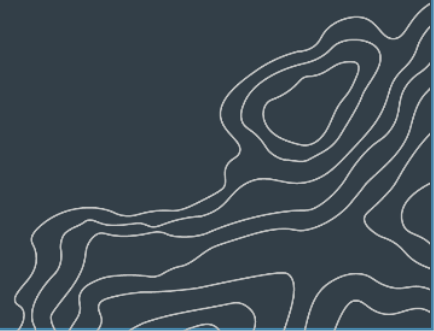


HARBOUR AIR SEAPLANES

2021 GHG EMISSIONS SUMMARY REPORT

September 2022



Overview

This report summarizes the findings of a detailed greenhouse gas (GHG) emissions inventory conducted for Harbour Air's operations during their fiscal year 2021 (January 1, 2021 – December 31, 2021). The report follows the accounting and reporting guidelines of The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition, published by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), which is the industry standard for corporate GHG inventories.

In 2021, Harbour Air generated a total of 6,656 tonnes of carbon dioxide equivalent (tCO₂e) as shown in the table on the next page. Harbour Air's largest source of emissions in 2021 was aviation turbo fuel and aviation gasoline. Employee commute was the third largest emissions source.

History of Harbour Air Climate Leadership

- 2007: Harbour Air starts calculating greenhouse gas emissions
- 2008: North America's 1st fully carbon neutral airline
- 2012: Founding member of Victoria Sustainable Tourism Alliance (ViSTA)
- 2012: Harbour Air Launches annual Self Propel Yourself to Work Week
- 2013: Launched reusable boarding passes and saved 340,000+ pieces of paper that year
- 2015: Initiated annual company-wide Earth Day Shoreline Clean Up
- 2015: Harbour Air maintenance department begins fuel recycling
- 2016: Victoria floating terminal opens with a 1-acre green roof, including 50 solar panels
- 2017: 10,000 honeybees added to Victoria green roof
- 2017: Calculates and optimizes flight routes to find new opportunities for fuel efficiency
- 2017: Starts printing carbon neutral brochures
- 2019: Founding member of Project Green YVR
- 2019: New partnership with LOOPShare Ltd. to launch electric scooter ridesharing services in Vancouver
- 2019: Historic moment - Harbour Air launches world's first fully electric commercial ePlane in Vancouver

Emissions by Scope and Source

In accordance with the GHG Protocol, emissions sources are grouped by scope. Each scope indicates the level of responsibility and influence Harbour Air has over emissions within that area. The company has the most control over Scope 1 (direct) emissions and the least over Scope 3 (indirect) emissions.

Table 1. Harbour Air GHG Emissions Scopes

Emissions Source	Annual Emissions (tCO ₂ e)*					% Change		% Change	
	2007	2018	2019	2020	2021	2020 to 2021	2007 to 2021		
Scope 1	6,740.0	12,059.0	13,077.0	12,228.0	6,180.2	↓ 49.5%	↓ 8.3%		
Natural Gas	266.0	142.1	156.5	186.5	166.6	↓ 10.7%	↓ 37.4%		
Aviation Gasoline	850.0	1,317.7	1,545.3	1,323.1	880.0	↓ 33.5%	↑ 3.5%		
Aviation Jet Fuel	5,485.0	10,504.6	11,275.2	10,660.4	5,110.3	↓ 52.1%	↓ 6.8%		
Gasoline	39.0	36.1	37.5	43.6	13.5	↓ 69.0%	↓ 65.4%		
Diesel	96.0	58.0	63.0	14.3	9.3	↓ 35.0%	↓ 90.3%		
Propane	-	-	-	-	0.5	N/A	N/A		
Scope 2	87.0	9.0	8.0	5.8	13.1	↑ 125.9%	↓ 84.9%		
Electricity (Location-Based)	87.0	9.0	8.0	5.8	13.1	↑ 125.9%	↓ 84.9%		
Scope 3	337.0	408.1	455.1	271.4	462.2	↑ 70.3%	↑ 37.2%		
Air Travel	79.0	31.0	33.0	-	-	0.0%	↓ 100.0%		
Employee Commute	251.0	377.0	422.0	221.5	392.9	↑ 77.4%	↑ 56.5%		
Homeworking	-	-	-	49.8	20.7	↓ 58.4%	N/A		
Paper	6.8	0.1	0.1	0.1	0.1	0.0%	↓ 98.5%		
Emails and Internet Use	-	-	-	-	48.5	N/A	N/A		
OVERALL TOTAL	7,164.0	12,476.1	13,540.1	12,505.2	6,655.5	↓ 46.8%	↓ 7.1%		

*Note: Figures may not add due to rounding

Figure 1, below, is a visual representation of Harbour Air’s emissions broken down by source, comparing 2018-2021 emissions with the baseline of 2007.

