

# Green Hospital Scorecard What is it?

Rockyview General Hospital (RGH) is the first AHS site to participate in the Green Hospital Scorecard (GHS).

The GHS is managed by the Canadian Coalition for Green Health Care which strives to positively influence the ecological impact of Canadian health care.

The GHS program provides meaningful measures of hospital operations, management, and policy adoption in the energy and environment spheres.

Since 2019, RGH has collected and submitted data to the GHS for benchmarking against other Canadian and international hospitals.



An initiative from the Canadian Coalition for Green Health Care

## Green Hospital Scorecard Categories

1. Energy
2. Water
3. Waste
4. Pollution Prevention
5. Corporate Leadership, Planning & Management
6. Transportation
7. Food
8. Climate Change
9. Anesthetic Gas
10. Energy Behaviour



# Green Hospital Scorecard RGH Report



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## Energy

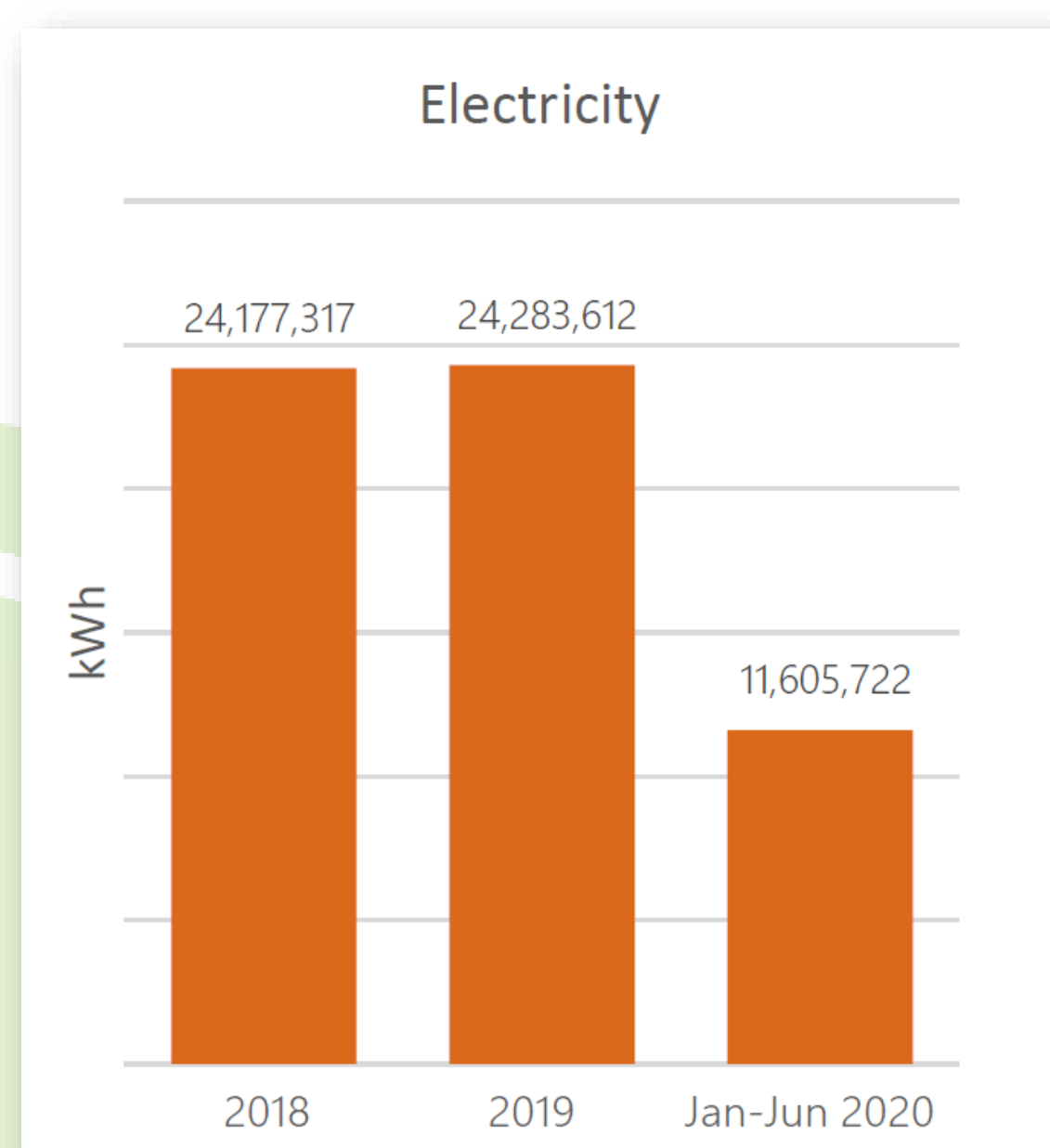
RGH uses electricity and natural gas to power the site. Our emergency generators run on diesel fuel.

All of our energy use is tracked and reported as part of the Green Hospital Scorecard submission.

Some of the efforts to reduce energy consumption at RGH include changing out light fixtures to newer

