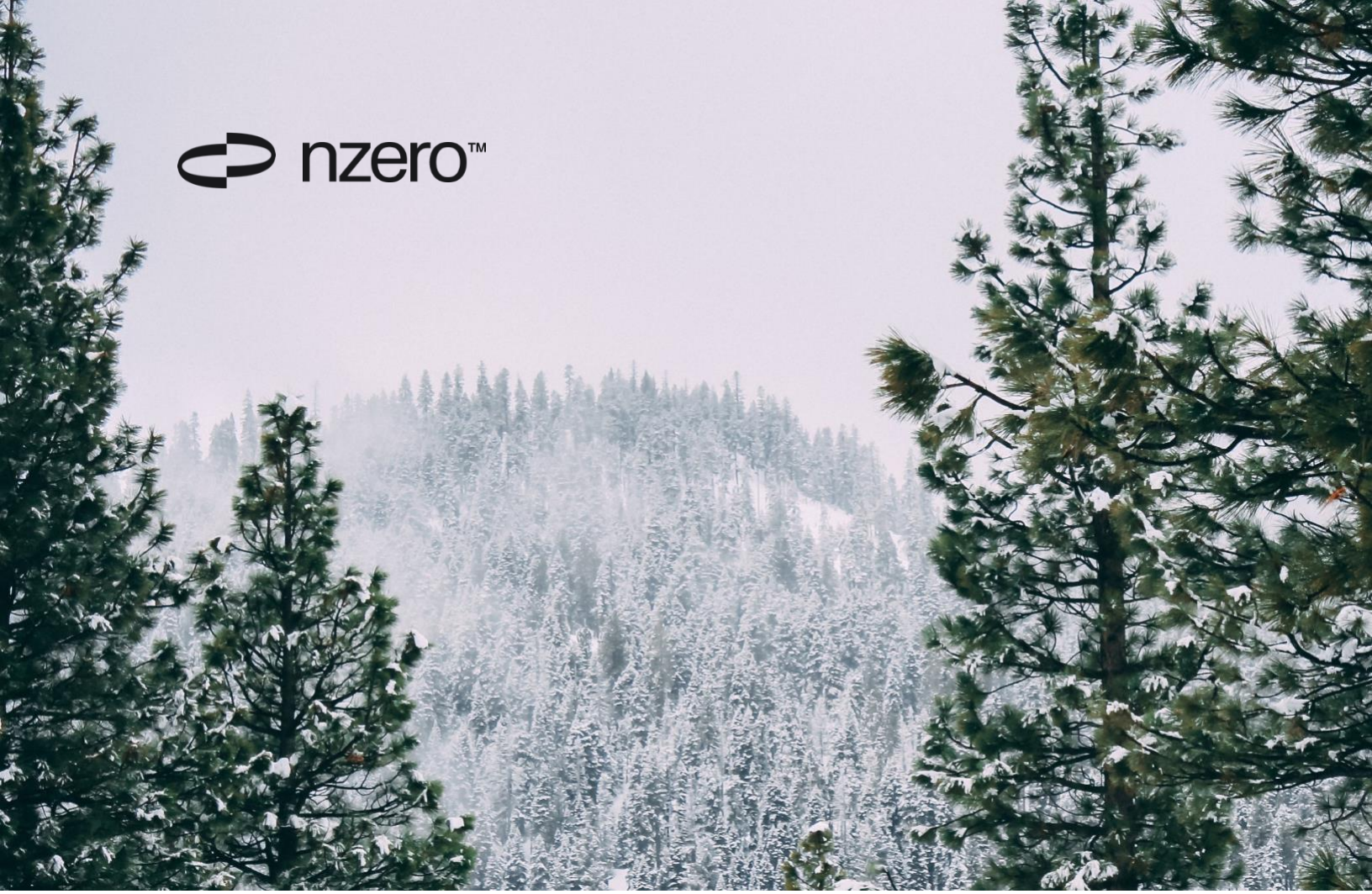

Truckee Tahoe Airport

Sustainability Report

2023

TRUCKEE TAHOE AIRPORT

SUSTAINABLE AVIATION FUEL

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Executive Summary

Truckee Tahoe Airport, a medium-sized airport located in the Sierra Nevada Mountains, embraced sustainability as a fundamental priority in recent years. In 2023 they continued to make substantial progress decarbonizing their operations through granular emissions tracking and multiple initiatives targeting Scope 1 & 3 emissions. Truckee Tahoe Airport currently shares the aviation industry target of net zero emissions by 2050, but rapid improvements have demonstrated their intent to exceed this deadline.

In 2023 the airport tracked Scope 1, 2, and 3 emissions, across 22 different sites within the airport grounds. Scope 1 sources included natural gas used for heating at 6 different sites, and diesel and gasoline used to fuel airport equipment and machinery. Scope 2 emissions came from purchased electricity while Scope 3 categories included Employee Commuting and Use of Sold Products. In total, the airport emitted 4,375 metric tons of carbon dioxide equivalent (CO2e) in 2023 across Scopes 1, 2, and 3 with 336 MTCO2e attributed to Scope 1 (7.7%), 157 MTCO2e to Scope 2 (3.6%) and 3,882 MTCO2e to Scope 3 (88.7%). Compared to the results of the 2022 GHG inventory, there was an overall emissions reduction of 2,364 MTCO2e, or 35%. Looking only at Scope 1 & 2 emissions, there was an increase of 22%. Most of the increase came from Scope 1, where natural gas usage increased by over 50% and gasoline usage by over 62% compared to the previous year. This increase can be attributed to an especially severe winter - the second coldest on record - requiring more fuel for heat and snow removal. The most significant reduction can be seen in Scope 3 emissions, which decreased by 31% in 2023. This reduction is attributable to the transition made in fuels sold to blended SAF, which has a much lower carbon intensity than regular aviation fuels.

Truckee Tahoe Airport had previously calculated their Scope 1, 2, and 3 emissions from 2015, providing key insights from emissions sources and activities relevant to the design of their decarbonization journey. However, comparing the results of the 2023 GHG Inventory against the results from 2015 is not possible since there has been refinement of the emissions sources tracked by Truckee Tahoe Airport, as well as industry advancements in the methodologies used to calculate emissions. Climate science is constantly advancing, which leads to the methodologies for GHG calculations continuously evolving. The analysis from 2015 is still relevant for Truckee Tahoe Airport, however, since it provides important insight into key activities and emissions hotspots from that time. The most important source of emissions in 2015 was Scope 3 Aircraft Operations, which is related to fuel used by aircraft and fuel sold. As previously mentioned, Scope 3 fuel sold remains the highest source of emissions in 2023, which means that this is an activity that Truckee Tahoe Airport needs to pay special attention to.

Truckee Tahoe Airport completed its transition to blended Sustainable Aviation Fuel (SAF) in July 2023. This multi-year initiative supported the reduction of Scope 3 Category 11 emissions (use of sold products) and is often recognized as one of the largest, most challenging, and costly targets for reducing emissions in the aviation industry. In 2023 they launched their fleet electrification initiative, purchasing two electric vehicles to support various airport operations, subsequently reducing their Scope 1 emissions. They transitioned from self-service fueling to full-service (at no additional cost to tenants), which provides fuel to the aircraft where they are parked, eliminating the need to spend fuel taxiing to and from the pumps. Finally, in 2023 they began tracking their Scope 1, 2 & 3 emissions with the help of NZero, a carbon management and decarbonization software platform. The data from tracking their emissions will allow Truckee Tahoe Airport to realize the impact of their past and current initiatives, understand and prioritize future sustainability initiatives, and understand their carbon footprint roadmap.