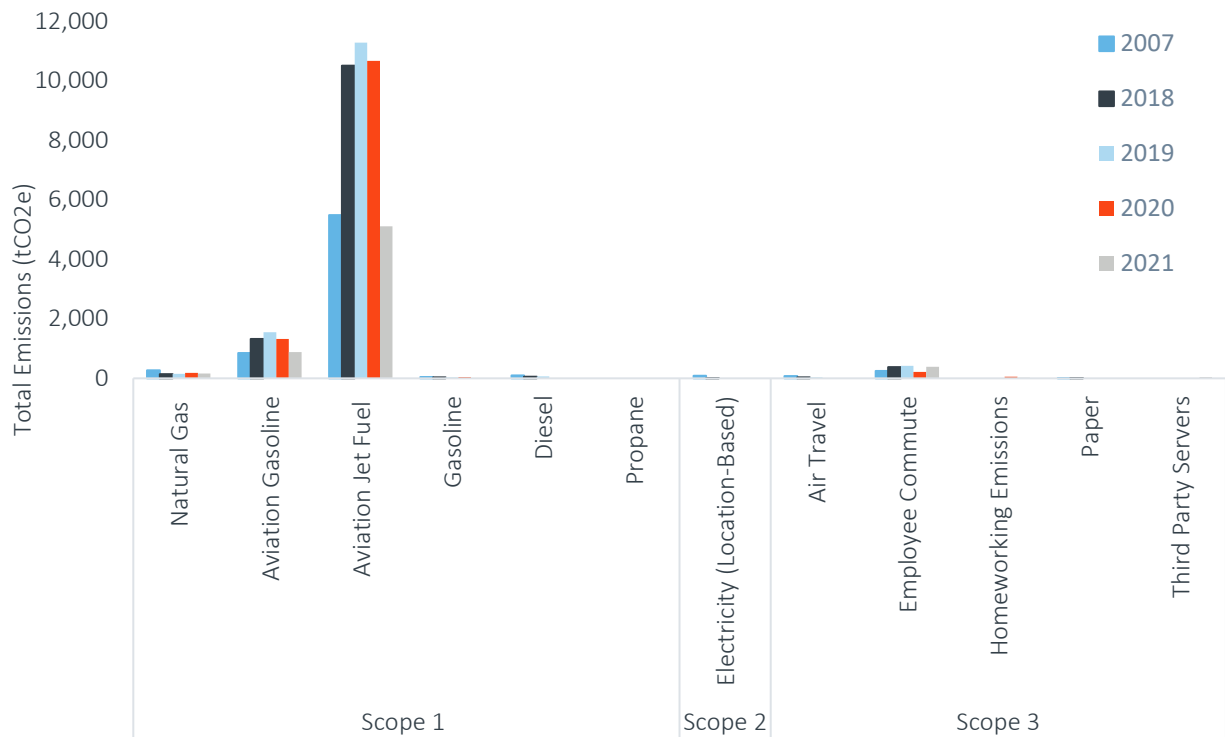


Figure 1. Harbour Air’s 2007 and 2018-2021 GHG Emissions by Source (tCO₂e)

In 2021, Harbour Air switched their fiscal year from April 1st - March 31st to align with the calendar year (January 1st - December 31st). This means that one month of the reported 2020 emissions (March) was during the pandemic when travel was severely restricted. The drop in emissions in 2021, reflected in Figure 1, above, are primarily due to COVID-19 and decreased travel during that period.

Figure 2, below, further illustrates the breakdown of emissions by source for 2021. As shown, the largest sources of GHGs are related to aviation fuel usage, which produces 90% of Harbour Air's emissions, followed by GHGs from employee commute and natural gas combustion that contribute an additional 8% to the overall total.

