



SickKids®

Energy Conservation and Demand Management Plan 2020 - 2024

Published July 2019





THE HOSPITAL FOR
SICK CHILDREN

A culture of social responsibility, which includes energy, water and resource utilization efficiency, has long been a part of The Hospital for Sick Children (SickKids). SickKids is committed to a socially responsible work environment that contributes to a safe, healthy and ecologically efficient environment and sustainable low-carbon future.

This latest update of SickKids' 2020 - 2024 Energy Conservation and Demand Management Plan continues to pursue our vision to become the most energy-efficient hospital by continuously reducing energy consumption and carbon footprint through cost-effective, innovative and integrated solutions.

Our commitment to the environment and energy conservation is embedded in SickKids' strategic plan and it extends to our patients and their families, our staff and the community.

On behalf of SickKids, I endorse and approve this 2020 – 2024 Energy Conservation and Demand Management Plan.

A handwritten signature in black ink that reads "Laurie Harrison". The signature is written in a cursive, flowing style.

Laurie Harrison
Vice-President, Finance & Chief Financial Officer
Energy and Environmental Sustainability Executive Sponsor

SickKids

June 20, 2019

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Background

The Hospital for Sick Children (SickKids), affiliated with the University of Toronto, is Canada's most research-intensive hospital and the largest centre dedicated to improving children's health in the country. As innovators in child health, SickKids improves the health of children by integrating care, research and teaching.

As an integrated health care establishment we have three owned facilities and three leased office spaces within the downtown core. The main hospital campus consists of the Atrium, located at 170 Elizabeth Street, and the Annex, located at 555 University Avenue. Our research facility is located in the Peter Gilgan Centre for Research and Learning (PGCRL) on 686 Bay Street. In addition, SickKids leases office spaces at 180 Dundas Street, 525 University Avenue and 123 Edward Street.

SickKids is undergoing a campus redevelopment in order to improve the environment for patients and families and the efficiency and effectiveness of our operations. The redevelopment effort known as Project Horizon, has resulted in the closure of the McMaster research facility shortly after PGCRL was fully occupied in 2014. Project Horizon consists of three phases, estimated to be complete in the next 12 years. The first phase, a new 22-storey Patient Support Centre (PSC) tower, slated for administrative staff and training spaces for clinical staff will be complete in late 2022 to early 2023. This collaborative space will bring together staff from across SickKids' leased spaces, likely resulting in no further need for our currently leased office spaces. After the PSC tower, the next phase will be planning for and building the multi-storey Peter Gilgan Family Patient Care Tower, which is expected to be completed by 2030. Both new towers will aim to achieve Leadership in Energy and Environmental Design (LEED) certification. The redevelopment will also renovate the existing Atrium building. For more information about SickKids campus redevelopment, visit www.sickkids.ca

Guiding SickKids activities going forward are our [2030 Goals](#) of a socially responsible work environment that contributes to a safe, healthy and ecologically efficient environment and sustainable low-carbon future. The 2030 Goals outline the need, vision and strategies to achieve a socially responsible work environment at SickKids.

Introduction

Ontario Regulation 507/18, Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans, under the Electricity Act 1998, requires broader public sector organizations, such as hospitals, to develop an Energy Conservation and Demand Management (ECDM) plan and update it every five years.

Our updated ECDM plan was developed in compliance with the regulation and covers the period from 2020 to 2024.

The plan describes SickKids':

- Vision, goals and objectives for conserving energy
- Results from the first ECDM plan
- Energy conservation measures

Our updated ECDM plan builds on the SickKids' first plan developed in 2014 and the experience gained in energy conservation over the last five years.

The plan can be accessed on SickKids' intranet site (KidsGoGreen site on mysickkids.ca) and the public website (www.sickkids.ca under Strategy and Performance). In addition, hard copies are available from the Facilities Department.

Vision, Goals and Objectives for Conserving Energy

SickKids is committed to a socially responsible work environment that contributes to a safe, healthy and ecologically efficient environment and sustainable low-carbon future.

