



Public Impact Statement 2021

ITPS Canada

*Committed to
responsible aviation.*



ITPS
CANADA 

ITPS Canada's GHG report has been produced by LivClean
May 2022



ITPS Canada Impact Statement for 2021.

In 2021, ITPS's
carbon footprint
from flying was:

1,810 tCO₂-e

% of Footprint
offset

25% = 453 t

Carbon Offsets
Purchased

ITPS Offsetting is equivalent to:

Taking **33,069** cars off
the road for a day.



Planting
4,530
trees and protecting
them for 100 years.



Recycling
588,312
Kg of waste instead
of dumping it in
landfill



Taking **54**
passenger flights
around the
world.

Overview

This is a report stating the direct carbon emissions associated with aviation fuel consumption by ITPS Canada in 2021, as assessed by LivClean Corp, using emission factors provided by The Sherpa Report and calculation methodology outlined below. This report and the data provided by ITPS are for estimation purposes only and are not independently verified. ITPS will use the results of assessment for the purpose of purchasing carbon offsets, as well as setting a baseline for future year assessments.

To mitigate the carbon impact from aviation fuel consumption, ITPS Canada has purchased offsets from LivClean Canada, equal to 25% of their 2021 assessed emissions.

By supporting the Great Bear Forest Carbon Project, ITPS is offsetting about the equivalent of planting and protecting 4,530 trees. This effort balances 25% of the greenhouse gas emissions from the organization's fleet of 29 modern and vintage aircraft flown during test-pilot training, out of London's International Airport (CYXU).

Calculation Methodology

The methodology for calculating the emissions is presented below.

GHG emissions from aviation fuel

$$\text{TOTALFleet}_{\text{Emissions}} = \sum_{\text{allfueltypes}} \{ \text{FuelConsumption}_{\text{fueltype}} * \text{EmInt}_{\text{FuelType}} \}$$

Where

Fleet_{Emissions} = Total GHG emission from aviation fleet per year

FuelConsumption_{fueltype} = Fuel used in a year, by type of fuel in litres

EmInt_{FuelType} = GHG emission intensity by fuel type (Emission factor)

This calculation is repeated for each aircraft used in the fleet using the GHG emission factors for various fuel types which might be used by the aircraft, as specified below.

Primary Fuel Type	Emission Intensity
	CO ₂ e (tonnes/litre)
Aviation Jet A or A1	3.15
AvGas 100LL	3.10

Source: Verifavia.com

Data

GHG emissions from aviation fuel consumption were quantified according to information provided by ITPS on fuel purchases in 2021 as follows:

Aircraft	Litres (2021)	Type	Emission Factor kg CO ₂ e/ltr*	GHG Emissions t CO ₂
Aircraft 1	1,489	Jet A or A1	3.15	5
Aircraft 2	642	Jet A or A1	3.15	2
Aircraft 3	30,707	Jet A or A1	3.15	97
Aircraft 4	2,092	Jet A or A1	3.15	7
Aircraft 5	210	Jet A or A1	3.15	1
Aircraft 6	1,296	Jet A or A1	3.15	4
Aircraft 7	77,621	Jet A or A1	3.15	245
Aircraft 8	500	Jet A or A1	3.15	2
Aircraft 9	3,161	Jet A or A1	3.15	10
Aircraft 10	18,190	Jet A or A1	3.15	57
Aircraft 11	4,567	Jet A or A1	3.15	14
Aircraft 12	18,247	Jet A or A1	3.15	57
Aircraft 13	67,727	Jet A or A1	3.15	213
Aircraft 14	5,049	Jet A or A1	3.15	16
Aircraft 15	15,621	Jet A or A1	3.15	49
Aircraft 16	984	Jet A or A1	3.15	3
Aircraft 17	137,391	Jet A or A1	3.15	433
Aircraft 18	128,372	Jet A or A1	3.15	404
Aircraft 19	597	Jet A or A1	3.15	2
Aircraft 20	403	Jet A or A1	3.15	1
Aircraft 21	3,196	Jet A or A1	3.15	10
Aircraft 22	311	Jet A or A1	3.15	1
Aircraft 23	5,261	Jet A or A1	3.15	17
Aircraft 24	739	Jet A or A1	3.15	2
Aircraft 25	693	Jet A or A1	3.15	2
Aircraft 26	521	Jet A or A1	3.15	2
Aircraft 27	883	Jet A or A1	3.15	3
Aircraft 28	8,310	AvGas	3.10	25.76
Aircraft 29	39,805	Jet A or A1	3.15	125
Grand Total	574,585	Jet A or A1	3.15	1,809.53

Results

Using the calculation methodology and the *emission factors*, the resulting carbon associated with aviation fuel consumption were:

Aviation Fuel related emissions 2021

Fuel Type	Consumption (L)	Direct emissions (tonnes CO ₂ e)
Aviation Jet A or A1	566,275	1,783.77
AvGas 100LL	8,310	25.76
TOTAL		1,809.53

Offsetting

To mitigate the carbon impact from aviation fuel consumption, ITPS Canada has purchased 453 tonnes of carbon offsets from LivClean Canada, equal to 25% of their 2021 assessed emissions.

About the Project: Great Bear Forest Carbon Project - Haida Gwaii, B.C. Canada

ITPS Canada's carbon offset purchase supports the Great Bear Forest Carbon Project which is located inside the traditional territories of the Haida Nation, British Columbia. The Great Bear project area covers more than 14 million acres and is within the Queen Charlotte/Haida Gwaii archipelago which is home to the largest remaining intact coastal temperate rainforest in the world, and rich with old growth forests.

The project aims to increase carbon capture and storage by converting forests that were previously available for logging to protected forests, thereby preserving existing carbon stocks, reducing emissions caused by harvesting, road building and other forestry operations, and increasing the carbon stocks as the forest continues to grow.

In addition to the carbon sequestration benefits, the project protects the western red cedar, which is known as the "Tree of Life" and many important habitats for organisms such as the Kermode bear, black and grizzly bears, and seacoast wolves. The project also preserves important coastal and freshwater habitats for marine life.

The British Columbia Great Bear Forest Carbon Project's impact is measured in ex-post carbon credits with 100-year permanence protection backstopped by the Forest Carbon Asset Management System buffer pool. The project follows the British Columbia (BC) Forest Carbon Offset Protocol for Improved Forest Management and is tracked on the BC Forest Carbon Offset third-party public carbon-reduction registry.

Tracking

The Great Bear Forest Carbon Project and the ITPS offset purchase are tracked on the BC Forest Carbon Offset third-party public carbon-reduction registry: https://carbonregistry.gov.bc.ca/br-reg/public/bc/index.jsp?entity=retirement&standardId=&unitClass=&sort=retirement_date&dir=DESC&name=haida

ITPS carbon offset purchases are tracked by LivClean Canada. See public dashboard: https://ecostayforest.ca/partner_impacts/0182