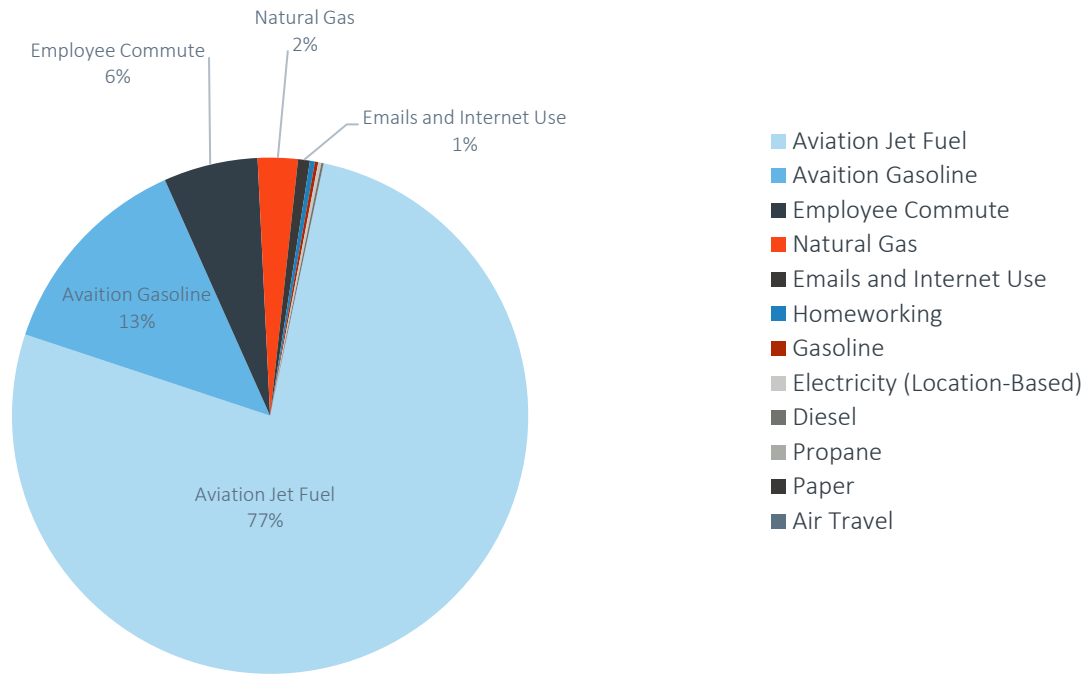


Figure 2. GHG Emissions by Source for 2021

Key Insights

Aviation Jet Fuel

- Accounting for nearly 77% of emissions in 2021, aviation jet fuel is Harbour Air's largest source of emissions. In 2021, emissions from this source decreased significantly, by 52%, compared to 2020; they dropped to levels close to Harbour Air's base year, 2007. This is the result of travel restrictions due to the global COVID-19 pandemic.

Aviation Gas

- Aviation gas emissions made up 13% of emissions in 2021.
- This source followed the same trend as aviation jet fuel. Emissions in 2021 decreased by 34% in comparison with 2020 and have reached similar levels to 2007 (up 3.5%).

Electricity (location-based)

- Emissions associated with electricity consumption made up a very small amount (0.2%) of Harbour Air's 2021 total emissions. Electricity usage rose by 18% from 2020 to 2021; however, the increase in this source's GHGs is primarily due to a change in the published emissions factor for BC, rather than the change in consumption.

Employee Commute

- Employee commute is the third-largest source of GHGs and makes up 6% of the total. Emissions from this source appeared to increase by 77% from 2020 to 2021; however, commuting emissions calculated for 2020 were based on 2019 data, since an employee survey was not completed for 2020. Based on the commuting surveys, in 2019 the emissions per person were 1.03 tCO₂e, and in 2021 they were 1.47 tCO₂e, which also accounted for the number of staff working from home. This change is the result of more people travelling alone in vehicles than carpooling or taking transit in 2021 compared to 2019, due to COVID-19 safety concerns. In 2019, 89% of emissions were produced by driving alone, 4% from carpooling and 7% from taking transit, whereas, in 2021, these figures were 96%, 1% and 3%, respectively.

Employee Commute & Homeworking Emissions

In 2020, during COVID-19 restrictions, there was a shift to working more from home, when this option was suitable for a person's work role. As such, the amount of commuting decreased and the number of Harbour Air staff working from home increased from March to December. In 2021, however, with the easing of COVID-19 restrictions, Harbour Air's employee commute emissions increased, while homeworking emissions decreased and were similar to pre-COVID levels.

Figure 3, below, shows how the percentage breakdown of emissions associated with commuting versus homeworking in 2021.

