

Annual Sustainability and Performance Report 2023-24



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Objective

This Annual Sustainability and Performance Report is designed to provide a concise summary of St. Joseph's Healthcare Hamilton (SJHH)'s sustainability and environmental performance over the previous fiscal year. It highlights the actions and outcomes that have been realized as a result of initiatives developed in the 2023-2024 sustainability action plan.

This report aims to transparently communicate our commitment to environmental, social, and economic sustainability, by outlining measurable progress towards reducing our carbon footprint, conserving resources, enhancing community engagement, and promoting a healthier future for all stakeholders.

Background and Mandate

St. Joseph's Healthcare Hamilton is committed to the development and implementation of an annual sustainability plan with the overall collective objective of reducing 40% of our carbon footprint by 2030, and working towards achieving 0% carbon emissions by 2050, using 2016 as our baseline.

This commitment is in keeping with SJHH's values of Dignity, Respect, Service, Justice, Responsibility and Enquiry.

St. Joseph's Healthcare Hamilton approaches its sustainability efforts through the following four pillars:

Pillar One: Energy/ Utility Management

Pillar Two: Waste Reduction

Pillar Three: Pollution Management

Pillar Four: Education and Awareness

This commitment supports both Federal and Provincial mandates, the former through the Net-Zero Emissions Accountability Act, and the latter through Emission Performance Standards. Both have aligned their targets to reduce greenhouse gases (GHG's) by 40-45% by 2030 and to work towards achieving net-zero emissions in Canada by 2050, in order to meet Conference of the Parties (COP) established global targets.

Overview of Current Environment

SJHH's 3 main campuses (Charlton, King, West 5th) have infrastructure ranging in age from 1940's – 2013. These facilities occupy over 2.3 million square feet of space for a total conditioned space equivalent to 23 city blocks. SJHH expends a lot of energy to condition this space throughout the year. The following describes the various building infrastructure required to keep our facilities safe and comfortable at these sites:

Heating

- 10 Steam & 9 Hot Water Boilers generate Steam and Hot Water
 - Sterilization
 - Heating/Humidification
 - 101 Air Handlers

Cooling

- 12 Chillers & 13 Cooling Towers provide:
 - MRI Cooling
 - Air Conditioning
 - 101 Air Handlers

Powers

- Electrical Grid
- Back-up Generators
 - King and Charlton, emergency back up only
 - West 5th equipped with full back up generator power

Past Performance

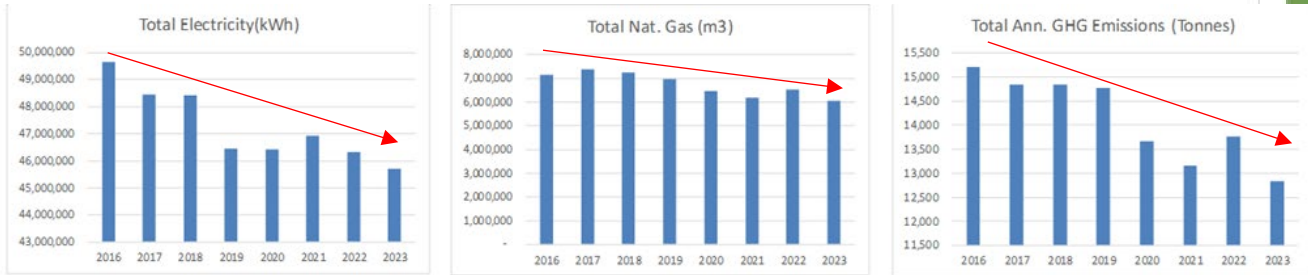
Prior to this year and as a result of the efforts of a number of departments, SJHH has successfully completed a number of initiatives which have reduced our annual electricity, natural gas and water usage, and associated emissions of greenhouse gases (GHG)s.

A sample of these projects are listed below:

- Boiler room pipe/equipment insulation
- Replacement of 2,830 lighting fixtures with LED lights
- Optimization of our building automation system
- Installed electric vehicle (EV) charging stations at each campus
- Replaced all plastic cutlery with compostable utensils

The following table illustrates the overall reduction in energy as a result of all of the initiatives that have been implemented since 2016.