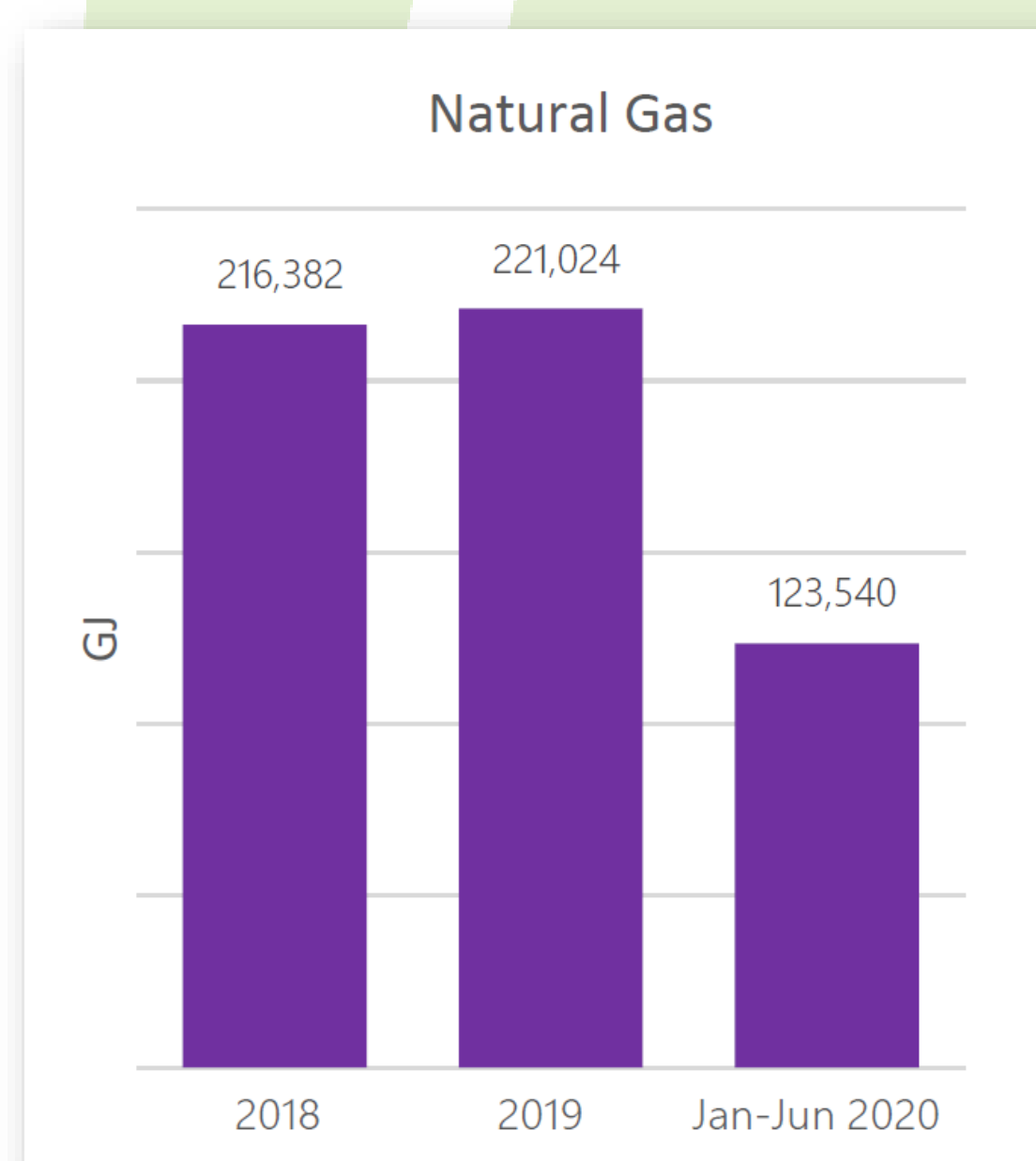
high efficiency LED bulbs using Variable Frequency Drives on electric motors and controlling building conditions through system programming.

Improved technology at RGH has improved air quality and enhanced lighting levels which in turn has made the site safer and more economical to operate.



**Electricity** powers most equipment, lighting and building systems at RGH. From Aug 2019 – Jul 2020 RGH consumed an average of 65,951 kWh per day.

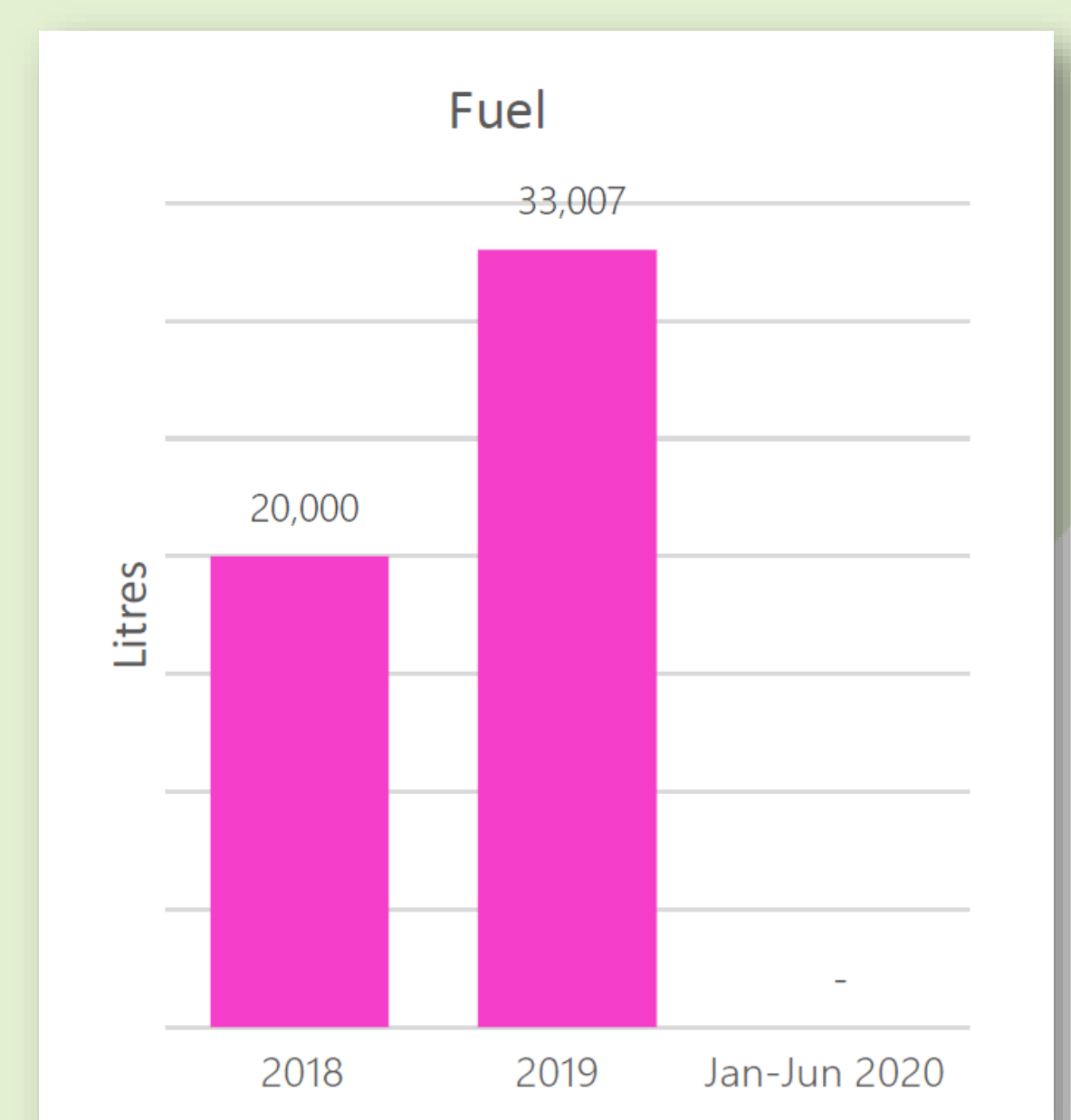
*Watching a plasma TV for 3 hours is the equivalent to approximately one kilowatt hour.*



**Natural Gas** powers building heating systems, boilers, hot water heaters and assorted kitchen equipment at RGH.

Natural gas usage at RGH dropped marginally in 2020 from 608 GJ to 603 GJ per day.

