

Climate Overview

Hanscom DEIR

Please [Click Here](#) for the full public comment toolkit

Climate-Related Talking Points – click on each to see more info

1. [Net Zero Project](#)
2. [Sustainable Aviation Fuels \(SAFs\)](#)
3. [Ferry Flights](#)
4. [GHG & Fuel Farm](#)

Reminder: Be sure to include the DEIR Section numbers (provided below) with your talking points to increase their impact.

1. Net Zero Project Talking Points

Choose one or some below (please individualize) or use your own.

NEW [Recently Released Independent Analysis](#): Analysis of Greenhouse Gas Emissions Impact of Proposed Expansion of Hangar Capacity at Hanscom Field by Industrial Economics, Inc. March 29, 2024

Claim 1: “This is a Net Zero project”

Note to Commenters:

How can a hangar facility built for 50-70 super-emitting private jets be called a Net Zero project? Easy! Just don’t count the aircraft emissions. Read more below.

Remember to include Section numbers (provided below) with your Talking Points to increase their impact.

“The Project will facilitate progress toward a net zero GHG aviation industry.”

(Section 1.6)

See more net-zero claims the bottom of this section

The Proponent claims that their massive hangar expansion is net-zero, but this is because they do not consider aircraft emissions, which are greater by orders of magnitude. Their Net-Zero claim is misleading.

- Airports only claim two sources of CO2 emissions: the airport's **infrastructure** and the **energy grid** it uses. These are referred to as **Scope 1** and **Scope 2**. Left out of calculations of airport emissions is **Scope 3**: emissions produced by aircraft.

The [EPA concedes](#) that Scope 3 emissions generally represent the greatest part of an entity's overall CO2 profile.

This has serious implications for state efforts to rein in climate change: Private jet aviation emissions at Hanscom alone already cancel nearly 50% of climate gains from all the solar PV ever installed in Massachusetts. If this Project goes forward, that figure would rise to 70% canceled climate gains.

See **NEW** [NET ZERO & SOLAR ANALYSIS](#) for additional arguments

The Proponent's Net Zero Claims:

- "The Proponent intends for this Project to...serve as a national example of innovative and sustainable aviation practices in line with the Commonwealth's decarbonization goals." (Section 1.1.2)
- "The Proponent intends to design and construct the Project as the largest corporate hangar complex at Hanscom Field to target net zero GHG emissions." (Section 1.3)
- "The Project will be designed and constructed as an innovative example of sustainable development, with clean and efficient energy at its core... contributing in measurable ways to support the Commonwealth's decarbonization goals and [Massport's Net Zero Roadmap](#) reduction targets*." (Section 1.1.2)

*Note: Massport's Net Zero Roadmap emissions reduction targets are entirely limited to building and grid emissions, and completely disregard aircraft emissions

Background Resources:

- [EPA Scope 3 Inventory Guidance](#)
- [Massport's Net Zero Roadmap](#)

- [Net Zero and Solar Analysis](#)

[Net Zero Project](#)
[Sustainable Aviation Fuels \(SAFs\)](#)
[Ferry Flights](#)
[GHG & Fuel Farm](#)

2. Sustainable Aviation Fuels (SAFs) Talking Points

Choose one or some below (please individualize) or use your own.

Claim 2: “This is a sustainable aviation project that will promote SAFs.” (Sustainable Aviation Fuels)

Note to Commenters:

The private aviation sector is planning for continued growth. They are aware that their disproportionate greenhouse gas emissions are not good optics. SAFs are a marketing strategy to persuade policymakers and the public that continued growth of this sector is acceptable because it’s “sustainable”. SAFs are deceptively appealing because they lure us in with the possibility that aviation can continue without any consequences. But that’s not the case. See below.

Remember to include Section numbers (*provided below*) *with your Talking Points to increase their impact.*

The Proponent’s claims about sustainable aviation and the use of SAFs serve to distract the public from the approximately 220,000 tons of new CO₂e that the project would produce in pursuit of “the expanding market for corporation aviation.” (Section 2-3)

“The Project will promote the use of clean aviation fuels, future conversions to electric aircraft...and other sustainable technologies and practices that are emerging in the industry.” (Section 1.1.2)

SAFs are not the sustainable panacea that their name evokes.

Here’s what you and EEA Secretary Tepper need to know to cut through the SAF hype:

- Biofuels are made from crops (like corn) or agricultural waste (like animal fat or vegetable oil) mixed

with conventional jet fuel. They generate the same amount of CO₂e as regular aviation fuel. In fact, there is strong evidence that crop-based biofuels may be [even more carbon-intensive](#) based on their full life cycle. Characterizing them as a green solution is misleading.

- The worst scenario would be if SAFs were successful: They would hijack arable land necessary for food production, lead to increased hunger and the displacement and destruction of forests and wetlands.
- After describing the Project's planned 3-year construction period ending in winter of 2027, **the Proponent admits that sustainable aviation is a slim possibility that's a long way off:**

*"...whereas **the aviation industry projects use of alternative/clean-fuel aircraft (i.e., electric or SAF) to be approximately 10 percent of aircraft by 2030 so that delaying later phases contingent upon the availability of SAF or electric aircraft is not feasible.**" – Section 3 [bolding & italics are ours]*

In so doing, the Proponent suspends the greenwashing in a rare moment to reveal their actual goal: they are biting at the bit to build out and grow – regardless of sustainable aviation!