Reduction of Natural Gas, Electricity and Green House Gases since 2016:



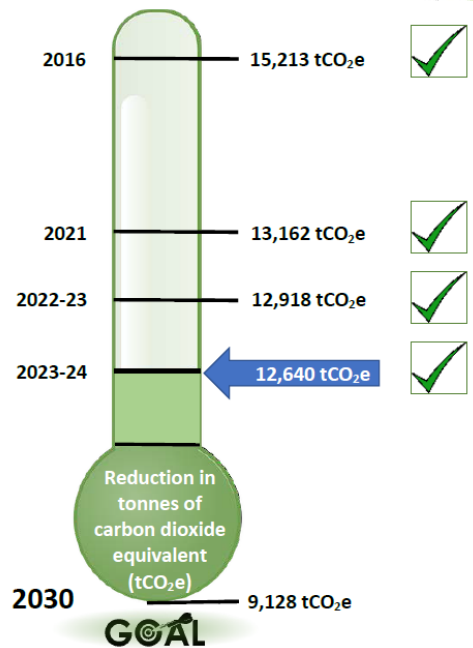
- 3,952,160 kWh or 8 % in electricity consumption
- 1,075,070 m³ or 15% in natural gas consumption
- 2,573 tonnes or 17 % reduction in CO²e emissions

Overall SJHH's Energy Use Intensity (EUI is a measure of how much energy a building uses per area over a given period of time) has decreased by 12.3% since 2016 primarily due to energy conservation measures implemented.

Green House Gas (GHG) Reduction Target

The diagram to the right shows the reduction in tonnes of Carbon Dioxide equivalent (TCO₂e) GHGs emitted by SJHH since 2016 as a result of our energy saving initiatives.

So far we have reduced our GHG emissions by 2,573 tCO₂e since 2016. This accounts for 17% of our goal 40% GHG emission reduction by 2030.



We require a further reduction of 3,512 tonnes of GHGs by 2030 to get us to a total reduction of 9,128 tCO₂e which would be a 40% reduction of our emissions using 2016 as our base year.

From there we work on a plan to get us to 0% by 2050!

Current Performance

A multi-year Sustainability Action Plan for 2023-25 was developed. The following outlines the specific objectives of the plan and summarizes the progress made by SJHH in meeting this plan over this past fiscal year i.e., April 1 2023- March 31, 2024.








Pillar 1 – Energy/Utility Management																																										
Objective	Timeline	Outcome /Status																																								
<p>1 Building Services will have implemented the following energy savings projects to reduce our annual Green House Gas (GHG) emissions by 278 carbon dioxide equivalent (CO₂e) tonnes:</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Energy Savings</th> <th>Annual Cost Savings (\$)</th> <th>GHG Reduction (Tonnes)</th> </tr> </thead> <tbody> <tr> <td>LED Lighting Retrofit (King St)</td> <td>30,697 kWh</td> <td>4,376</td> <td>1.54</td> </tr> <tr> <td>LED Lighting Retrofit (Charlton - Fontbonne)</td> <td>2,450 kWh</td> <td>654</td> <td>0.12</td> </tr> <tr> <td>LED Lighting Retrofit (Charlton - Mary Grace)</td> <td>31,490 kWh</td> <td>5,305</td> <td>1.58</td> </tr> <tr> <td>LED Lighting Retrofit (Charlton - Martha)</td> <td>14,960 kWh</td> <td>2,900</td> <td>0.74</td> </tr> <tr> <td>Blowdown Heat Recovery (Charlton)</td> <td>1,219 GJ</td> <td>12,400</td> <td>58.9</td> </tr> <tr> <td>Existing Building Optimization (Charlton)</td> <td>3,930 GJ</td> <td>39,000</td> <td>190</td> </tr> <tr> <td>Replace 20 fan motor drives to reduce speed when possible (Charlton)</td> <td>400,000 kWh</td> <td>44,000</td> <td>25</td> </tr> <tr> <td>Parking P8 lighting control switched to photocell (West 5th)</td> <td>5,652 kWh</td> <td>774</td> <td>0.14</td> </tr> <tr> <td>TOTAL</td> <td></td> <td>109,409</td> <td>278</td> </tr> </tbody> </table> <p>In addition to the above noted initiatives, utility sub metering at the Charlton site was completed for the following utilities which will enable us to better measure and track:</p> <ul style="list-style-type: none"> • Electricity consumption • Steam generation • Natural gas consumption • Selected building water consumption 	Description	Energy Savings	Annual Cost Savings (\$)	GHG Reduction (Tonnes)	LED Lighting Retrofit (King St)	30,697 kWh	4,376	1.54	LED Lighting Retrofit (Charlton - Fontbonne)	2,450 kWh	654	0.12	LED Lighting Retrofit (Charlton - Mary Grace)	31,490 kWh	5,305	1.58	LED Lighting Retrofit (Charlton - Martha)	14,960 kWh	2,900	0.74	Blowdown Heat Recovery (Charlton)	1,219 GJ	12,400	58.9	Existing Building Optimization (Charlton)	3,930 GJ	39,000	190	Replace 20 fan motor drives to reduce speed when possible (Charlton)	400,000 kWh	44,000	25	Parking P8 lighting control switched to photocell (West 5 th)	5,652 kWh	774	0.14	TOTAL		109,409	278	March 31, 2024	✓
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2	Installation of a Watergater within the Juravinski Tower (Charlton) resulting in a reduction of water consumption by 20% to support water reduction strategy	March 31, 2024	✓
3	Initiated electrical reduction projects through the provincial Save on Energy (SEM) Program	March 31, 2024	✓
4	Completed and submitted the 2023 (2022 data) Green Hospital Scorecard for the Charlton and King St. Campuses	March 31, 2024	✓
5	Completed and submitted the P3 Greening Healthcare Scorecard for West 5th Campus	March 31, 2024	✓
6	Participated in the Industry Conservation Initiative (ICI) for the Charlton and West 5th Campuses	March 31, 2024	✓
7	Initiated and progressed the heat recovery project to the installation phase (to be completed as part of 2024/25 sustainability plan)	March 31, 2024	✓
8	Developed a business case for the following: <ul style="list-style-type: none"> • Gas, steam and electric submetering initiative • LED lighting retrofit King Campus, Juravinski, Surgery Centre, Bishop Dowling and Luke wings of the Charlton Campus • Solar panels on a new carport at King Campus 	March 31, 2024	✓