*The average urban home in Alberta uses 120 GJ per year.*



**Diesel fuel** powers RGH's three generators, and is the backup fuel supply for the boilers. The generators have enough power to supply the site with electrical power at a total of 4.5 megawatts.



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## Water

The Green Hospital Scorecard tracks the amount of water hospitals use.

As of Sep 2020, RGH is on pace to reduce water consumption. The daily average water use dropped from 673 m<sup>3</sup> in 2019, to 589 m<sup>3</sup> in 2020, a reduction of 12%.

### Water Ways

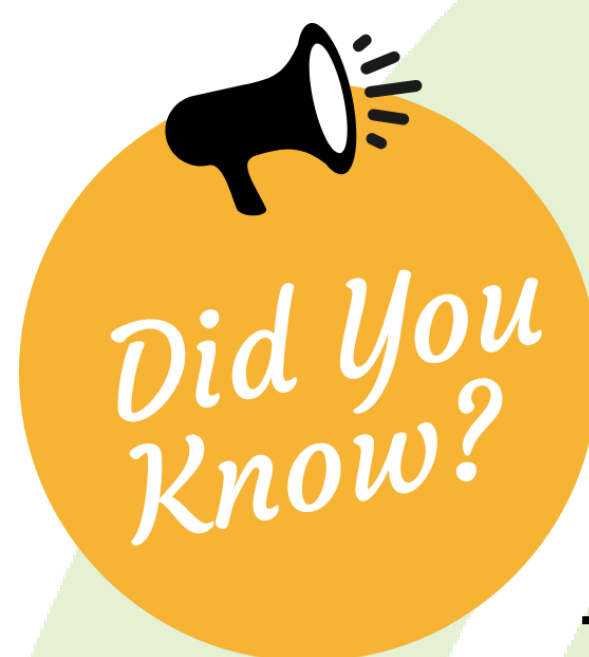
Domestic city water is piped to the RGH power plant where it is boosted in pressure. A toilet above the 6<sup>th</sup> floor won't flush without boosting pressure! All showers are low flow and all toilets are low flush.

Depending on the need, water at RGH will move through **filtration systems** (for refrigerators, and drinking stations), **softener systems** (same as a residential system, only bigger) or **reverse osmosis systems** (a very efficient type of filtration).



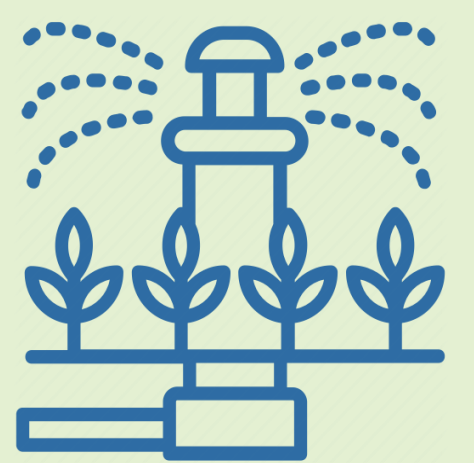
### Hot Water Tanks 'n Pipes

There are two sizes of hot water tanks at RGH. Three small 60c tanks are for regular use and two large 80c tanks for kitchen use. The majority of the hot water, however, is stored in the piping and not the tanks themselves. The cylinder tanks are 3.5 feet in diameter and 9 feet tall, whereas the piping is 4 inch diameter and runs for approximately 3km.



### Reservoir to the Rescue

The shrubs, gardens and lawns have the Glenmore Reservoir to thank. The lawn and garden sprinkler system pumps non potable water directly from the reservoir. RGH is only responsible for the cost to run the pumps and maintain the piping.



### Biggest Need

Medical Device Reprocessing Department requires the most water on site.

While the machines used to clean and sterilize equipment differ, there is a need for both hot and cold domestic rinses, hot and cold soft water wash, and reverse osmosis for the final rinse.

### Be a Water Warrior!

If you see a dripping tap, leaking valve or toilet running, RGH staff are asked to submit an e-Facilities request to initiate FME to repair as needed.