While not heavily impacted by regulations in 2023, more regulations are being proposed that would impact Truckee Tahoe Airport if passed. SB 1193 is a proposed California bill that seeks to phase out the sale of leaded aviation fuel by 2030; while Truckee Tahoe Airport's 100LL fuel sales are low, they do sell leaded fuel and should be aware of the status of the bill as its passing would impact airport operations. The California Air Resources Board (CARB) recently updated its Low Carbon Fuel Standard Policy, which requires certain fuels to reduce their carbon intensity each year. The updates increase the required reduction in carbon intensity, which is likely to increase fuel prices. Finally, SB253 is a California bill that may indirectly impact the airport by requiring large businesses doing business in CA to report their Scope 1, 2, and 3 emissions; while this does not affect Truckee Tahoe Airport directly, it may require charter company tenants to request data from the airport.

The airport also owns and manages over 2,000 acres of land surrounding the airport and supports the biodiversity and conservation of wildlife through various land management activities, including regular tree thinning and mastication of forest stands. The surrounding land also serves as a habitat for several endangered or special status species and the airport seeks to protect and conserve these species through the maintenance and preservation of the land.

Truckee Tahoe Airport plans to continue its momentum in 2024. They have 3 primary initiatives in mind: eGPU implementation, target setting, and vehicle electrification. Purchased at the end of 2023, Truckee Tahoe Airport will be implementing electronic ground power units (eGPUs) once they are delivered in Q1 2024. eGPUs allow aircraft to utilize an external power source during aircraft startup, boarding, maintenance, etc. and will replace existing gas-powered GPUs, reducing Scope 1 & 3 emissions. With the granular tracking of emissions across Scopes 1, 2, and 3, Truckee Tahoe Airport plans to shift from net zero by 2050 to unique sustainability targets based on their operations and existing progress. Finally, they plan to continue their vehicle electrification initiative with the purchase of two additional electric vehicles (one in Q1, one later in the year).

Introduction

To combat the 2% global emissions contribution from the aviation industry, as reported by the Energy Information Administration (EIA), in October 2022 the International Civil Aviation Organization (IACO) set an industry target of net zero emissions by 2050. While Truckee Tahoe Airport supports this goal, their progress in 2023 demonstrates they plan on achieving this well ahead of 2050.

Truckee Tahoe Airport tracks Scope 1, 2 & 3 emissions, serving as evidence of its commitment to transparency and accountability. In 2023 they made progress on a variety of initiatives, including the completion of the blended sustainable aviation fuel (SAF) initiative, the start of Scope 1, 2 & 3 tracking and fleet electrification, and the implementation of full-service fueling. Truckee Tahoe Airport is relatively unaffected by current state and federal environmental legislation as they have focused on large and public companies; despite this lack of regulatory incentive, they have demonstrated aspiration to become an industry leader in sustainable practices.

Central to the airport's success in achieving sustainability goals is its collaboration with stakeholders - comprising customers, the local community, aviation partners, governmental bodies, and businesses. This collaborative effort enhances the impact of sustainability initiatives and underscores the airport's commitment to broader societal and environmental welfare.

This Sustainability Report highlights Truckee Tahoe Airport's carbon footprint and sustainable operations for 2023, covering Scope 1, 2, and 3 emissions, biodiversity projects and land use, targets, initiatives, stakeholder engagement, future plans, and relevant legislation.

Organizational Profile

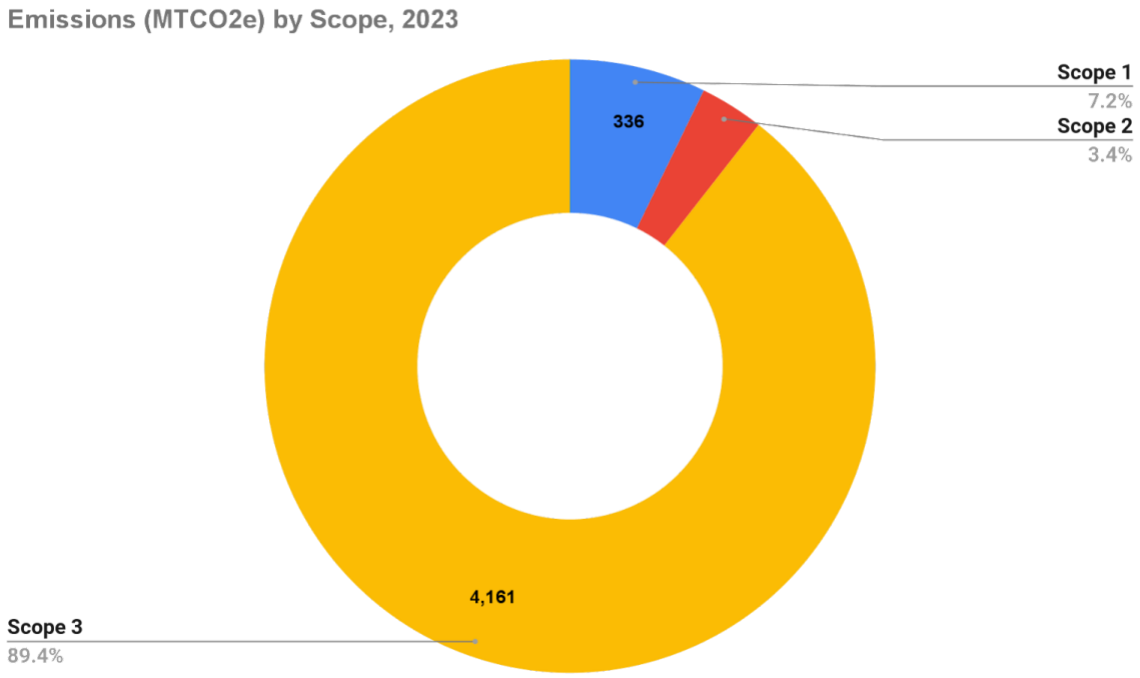
The Truckee Tahoe Airport, situated amidst the Sierra Nevada Mountains in California, stands as a pivotal air transportation facility within the region. Owned by Truckee Tahoe Airport District, the medium-sized airport operates with a structure aimed at efficiently managing general aviation, commercial, and corporate air travel. Handling 30,140 operations in 2023 (28,327 powered aircraft, 1,813 gliders), this airport serves as a vital link connecting the Truckee Tahoe community to various national and regional destinations such as the Bay Area, Western States (NV to CO), and Southern CA. Classified by the National Plan of Integrated Airport Systems (NPIAS) as a General Aviation Airport, Truckee Tahoe Airport operates within the broader aviation industry, contributing significantly to regional accessibility and serving as a crucial economic asset to the local area. Its reach extends to supporting tourists, businesses, and residents by providing essential services and facilities and facilitating travel and transportation needs. The airport's dedication to safety, efficiency, and service excellence further solidifies its role as an indispensable transportation hub within the region.