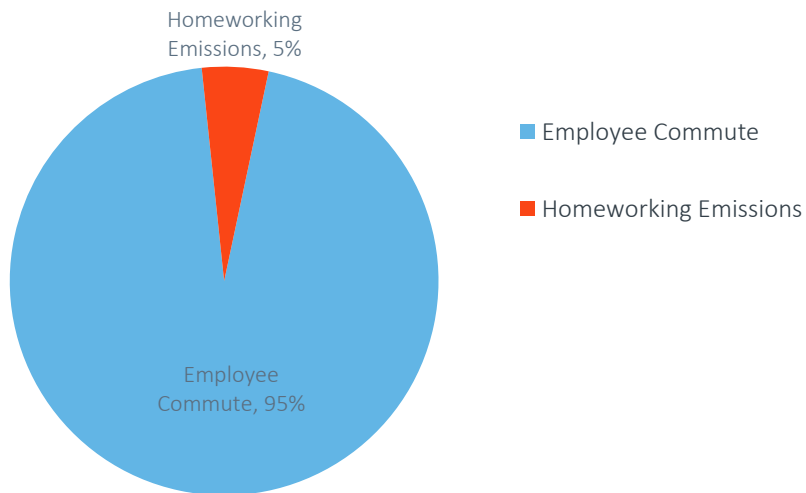


Figure 3. Employee Commute & Homeworking Emissions 2021

Emissions Intensity Trends

In addition to calculating total emissions, Ostrom Climate also evaluated Harbour Air's emissions using several intensity metrics, which allow a company to track progress towards emissions efficiency while accounting for business growth.

Three intensity metrics were used:

- **tCO₂e/ employee:**
There was a 25% decrease in emissions per employee from 2007 to 2021, which is a significant accomplishment.
- **kgCO₂e/revenue \$:**
Since 2007, GHG emissions have decreased by 23% per dollar earned, another marker of improved emissions efficiency.
- **kgCO₂e/passenger-km flown:**
The emissions per passenger-km flown increased by 44% when comparing 2021 to 2012 when data was first tracked for this metric. It held relatively steady for several years, but then climbed dramatically in 2020 as shown in Figure 4, below. The change is likely the result of a drop in ridership due to COVID-19 restrictions and illustrates how flying planes that are not at or close to capacity significantly impacts emissions efficiency relative to passenger-km flown.

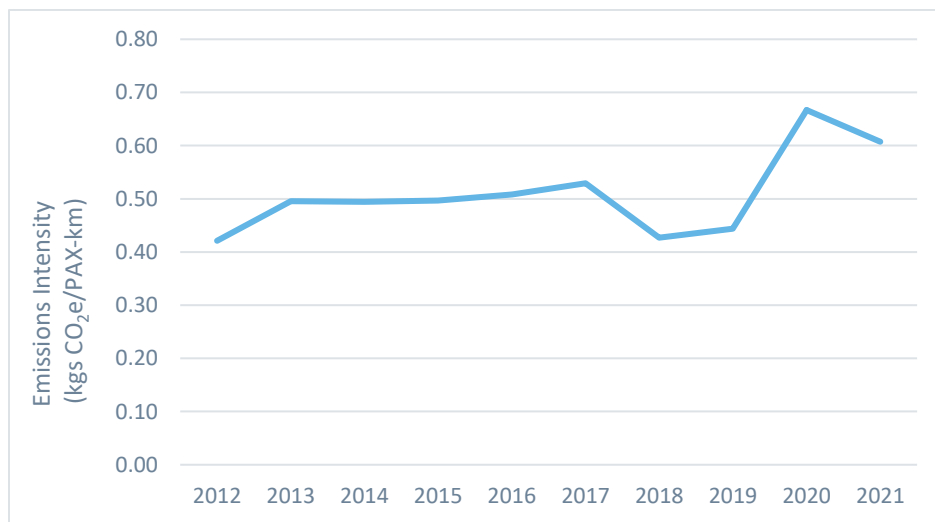


Figure 4. Emissions per Passenger-km

Tables 2 and 3 summarize this:

Table 2. Harbour Air 's 2007 to 2021 intensity metric changes

Intensity Metric	2007	2021	% Change
tCO ₂ e per employee	33.0	24.8	↓ 25%
kgCO ₂ e/ Revenue \$	0.31	0.24	↓ 23%

Table 3. Harbour Air 's 2012 to 2021 intensity metric changes

Intensity Metric	2012	2021	% Change
kgCO ₂ e per passenger-km	0.42	0.61	↑ 44%

Carbon Neutral Status

In most cases, organizations can't reduce 100% of their operational emissions and are left with unavoidable GHGs. To go beyond this reduction barrier, and take full responsibility for their emissions, organizations can purchase carbon offsets to mitigate their GHGs and achieve carbon neutrality. A carbon offset is an investment in a project with real and measurable emissions reductions and can help organizations cost-effectively meet their carbon targets.