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## Waste

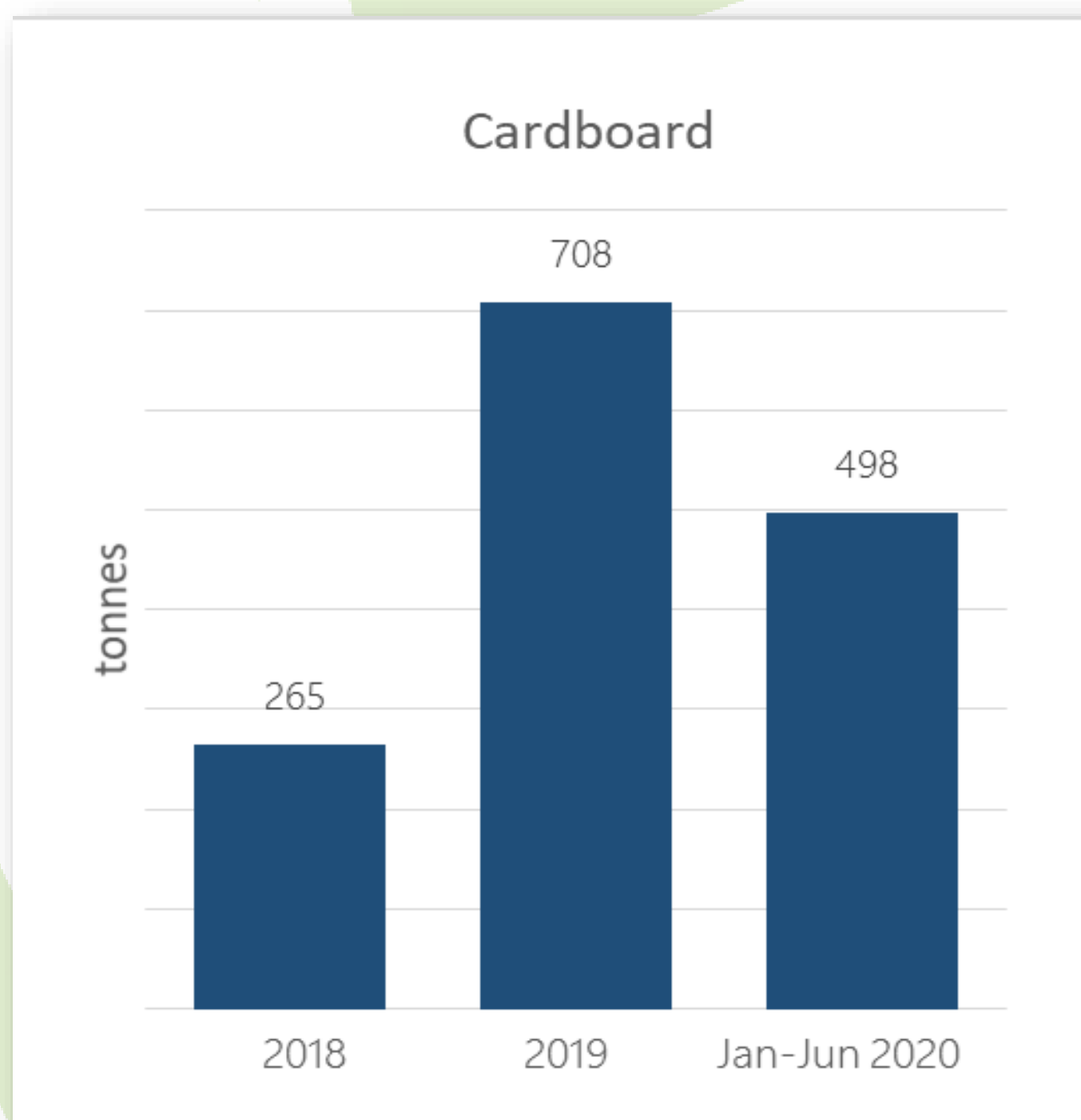
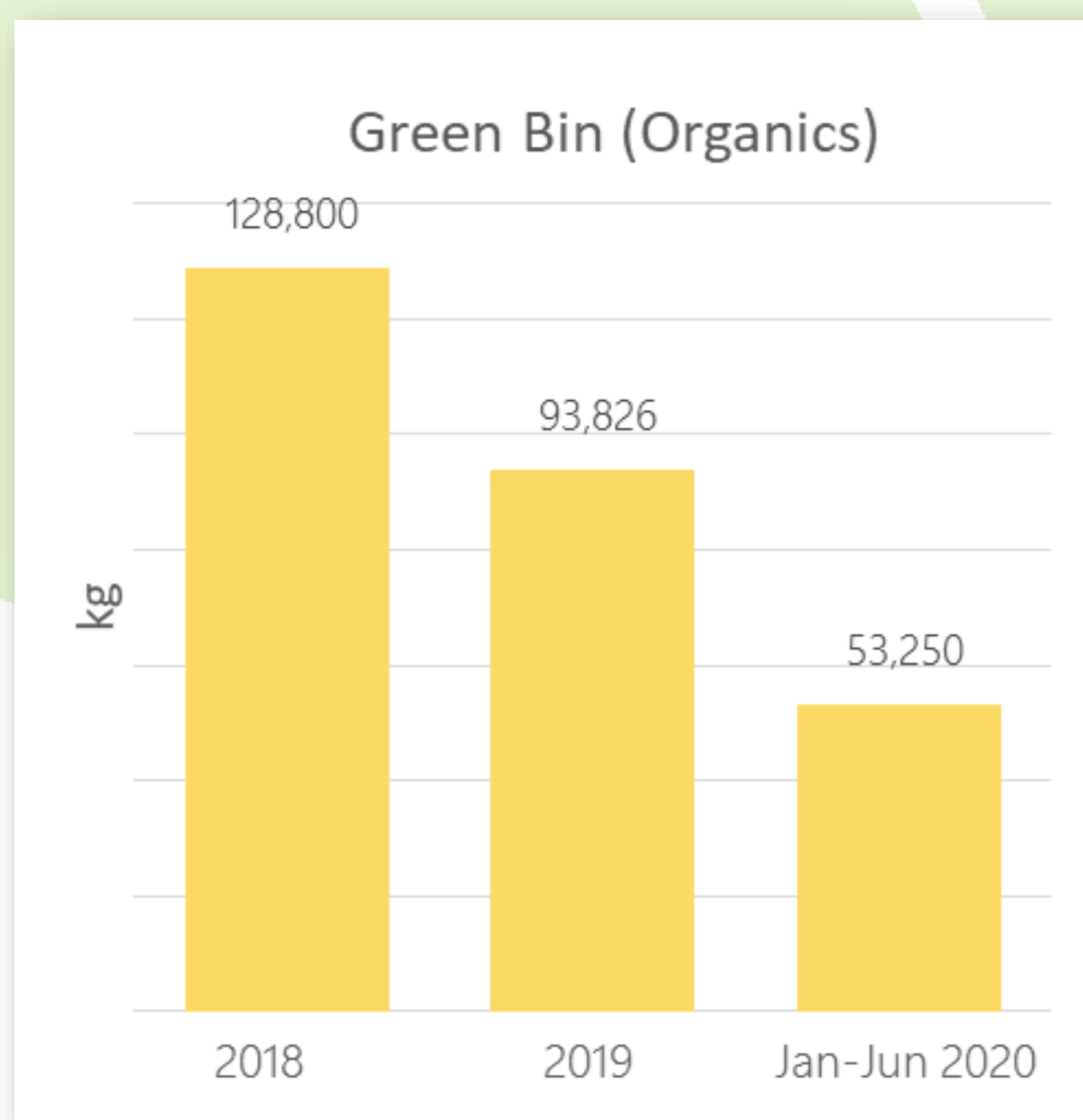
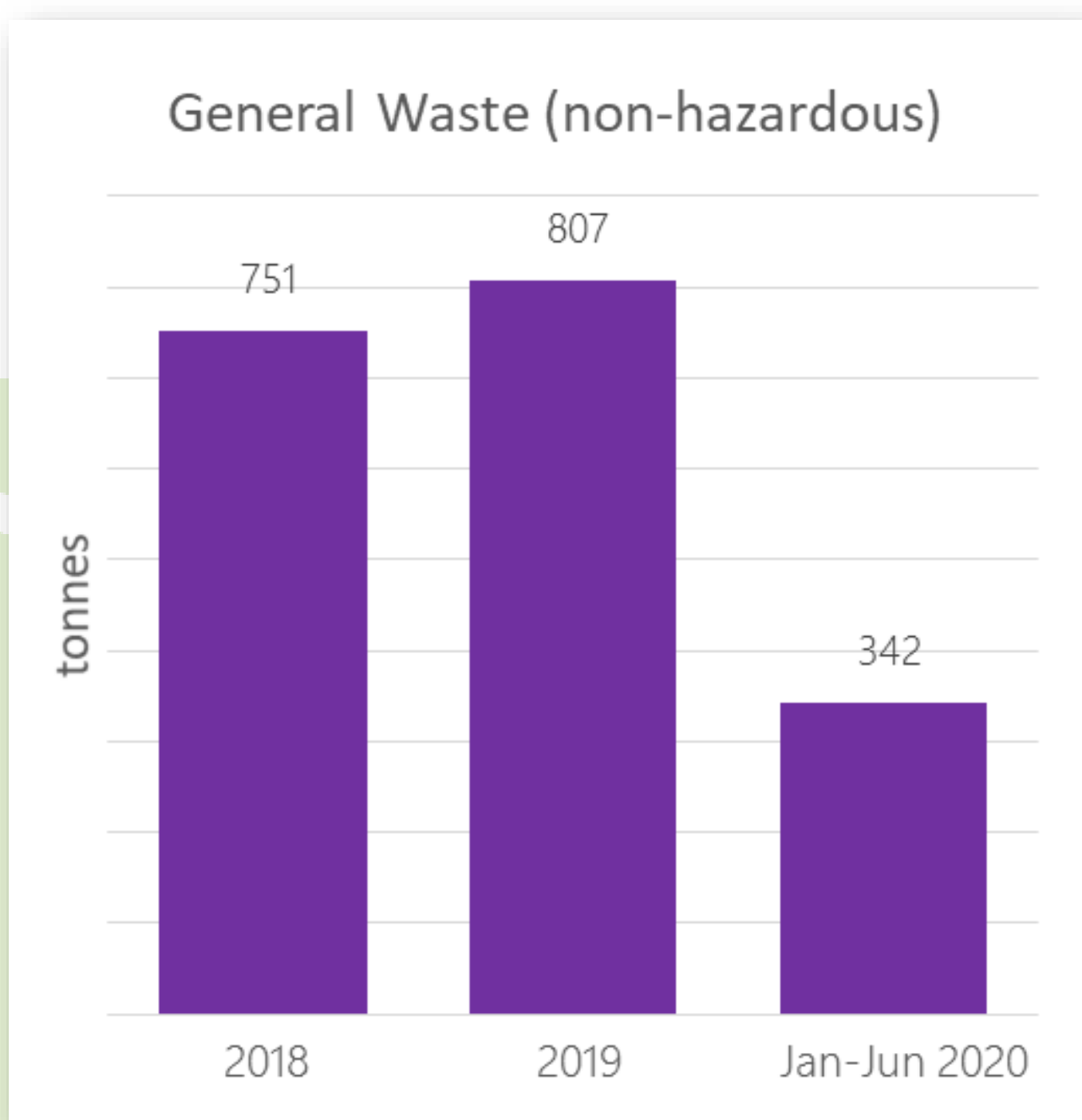
The Green Hospital Scorecard looks at how hospitals manage waste and recyclable materials.