Environmental Performance

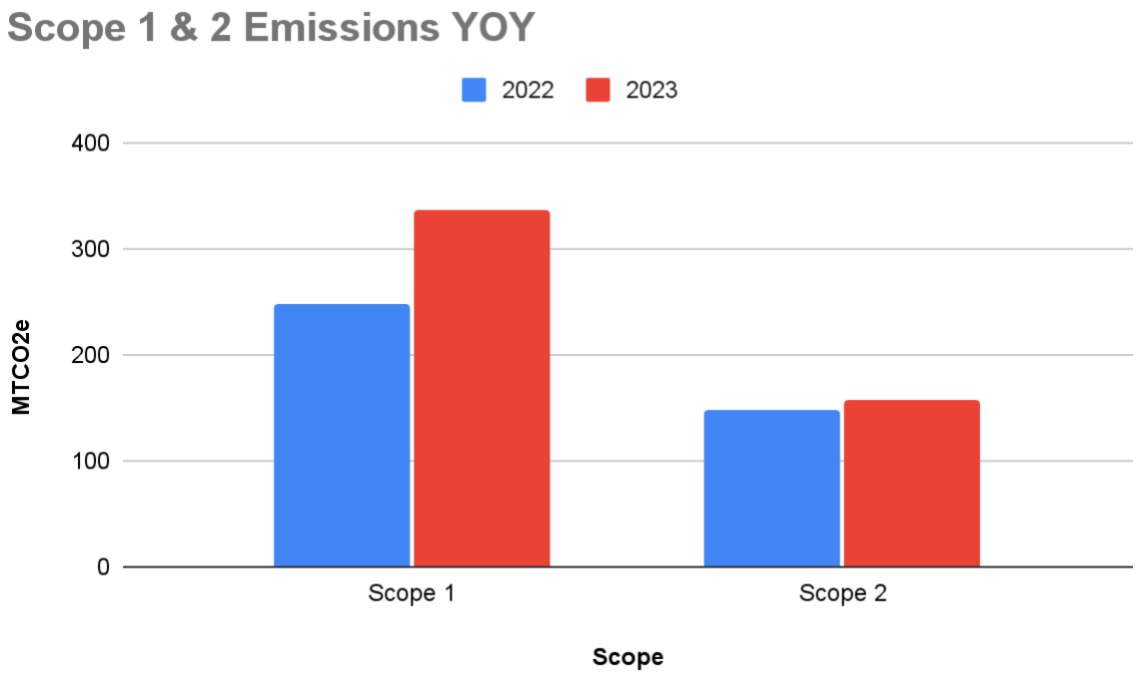
Emissions

Truckee Tahoe Airport tracked Scope 1, 2, and 3 emissions in 2023. Scope 1 emission sources include natural gas, diesel, and gasoline, Scope 2 emissions are from purchased electricity, and Scope 3 emission categories include Employee Commuting and Use of Sold Products.

Truckee Tahoe Airport emitted 4,375 metric tons of CO2e (MTCO2e) in 2023, with 336 MTCO2e in Scope 1 (7.7%), 157 MTCO2e in Scope 2 (3.6%) and 3,882 MTCO2e in Scope 3 (88.7%). Natural gas used for heating, and motor gasoline and diesel fuel used to run airport equipment were the three Scope 1 emission sources in 2023. Natural gas was the largest source of emissions within Scope 1, comprising about 49%, and was used at 6 out of 22 sites for a total of 163 MTCO2e. The majority of natural gas emissions came from just two sites, the Admin Building/Terminal (45%) and the Rental Car Facility/Lift Coworking Space (previously Clear Capital) (35%). Gasoline combustion emitted 65 MTCO2e and diesel combustion emitted 108 MTCO2e, making up 19% and 32% of Scope 1 emissions, respectively. Electricity was the only Scope 2 emission source and was used at all 22 sites tracked in 2023. In total electricity emissions contributed 157 MTCO2e in 2023. Scope 3 emissions made up the bulk of emissions in 2023 at 3,882 MTCO2e - over 88% of total emissions. Most of these emissions were from Category 11 - Use of Sold Products, particularly from the Jet A fuel. In 2023 Truckee Tahoe Airport sold over 428,000 gallons of blended SAF. On average, this blend was about 26% SAF, meaning that there were approximately 317,000 gallons of Jet A fuel sold, resulting in 3,053 MTCO2e - 79% of all Scope 3 emissions.

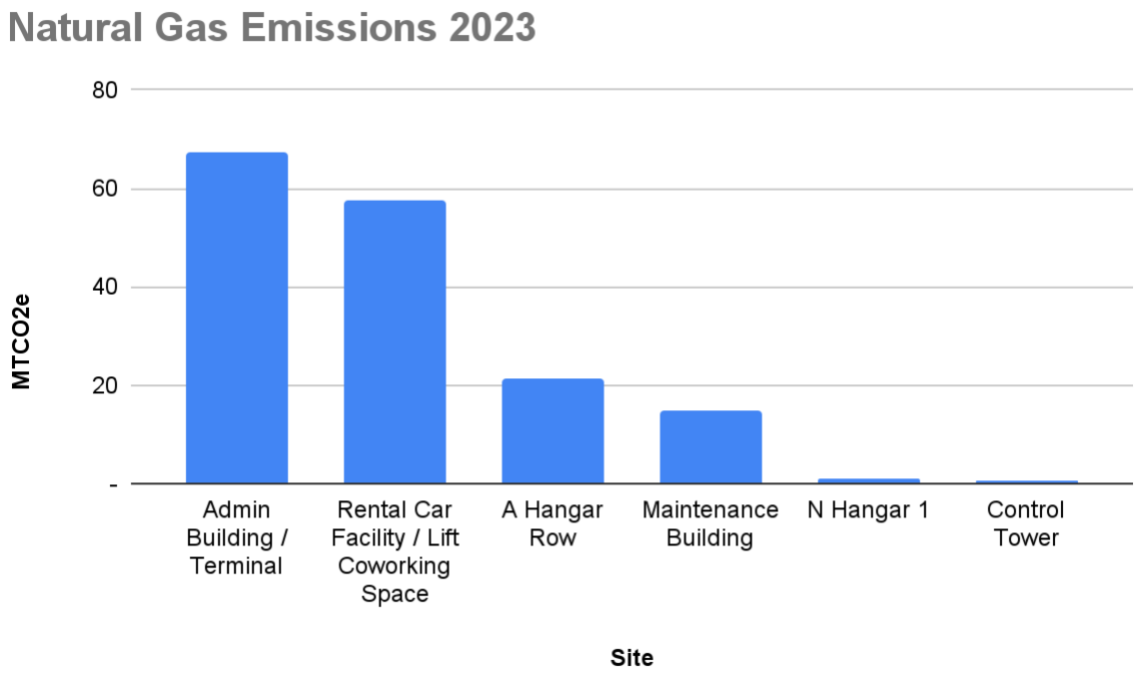


Compared to 2022, total emissions decreased by 27% due to a reduction in emissions from fuel sold, attributable to the blended SAF transition implemented by Truckee Tahoe Airport. Looking only at Scope 1 & 2, emissions increased 24%, with Scope 1 increasing 35% and Scope 2 remaining relatively the same with only a 6% increase. The winter of 2023/2024 in Truckee marked the second coldest winter on record, characterized by exceptionally low temperatures and prolonged periods of freezing weather. Because of these extreme conditions, there was a notable increase in the demand for heating fuel throughout the area. The necessity to combat the extreme temperatures and heavy snowfall led to heightened reliance on heating systems to maintain warmth and clear snow-covered surfaces. This can be seen in the increased natural gas consumption Truckee Tahoe Airport reported, which resulted in higher Scope 1 emissions.