- From ["Aviation Could Consume a quarter of 1.5C carbon budget by 2050"](#)
(This article was a footnote in Climate Chief Melissa Hoffer's 10/25/23 report)
 - ICAO (International Civil Aviation Authority) estimated that **complete replacement with SAFs "by 2050 would require around 170 new large biorefineries to be built every year from 2020 to 2050, at the cost of \$15bn to \$60bn per year..."**
 - Leo Murray...told Carbon Brief: "The ICAO biofuels scenarios are clearly fanciful at best... **Fundamentally, what all these industry-led analyses refuse to acknowledge or countenance is the very evident truth that the only reliable means by which to control aviation emissions is to manage – ie curtail – demand growth.**"

- **The most effective way to curtail demand growth is to limit infrastructure.**

Studies on [Induced Demand](#) back this up. So does the FAA.

- And a word about electric aviation –

[Lufthansa Says Green Fuel Would Eat Up Half German Electricity](#)

"Germany's biggest airline would consume half of the country's entire electricity production to switch its fleet to green fuels like e-kerosene, according to Deutsche Lufthansa AG, underscoring the challenge in reducing emissions from air transport" - September 25, 2023, Bloomberg

Resources referenced in this section:

- **New!** [Full Sustainable Aviation Fuels report, 5/14/24!](#)

- [GREENWASHING THE SKIES: How the Private Jet Lobby Uses “Sustainable Aviation Fuels” as a Marketing Ploy](#), Institute for Policy Studies, Program on Inequality, Inequality.org 3/24/24
- [Sustainable Aviation Fuel Emission Impacts](#), World Resources Institute, 12/20/24
- [Aviation Could Consume a quarter of 1.5C carbon budget by 2050](#), Carbon Brief, 8/8/16
- [Lufthansa Says Green Fuel Would Eat Up Half German Electricity](#), Bloomberg, 9/25/23

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3. Ferry Flights Talking Points

Choose one or some below (please individualize) or use your own.

NEW Recently Released Independent Analysis: Analysis of Greenhouse Gas Emissions Impact of Proposed Expansion of Hangar Capacity at Hanscom Field by Industrial Economics, Inc. March 29, 2024

Claim 3: “This project will reduce the number of ferry flights. (Ferry flights are empty flights.)”

Note to Commenters:

Massport and Runway Realty Ventures (the “Proponent”, aka the developers) plan to grow private luxury jet aviation. They know this is incompatible with climate change efforts, so they’re brazenly selling it *as even more environmentally friendly* than a no-build scenario, upending any connection with reality.

Essential Reading before you begin: [Luxury Jet Hangar Project Proponent Releases Flawed Environmental Report.](#)

Remember to include Section Numbers (*provided below*) with your Talking Points to increase their impact.

- In a dramatic departure from their assertion a year ago that their Project will reduce ferry flights (empty flights), the Proponent now states that the Project “may likely reduce annual ferry flights”
Section 1.1.1

- Illogically, the Proponent claims that not building the expansion (**No-Build Alternative**) will result in more flights than building the expansion (**Build Alternative**). How is this possible?

“Ferry flights are a source of air emissions, including GHG emissions, noise and other impacts, that the Project would mitigate by meeting demand for additional hangar space at Hanscom Field to accommodate existing ferry flight operations.” (Section 2.3)

- **The Proponent’s conclusion that building hangars would reduce flights and decrease GHG emissions is refuted by studies on induced demand.**

Common sense tells us **“Build it and they will come”**. This is supported by research on induced demand which posits that increasing the supply or capacity for a transportation system generates new demand to utilize that system beyond just meeting existing demand.

In the case of Hanscom Field, induced demand could result in **new private jets, more private jet operations, and an overall increase in noise, air pollution, and greenhouse gas emissions**. These potential induced impacts should be carefully evaluated.

The Proponents should incorporate *induced demand* as a factor in their analysis.

- **The Proponent claims that hangars have no effect on aviation activity. The FAA disagrees.** The Proponent repeatedly states that operations will increase “regardless of whether the Project is constructed” (Section 2.4). They assume that the Build Alternative will have fewer flights than the No-Build Alternative. This is because they simply assume that the only difference in flights between the two Alternatives is that the Build Alternative will *eliminate all* potential ferry flights, while the No-Build Alternative will *include all* ferry flights (Section 2.2, Table 2-1). This disregards studies which posit that building infrastructure induces demand. The FAA confirms this.

The [FAA Aerospace Forecast FY 2018-2038](#), which the Proponent references, contains a passage on page 48 that acknowledges two things: 1) FAA forecasts assume “unconstrained” growth, and 2) the level of infrastructure development can affect demand, or growth, up or down.