Our energy vision is to become the most energy-efficient hospital by continuously reducing energy consumption and carbon footprint through cost-effective, innovative and integrated solutions.

Our commitment is embedded in SickKids' [strategic plan](#) and reflected in our 2030 energy and environmental sustainability [goals](#). Both are available on SickKids public website.

The strategic plan promotes a socially responsible work environment. It also commits to the continued development and maintenance of policies, procedures, programs and investments in energy and resource utilization efficiency.

The 2030 energy and environmental sustainability goals have been aligned with the United Nations Paris Agreement, and are supported by the following strategies:

- Investments in energy, water and infrastructure retrofits to reduce energy use, water use, and greenhouse gas emissions.
- Investments in alternative water sources and re-use, renewable and clean energy.

- Design buildings and health-care services resilient to the impacts of climate change.
- Reduce the use of natural resources and toxic substances through continuous process improvement.
- Form partnerships to promote a socially responsible work environment.
- Promote socially responsible behaviour through campaigns, training and departmental accountability.
- Participate in provincial, national and international environmental performance benchmarking, awards and challenges.

Our 2020 - 2024 energy conservation objectives align with the 2030 targets. They include SickKids owned and existing buildings i.e. Annex, Atrium and PGCRL.

Our 2024 objectives are:

- Reduce energy consumption by 10%
- Reduce water consumption by 10%
- Reduce greenhouse gas emissions by 10%
- Continue to cultivate a culture of conservation across the organization through sustained behaviour changes that reduce energy and water consumption

The process of continuous improvement guides the energy management and conservation efforts at SickKids. It includes:

1. Assessment of current and future states and performances
2. Setting of goals, objectives and strategies
3. Strategic planning, development, maintenance and implementation of policies, procedures, programs and investments
4. Monitoring, analyzing and reporting of progress and results
5. Improving current state through the ongoing process of addressing issues, identification of opportunities and implementation of solutions

Tracking Energy Consumption

We report energy and water use monthly, quarterly and annually. It allows us to understand how energy is used in all of our sites, helps to identify potential energy conservation opportunities and track progress on energy conservation efforts.

We report energy use, water use and greenhouse gas emissions monthly during meetings with facilities management, and quarterly on SickKids intranet site. Furthermore, the energy use metric is one of SickKids' key performance indicator that is reported quarterly against annual objectives, in the Corporate Scorecard. The Scorecard is reviewed quarterly by Senior Management and the Board of Trustees, and is posted on www.sickkids.ca under Strategy and Performance.

All of our annual energy reports required under the regulation along with the ECDM plan can be found on SickKids intranet site and www.sickkids.ca.

We benchmark energy to measure SickKids' energy performance over time, and relative to other similar organizations. At the present time, we benchmark our energy performance against Ontario's Health Care and Social Assistance Secondary Energy Use and Greenhouse Gas Emissions, the Green Hospital Scorecard and Greening Healthcare. SickKids' 2018 (fiscal year from April 2018 to March 2019) Energy Use Intensity of 2.01 Gigajoule (GJ) / (m²-year) is 6% lower than Natural Resources Canada Ontario Healthcare average of 2.14 GJ / m². We will benchmark and report each of our buildings once the Energy Star Score becomes part of Natural Resources Canada's benchmarking program, and building level benchmarking will be available.

2018 Energy Savings Update

Between 2012 and 2018, Atrium and Annex building energy consumption was reduced by 4%. The closure of the 18,400 square meter McMaster facility and the opening of the PGCRL with a floor area over 80,000 square meter has increased SickKids overall energy consumption. The PGCRL is an energy efficient building with LEED Gold New Construction and Commercial Interior certifications, and is currently pursuing LEED certification for Existing Building: Operations and Maintenance.

Figures 1 to 3 show annual energy performance from 2012 to 2018. Figure 1 shows energy use by building and fuel source. Figure 2 shows energy performance i.e. Energy Use Intensity for each building. Figure 3 shows energy cost i.e. energy cost intensity for each building.

