

Bell Canada 2016 Greenhouse Gas Emissions Report

INTRODUCTION

This Greenhouse Gas (GHG) emissions report was prepared in accordance with the principles and requirements of ISO 14064-1 and the Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard (Revised Edition) and has been used to report Bell's GHG emissions to the CDP and other corporate disclosures. Bell reported a total of 310,971 tonnes of carbon dioxide equivalent (CO₂e), which includes Scope 1, 2 and 3 emissions, for the time period from January 1st to December 31st 2016.

ORGANIZATIONAL BOUNDARIES

Bell applies the operational control approach to determine the scope of reporting for its subsidiaries and divisions. The following list identifies the businesses included in the organizational boundaries:

- BCE Nexxia
- Bell Aliant
- Bell Canada
- Bell Media
- Bell Mobility
- Bell Mobility Channels
- Bell Technical Solutions
- Expertech
- Northwestel
- The Source

The table below reports Bell's scope 1, 2, and 3 emissions for the years ending December 31st, 2015 and December 31st, 2016.

Emissions in tonnes of CO ₂ e ¹	Operational Boundary	2015	2016	Increase (decrease)
Scope 1	Direct emissions controlled by Bell includes accidental release of ozone depleting substances from cooling equipment, burning of fuel oil and natural gas in buildings, combustion of diesel for its telecommunication towers and transmission equipment, combustion of propane for its maintenance equipment and combustion of diesel and gasoline for its vehicle fleet and generators.	133,566	128,878	(3.5%)
Scope 2	Indirect emissions associated with energy corresponding to the production and transmission of electricity required by Bell's activities, in its buildings and other facilities.	221,662	174,043	(21.5%)
Scope 3	Other indirect emissions include business travel for Bell employees, including travel by air, rail, rented vehicles and personal vehicles.	8,522	8,050	(5.5%)
Total		363,749	310,971	(14.5%)

Compared with 2015, Bell's carbon footprint decreased 52.8 kilotonnes (14.5%). The largest portion of the decrease is attributable to Scope 2 emissions, which were down 47.6 kilotonnes. Even though Bell's electricity consumption has remained quite stable compared with 2015, this decrease is mainly due to the significant drop in emission factors due to cleaner energy sources.

¹ Rounding of numbers may affect total figures presented

METHODOLOGY AND ASSUMPTIONS

Scope 1

Fossil fuels:

Sources with information on volume of fossil fuels consumed:

Information provided from the company's energy data aggregator systems and energy providers' reports includes the volumes of diesel, fuel oil, gasoline, natural gas and propane consumed per province for the time period covering January 1st to December 31st 2016.

Sources with no information on volume of fossil fuels consumed:

The volumes of diesel, fuel oil, gasoline, natural gas and propane consumed are established by compiling the Canadian dollars spent (\$) from the company's energy finance reports that are converted into volume using average costs per unit of energy per substance and province. Average costs per unit are determined by using best estimates for the time period covering January 1st to December 31st 2016.

Emissions were calculated by multiplying these fossil fuel volumes by the Canadian emission factors taken from the *National Inventory Report 1990-2015: Greenhouse Gas Sources and Sinks in Canada (Part 2)*.

The total GHG emissions, in tonnes of CO₂e, were calculated by multiplying the mass of each gas (CO₂, CH₄ and N₂O) by its global warming potential (GWP) and adding up the totals. GWPs used are from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report, 2014 (GWP of CO₂ = 1, GWP of CH₄ = 28 and GWP of N₂O = 265).

Biomass emissions were calculated by applying the following assumptions on the volume of diesel and gasoline consumed: 2% biodiesel content in diesel and 5% ethanol content in gasoline.

Ozone depleting substances (ODS):

Volume of ODS accidentally released is acquired by compiling volumes reported within our incident response management system. Emissions were calculated by applying the appropriate GWP for each substance using the IPCC Fifth Assessment Report, 2014.

Scope 2

Facilities with electricity consumption information:

Information provided from the company's energy data aggregator systems and energy providers' reports includes electricity volume in kilowatt hours (kWh) per province for the time period covering January 1st to December 31st 2016.

Facilities with no electricity consumption information:

Facilities with electricity financial information:

Electricity volume in kilowatt hours (kWh) is established by compiling the Canadian dollars spent (\$) from the company's energy finance reports and converting them into volumes using the best estimated average cost per unit of energy (\$/kWh) per province for the time period covering January 1st to December 31st 2016.

Facilities with no electricity financial information:

The volume is established by using an averaged kilowatt hour (kWh) consumption per square foot. This average is calculated from direct energy consumption information that was extrapolated from a representative sample of buildings.

Electricity emission factors were then applied to the total 2016 kWh consumed by province to calculate tonnes of CO₂e. Canadian emission factors were sourced from the *National Inventory Report 1990-2015: Greenhouse Gas Sources and Sinks in Canada* (Part 3, Annex 13).

Scope 3

Air/Rail travel:

Information originated from travel agency reports and includes flight segments and mileage for flight and rail travel. Flight segments are then sorted as domestic, short and long haul as per *GHG Emissions from Transport or Mobile Sources* Excel file (sheet *Activity Data*) published on the Greenhouse Gas Protocol website in May 2015. Flight segments and rail mileage are then converted to tonnes of CO₂e using *Emission Factors from Cross-Sector Tools* Excel file (sheet *Reference - EF Public*) published on the Greenhouse Gas Protocol website in March 2017.

Rented vehicles:

Volume of gasoline in litres is established by compiling the Canadian dollars spent (\$) for gasoline with the car rental companies and converting it to volume using average cost (\$/L) from current best estimates for the time period from January 1st to December 31st 2016.

Emissions are then calculated following the same methodology as described for fossil fuels (please see above). For this calculation, Bell assumed that all rented vehicles run on gasoline.

Employee personal vehicle use for business travel:

Mileage is established by converting employee mileage expenses (\$) into kilometres, which are then converted to fuel consumption (L) using a consumption average.

Emissions are then calculated following the same methodology as described for fossil fuels (please see above). For this calculation, Bell assumed that all personal vehicles run on gasoline.