the co-operators

Published April 2019

Energy consumption and carbon emissions inventory

ENERGY CONSUMPTION (GJ)

	2018	2017	2016	2010
Gasoline[1]	**16,577**	17,921	21,725	41,800
Natural Gas[1]	**38,097**	36,033	38,355	54,049
Electricity[1]	**63,023**	61,733	65,772	93,315
Steam[2]	**848**	729	1,276	1,431
Diesel[1]			5,705	
Total energy	**118,545**	116,416	132,833	190,595

1. *Conversion factor source: National Energy Board, Energy Conversion Tables, https://apps.neb-one.gc.ca/Conversion/conversion-tables.aspx?GoCTemplateCulture=en-CA.*
2. *Conversion factor source: Energy Star, Portfolio Manager Technical Reference: Thermal Conversion Factors https://www.energystar.gov/buildings/tools-and-resources/portfolio-manager-technical-reference-thermal-conversion-factors.*

CARBON EMISSIONS (TONNES OF CO2 EQUIVALENT)

	2018 Location-Based	**2018 Market-Based**	2017 Location-Based	2017 Market-Based	2016 Location-Based	2016 Market-Based	2010 Base Year
Fleet	**1,115**	**1,115**	1,197	1,197	1,438	1,438	2,970
Natural gas	**1,942**	**1,942**	1,838	1,838	1,949	1,949	2,658
Diesel[1]	**0**	**0**	0	0	415	415	0
Total Scope 1 (Energy)	**3,057**	**3,057**	3,035	3,035	3,802	3,802	5,628
Electricity	**4,932**	**408[2]**	5,087	387[2]	5,976	381[2]	11,566
Steam	**54**	**54**	47	47	85	85	95
Total Scope 2 (Energy Indirect)	**4,986**	**462**	5,134	434	6,061	466	11,661
Air Travel	**5,307**	**5,307**	5,179	5,179	4,989	4,989	4,554
Employee vehicle travel	**863**	**863**	808	808	853	853	1,510
Total Scope 3 (Other Indirect)	**6,170**	**6,170**	5,987	5,987	5,842	5,842	6,064
Total emissions	**14,213**	**9,689**	14,156	9,456	15,705	10,110	23,353
Carbon offsets[3]		**5,211**		4,944		3,590	
Net equivalent carbon emissions		**4,478**		4,512		6,520	

1. *A diesel generator supplied power at our head office location during an extended power outage.*
2. *Reduction associated with Renewable Energy Certificates purchased from Bullfrog Power.*
3. *Reduction associated with the Financial Advisor Carbon Neutrality Program and Compugen's CarbonBank™ program.*

METHODOLOGY

The greenhouse gas inventory is calculated using the operational control approach, as outlined by the World Resources Institute and World Business Council for Sustainable Development's Greenhouse Gas Protocol.

Carbon dioxide, methane and nitrous oxide are included in all emission totals (and are reflected in the emission intensity figures on page 44 of our Integrated Annual Report); the intensity figures include emissions from scope 1, 2 and 3. We use 2010 as our base year; although it was not the first year that emissions data were collected, it contains a more complete data set than prior years. It is also the basis for our emission reduction goals of a 75 per cent reduction from 2010 emission levels by the end of 2018, and a 100% reduction by the end of 2020. Prior year emission totals have been recalculated to reflect updated electricity emissions factors. Emissions from natural gas, electricity and steam are from corporate office locations representing 83% of total floor space.

In 2016 we introduced the Financial Advisor Carbon Neutrality Program. Through this voluntary, corporate-funded program, we've enabled our Financial Advisors (who are independent business owners and not part of our corporate carbon footprint) to make their offices carbon neutral through the use of Bullfrog Power and the purchase of carbon offsets. Financial Advisor locations across Canada are now contributing to the transition to a low-carbon economy.

In 2018 we began participating in Compugen's CarbonBank™ program. Through this program IT equipment slated for upgrades (such as laptops, desktops and printers) is refurbished to be repurposed. Carbon credits are then generated through avoidance of emissions associated with both the traditional e-waste recycling process and the manufacturing of new IT equipment. These emissions reductions are registered on the CSA Group's GHG CleanProjects® Registry.

It was our intention to reduce carbon emissions through the Financial Advisor Carbon Neutrality Program and CarbonBank™ program in an amount equivalent to the amount that would be needed to reach a 75 per cent reduction in our corporate footprint; in 2018 we surpassed our target, with an 81 per cent reduction. This non-traditional approach offers the same environmental impact, in terms of the amount of carbon that is offset, as purchasing offsets for our own operations—while additionally offering the benefits of engaging our Financial Advisors and employees, and through them many of our clients, in conversations about climate change and the risks it presents. We've applied this reduction to our corporate carbon reduction goal, and the result is our net equivalent carbon emissions.