We completed 19 technical conservation measures since 2014. Measures with the greatest reductions were:

- The replacement of approximately 20,000 incandescent and fluorescent lighting fixtures to energy efficient LED fixtures
- The installation of variable frequency drives on 200+ fan and pump motors
- The conversion of air handling units from 100% outside air units to mixed air units in the Annex

Figure 1: Annual energy use in gigajoules (GJ) by building and fuel source, 2012 - 2018

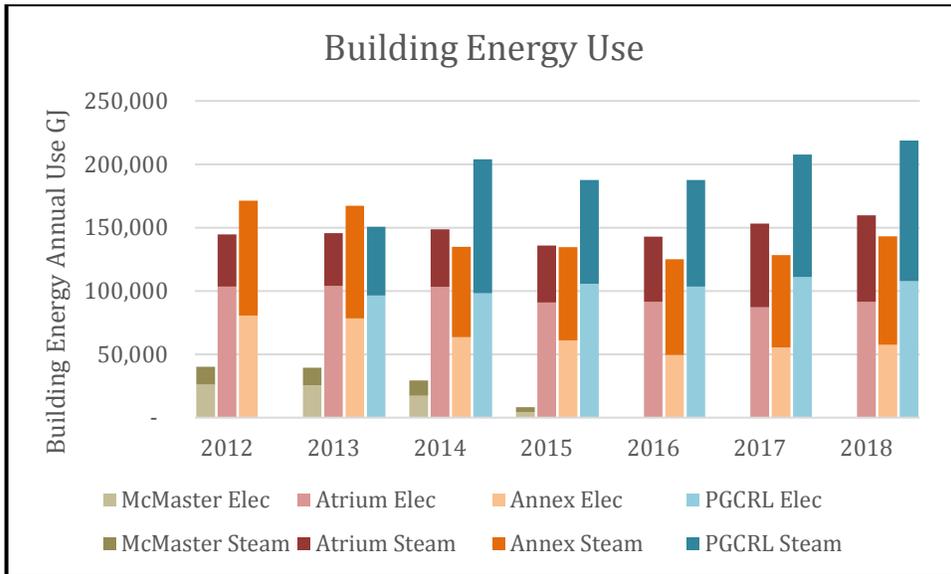


Figure 2: Annual energy performance in gigajoules (GJ) per square meter (m²) for each building, 2012 – 2018

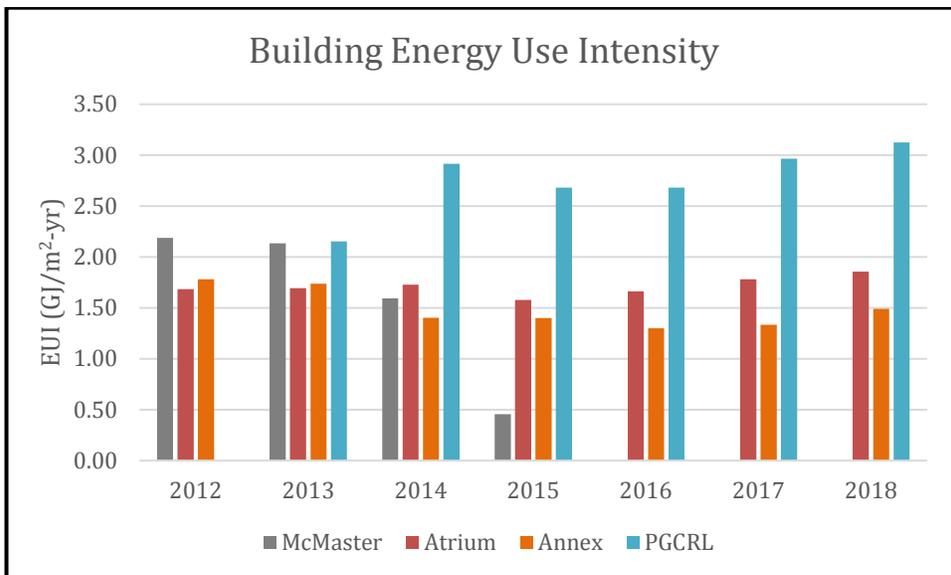
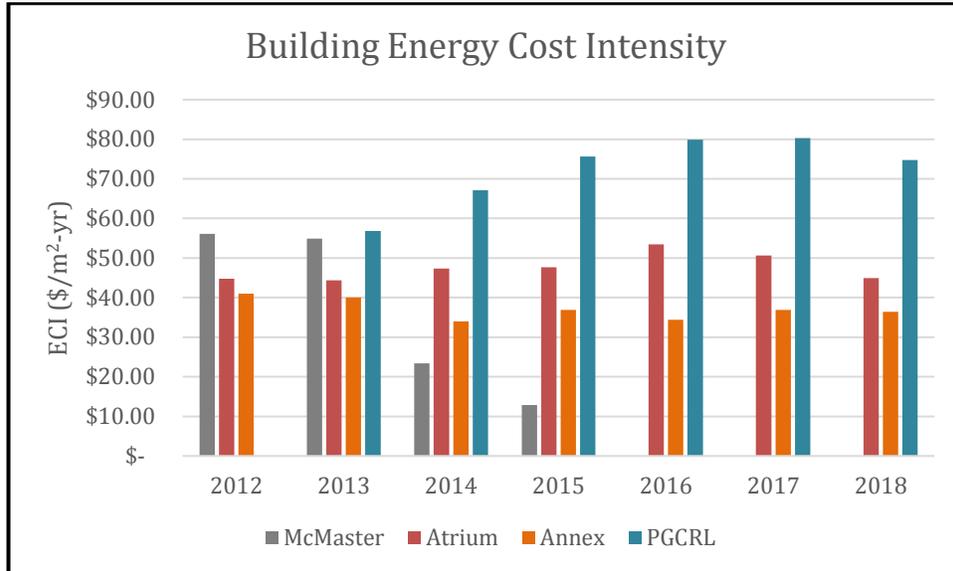