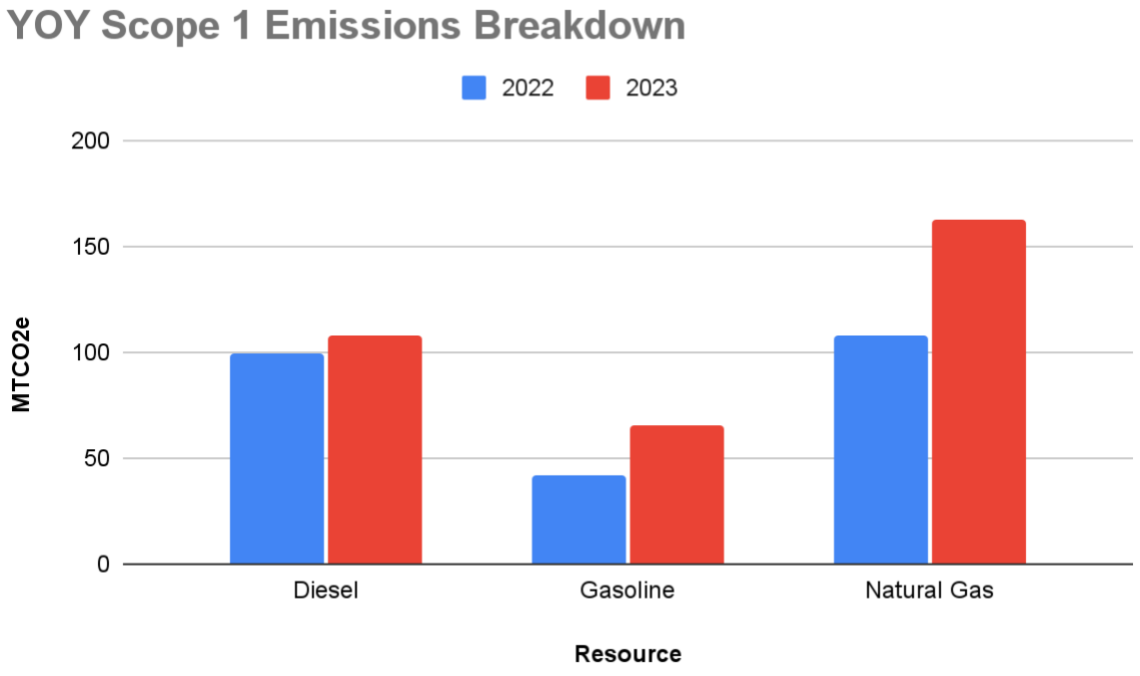


Scope 1

Scope 1 sources included gasoline and diesel fuel to power airport equipment, and natural gas for heating. In total, Scope 1 emissions increased by 35% compared to 2022, with the majority coming from increases in natural gas and gasoline usage. Natural gas was used at 6 sites in 2023, as opposed to 5 in 2022. The Maintenance Building did not use natural gas in 2022 but began using it in 2023. The bulk of natural gas emissions came from the Admin Building/Terminal and Rental Car Facility/Lift Coworking Space, emitting 67 and 58 MTCO2e, respectively. Combined, they made up over 77% of all natural gas emissions and over 37% of total Scope 1 emissions. Total natural gas usage across all sites went from 108 MTCO2e in 2022 to 163 MTCO2e in 2023, a 51% increase. This increase was mainly due to the increase in emissions at the Rental Car Facility/Lift Coworking Space, which increased over 113% from 538 MTCO2e in 2022 to 1,145 MTCO2e in 2023.

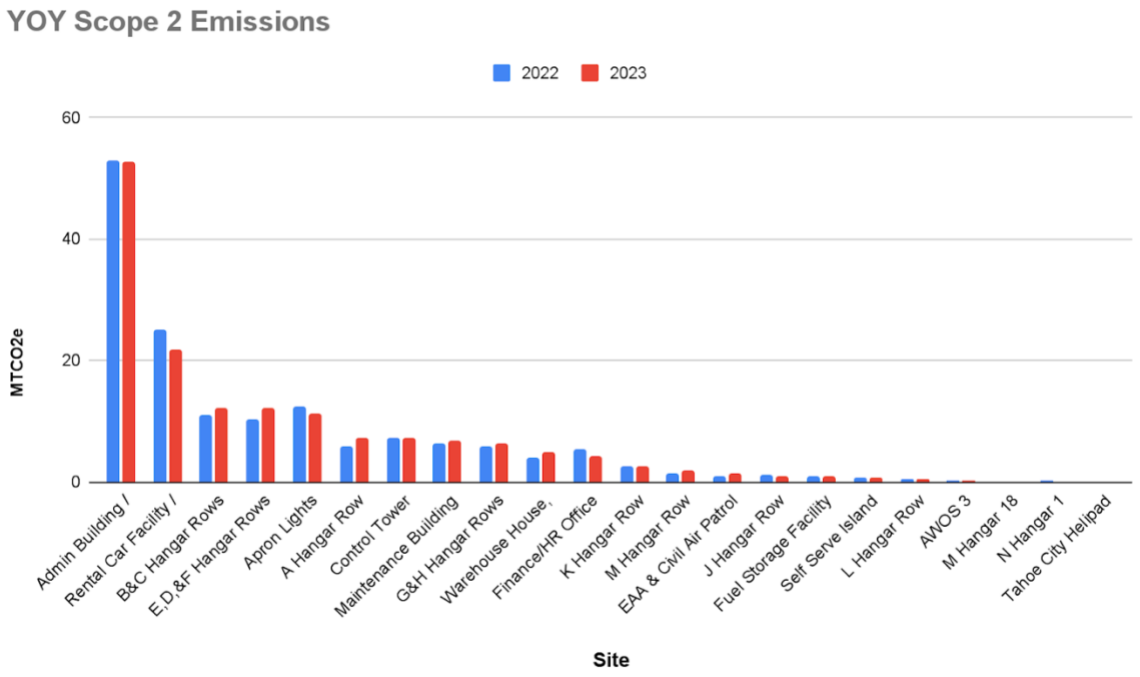


Diesel and gasoline used to run airport equipment emitted 108 and 65 metric tons of CO2e, respectively. The usage of both fuels increased, although the increase in diesel was minimal at 9%, while the increase in gasoline usage was more significant at 55%. Although the percentage increase was the highest among Scope 1 fuels, the net emissions from gasoline were still the lowest at 65 MTCO2e, compared to 108 MTCO2e from diesel, and 163 MTCO2e from natural gas.



Scope 2

Scope 2 emissions were tracked across 22 sites at the airport and emitted a total of 157.2 MTCO2e in 2023, nearly identical to 2022 at 148.46 MTCO2e. The top 5 heaviest emitters in 2023 made up 70% of Scope 2 emissions, while the top two emitters, Admin Building/Terminal and Rental Car Facility/Lift Coworking Space made up over 45% alone. The Admin Building was the highest emitter of all sites at 53 MTCO2e in 2023, over 34% of all Scope 2 emissions. The next highest was the Rental Car Facility/Lift Coworking Space which emitted 21.9 MTCO2e in 2023, equaling just under 14% of total Scope 2 emissions.

