

Energy and greenhouse gas (GHG)

Energy consumption and GHG footprint

The tables below illustrate the evolution of Bell's energy consumption, energy intensity and carbon footprint (GHG emissions) from 2020 to 2021.¹

ENERGY CONSUMPTION

MWh and GJ equivalents, 2020, 2021

GRI 302-1

	2021			2020			% CHANGE
	MWH EQUIVALENT	GJ EQUIVALENT	% OF TOTAL	MWH EQUIVALENT	GJ EQUIVALENT	% OF TOTAL	
Fuel (Scope 1)	558,007	2,008,664	23%	583,220	2,099,425	23%	-4.3%
Electricity, heating/cooling and steam (Scope 2)	1,823,736	6,564,925	77%	1,969,933	7,091,192	77%	-7.4%
Total	2,381,743	8,573,589	100%	2,553,153	9,190,617	100%	-6.7%

¹ Figures are based on data from July 1 of the previous year to June 30 of the reporting year

ENERGY INTENSITY

Energy intensity ratio, 2020, 2021



GRI 302-3

	2021	2020	% CHANGE
Total energy consumption (MWh equivalent)	2,381,743	2,553,153	-6.7%
Total operating revenues (\$ millions)	23,293	23,209	+0.4%
Energy intensity ratio ² (total energy consumption divided by total operating revenues)	102	110	-7.1%

² Bell's vertical integration affects the way the GHGs emitted by our business activities are allocated among our operational emissions (scope 1 (fuel and ozone depleting substances) and scope 2 (electricity, steam and heating/cooling) GHG emissions) and our upstream and downstream indirect emissions (scope 3 GHG emissions). For example, network installation and construction activities performed by Bell employees affect our operational emissions, whereas these activities are often outsourced by other carriers, and thus fall under their upstream indirect emissions. For more details, see the impact of the business model section of Our corporate responsibility approach.





GHG EMISSIONS

Tonnes of CO2 equivalent (CO2e), 2020, 2021³









SCOPE	GHG EMISSIONS TYPE		SCOPE DESCRIPTION	2021	2020 ⁴	% CHANGE	GRI
1	Operational emissions		Direct GHG emissions from sources that are owned or controlled by Bell: consumption of fuel (in our vehicle fleet, facilities and equipment) and accidental release of ozone depleting substances (from cooling equipment)	139,187	142,996	-2.7%	GRI 305-1
2			Indirect GHG emissions associated with the consumption of purchased electricity, heating/cooling and steam required by Bell's activities in our buildings and other facilities	136,535	160,548	-15.0%	GRI 305-2

³ PwC provided limited assurance over the 2021 GHG emissions and year-over-year change of scope 1, scope 2 and part of scope 3 (indirect emissions categorized as business travel activities). See [PwC's assurance statement](#)

⁴ 2020 GHG emissions from scope 2 and from some categories of scope 3 are restated in line with the methodology outlined in standards of the Greenhouse Gas Protocol. For more information on this restatement, see the About this report section

SCOPE	GHG EMISSIONS TYPE		SCOPE DESCRIPTION	2021	2020 ⁴	% CHANGE	GRI
3	Indirect emissions:		Other indirect GHG emissions associated with activities up and down Bell's value chain, which are categorized as follows ⁵ :	1,861,651	1,947,578	-4.4%	GRI 305-3
	Upstream		Purchased goods and services: extraction, production and transportation of goods and services purchased or acquired by Bell	1,521,752	1,574,949	-3.4%	
			Capital goods: extraction, production and transportation of capital goods purchased or acquired by Bell	25,679	24,549	+4.6%	
			Fuel- and energy-related activities: extraction, production and transportation of fuels and energy purchased or acquired by Bell (not already accounted for in scope 1 or 2), including: <ul style="list-style-type: none"> upstream emissions of fuels consumed by Bell upstream emissions related to fuels consumed in the generation of electricity, heating/cooling and steam purchased by Bell generation of electricity, heating/cooling and steam that is lost in transmission and distribution systems 	144,045	170,359	-15.4%	
		Upstream transportation and distribution (T&D) in vehicles and facilities not owned or controlled by Bell, including: <ul style="list-style-type: none"> T&D of products purchased by Bell between our tier 1 suppliers and our own operations T&D services purchased by Bell, including inbound and outbound logistics, and T&D between our own facilities 	50,297	28,642	+75.6%		

⁵ Our Scope 3 excludes GHG emissions associated with activities categorized as upstream and downstream leased assets (which are already accounted for in our scope 1 and 2) and processing of sold products (as this category is not applicable to Bell)