RGH waste is considered for reuse, recycling or composting. Paper, plastic, electronics, batteries and construction debris are recycled.

RGH has recently added full collection of compostable waste in our patient food services kitchen and retail food services kitchen and cafeteria. Garburators are no longer used.

In 2019 styrofoam cups and plates were replaced with a compostable equivalent.

### RGH, by the numbers:



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## Pollution Prevention

The Green Hospital Scorecard measures Pollution Prevention – a concept that focuses on the hospital choosing less toxic and more environmentally preferred chemicals and materials.

Pollution Prevention aligns with the “do not harm” philosophy in health care and takes into account a

hospital's actions to reduce its impact on the environment.

RGH supports environmentally preferable purchasing and use of less-toxic, lower impact or local materials. Some examples include switching cleaning chemicals and wipes.

### Wipes & Cleaning Chemicals

RGH switched to Accel Prevention wipes and solution for use on hard surfaces and floors. “Green” benefits include:

- Decreased toxicity
- Does not require PPE for use
- Increased microbial coverage and product/equipment compatibility

This change resulted in cost savings too ~ a savings of \$67K annually.



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## Corporate Leadership, Planning & Management

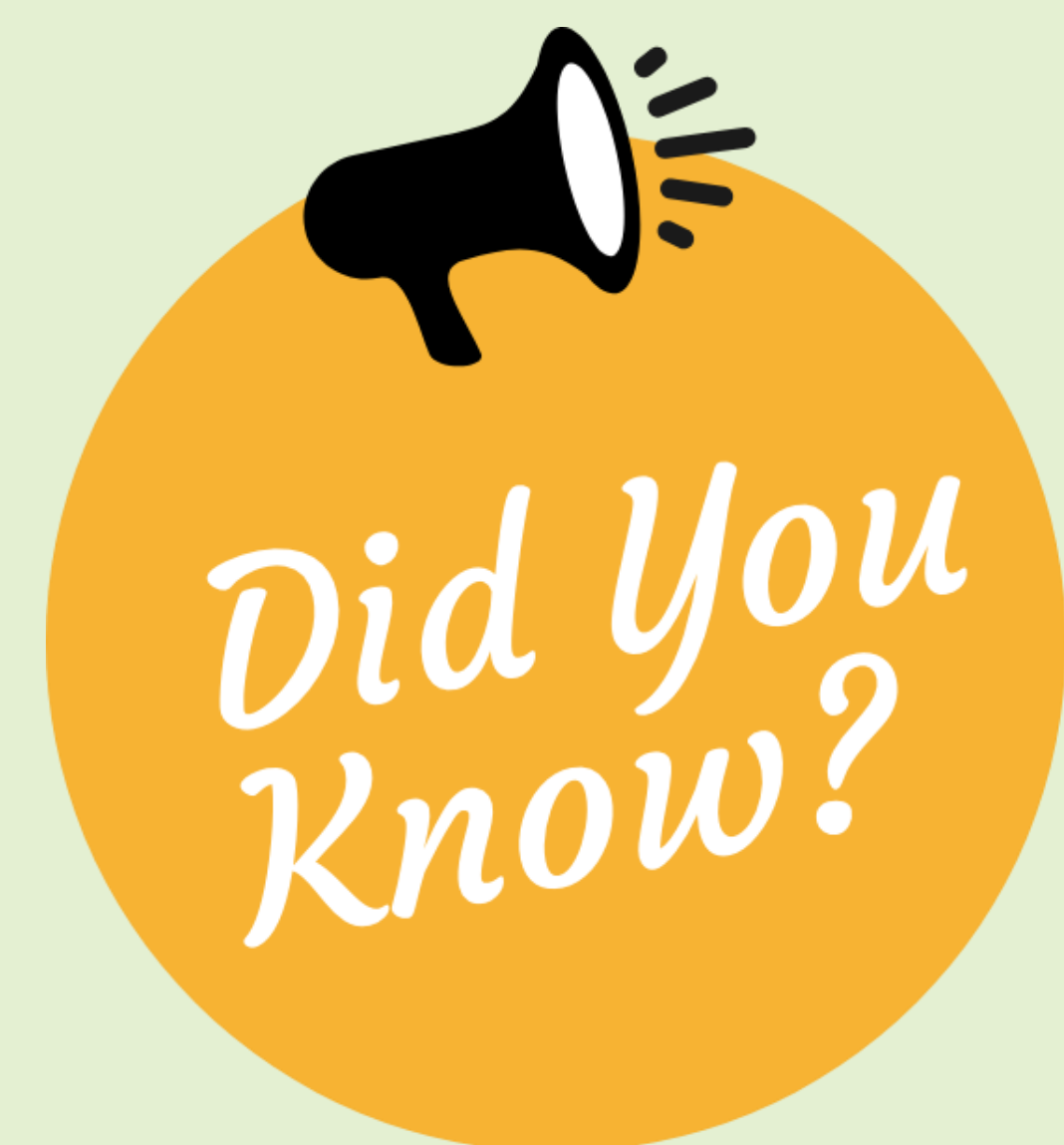
The Green Hospital Scorecard captures corporate commitment to green culture, integration of green objectives, and hospital support for staff involved in green initiatives.