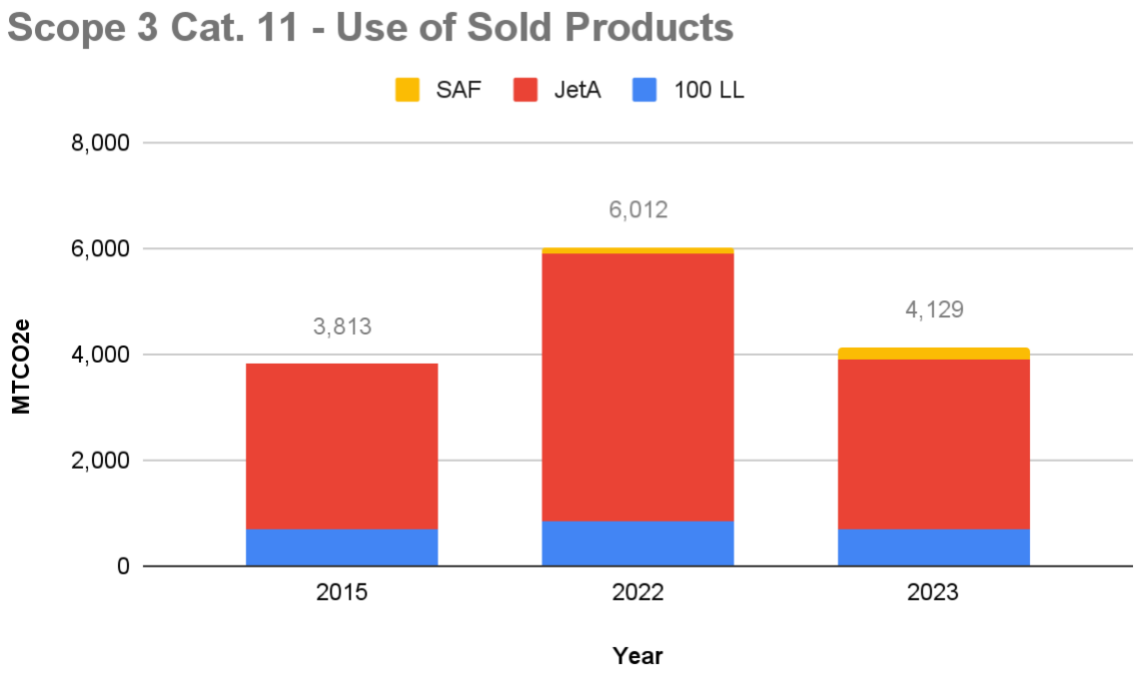


Scope 3

The Scope 3 categories tracked and measured in 2023 include Employee Commuting and Use of Sold Products. Employee commuting patterns were tracked through an employee commuting survey while emissions from fuel sales were tracked via fuel sale logs. Total Scope 3 emissions in 2023 were 4,162 MTCO2e, 89% of total emissions. Employee commuting emitted 33 MTCO2e, less than 1% of Scope 3 emissions, while Use of Sold Products made up 99% of Scope 3 emissions at 4,129 MTCO2e. Truckee Tahoe Airport made the transition to selling 100% blended SAF in 2023 to reduce Scope 3 emissions from the combustion of sold fuel. While the exact blend percentage varied throughout the year, all fuel sold was blended with SAF to some degree, with most months hovering around a 26% blend of SAF. Most of the Scope 3 emissions still came from the combustion of sold fuel, particularly the Jet A portion of the fuel, which emits much more carbon than SAF when combusted. The use of Jet A alone accounted for 77% of Scope 3 emissions. However, by transitioning

to blended SAF, Truckee Tahoe Airport was able to avoid over 798 MTCO2e that would have been released had they sold pure Jet A rather than blended SAF.

As mentioned previously in this report, fuel under Scope 3 represents the biggest source of emissions consistently through the years for Truckee Tahoe Airport. The graph below shows a more detailed look into the fuel under Scope 3, accounted for under Category 11 - Use of Sold Products. As shown in the graph, the fuel that contributed the most to the emissions from this category was Jet A fuel for all three years. 2022 was the year with the highest emissions from this category, with a total of 6,012 MTCO2e. This represented an increase of 66% compared to 2015 emissions. On the other hand, there was a decrease of 31% in emissions from this category in 2023 compared to 2022 levels. This can be attributed to the transition to blended SAF fuel that was implemented in 2023. Emissions coming from 100LL fuel increased 26% in 2022 compared to 2015 levels. However, emissions coming from this fuel decreased by 20% in 2023 given the fuel transition mentioned above.

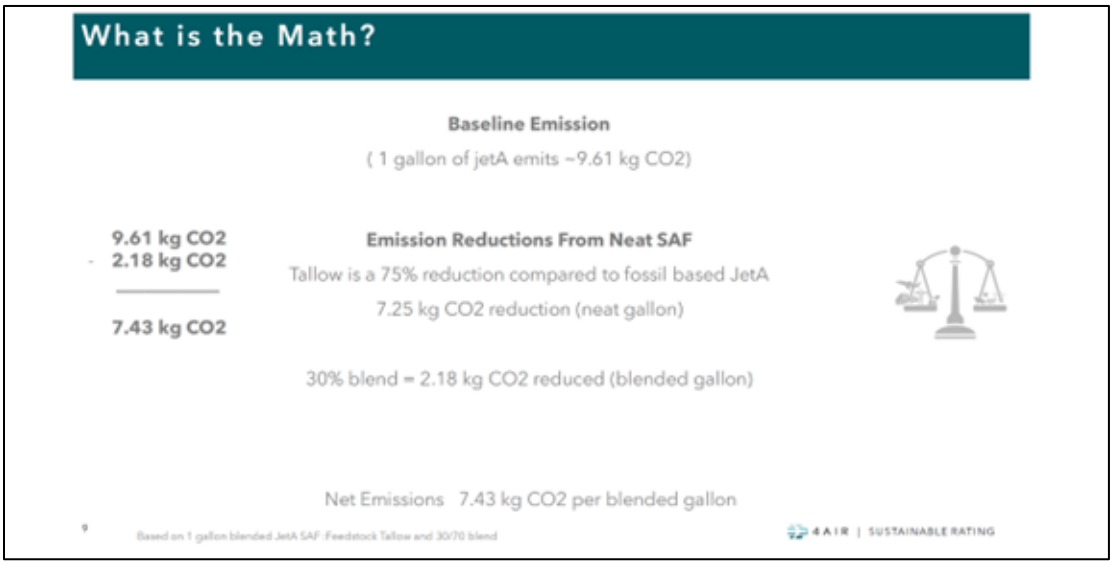


Blended SAF vs. Jet A

There are two main differences between blended SAF and Jet A fuels.

1. **Composition:** Jet A is a conventional aviation fuel derived from crude oil. It is a type of kerosene-based fuel commonly used in commercial aviation. Blended SAF is a more sustainable alternative since it is typically produced from renewable sources such as biomass, waste oils, or synthetic processes. Blended SAF is mixed with conventional Jet A fuel in varying ratios to create a blend suitable for use in aircraft engines.
2. **Environmental impact:** Jet A is a fossil fuel derived from crude oil; it has a much higher carbon footprint because the carbon content of fossil fuels is much

higher than biofuels. When the fuel is combusted, there is more carbon (and other GHG gasses) released to the atmosphere than other fuels with lower carbon content. Additionally, Jet A's higher carbon footprint is associated with the high upstream emissions of fossil fuel extraction, production, and combustion. Alternatively, Blended SAF is considered more sustainable because it has the potential to significantly reduce lifecycle greenhouse gas emissions, as it is produced from renewable sources and can be blended with conventional fuel to reduce overall emissions from aircraft operations. Blended SAF can also help to reduce dependence on fossil fuels and mitigate the environmental impact of aviation.