SCOPE	GHG EMISSIONS TYPE		SCOPE DESCRIPTION	2021	2020 ⁴	% CHANGE	GRI	
3	Upstream		Waste generated in operations: disposal and treatment of waste generated in our operations	1,353	1,874	-27.8%		
			Business travel: transportation of Bell employees for business-related activities (including travel by air, rail, rented vehicles and personal vehicles)	1,332	8,834	-84.9%		
			Employee commuting: transportation of Bell employees between their homes and their worksites (including commuting by public transit and personal vehicles)	5,663	24,076	-76.5%		
	Downstream		Downstream transportation and distribution (T&D) in vehicles and facilities not owned or controlled by Bell: T&D of products sold by Bell between our operations and the end consumer, including retail and storage	11,643	157	+7315.9%		
			Use of sold products: end use of goods and services sold by Bell	37,860	44,495	-14.9%		
			End-of-life treatment of sold products: waste disposal and treatment of products sold by Bell at the end of their life	4	4	0.0%		
			Franchises: operation of Bell's franchises (not already accounted for in scope 1 or 2)	5,701	6,300	-9.5%		
			Investments: operation of investments (not already accounted for in scope 1 or 2), including equity investments (such as associates and joint ventures), debt investments and project finance	56,322	63,339	-11.1%		
	Total				2,137,373	2,251,122	-5.1%	

Explanations for GHG variations from 2020 to 2021⁶

Compared with 2020, Bell's total carbon footprint (GHG emissions) decreased 113,749 tonnes of CO₂e (-5.1%). Most of this decrease is attributable to Scope 3 emissions, which were down 85,927 tonnes of CO₂e (-4.4%). This decrease is essentially due to GHG emissions related to our purchased goods and services, which were down 53,197 tonnes of CO₂e (-3.4%). This slight decrease is in line with the similar drop in spending for goods and services purchased from our suppliers, leading to lower GHG emissions.

Our GHG emissions from Scope 2 sources decreased by 24,013 tonnes of CO₂e (-15.0%) compared with 2020. This decrease is mainly due to the sale of most of our data centres to Equinix in the fourth quarter of 2020.

Our GHG emissions from Scope 1 sources decreased by 3,809 tonnes of CO₂e (-2.7%) compared with 2020. This decrease can be attributable to the impacts of the COVID-19 pandemic (fewer employees in the buildings and less fuel consumed by our vehicle fleet).

Energy and GHG savings

Our Real Estate, Media, IT, Network, Mobility, Northwestel and Fleet teams continue to look for ways to improve our energy performance. The tables below illustrate how we achieved electricity and fuel savings, and their associated GHG savings in 2021⁷.

⁶ Figures are based on data from July 1 of the previous year to June 30 of the reporting year

⁷ Figures are based on data from October 1, 2020 to September 30, 2021

ELECTRICITY SAVINGS

GRI 302-4

	2021 ELECTRICITY SAVINGS INITIATIVES	COST SAVINGS (\$ 000)	ELECTRICITY SAVINGS	
			(GWH)	(GJ)
Buildings	<ul style="list-style-type: none"> Add free cooling systems to reduce the need for mechanical cooling Implement conversions to LED lighting and occupancy-based lighting controls Re-commission HVAC temperature setpoints and building automation systems (BAS) sequence of operations 	913	9.27	33,372
Network	<ul style="list-style-type: none"> De-power DMS equipment in 20 sites Upgrade power plant and modernize rectifiers in 15 sites 	298	2.34	8,424
Bell Mobility	<ul style="list-style-type: none"> Deploy software power saving features on call-processing equipment 	470	2.96	10,656
IT	<ul style="list-style-type: none"> Consolidate, optimize and virtualize servers (the equivalent of 553 physical servers) 	191	2.21	7,956
Total Savings		1,872	16.78	60,408

FUEL SAVINGS

	2021 FUEL SAVINGS INITIATIVES	COST SAVINGS (\$ 000)	FUEL SAVINGS	
			(LITRES)	(GJ)
Vehicle fleet	Replace 501 older vehicles with new, more fuel-efficient models	152	133,358	4,638
	Use 35 electric vehicles, which replaced their equivalent gas only vehicles	30	26,060	906
Total Savings		182	159,418	5,544

GRI 302-4

GHG SAVINGS

2021 ENERGY SAVINGS INITIATIVES	GHG EMISSIONS REDUCTION (TONNES OF CO ₂ E)
Electricity	1,283
Fuel	371
TOTAL GHG EMISSIONS REDUCED IN PERIOD	1,654

GRI 305-5

Renewable energy

Nearly 57%⁸ of the 1,776,425 MWh of electricity we consumed in 2021⁹ was from renewable sources, such as water, wind, tides and solar. Of this, 87% was from hydro sources.

Bell's network

The Bell network generated approximately 250,000 kWh of renewable energy in 2021 from solar and wind power sources.

In the Northwest Territories, our 9 photovoltaic and diesel hybrid power systems in remote sites and 1 photovoltaic power system in Whitehorse, generate approximately 130,000 kWh of renewable energy every year and save approximately 27,000 litres of diesel, the equivalent of 73 tonnes of CO₂e per year.

In Ontario, our wind and solar power technologies installed at 12 remote cell sites generated approximately 50,000 kWh of renewable energy every year, while in the Atlantic region our solar arrays generated approximately 70,000 kWh of renewable energy at 10 of our sites.