Figure 3: Annual energy cost in utility cost (\$) per square meter (m²) for each building, 2012 - 2018



Changes from Previous Plan to Achieve our Goals and Objectives

We made changes to ensure we move towards achieving our 2030 targets and to improve how we deliver on our five-year ECDM plan. They are:

- Implemented an Environmental Policy with a commitment to the efficient use of energy and resources.
- Implemented an energy and sustainability governance structure which includes an Executive Sponsor, Steering Committee, Green Teams and Champions.
- Introduced quarterly reporting of energy and water use, along with greenhouse gas emissions that is accessible to all staff on SickKids intranet site.
- Selected the energy use measure to be a key performance indicator. SickKids key performance indicators are reported against annual objectives in the Corporate Scorecard. The Scorecard is reviewed quarterly by Senior Management and the Board of Trustees, and is posted on www.sickkids.ca.
- Introduced monthly energy performance reviews and identification of energy and water savings opportunities with facilities management.

Facilities Management and Facilities Development departments, and our Green Teams will review the ECDM plan on an annual basis to assess the results of the ongoing, current and proposed measures and determine if adjustments to the plan are required.

Initiatives may be added to the plan as new opportunities arise. Any updates to the plan will be posted on SickKids intranet site and www.sickkids.ca.

Energy Conservation Measures

To achieve SickKids' short and long-term objectives, our approach is to strategically plan and invest in technical, organizational and behaviour measures. See Appendix table 1 for ongoing and current technical measures, table 2 for proposed technical measures, table 3 for ongoing organizational and behaviour measures, and table 4 for proposed organizational and behaviour measures

Proposed energy conservation measures will be evaluated and approved using the following tools and criteria:

- Staff, patient and families' safety and patient care.
- Financial instruments, such as simple payback, internal rate of return, capital cost and energy costs/savings over the life of the equipment or design.
- Impact on environmental performance, which include Energy Use Intensity, Water Use Intensity, and Greenhouse Gas Emissions Intensity measures.

Where possible, more costly conservation projects will be bundled with more cost-effective ones to leverage their development.

Implementation of the projects depend on:

- Funding allocated by SickKids
- Securing external funding
- Incentives from utility providers, government and/or other partnerships
- Availability of qualified staff

Progress on projects is monitored using the monthly, quarterly and annual energy reports. It is also evaluated using the methods described in the Monitoring and Evaluation section.