Measure of corporate commitment is through the presence of formal programs and policies that support green initiatives within RGH.

AHS has an **Office of Sustainability** to:

- be an active corporate leader in environmental sustainability
- introduce initiatives to reduce our greenhouse gas emissions, environmental footprint and costs
- coordinate green initiatives throughout the organization
- support great work passionate AHS and RGH staff are championing.

The **AHS Environmental Sustainability Policy** came into effect in 2020 to identify ways to minimize consumption of energy, water, waste and reduce greenhouse gas emissions at AHS.



RGH has a **Green 'n Healthy Committee** with membership from managers across departments to foster front line engagement and implement. This committee is open to all staff to collaborate on site projects and events like Earth Day and Waste Reduction Week.

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## Food

The Green Hospital Scorecard looks at health care facilities practices that support a sustainable and healthy food system. These practices include considerations for environmental sustainability, improved nutritional quality, supporting a shift to low carbon foods, and choosing appropriate and sustainable foods.

Here are some examples of innovative ways Rockyview General Hospital (RGH) supports a healthy food system:

### RGH **Retail Food Services**

has made improvements to support healthy eating while being mindful of environmental sustainability:

- sugar sweetened beverages replaced with healthier options
- smaller portion sizes offered
- whole grain bread served as a default option
- a full service salad station added focusing on plant based proteins – this offering supported an increase of salad/plant based protein sales representing 9% of total sales in 2020.

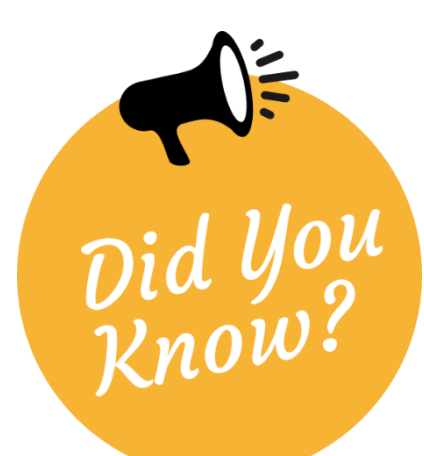


RGH **Geriatric Mental Health Unit** has an onsite garden as part of recreation therapy. Every year they plant and grow vegetables and harvest them for use in their meals.



Until 2018, RGH **Patient Food Services** was part of the provincial menu system that didn't specifically offer a vegetarian meal option to patients.

- In April 2018, RGH trialed a vegetarian dinner option for patients and demonstrated operationally this was feasible. This option has since expanded to lunch and all other hospitals in the Calgary Zone (CZ).
- In December 2020, a vegetarian stir fry was featured as the main item on the Friday supper menu.
- RGH sees about 2% of patients choosing a vegetarian or vegan diet. The CZ is the only zone in the province currently offering patients a vegetarian/vegan choice on the regular menu.



AHS has a Healthy Eating Environment Policy.



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## Transportation



The Green Hospital Scorecard assesses Clean and Active Transportation.

Active transportation is using one's own power to get from one place to another and includes walking, jogging and biking. Clean transportation includes public transit, carpooling, shuttles and low-emission vehicles.

Rockyview General Hospital (RGH) supports **Clean and Active Transportation**, examples include:

- Carpool Program – RGH has designated carpool stalls set aside for staff who choose to carpool to work.
- Parking Services – for staff parking on site, the option to temporary suspend parking for seasonal or alternate commuting is available.
- Calgary Transit – buses stop at RGH entrance points in addition to the nearby RGH BRT bus loop.
- Bicycling – to support RGH staff commuting by bicycle, bike stands are easily accessible at staff entry points. There is also a secure bike locker in the Lot 1 parkade.



**AHS Virtual Health** enables AHS clinical programs and clinicians to deliver health services, expertise and information over distance improving access and reducing barriers to patient care across Alberta and beyond.

For many years RGH has been using Virtual Health technology to deliver quality virtual care. AHS Virtual Health uses many different video conferencing tools including Zoom; Traditional Telehealth; and Skype for Business. Through these tools Clinicians at RGH and throughout the Alberta can provide quality care at a distance, staff education, and administrative functions.

The use of technology results in reducing travel for patients and staff while increasing access for all.



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## Climate Change

Healthcare facilities in Canada are being impacted by climate-related events such as floods, fires, heat and extreme weather. Such events have resulted in closed hospitals resulting in delays in critical care services, patient transfers, among other challenges.

Rockyview General Hospital (RGH) is engages in projects to support a greener hospital for the betterment of the planet. Here are some examples of partnership and plans RGH is working on to be prepared for more frequent and intense climate-related events.

### stryker

RGH has partnered with Stryker to support responsible environmental sustainability and stewardship.

In September 2020, RGH became the first hospital in Alberta to recycle certain single use medical devices thereby diverting single use devices from going directly into general or biohazard waste.

These devices are collected by Stryker, reprocessed, and sold at a reduced rate – contributing to a circular economy and environmental sustainability without compromising quality or safety. This resulted in 530kg of RGH waste being diverted from our local landfill between Sep – Nov 2020.