The integration of Sustainable Aviation Fuel (SAF) is increasingly seen as critical for genuine decarbonization in aviation, as depicted in the graph below. Blended SAF, combining SAF with conventional aviation fuel like Jet A, offers a practical approach to emissions reduction while considering factors such as cost and availability of SAF. This strategy enables airlines to transition gradually towards greener aviation practices without requiring extensive modifications to existing infrastructure or aircraft engines. By blending SAF with conventional fuel, airlines can manage potential fluctuations in SAF availability and cost, ensuring a stable transition to sustainable aviation. Furthermore, the adoption of blended SAF demonstrates a commitment to environmental responsibility and contributes to global efforts to address climate change, while continued investment in SAF production and infrastructure can enhance its availability and affordability, fostering long-term sustainability in the aviation sector.

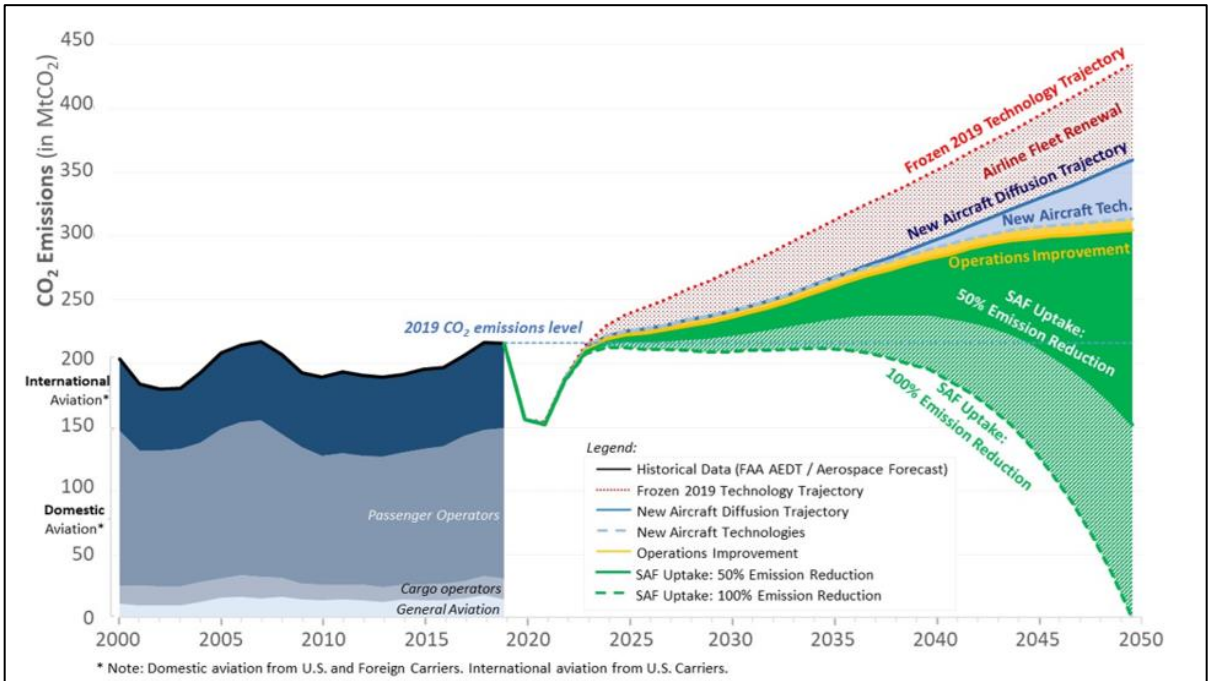


Figure 3. Analysis of Future Domestic and International Aviation CO_2 Emissions[13]

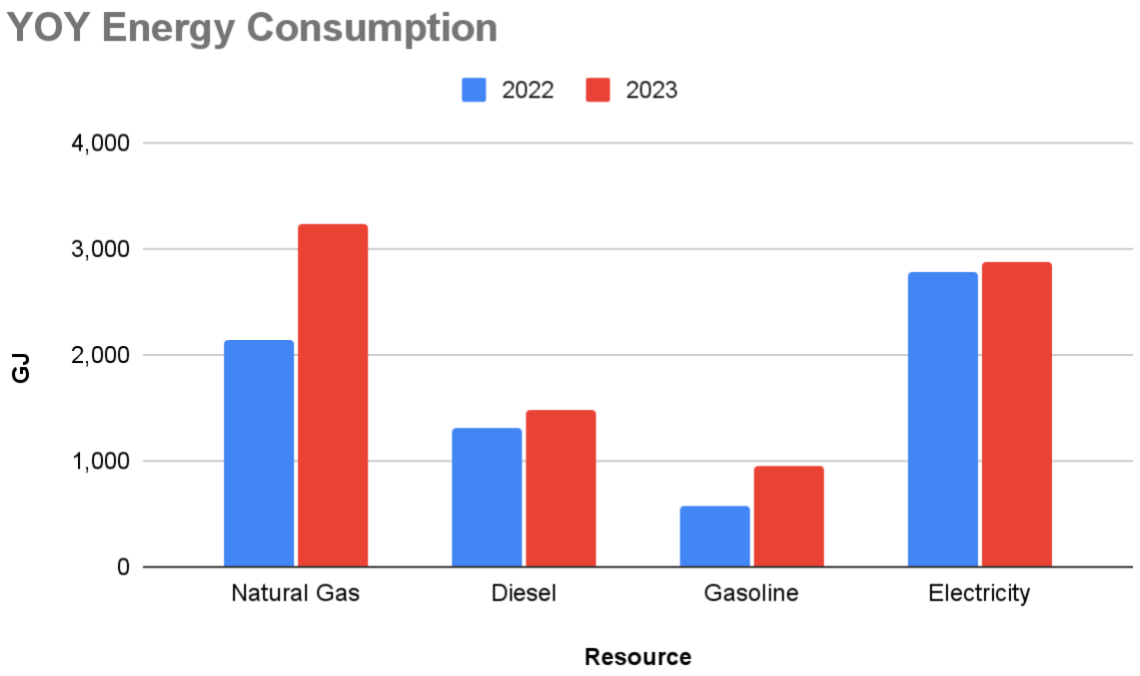
Industry Fuel Transition Away from Leaded Fuels

There have been significant efforts in the aviation industry to transition away from leaded fuels. One of the main efforts is the EAGLE initiative (Eliminate Aviation Gasoline Lead Emissions) introduced by the FAA, which aims to transition piston-engine aircraft to lead-free aviation fuels by the end of 2030 while preserving safety and economic benefits. EAGLE focuses on four key pillars: business infrastructure, research and development, unleaded fuel testing and qualification, and regulatory and policy, with responsibilities divided between the industry and the FAA. Industry groups, including AOPA, AAAE, API, EAA, GAMA, HAI, NATA, and NBAA, have committed to the EAGLE initiative, recognizing its importance in achieving a lead-free aviation future. The initiative is praised for its collaborative approach and commitment to addressing the challenges of transitioning away from leaded fuels while maintaining aviation safety and economic viability, with industry leaders expressing optimism and dedication to the initiative's success.