Monitoring and Evaluation

SickKids references and follows the International Performance Measurement and Verification Protocols (IPMVP) as methods to develop, define and assess energy and power performance metrics.

The IPMVP is a set of framework documents used to develop strategies and plans for quantifying energy and water savings at the project level for retrofits and new construction. IPMVP groups measurement and verification methodologies into four categories: Options A, B, C, and D. The four options provide a range of approaches to determine energy savings depending on the characteristics of the energy projects being implemented, and balancing the accuracy in energy savings estimates with the cost of conducting measurement and verification activities.

Renewable Energy Projects

Solar Thermal System

SickKids currently has a 182 kW solar thermal system on the rooftop of the Atrium building. The solar thermal system was installed in 2007 and was in working order from that point until 2011. SickKids' intent is to re-commission this solar thermal system and continue energy production from renewable sources. We continue to review options and partnerships with organizations like TAF (Toronto Atmospheric Fund).

Deep Lake Cooling

SickKids is investigating the feasibility of potentially connecting existing and new buildings to Enwave's district deep lake water cooling (DLWC) system. Enwave's DLWC system takes cold water from Lake Ontario to cool its chilled water, and then supply the chilled water to buildings in downtown Toronto. Advantages of using DLWC include increased building usable spaces, reduced electricity usage of conventional chiller plant, reduced portable water and chemical treatment, and the associated positive environmental impacts.

Heat Pump Water Heating

SickKids is assessing the feasibility of installing a heat pump, along with other smart building technologies in existing and new buildings. Heat pump uses electricity to extract waste heat from neighbouring buildings in downtown Toronto, through Enwave's DLWC system.

Appendix: Energy Conservation Measures

Table 1: Ongoing and Current Technical Energy Conservation Measures

Building	Measure	Responsible Parties	Estimated Completion Date	Estimated Cost of Retrofit (\$)	Estimated Energy Use Savings (GJ)	Estimated Energy Cost Savings (\$)	Measure preferred state
PGCRL	Continuous improvement (Re-commissioning)	Facilities Operations, Energy and Sustainability	Ongoing	\$ 100,000	4160	\$ 120,000	Ongoing identification and implementation of O&M improvements, optimizing the building subsystems performance as well as how they function together.
PGCRL	Process Chiller Condenser Water System Heat Reclaim Retrofit	Facilities Operations, Energy and Sustainability	Q4/2020	\$ 176,000	5080	\$ 105,000	Allow waste heat being transferred to air handling unit pre-heat coils
PGCRL	Deep Lake Cooling	Facilities Operations, Energy and Sustainability	Q4/2021	\$ 9,000,000 shared with utility provider	6478	\$ -	Connect building to Enwave's Deep Lake Cooling system, to use this renewable source of energy to air condition PGCRL
Annex/Atrium	Reduce Operating Time of Supply and Exhaust Fans	Facilities Operations, Energy and Sustainability	Q4/2022	\$ 763,470	10994	\$ 330,063	Scheduled and managed HVAC system to operate according to the building occupancy and space usage.

Building	Measure	Responsible Parties	Estimated Completion Date	Estimated Cost of Retrofit (\$)	Estimated Energy Use Savings (GJ)	Estimated Energy Cost Savings (\$)	Measure preferred state
Annex/Atrium	Right-sizing Ventilation Airflow Volumes	Facilities Operations, Facilities Development, Energy and Sustainability	Q4/2022	\$ 687,500	4885	\$ 115,542	Energy savings due to reduced air flow. Air flow sized based on current code requirements and space usage.
Atrium	Kitchen Hood Demand Control Ventilation (DCV)	Facilities Operations, Facilities Development, Energy and Sustainability	Q4/2022	\$ 40,000	588	\$ 16,500	Installed Demand Control Ventilation (DCV) system. Reducing the speed of the exhaust fans during slow periods not only saves electrical energy used to run the fans but also the thermal energy used to heat the air that is exhausted unnecessarily.
Annex/Atrium	Steam Distribution System Improvements	Facilities Operations, Energy and Sustainability	Q4/2022	\$ 450,000	4054	\$ 49,575	Lower energy consumption due to reduced system distribution losses.
Annex/Atrium	Steam Pipes and Separators Insulation	Facilities Operations, Energy and Sustainability	Q4/2022	\$ 12,000	120	\$ 1,800	Lower energy consumption due to reduced system distribution losses.

