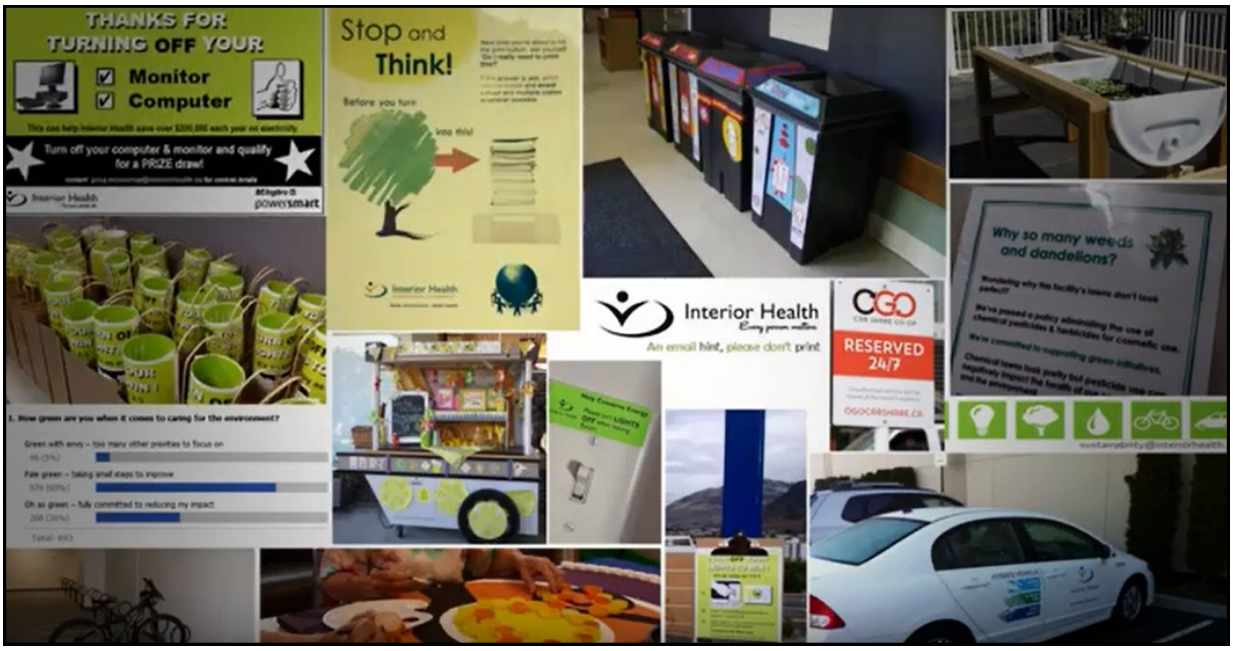
Plans to Continue Reducing Emissions in 2017 and beyond (cont'd)

Planning and integration (cont'd)

- Review new fleet purchases in 2017 to determine what fuel efficient options are available and identify improvements to fuel data collection to analyze yearly comparisons.
- Continue discussions with car sharing companies to identify whether there are opportunities to reduce our fleet fuel use.
- Develop a business case for an electric vehicle conversion.
- Develop and obtain endorsement of an IH-wide environmental sustainability plan.
- Develop an environmental sustainability committee to oversee IH-wide environmental sustainability planning

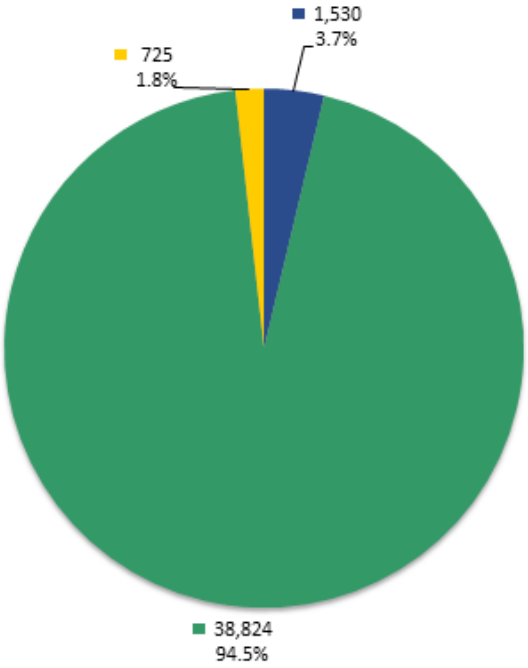
Employee engagement

- Roll out multiple engagement and education campaigns – paper and printing reduction, sustainable transportation, sweater day, repurposing items, recycling, etc.
- Develop and implement a three-year behaviour change energy and environmental stewardship plan.



Part C: Copy of Emissions Source Report—SmartTool May 15, 2017

Interior Health Authority
Greenhouse Gas Emissions by Source
for the 2016 Calendar Year (tCO_2e*)



Total Emissions: 41,078

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2016 (Generated May 15, 2017 8:52 AM)
Total offsets required: **41,019**. Total offset investment: **$1,025,475**. Emissions which do not require offsets: **59** **

*Tonnes of carbon dioxide equivalent (tCO_2e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** Under the *Carbon Neutral Government Regulation* of the *Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

Part D: 2016 Carbon Neutral Action Report Survey

Below is a copy of the Carbon Neutral Action Report Survey originally submitted to the Ministry of Environment.