Efforts like the EAGLE initiative and the regulations presented in the following sections highlight the aviation industry trends toward a rapid transition away from harmful leaded fuels. While progress has been made, challenges such as infrastructure updates and regulatory hurdles continue to be addressed as the industry moves towards a cleaner and more sustainable future.

Energy Usage

In 2023 Truckee Tahoe Airport consumed a combined total of 8,534 GJ of natural gas, diesel, gasoline, and electricity, a 25% increase from 2022. Natural gas and electricity made up the majority of this consumption at about 3,235 GJ (38%) and 2,870 GJ (34%), respectively. Diesel and gasoline made up the remaining 28% of energy usage, with a breakdown of 16% diesel and 11% gasoline, or 1,486 GJ and 943 GJ, respectively. The main drivers of the increased energy consumption were a 51% increase in natural gas usage and a 62% increase in gasoline usage. Diesel and electricity consumption were more comparable to 2022, with diesel usage increasing only 13% and electricity a mere 3%.



Electricity

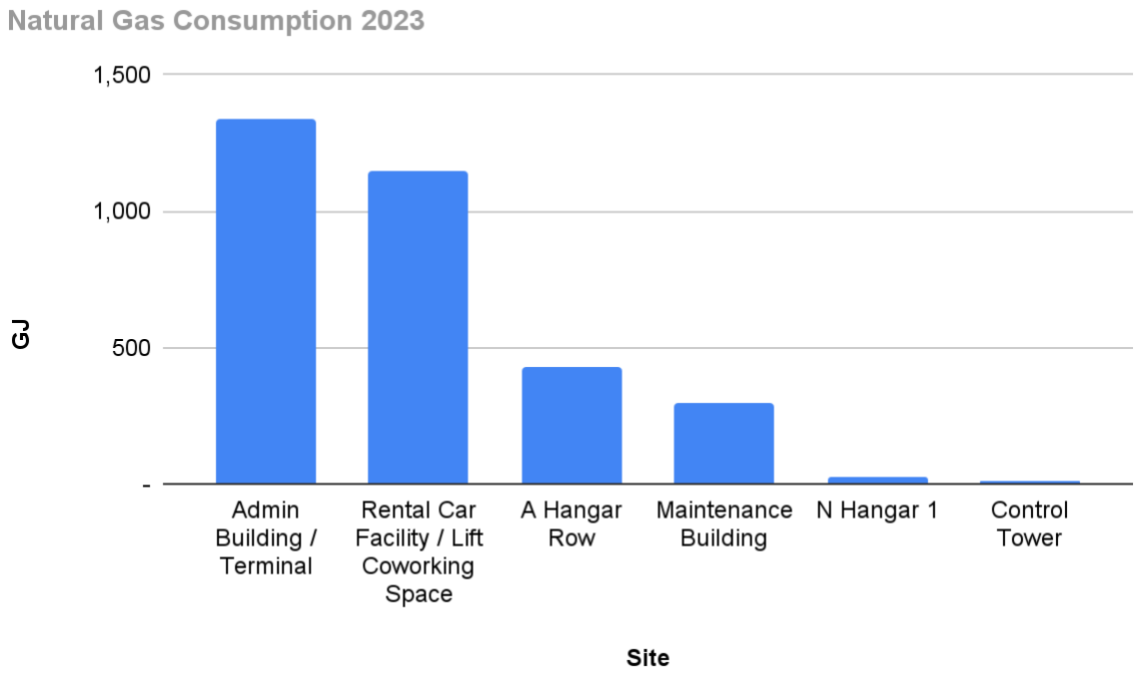
The airport tracked 22 different sites in 2023. While all sites consumed electricity during 2023, the Admin Building/Terminal site consumed the most at 974 GJ, about 34% of the airport's total electricity consumption. The next largest consumer of electricity was the Rental Car Facility/Lift Coworking Space at nearly 403 GJ, which represents 14% of the total electricity consumption. Overall electricity usage increased by about 81 GJ or 3% compared to 2022.

Site	Electricity Consumption (GJ)	% of Total Electricity Consumption
Admin Building / Terminal	974	34%
Rental Car Facility / Lift Coworking Space	403	14%
B&C Hangar Rows	226	8%
E,D,&F Hangar Rows	226	8%
Apron Lights	207	7%
A Hangar Row	136	5%
Control Tower	132	5%
Maintenance Building	126	4%
G&H Hangar Rows	116	4%
Warehouse House, Suites E1 & E2, Farm Lights	90	3%
Finance/HR Office	49	2%
K Hangar Row	48	2%
M Hangar Row	37	1%
EAA & Civil Air Patrol Building (house)	26	1%
J Hangar Row	20	1%
Fuel Storage Facility	18	1%
Self Serve Island	13	<1%
L Hangar Row	9	<1%
AWOS 3	6	<1%
M Hangar 18	3	<1%
N Hangar 1	3	<1%
Tahoe City Helipad	0	<1%

Natural Gas

In 2023 natural gas was only used at 6 sites: Admin Building/Terminal, Rental Car Facility/Lift Coworking Space, A Hanger Row, Maintenance Building, N Hangar 1, and Control Tower for a total of 3,235 GJ, a 51% increase from 2022. The majority of natural gas - over 77% - was used at the Admin Building/Terminal and the Rental Car Facility/Lift Coworking Space, consuming 1,335 GJ and 1,145 GJ, respectively. The remaining 23% of energy was consumed primarily at A Hangar Row (13%) and the Maintenance Building (9%), with the last 1% coming from N Hangar 1 and the Control Tower. Hangar A is in the top 3 buildings with the most natural gas usage because it is currently being used for ground support operations while a new building for this is

being built. Once these operations are transitioned to the new building, the natural gas usage in Hangar A should be expected to decrease. The main reason for the 51% overall increase in natural gas consumption was the 113% increase in usage at the Rental Car Facility/Lift Coworking Space, consuming 538 GJ in 2022 and increasing to 1,145 GJ in 2023. The previous tenant had remote working policies and had left the space unoccupied, however, in 2023 Lift Workspace moved in and began to utilize the space, resulting in a significant increase in natural gas usage.



Other Fuels

The airport also used gasoline and diesel to power various types of airport equipment in 2023. In total 7,155 gallons of gasoline and 10,210 gallons of diesel were used in 2023, for a total of 17,365 gallons and 2,430 GJ. This was a 24% increase in fuel consumption, primarily driven by a 55% increase in gasoline consumption. As mentioned previously, the 2023/2024 winter in Truckee was the coldest on record. This was a driving factor for the increase in fuel usage, given that there was an increment in the fuel needed for snow removal.

Biodiversity and Conservation

Truckee Tahoe Airport is located in a mountainous region northeast of Lake Tahoe and manages over 2,000 acres of land surrounding the airport. These land areas include the airport land, Alder Hill Beacon, Jones Property, Martis Valley Estates, Ponderosa Golf Course, and Waddle Ranch. Across these properties lie a variety of land types and vegetation, including Eastside pine, Sierran mixed conifer, sagebrush, bitterbrush, wet and dry meadows, montane riparian, and montane chaparral. The airport implements a variety of different land management activities to maintain the surrounding landscape with goals of providing recreational opportunities for the local community, enhancing forest health, reducing the risk of wildfire, preserving cultural resources, maintaining water quality, and preserving the natural wildlife and habitat. Some of the land management activities include tree thinning and mastication, fertilizer and pesticide management, road and trail maintenance, and upkeep of local water resources.

