AIR CANADA

302-3 Energy Intensity

General KPI Information

a) GRI description: Energy intensity.

b) Calculation protocol available in: GRI Standards, GRI 302: Energy, p. 10
GRI Standards can be downloaded at the following link: https://www.globalreporting.org/standards

c) Boundaries: Air Canada, including Air Canada Rouge® (Full Disclosure)

Quantitative KPI Information

Please specify nominator and denominator with their respective units	Unit	2019	2018	2017	2016
Absolute energy consumption (numerator): jet fuel consumed	**litres**	**5,091,678,821**	**4,960,628,693**	**4,704,583,337**	**4,273,557,679**
Organization-specific metric (denominator): weight of passengers and cargo by distance transported / 100	**100 RTK (revenue tonne kilometres)**	**165,100,915**	**164,202,274**	**150,617,866**	**132,472,308**
Energy intensity ratio (the amount of fuel required to move 100 tonnes of people or cargo 1 kilometre)	**litres / 100 RTK**	30.84	30.21	31.24	32.26

Qualitative KPI Information

Explanation for variation between 2017, 2018 and 2019:
Fuel efficiency can change for many reasons: changes to the load factors, changes in aircraft types, changes to the capacity, changes to the amount of cargo carried and changes to the schedule. In addition to fuel efficiency gains from previous years, Air Canada's additional gain in 2018 can be attributed to various reasons:
- Additional new fuel-efficient aircraft added to the fleet: 787-8 and 737
- Better load factors
- Operational improvements: Analyzed Contingency Fuel program, Lightweight paint on new livery, Required Navigation Performance Authorization Required, etc.

In addition to the specific fuel-saving initiatives outlined in 302-4 and 305-5, there are many factors that influence overall fuel consumption, which include on-time performance of the system, weather related events, and the general cultural awareness towards our environmental impact. When the network is operating as designed, there are fewer disturbances that will degrade the process and significant benefits can be seen. Additionally, employee support of our environmental goals, which is difficult to measure at an individual level, can have a significant cumulative result.
However, the grounding of the Boeing 737 MAX impacted significantly our operations, and the way we flew our aircraft. For the most of 2019, our most fuel-efficient aircraft were grounded. In order to maintain our schedule, aircraft flew routes they were not originally planned for and as a result, our fleet was not used to its maximum fuel-efficient capacity. In addition, less efficient aircraft we kept longer in our fleet, and less-efficient aircraft flew under the wet lease agreements to insure the schedule. Therefore, our GHG intensity, which is directly related to the amout of jet fuel consumed, was impacted by this fleet disruption.

Types of energy included in the intensity ratio: fuel, electricity, heating, cooling, steam or all.
The energy included in this ratio is the amount of jet fuel consumed, on an annual basis, by Air Canada and Air Canada Rouge® aircraft.

Ratio used (within the organization, outside or both):
The ratio uses energy consumed within the organization.