- **The Proponent’s methodology for estimating “ferry flights” is significantly flawed** in that they fail to validate their model, e.g., they have no basis for saying that a flight on the ground for 18 hours defines a ferry flight, or that a flight to and from a 350-mile radius defines a ferry flight. An analysis needs to validate its model with real world data if it is to be accurate.

The Proponent's methodology for determining what constitutes a "ferry flight"--using proxy criteria about flight operations (i.e., flight distance, length of time on the ground, and whether the aircraft was hangared at Hanscom)--has never been validated with real world data. As such, it does not provide a believable basis for predicting how these patterns would change with increased availability of hangar space.

Once it can be said conclusively that certain flights were in fact ferry flights--because of direct observation, interviews, or corporate records or whatever can be acquired--then one can argue about how much validated data, sampled over what length of time would be needed to extrapolate with confidence.

If it is really impossible to get any actual data about how many ferry flights there currently are--as repeatedly expressed by the HMMH consultant at public meetings--the Proponent needs to throw out any part of their analysis that tries to predict how that would change. -- **Sections 2.3.1, 2.3.2,**

- To find a more accurate quantification of the effect of ferry flights, a recognized industry consultant was retained to verify the Proponent's claims. The consultant performed an analysis of detailed flight data for all aircraft using Hanscom over the prior year and identified the operating base for any aircraft exhibiting ferry flight activity. This analysis found only three aircraft that regularly ferry through Hanscom. It was found that those three aircraft, if they relocated to Hanscom, would save 75 flights, considerably less than the 3,500 claimed by the Proponent based on their superficial analysis. (Publication of this analysis is forthcoming early April.)

The Proponent had access to the flight data and could have determined the actual number of ferry flights that would be affected by hangars at Hanscom, but deliberately did not do so, apparently because the facts did not fit with their narrative.

[Net Zero Project](#)
[Sustainable Aviation Fuels \(SAFs\)](#)
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[GHG & Fuel Farm](#)

4. GHG & Fuel Farm Talking Points

Choose one or some below (please individualize) or use your own.

NEW [Recently Released Independent Analysis](#) refuting developers' GHG and ferry flight claims by Industrial Economics, Inc. April 4th, 2024

Claim 4: "This project will not generate any new greenhouse gasses (GHG)."

Note to Commenters:

The Proponent is silent on aircraft GHG from flights. But their fuel numbers aren't. See below.

Remember to include Section numbers (*provided below*) *with your Talking Points to increase their impact.*

- **The Proponent's jet fuel numbers challenge their ferry flight analysis results, pointing to a dramatic increase, not decrease, in operations and GHG emissions enabled by the Project.**

Profile of the Project's Fuel Storage Facility (Section 1.5.2.4):

- Four new 20,000-gallon underground tanks of jet fuel
- 1-2 fuel delivery trucks per day (10,000 gal per truck)

- 15,000 gallons of aviation fuel delivered daily, on average, computes to **over 5.5 million gallons of jet fuel per year for just this facility, which can be translated to greenhouse gas emissions:**
 - **Expected new GHG Emissions from this Project: [150,000-220,000 tons CO2e per year](#):** This is more than is generated by any of the four towns that Hanscom is located in. For example:
 - **The Town of Lincoln**, its 7,000 residents, their homes, their cars, the Town's businesses, and schools are responsible for about **60,000 metric tons of CO2e annually.**
- 5.5 million gallons of jet fuel per year from this single facility alone will represent half the total jet fuel used at Hanscom which was 11,858,193 gallons in 2021, according to Massport's response to a Public Record Request

- **How can the Proponent only claim 30,686 tons of GHG?**

The model used by the Proponent* only includes takeoff and landing CO2 emissions right at the airport. It does not include emissions of the aircraft during flight. Using this method, a flight to Europe has the same emissions as a flight to Nantucket or a local ferry flight, because only the takeoff is modeled. [*in Table 8-5, Section 8.3.3]

This method was developed to examine local particulate or chemical concentrations, which are the most concentrated, and have an effect, right around the airport. It was never developed to deal with GHGs, which have a global and not local effect. The Proponent's use of this method is misleading.

New Potential Lever: National Environmental Policy Act ([NEPA](#)) [Guidance on Green House Gas Emissions and Climate Change](#) – Jan 9, 2023

This relatively new guidance from a year ago, 1/9/23, provides a number of meaningful requirements for a federal environmental review, under NEPA (National Environmental Policy Act). For example,

- Developers must consider CO₂e and not just CO₂ (CO₂e includes many climate-change producing chemicals, beyond CO₂, like methane).
- Developers must consider the whole GHG consequence (and not just emissions near the airport).
- Developers must analyze the social cost of GHG.
- Developers must consider state and local GHG reduction goals and plans, and determine if the project is consistent with them.

WHY is this relevant to our public comments now?

BECAUSE: A federal environmental review (NEPA) of the proposed expansion plans will follow shortly on the heels of the DEIR. If we insert the NEPA requirements into our public comments ***now***, this will shed light onto the fact that they exist and will raise expectations that the developers must comply with them.

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