Stryker's *Products for the Planet* program provides hospitals the opportunity to contribute to forest restoration by achieving annual collection goals for single-use devices. By way of RGH's recent efforts, 150 trees have been planted.

Trees planted: **150** in 2020/21



Total landfill **avoidance**



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## Anesthetic Gas

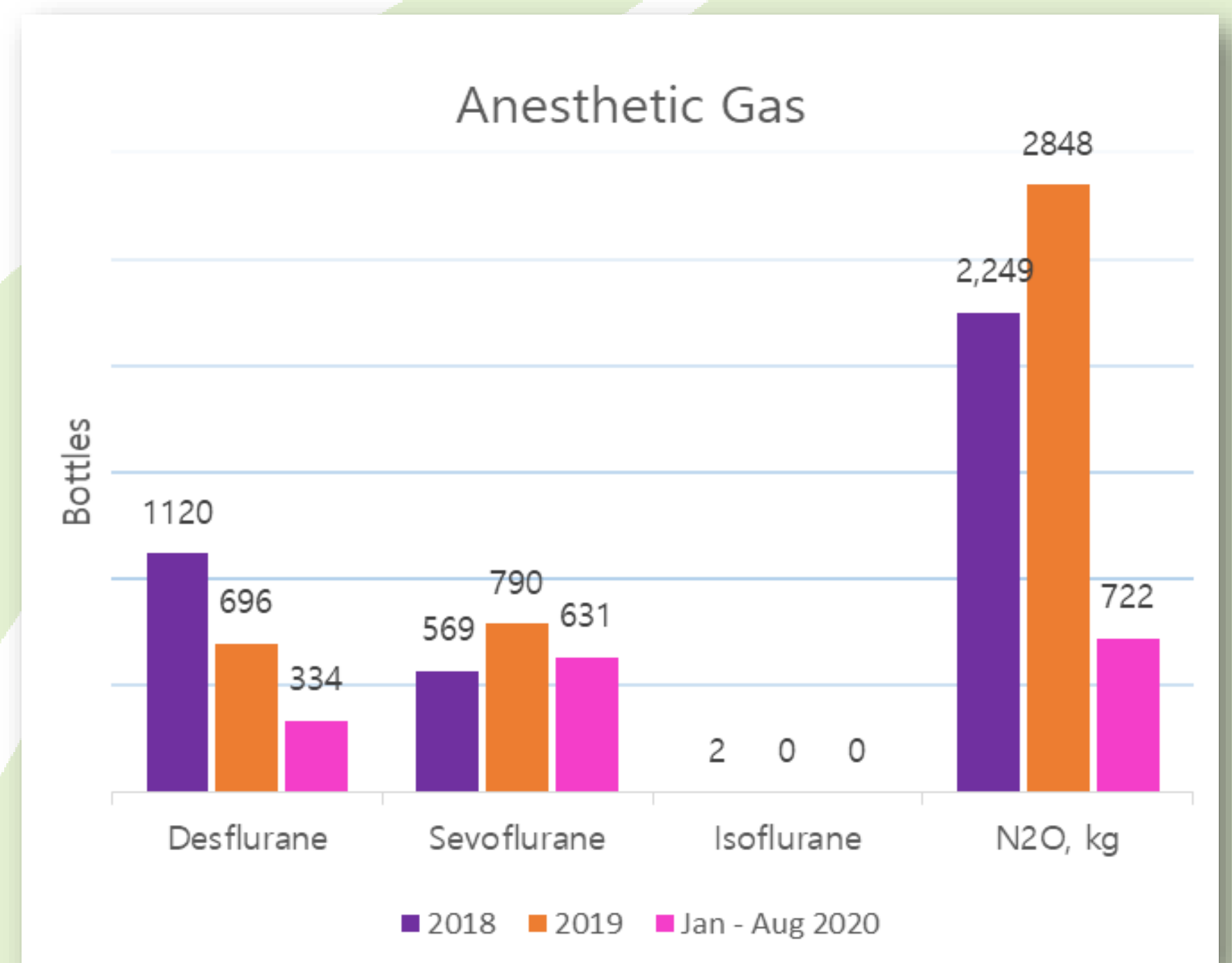
Anesthetic gases used for surgeries are potent greenhouse gases which hospitals regularly discharge unabated into the atmosphere.

The Green Hospital Scorecard brings attention to RGH's consumption of anesthetic gas and the importance of measuring and monitoring - crucial for our awareness of reducing emissions.

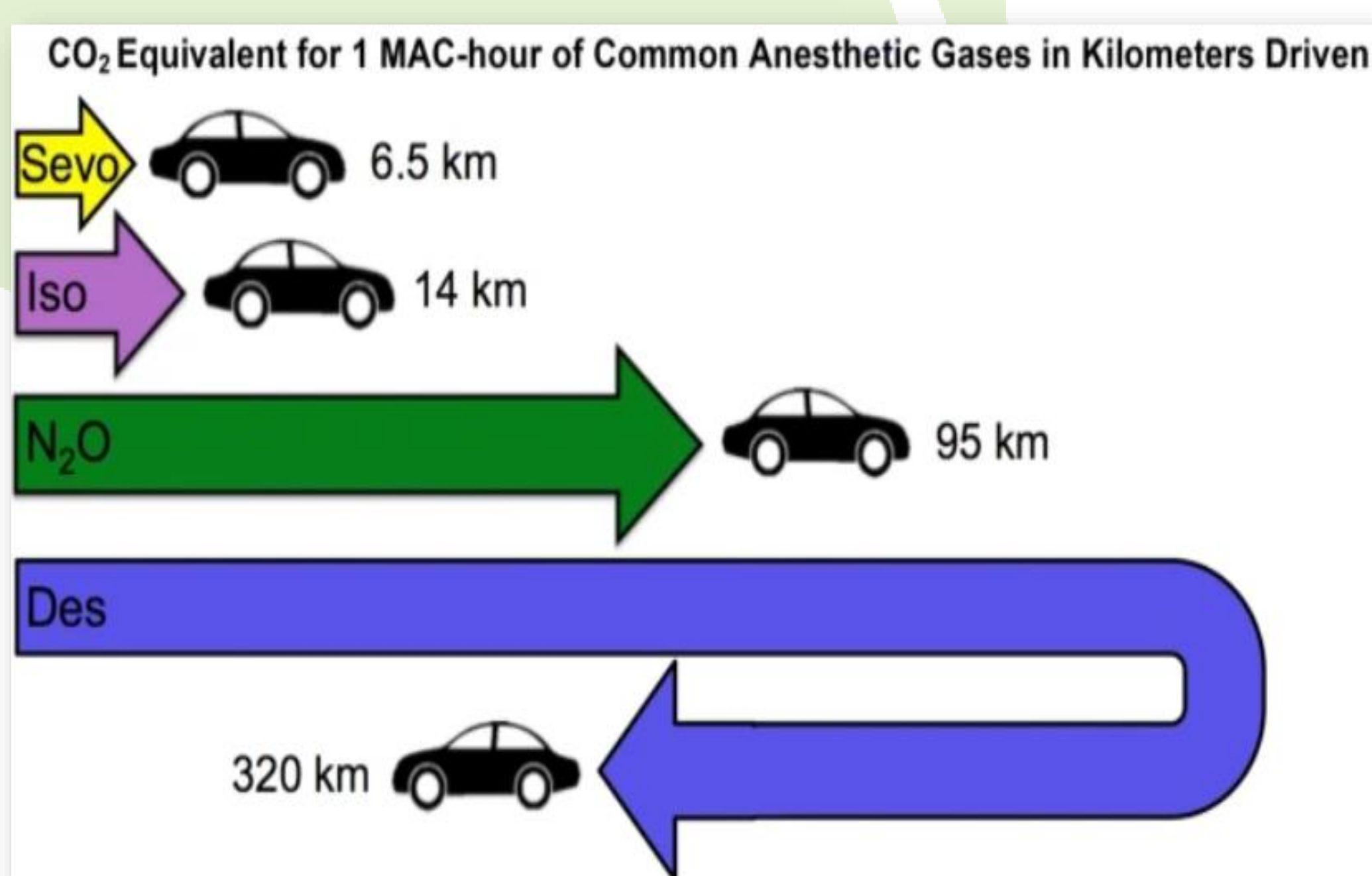
Before 2019, RGH clinicians had little knowledge of the global warming potential of anesthetic gases we use: Desflurane, Sevoflurane, Isoflurane and Nitrox Oxide.