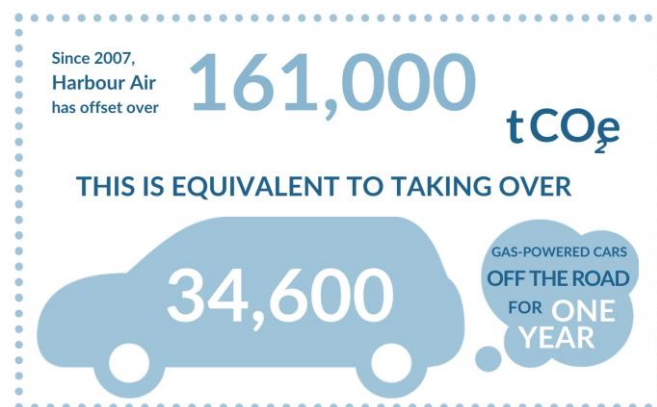
In order to mitigate the climate impacts of their 2021 operations, Harbour Air has purchased 6,656 tonnes of carbon offsets from Ostrom Climate's customized portfolio. Harbour Air supports high-quality offset projects that are third-party verified to ensure the reductions are real and permanent and that they would not have occurred without funding from carbon offsets. These projects include The Great Bear Forest Carbon Project, an Improved Forest Management initiative, which generates emission reductions by protecting forest areas that were previously designated, sanctioned or approved for commercial logging. It is a landmark project for balancing human well-being and ecological integrity through carbon finance and is the first carbon project in North America on traditional territory with unextinguished Aboriginal rights and title.

The Harbour Air portfolio also supports The Darkwoods Forest Carbon Project, another Improved Forest Management project located in British Columbia's Selkirk Mountains. The area harbours a wide variety of habitats, including old-growth forests, alpine tundra, tumbling creeks, and the deep, cold waters of Kootenay Lake. A plethora of plant and animal species utilize these habitats, and the conservation of the area is critical to ensuring their long-term viability.

Harbour Air also supports two international renewable energy projects, a Brazil Wind Project and a Solar Cooker Project in China. These projects aim to reduce carbon emissions by shifting reliance on fossil fuel use for energy production.



Harbour Air has been a carbon neutral airline since 2007. To date, it has offset over 161,000 tCO₂e.



Looking Forward

Canada's Commitments

Under the Paris Agreement, Canada is committed to a national GHG reduction target of 30% below 2005 levels by 2030. In 2020, the Government of Canada released an updated climate plan, A Healthy Environment and a Healthy Economy, to help Canada exceed those targets.¹

To achieve this target, the Government of Canada is addressing GHG emissions on a sector-by-sector basis, including those in the aviation industry through Canada's Action Plan to Reduce Greenhouse Gas Emissions from Aviation (Canada's Action Plan).² Canada has also signed onto ICAO's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). Doing so requires that emissions from international flights for 2021 be offset if they exceed CORSIA's sectoral baseline (the total average CO₂ emissions for 2019 and 2020); this requirement comes into effect, once the baseline and other design features have been adjusted (the annual Sectoral Growth Factor value corresponding to 2021 emissions), which ICAO plans to complete by 31 October 2022).³

Harbour Air's Commitments

Harbour Air goes well beyond this commitment by purchasing carbon credits to offset GHG emissions from all flights—domestic and international—and has been doing so since 2007. They offset their entire corporate footprint, as well.

Harbour Air is also committed to making real emissions reductions. They manage their fleet renewals, guide flight operations, and optimize air traffic, routes, and scheduling as a function of good business practices. Efforts on these fronts serve to make the business more efficient, which correlates directly with lower emissions.

Harbour Air's Leadership

In 2019, Harbour Air made headlines by flying the first fully electric commercial aircraft. Recognizing the significant carbon footprint associated with the aviation industry is a historic milestone towards reducing their emissions and setting a precedent for the rest of the industry. They are currently working with the government to get approvals in place and hope to launch the world's first commercial electric plane in 2023.

Being the only airline in the world that has been carbon neutral since 2007, Harbour Air is already the world's leading airline in low-carbon aviation. Their drive to further reduce emissions and lead the way for other airlines continues to raise the bar throughout the sector.

¹ Government of Canada, "Progress towards Canada's greenhouse gas emissions reduction target," <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/progress-towards-canada-greenhouse-gas-emissions-reduction-target.html>, (January 9, 2020).

² Government of Canada, "Canada's Action Plan to Reduce Greenhouse Gas Emissions from Aviation," <https://tc.canada.ca/en/corporate-services/policies/canada-s-action-plan-reduce-greenhouse-gas-emissions-aviation>, (April 9, 2020).

³ ICAO, "Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)," <https://www.icao.int/environmental-protection/CORSIA/Pages/default.aspx>, (2020).