Organization Name:

Interior Health Authority

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

During 2016, did your organization take any of the following actions to support emissions reductions from buildings?

• Performed energy retrofits of the organization's buildings: Boiler replacements and lighting retrofits.
• Built, or are building new LEED Gold or other "Green" buildings: We are working with partners to build LEED Gold standard facilities.
• Other actions? Please describe briefly: Certified the Interior Heart and Surgical Centre to LEED Gold Standard.

Briefly describe your organization's plans to continue reducing emissions from its stationary sources in future years.

Interior Health (IH) has a strategic energy management plan (SEMP) to guide the Authority through the process of defining and meeting energy and greenhouse gas emissions targets. As well, a complimentary plan on environmental sustainability initiatives beyond those mandated, complete the holistic approach. The main areas of focus of both plans are to:

1. Educate and engage - to influence behaviour change, continue engaging our Plant Services staff, our Sustainability Associates and the Climate Change Health Committee to promote a culture of environmental stewardship and influence no-low cost behaviour change initiatives through leveraging resources provided by the Energy-Wise Program (formerly Workplace Conservation and Awareness Program).
2. Optimize existing buildings - working closely with our Capital Projects teams and Facilities Management and Operations staff to advise on energy management issues and provide operational savings business cases to maximize energy utilities savings and GHG reductions for retrofit of facilities.
3. Influence new construction - continuing to influence new construction or major renovations to ensure aggressive energy performance targets are included in contract negotiations ensuring our buildings are as energy efficient as possible.
4. Improve our existing buildings - by leveraging the Carbon Neutral Capital Program (CNCP) as our primary funding source, implement GHG/energy reduction projects in our existing buildings portfolio. Concurrently, discussing innovative internal funding models using incentives acquired through utility cost avoidance due to energy conservation.

During 2016, did your organization participate in utility-sponsored energy demand management program(s) (e.g. BC Hydro's Energy Management (Manager))?

Yes

If yes, please describe briefly:

Interior Health participated in BC Hydro's Energy Management Program.

2) Mobile Sources (Vehicles, Off-road/Portable Equipment): Fuel Combustion.

During 2016, did your organization take any of the following actions to support emission reductions from its mobile sources?

• Replaced existing vehicles with more fuel efficient vehicles (gas/diesel): Purchased more than 20 fuel efficient vehicles in 2016.
• Took steps to drive less than previous years.
• Other actions? Please describe briefly: Promoted carpooling, active transportation and teleconference/ video-conference use.

Briefly describe your organization's plans to continue reducing emissions from its mobile sources in future years.

In the short term, we will continue to optimize maintenance schedules and analyze fleet data for further reduction opportunities. As well, IH continually looks for opportunities to reduce business travel and operate in a low-cost manner. We plan to investigate the feasibility of electric vehicle use and Fleet Smart Driver training.

3) Supplies (Paper):

During 2016, did your organization take any of the following actions to support emissions reductions from paper supplies?

• Awareness campaign focused on reducing office paper use.
• Other actions? Please describe briefly: In partnership with Island Health and BCCSS completed a pilot to determine feasibility of wheat sheet paper use. Pilot determined source was appropriate, however supplier could not provide cost-competitive pricing compared to other sources of paper.

Briefly describe your organization's plans to continue reducing emissions associated with its office paper use in

In 2016, IH made significant strides toward replacing paper records with electronic processes as outlined in the Carbon Neutral Action Report. We also support employees' ability to share and manage information and documents electronically by increasing the number of team sites and collaborative software such as Skype for Business and WebEx. Paperless meeting promotion will be a key area of focus for our Sustainability Associates in 2017. As well, we will continue investigating alternative sources of paper with lower GHG emissions, and work with our BCCSS Supply Chain to ensure other sources of paper are cost-competitive to 30 per cent and 50 per cent post-consumer recycled paper.

4) Other Sustainability Actions:

Business Travel: During 2016, did your organization take any of the following actions to support emissions reductions from business travel?

• Encouraged alternative travel for business (e.g. bicycles, public transit)
• Encouraged or allowed teleworking or working from home.
• Other, please describe briefly: Encouraged carpooling of fleet vehicles.

Education & Awareness: During 2016, did your organization have any of the following programs or initiatives to support sustainability education and awareness?

• Green, Sustainability or Climate Action Team.
• Support for professional development on sustainability (e.g. workshops, conferences, training).
• Supported or provided education to staff about the science of climate change, conservation of water, energy and/or raw materials.
• Other, please describe briefly: Formed a Climate Change and Health Committee to further knowledge and linkages to potential health affects.

Other Sustainability Actions: During 2016, did your organization have any of the following programs or initiatives to support sustainability?

• An operations policy or program to facilitate the reduction and diversion of building occupant waste (e.g., composting, collection of plastics, batteries) from landfills or incineration facilities.
• Other, please describe briefly: Water conservation - as fixture replacements are required, these are replaced with more efficient models.