RGH is aligning with global efforts to reduce or eliminate the use of Desflurane. Sevoflurane (it's greener cousin) will be used where appropriate.

Our RGH Anesthesia Department is leading the way supporting greener choices.



- Desflurane has the highest global warming potential of the common anesthetic gases, followed by Nitrous Oxide, and Sevoflurane the least.
- Nitrous Oxide is an anesthetic but also commonly used as a carrier for volatile anesthetics. RGH is looking at the potential to reduce the use of Nitrous Oxide and replace with medical air where possible.
- Some of our anesthesia machines automatically adjust fresh anesthetic gas flow to the lowest flow necessary for Desflurane and Sevoflurane.



Hanna, M., Bryson, G.L. A long way to go: minimizing the carbon footprint from anesthetic gases. *Can J Anesth/ J Can Anesth* 66, 838-839 (2019).

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## Energy Behaviour

The Green Hospital Scorecard looks at how Energy Behaviour is supported and actioned at the facility level.

Rockyview General Hospital (RGH) was asked to report on our Energy Behaviour. Examples of behaviours include sharing energy consumption data with staff, encouraging staff to take energy saving actions, and

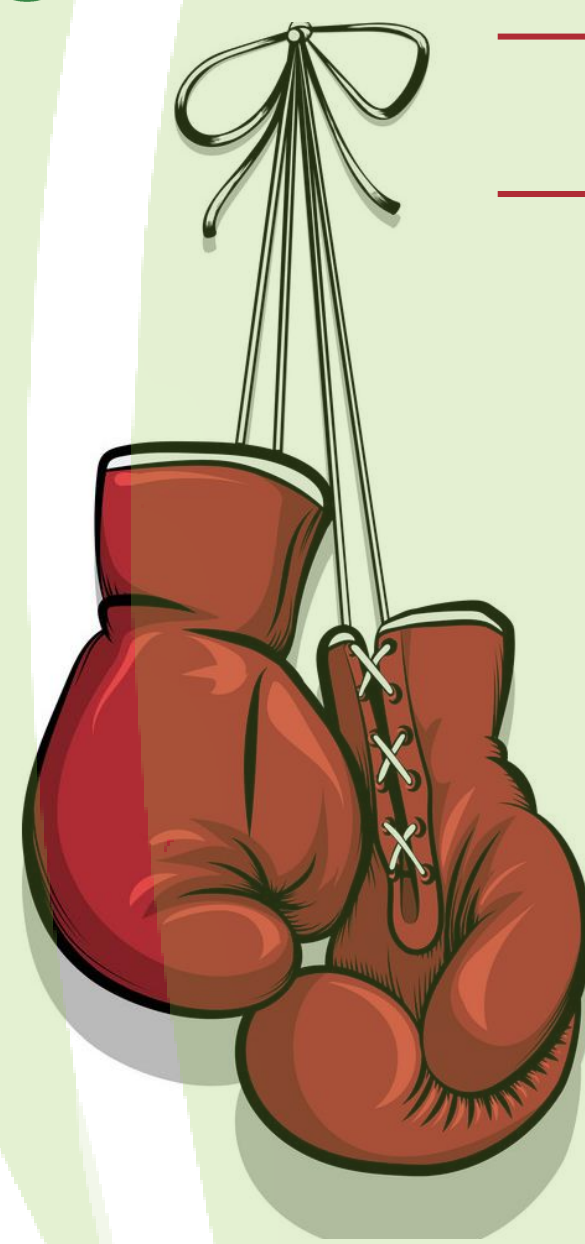
supporting staff practicing new energy savings habits.

In addition, RGH senior leadership was assessed on Energy Behaviour in areas including how energy savings are integrated into purchasing decisions, and how energy savings and energy waste is considered when planning projects.

### Electricity Conservation Challenge

In Jan 2020, U83/84 and U93/94 participated in an Electricity Challenge to see which area had a higher reduction on their overall electricity consumption over a 14 day period.

In Dec 2019, the Office of Sustainability secretly installed data loggers before the challenge to measure how much electricity was used. The selected units devised strategies to reduce their energy consumption. After the two week challenge, the data was retrieved pre and post challenge and analyzed to determine which units reduced their energy consumption the most.



	U83/84	U93/94
kWh Reduced	101	204
% Reduced	4.3%	8.6%

### What We Learned

There is a huge opportunity to conserve energy at a site level to reduce costs and greenhouse gas emissions.

### What Were the Winning Strategies?

Managers working in offices with natural light left their lights off and some light bulbs were removed in well-lit offices. The most important strategy was team work: turning off the lights when rooms are vacant, and making a conscious effort to turn off lights after staff completed their rounds.



Collectively, the challenge reduced consumption by 305kWh!