Building	Measure	Responsible Parties	Estimated Completion Date	Estimated Cost of Retrofit (\$)	Estimated Energy Use Savings (GJ)	Estimated Energy Cost Savings (\$)	Measure preferred state
Annex/Atrium	HVAC System Operational Improvements	Facilities Operations, Energy and Sustainability	Q4/2023	\$ 35,000	3183	\$ 76,130	Reduced energy consumption and improved thermal comfort by scheduling AHUs and resetting glycol temperature of run-around heat recovery system.
Annex/Atrium	Cooling Tower Water Treatment	Facilities Operations, Facilities Development, Energy and Sustainability	Q4/2023	\$ 150,000	Water savings only	\$ 16,335	Improved chemical treatment, reducing cooling tower make-up water by 10% and cooling tower blowdown by 40%.
Annex/Atrium	Replace Urinals	Facilities Operations, Facilities Development, Energy and Sustainability	Q4/2024	\$ 232,500	Water savings only	\$ 61,200	Installed new urinals with 1.5L per flush. Future capital cost avoidance and water consumption reduction.
Annex/Atrium	Recommissioning (RCx)	Facilities Operations, Energy and Sustainability	Q4/2029	\$ 646,500	3441	\$ 70,042	Ongoing identification and implementation of O&M improvements, optimizing the building subsystems performance as well as how they function together.

Building	Measure	Responsible Parties	Estimated Completion Date	Estimated Cost of Retrofit (\$)	Estimated Energy Use Savings (GJ)	Estimated Energy Cost Savings (\$)	Measure preferred state
Annex (Elm Wing) Atrium Offices	Constant Air Volume System Conversion to Variable Air Volume System	Project Horizon, Facilities Operations, Facilities Development, Energy and Sustainability	Q4/2030	\$ 1,375,000	9770	\$ 231,083	A dynamic control of the HVAC system and the integration of lighting control and occupancy override will save energy, improve comfort.

Table 2: Proposed Technical Energy Conservation Measures

Building	Measure	Responsible Parties	Estimated Completion Year	Cost of Retrofit (\$)	Estimated Energy Use Savings (GJ)	Estimated Energy Cost Savings (\$)	Measure preferred state
Atrium/Annex	Deep Lake Cooling	Project Horizon, Facilities Operations, Facilities Development, Energy and Sustainability	Q4/2021	\$ 6,000,000 shared with utility provider	6009	In Progress	Connect building to Enwave's Deep Lake Cooling system, to use this renewable source of energy to air condition Atrium and Annex buildings.

Building	Measure	Responsible Parties	Estimated Completion Year	Cost of Retrofit (\$)	Estimated Energy Use Savings (GJ)	Estimated Energy Cost Savings (\$)	Measure preferred state
Atrium/Annex	Refurbish Atrium Solar Water Heating	Facilities Operations, Energy and Sustainability	Q4/2021	\$ 85,000	780	\$ 11,700	The intent of the project is to reinstate the solar thermal system.
Atrium/Annex	Heat Integration - low temperature water distribution system	Facilities Operations, Facilities Development, Energy and Sustainability	Q4/2021	\$ 371,875	3073	\$ 58,710	Build a low temperature heating water distribution system to recovered waste heat and renewable heat through multiple buildings.
PGCRL	Peak Demand Shaving	Facilities Operations, Energy and Sustainability	Q4/2021	\$84,000 annual service fee	Varies	\$ 92,000	Install load shedding software to automatically turn off identified sheddable loads.
PGCRL	LED Upgrade	Facilities Operations, Energy and Sustainability	Q4/2023	\$ 45,000	120	\$ 5,000	Energy savings. Improved lighting quality and lamp life. Silent, flicker-free operation.
PGCRL	Process Chiller Plant Retrofit	Facilities Operations, Energy and Sustainability	Q4/2023	\$ 1,500,000	15000	\$ 225,000	To upgrade process chiller plant capacity to meet the increased process cooling load, recover waste heat generated from the building process load for space heating.