Over the years, our solar modernization program has significantly improved network reliability, reduced generator run time, cut energy costs and greenhouse gas emissions.



Bell is committed to maintain its current renewable energy generation and to continue exploring the potential to reduce the GHG emissions of our cell sites in remote areas.

⁸ Calculation based on data for 2018 from Electricity in Canada: Summary and Intensity Tables of the [Canadian National Inventory Report \(1990–2019\)](#), published April 12, 2021

⁹ Figures are based on data from July 1, 2020 to June 30, 2021

Bell Mobility, which currently operates around 12 off-grid sites in Canada, has partnered with the Interdisciplinary Institute for Technological Innovation (3IT), the Nanotechnologies and Nanosystems Laboratory (LN2) from Université de Sherbrooke and the company Stace, to provide solar-powered cell sites to address the need for cellular coverage in and around the environmentally-sensitive La Vérendrye Wildlife Reserve in Québec. In 2021, an investment of nearly \$400,000 was made to install a solar power system at the Dorval Lodge site, which limited the use of a diesel generator to cases where solar power was insufficient to maintain the batteries on site, thus reducing fossil fuel dependency by 60%.

In addition to Dorval Lodge, two Atlantic sites have solar integration that provides the majority of power requirements during the summer months.



In 2022, Bell Mobility will also complete coverage of Highway 6 in Manitoba with the addition of two new off-grid sites. These sites will be equipped with the latest iteration of high efficiency photovoltaic solar panels, made for cyclic use lithium batteries, DC fan cooling and DC Generators, and almost all shelter components will be DC powered.



Street furniture¹⁰

The energy consumption of Astral Out-of-Home street furniture is primarily used for the lighting of signs, ads and transit shelters. Renewable energy initiatives implemented in 2021 saved approximately 215,308 kWh of energy, avoiding an estimated 17 tons of CO₂e.

In 2021, 73 transit shelters with photovoltaic (PV) systems were installed, resulting in 99,741 kWh of electricity saved and 8 tons of CO₂e avoided. Since 2007, this initiative has led to the installation of 2,164 transit shelters with PV systems, resulting in approximately 2.96 million kWh of electricity saved and 245 tons of CO₂e avoided per year.



¹⁰ All data about street furniture initiatives are taken from: Street Furniture Year 14 Environmental Report, Sustainability Consulting RWDI, November 24, 2021. 2021 figures are based on data from September 1, 2020 to August 31, 2021.

Astral Out-Of-Home has also implemented photocell systems that turn off shelter lighting when there is sufficient daylight. In 2021, a total of 101 new and existing transit shelters were upgraded with photocell systems to reduce electricity consumption during the day. This upgrade yielded 76,802 kWh in electricity savings and 6 tons of CO₂e were avoided. Since 2007, it is estimated that the 5,536 installed photocells have saved approximately 4.21 million kWh of electricity, equivalent to an estimated 349 tons of CO₂e avoided.


As lighting technology continues to improve, improvements in energy efficiency are increasingly affordable and effective.

Digital transit shelters can be equipped with high-efficiency LED static advertisement panels which consume less electricity, have a longer lifespan and contain less hazardous materials than T12 fluorescent lamps. In 2021, 10 new LED lamps were installed, yielding approximately 3,504 kWh in energy savings and 0.3 ton of CO₂e.

T12 fluorescent lamps are also used for advertisement backlighting throughout the transit shelters. In an ongoing initiative, Astral Out-of-Home has supplemented energy savings by installing electronic ballasts, which use less energy than typical magnetic ballasts. In 2021, 43 electronic high output ballasts were installed. The estimated electricity savings and emissions avoided with this improvement are 35,261 kWh and 3 tons of CO₂e for that year. Since 2007, the 2,787 electronic high output ballasts that were installed saved approximately 2.29 million kWh of electricity, equivalent to an estimated 190 tons of CO₂e avoided.

In 2021, Astral Out-of-Home has also been exploring other initiatives to save energy on Super Boards by replacing aging Holophane fixtures with LED lighting on 20 boards. This initiative reduced the number of fixtures by 40% and electricity consumption by 85%. Exploring ways to increase energy savings for Horizontal and Vertical boards will continue in 2022.





To the extent this information sheet contains forward-looking statements including, without limitation, outlooks, plans, objectives, strategic priorities, commitments, undertakings and other statements that do not refer to historical facts, these statements are not guarantees of future performance or events, and we caution you against relying on any of these forward-looking statements. Forward-looking statements are subject to inherent risks and uncertainties and are based on assumptions that give rise to the possibility that actual results or events could differ materially from our expectations expressed in, or implied by, such forward-looking statements. Refer to BCE Inc.'s most recent annual management's discussion and analysis (MD&A), as updated in BCE Inc.'s subsequent quarterly MD&As, for further information on such risks, uncertainties and assumptions. BCE Inc.'s MD&As are available on its website at bce.ca, on SEDAR at sedar.com and on EDGAR at sec.gov.