Pillar 2 – Waste Reduction

	Objective	Timeline	Outcome /Status
1	Maintained or improved the following waste reduction strategies: <ul style="list-style-type: none"> • Transition from disposable dishware, plastic/foam meal trays to reusable safety trays, mugs and tumblers wherever possible: <ul style="list-style-type: none"> ○ West 5th has fully transitioned to reusable trays, mugs and tumblers, and fully reusable safe cutlery resulting in the reduction of 318,000 single use plastic items ○ Charlton has transitioned to all reusable trays, cups, mugs except for emergency, psychiatric emergency, and outpatient areas, and patient nutrition centres ○ Replaced plastic “take-out” containers with recyclable sugar cane containers • Reduced individually packaged products from vendors (i.e., individual juice, individual fruit in plastic containers) with products in bulk packaging 	March 31, 2024	✓

	<ul style="list-style-type: none"> Over the last year Food Services have started preparing products in-house like rice and pasta <ul style="list-style-type: none"> Resulted in less packaging and minimal processing before serving 																																						
2	<p>Diverted waste from landfill with the following initiatives:</p> <table border="1"> <thead> <tr> <th>Diversion of Landfill Waste</th> <th>2022/2023 Total Annual Volume*</th> <th>2023/24 Total Annual Volume*</th> <th>Variance</th> </tr> </thead> <tbody> <tr> <td>Blue bin recycling (GHC)</td> <td>183.1</td> <td>193.6</td> <td>5.75%</td> </tr> <tr> <td>General non-hazardous (GHC)</td> <td>984.0</td> <td>1168.0</td> <td>18.70%</td> </tr> <tr> <td>Electronics/e-waste (GHC other)</td> <td>11.0</td> <td>14.8</td> <td>34.17%</td> </tr> <tr> <td>Batteries (GHC other)</td> <td>0.9</td> <td>1.1</td> <td>16.23%</td> </tr> <tr> <td>Medical sharps container usage - plastics</td> <td>198.1</td> <td>211.8</td> <td>6.94%</td> </tr> <tr> <td>Shredded paper - confidential waste</td> <td>168.2</td> <td>272.5</td> <td>61.99%</td> </tr> <tr> <td>Scrap metal</td> <td>4,140 lbs</td> <td>9,290 lbs</td> <td>120%</td> </tr> <tr> <td>Fluorescent Tubes</td> <td>600 units</td> <td>3000 units</td> <td>400%</td> </tr> </tbody> </table> <p>* Volume measured in metric tonnes unless otherwise indicated.</p>	Diversion of Landfill Waste	2022/2023 Total Annual Volume*	2023/24 Total Annual Volume*	Variance	Blue bin recycling (GHC)	183.1	193.6	5.75%	General non-hazardous (GHC)	984.0	1168.0	18.70%	Electronics/e-waste (GHC other)	11.0	14.8	34.17%	Batteries (GHC other)	0.9	1.1	16.23%	Medical sharps container usage - plastics	198.1	211.8	6.94%	Shredded paper - confidential waste	168.2	272.5	61.99%	Scrap metal	4,140 lbs	9,290 lbs	120%	Fluorescent Tubes	600 units	3000 units	400%	March 31, 2024	✓
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3	<p>Maintained or improved the following food waste reduction strategies:</p> <ul style="list-style-type: none"> Reduced food waste and maximized diversion to organics where applicable <table border="1"> <thead> <tr> <th>Food Services</th> <th>2022/23 Total Annual Volume</th> <th>2023/2024 Total Annual Volume</th> <th>Variance</th> </tr> </thead> <tbody> <tr> <td>Organic waste (green bin)</td> <td>39,721 L</td> <td>146,766 L</td> <td>270%</td> </tr> <tr> <td>Coffee Grounds</td> <td>36,703 L</td> <td>72,066 L</td> <td>96%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Reduced the environmental impact from animal/meat-based menu options <ul style="list-style-type: none"> Implemented a vegan chili into West 5th menu cycle Assessing client meal preference on non-meat options 	Food Services	2022/23 Total Annual Volume	2023/2024 Total Annual Volume	Variance	Organic waste (green bin)	39,721 L	146,766 L	270%	Coffee Grounds	36,703 L	72,066 L	96%	March 31, 2024	✓																								
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Pillar 3 – Pollution Management																																							
	Objective	Timeline	Outcome /Status																																				
1	Developed a business case for an anesthesia gases absorption system to eliminate greenhouse gas emissions to the atmosphere	March 31, 2024	✓																																				
2	Investigated, developed and implement potential sustainable nephrology initiatives, starting with Six Nations**	March 31, 2024	□																																				