Building	Measure	Responsible Parties	Estimated Completion Year	Cost of Retrofit (\$)	Estimated Energy Use Savings (GJ)	Estimated Energy Cost Savings (\$)	Measure preferred state
PGCRL	Lab Fume Hood Exhaust Fan VFD control	Facilities Operations, Energy and Sustainability	Q4/2023	\$ 920,000	In Progress	\$ 91,667	Install variable frequency drives and upgrade controls to safely reduce the exhausted air volumes from fume hoods, to minimize the energy and cost of conditioning air supplied to laboratories.
Atrium/Annex	Solar Air Heating (Elm)	Facilities Operations, Facilities Development, Energy and Sustainability	Q4/2024	\$ 255,000	1300	\$ 19,500	Install a solar air heating system, known as "Solar Wall", at Elm wing. The collected solar heat by the system will be used to pre-heat the make-up air during heating seasons.
PGCRL	Demand Control Ventilation	Facilities Operations, Energy and Sustainability	Q4/2024	\$ 504,000	6056	\$ 188,033	Convert laboratories ventilation system from a constant volume design to variable volume and install an Indoor Air Quality sensing infrastructure.

Table 3: Ongoing Organizational and Behaviour Energy Conservation Measures

Measure	Type of Measure	Responsible Parties	Costs (\$)	Key Performance Indicator	Results & Savings
Lights Out Pilot	Behaviour	Energy and Sustainability, Hospital Staff	minimal, internal resources	Percentage of lights turned off when room unoccupied, Energy saved.	Percentage of lights turned off when room unoccupied increased from 30% to 60%. Estimated pilot annual savings of 6,660 kWh and \$933.
Green Team	Organizational	Energy and Sustainability, Hospital and Research Staff, Research Operations	minimal, internal resources	Green Team members supported with resources and engaged in green events, initiatives and pilots	Three green team led initiatives and events including Lights Out Pilot. Over 20 active green team members. Over 30 active green champions.
Policy	Organizational	Energy and Sustainability, Impacted Hospital and Research Areas	minimal, internal resources	Relevant policies are current and active.	Environmental Policy along with other green policies that conserve energy are reviewed regularly.
Energy Performance Reporting	Organizational	Senior Leadership, Energy and Sustainability	minimal, internal resources	Energy Use Intensity (EUI) reported in the Corporate Scorecard; EUI, Water Use Intensity and Greenhouse Gas Emissions Intensity reported quarterly on mysickkids.ca; annual energy consumption report to BPS	Energy consumption data since 2012. Regular review of energy and water data with facilities and identification of energy saving opportunities

Measure	Type of Measure	Responsible Parties	Costs (\$)	Key Performance Indicator	Results & Savings
Engage and recognize staff commitment to energy conservation	Behaviour	Energy and Sustainability	minimal, internal resources	Staff recognized, stories shared	Over ten stories posted internally and externally on staff initiatives. Over 20 prizes awarded to staff for participation. Over 50 events held to raise awareness on energy and sustainability.
Staff education and awareness	Behaviour	Energy and Sustainability	minimal, internal resources	Staff education/awareness events	Energy conservation behaviour introduced to new hires during orientation, and through various internal newsletters/associations.