3	Develop and implement a strategy of pollution management/reduction**	March 31, 2024	
Pillar 4 – Education and Awareness			
	Objective	Timeline	Outcome /Status
1	Developed a multi-year (2023-25) Sustainability Action Plan	March 31, 2024	
2	Completed an Annual Sustainability and Performance Report for 2023-24	March 31, 2024	
3	Developed and implemented an Earth day staff awareness campaign in time for Earth day (April 22, 2024)	March 31, 2024	
4	Developed and implemented a staff awareness plan for sustainability initiatives using various methods including: ➤ Implementing Firstline (mobile and web app), to improve appropriate antimicrobial utilization**	March 31, 2024	
5	Developed a corporate green/sustainability policy	March 31, 2024	
6	Shared information on inhaler reduction strategies to the Firestone physicians	March 31, 2024	

**Initiated but further work to be completed in 2024-25.

Legend:	 Completed
	 On-Track
	 Potential Risk
	 Critical Risk

Additional 2023-2024 Initiatives:

- Three programs are currently involved in sustainability projects which will be incorporated fully into our Sustainability Plan for 2024-25. Please see below for a brief overview from each working group on their progress to date:
 - **Perioperative Working Group** has recently just launched
 - Volunteers for membership on the group are still coming forward and includes surgeons, patient/family advisor, residents, managers, front line staff and anesthesia
 - Survey went out to all Peri-operative members to help identify sustainability initiatives that resonate with the team – projects still to be determined
 - New anesthesia machines will be ordered with sustainability lens regarding gas emissions
 - Looking for opportunities to improve sustainability by reusing one-time instruments
 - **The Hamilton Pathology Laboratory** has undertaken a study that will look into the current list of chemicals/consumables used in different aspects of the pathology laboratory (histology, cytology and immunohistochemistry) and aim to find green options for the current list. “With sustainability becoming all of our responsibilities and with the ever-shrinking lab budget, the time is ripe to find appropriate carbon neutral and cost neutral (or cost reducing) alternatives.”
 - **Sustainable Dialysis Initiative** - A Kidney Urinary Program Quality Improvement Project
 - Dialysis is a resource intense therapy. Climate change contributes to worsening kidney disease, and in turn many aspects of the treatment of kidney disease contribute to the worsening of climate change. Examples of this are the excessive water and electricity use, waste production and medication use. At St. Joseph's Healthcare Hamilton, we are committed to reducing the carbon footprint of dialysis care. By collecting baseline data at the Ohsweken Satellite Dialysis Unit, we aim to understand the magnitude of our local problem and then implement strategies that could improve the sustainability of dialysis across all sites.
 - Plan is to collect data on waste/usage at Ohsweken satellite site, report all data as per patient or per station in order to scale up to other sites in the future (easier to collect site data). Currently in the data collection phase, collecting: biohazard waste, linen usage, number of laboratory tests, general waste.

➤ Tree Planting

- With the support and involvement of Dr. Myles Sergeant and the Partnerships for Environmental Action by Clinicians and Communities for Healthcare Facilities (PEACH), Family Health Team Green initiative, Trees for Hamilton and the Greater Hamilton Health Network (GHHN), 22 trees were planted at King Street in 2024. This is the third year in a row that we have planted trees at SJHH.



➤ Reducing Transportation Emissions

- In order to support the reduction of emissions from cars, SJHH implemented the following:
 - Electric Vehicle Chargers installed
 - Bike Shelters: secured and covered bike shelters are already offered at Charlton, and a new bike shelter was installed at West 5th

Concluding Statement

St. Joseph's Healthcare Hamilton remains steadfast in its commitment to sustainability, recognizing the interconnectedness of environmental stewardship, public health, and social responsibility. Through continued innovation, collaboration, and dedication, we aim to create a healthier, more sustainable future for generations to come.

For more information or inquiries about our sustainability efforts, please contact greenteam@stjoes.ca.