Table 4: Proposed Organizational and Behaviour Energy Conservation Measures

Measure	Type of Measure	Responsible Parties	Expected Completion Date	Lifespan	Costs (\$)	Key Performance Indicator	Expected Results & Savings
Establish policies and processes (procedures) to ensure systematic purchase of the most energy efficient office, medical/research equipment	Organizational	Procurement, Energy and Sustainability	Q4/2020	1 year, ongoing	minimal, internal resources	Environmentally Preferred Purchasing Policy implemented and communicated	Regular review of established policies, processes. Increase in purchase of energy efficient equipment
Establish policies and processes (procedures) to ensure that the most energy efficient system design is considered during upgrades, renovations and new constructions.	Organizational	Facilities Operations, Facilities Development, Energy and Sustainability	Q4/2020	1 year, ongoing	minimal, internal resources	Policies and supporting resources implemented and communicated	Regular review of established policies, processes. Increase in energy efficient designs

Measure	Type of Measure	Responsible Parties	Expected Completion Date	Lifespan	Costs (\$)	Key Performance Indicator	Expected Results & Savings
Regular energy performance reviews and identification of energy and water savings opportunities with building operators	Behaviour	Facilities Operations	Q3/2020	6 months, ongoing	minimal, internal resources	Regularly review energy and water performance with building operators.	Increase in initiatives generated and implemented by building operators
Assess energy savings from increasing ultra-low freezer temperature	Behaviour	Facilities and Research Operations, Energy and Sustainability, Research Staff	Q4/2020	1 year	\$ 10,000.00	Energy savings from assessment align or surpass estimated savings with no impact to research	Labs aware of energy benefits. Over 50% of suitable areas/freezers participating in the program.
Implement increase ultra-low freezer temperature	Behaviour		Q4/2024	4 years, ongoing	minimal, internal resources	Temperature adjusted in recommended ultra-low freezers. Percentage of freezers with adjusted temperatures	
Establish policies and processes (procedures) to ensure systematic purchase of the most energy efficient building system equipment during replacements, renovations and new constructions.	Organizational	Facilities Operations, Facilities Development, Energy and Sustainability, Procurement	Q4/2021	2 years, ongoing	minimal, internal resources	Policies and supporting resources implemented and communicated	Regular review of established policies, processes. Increase in purchase of energy efficient equipment

Measure	Type of Measure	Responsible Parties	Expected Completion Date	Lifespan	Costs (\$)	Key Performance Indicator	Expected Results & Savings
Expand the Lights Out Initiative across hospital and PGCRL	Behaviour	Facilities Operations, Energy and Sustainability, Research and Hospital Staff	Q4/2021	1.5 year, ongoing	minimal, internal resources	Areas participating in the initiative supported with information and progress updates. Percentage of areas participating in the initiative and lights turned off when room unoccupied. Energy Saved	Lights Out Initiative expanded across hospital and PGCRL. Progress measured and reported to staff. Increase in percentage of lights turned off.
Assess energy savings from turning off medical/research equipment when not in use	Behaviour	Facilities and Research Operations, Energy and Sustainability, Clinical and Research Staff	Q4/2021	2 years	minimal, internal resources	Energy savings data for most commonly used equipment.	Labs aware of energy benefits. Suitable areas/equipment participating in the program.
Expand turn off medical/research equipment when not in use across hospital and PGCRL	Behaviour		Q4/2024	2 years, ongoing	minimal, internal resources	Areas participating in the initiative supported with information and progress updates.	
Ventilation temperature settings and schedules adjustments to support staff, equipment and services.	Behaviour	Facilities Operations, Energy and Sustainability, Hospital Staff	Q4/2023	3 years	minimal, internal resources	Energy saved, staff complaints	Estimated saving of 1% of Energy Use Intensity. Improved staff comfort.
Assess the feasibility of SickKids becoming carbon-neutral	Organizational	Facilities Operations, Facilities Development, Energy and Sustainability	Q4/2024	1 year	\$5,000 for external resources, internal resources	Feasibility study completed.	Strategic and financial information on achieving carbon-neutrality.

Measure	Type of Measure	Responsible Parties	Expected Completion Date	Lifespan	Costs (\$)	Key Performance Indicator	Expected Results & Savings
Assess the climatic resiliency of SickKids existing buildings	Organizational	Facilities Operations, Facilities Development, Energy and Sustainability	Q4/2024	2 years	\$5,000 for training & external resources, internal resources	Assessment completed.	Information on infrastructure investments to adapt to climate change.