There are a variety of different mammals, amphibians, reptiles, birds, and fish that live on the lands that the airport manages, including 8 special status species - either listed as threatened or endangered under the California or federal Endangered Species Act or the California Department of Fish and Wildlife Species of Special Concern (SSC) list (CDFW, 2019). There are also 5 plants known to be or with the potential to be present on the airport lands listed in the California National Plant Society *Inventory of Rare and Endangered Plants* list. (CNPS, 2020a). The airport seeks to enhance and preserve the habitat for these species and keep invasive species at bay, with many local community plans, general plans, and ordinances containing goals to maintain and protect the local wildlife.

Target and Metrics

In 2023, Truckee Tahoe Airport's sustainability target was that of the industry: net zero emissions by 2050. To work towards this goal, they made substantial progress on their active initiatives and kicked off multiple new initiatives.

Blended SAF Transition (Scope 3)

Truckee Tahoe Airport completed its transition to 100% blended SAF in July 2023. Having kicked off in 2020, this multi-year initiative resulted in a substantial reduction in Scope 3 Category 11 (use of sold products) emissions, by reducing their tenants' fuel emissions by as much as 80% once the transition was complete. The 20-30% higher cost of blended SAF vs Jet A highlights the complexities of a 100% transition, however, Truckee Tahoe Airport was able to overcome these through proper stakeholder engagement and support.

Alongside the completion of their transition to blended SAF, Truckee Tahoe Airport replaced their 3,000-gallon fuel truck with a larger 5,000-gallon truck. As seen above, the new truck is wrapped in their SAF branding, promoting their environmentally

conscious fuel offering to tenants and visitors. Truckee Tahoe Airport plans to dispose of the 3,000-gallon truck in 2024.

Scope 1, 2 & 3 Tracking

In 2023 Truckee Tahoe Airport partnered with NZero to begin tracking Scope 1, 2, and 3 (categories 7 & 11) emissions. By tracking these Scopes, Truckee Tahoe Airport is now able to quantify its current and historical carbon footprint, inform sustainability-related decision-making through granular data, and see the concrete impact as it completes various sustainability initiatives and operational changes.

Fleet Electrification (Scope 1)

Truckee Tahoe Airport kicked off its fleet electrification initiative with the purchase of 2 vehicles. The first was a Ford E-Transit-350 Cargo van that was acquired to replace a gas-powered flatbed. The second vehicle was a Ford Mustang Mach-E to be used for airport transportation; both were purchased in Q1. Truckee Tahoe Airport is also looking into options for biodiesel for its existing fleet.

Full-Service Fueling (Scope 3)

In Q4 of 2023, Truckee Tahoe Airport implemented full-service fueling for 100LL for aircraft at no additional cost. This replaced self-service 100LL fueling and will help reduce aircraft engine start time and airfield taxing of aircraft to fueling pumps. Utilizing full-service fueling minimizes emissions by eliminating the need for aircraft to taxi for refueling. Instead, a compact truck transports fuel directly to the aircraft, thereby curbing emissions from aircraft fuel consumption. Key data, such as the aircraft's fuel efficiency, average refueling taxi time, and truck mileage for the service, were provided by Truckee Tahoe Airport for analysis. Based on the estimated data used for analysis, each self-service fueling would emit approximately 32 kgCO2e, while each full-service fueling would emit just 0.4 kgCO2e, resulting in a potential reduction in emissions of 98%. It should be noted that the extent of emissions mitigated varies depending on additional factors such as the type of truck, fuel utilized for refueling, and the distance covered during the service.

Stakeholder Engagement

Stakeholder engagement is a necessary component of Truckee Tahoe Airport's sustainability strategy. They recognize the importance of effective communication to gauge support, work through concerns, and share decarbonization progress. Truckee Tahoe Airport frequently posts articles to its website, truckeetahoeairport.com, informing stakeholders and the surrounding community of their sustainability journey and achievement of key milestones.

The initiative of transitioning to blended SAF was a key example of Truckee Tahoe Airport's methodology for stakeholder engagement. Truckee Tahoe Airport anticipated the transition to blended SAF would increase fuel prices by approximately 20-30%. This substantial increase required the Airport to engage directly with all stakeholders to ensure the project would be well accepted, any issues could be addressed before the transition, and ultimately the project would adopt a community-led vision. Some hangar tenants had expressed concerns about the financial implications, which Truckee Tahoe Airport was able to work through in partnership. Larger charter companies such as NetJets and ExecutiveJets also provided feedback, in which they expressed support for the project as they would be able to promote a reduction in emissions to current and prospective customers.

Truckee Tahoe Airport recognizes that effective stakeholder engagement is critical to empowering its decarbonization journey and plans to keep these types of engagements a priority as they progress through additional initiatives.

Beyond the blended SAF initiative, Truckee Tahoe Airport communicates with stakeholders directly, through its website, and through public media to highlight initiatives and progress on its decarbonization journey.

Future Plans

In 2024, Truckee Tahoe Airport plans to launch and/or continue three primary decarbonization initiatives:

1. **eGPU Implementation (Scope 1 & Scope 3):** The purchase of two electric Ground Power Units (eGPU) will prevent aircraft from having to run engines during pre-flight or post-flight operations that require power (aircraft startup, boarding, maintenance). The electric Ground Power Units will also replace existing diesel-powered Ground Power Units.

2. **Target Setting:** Truckee Tahoe Airport plans to explore sustainability target setting in 2024. In 2023 they partnered with the carbon management platform NZero to begin tracking Scope 1, 2, and 3 emissions, and establish their emissions baseline. In 2024, they would like to explore transitioning from the industry-adopted target of Net Zero by 2050, to more ambitious, data-informed targets that accurately reflect the trajectory of their current and historical sustainability efforts.

3. **Vehicle Electrification (Scope 1):** Truckee Tahoe Airport expects to continue its fleet electrification initiative in 2024 with the purchase of 2 additional electric vehicles. They expect to purchase 1 Ford F-150 Lightning in January 2024 to replace a gas-powered F-150, as well as another Ford F-150 Lightning later in the year.

Reporting Opportunities

Airport Carbon Accreditation Program

The Airport Carbon Accreditation program is a global carbon management certification program developed by Airports Council International (ACI). The program is structured to support airports in measuring, managing, and ultimately reaching net zero emissions. Currently, 39 airports within the United States are participating in the program; these participants range from large international airports such as Harry Reid (LAS) and Hartsfield-Jackson (ATL) to those similar in size to Truckee Tahoe such as Tooele Valley (TVY), Hendricks County (2R2) and Plant City (PCM).

The program is broken down into 5 levels, each representing specific milestones in an airport's journey to net zero. Stages of the program include mapping, reduction, optimization/neutrality, transformation/transition, and Level 5 (90% reduction in Scope 1 & 2 emissions, no Scope 3 emissions by 2050). Participating airports measure and report their carbon emissions, implement carbon reduction strategies, engage stakeholders, and offset residual emissions to achieve a carbon-neutral status. Given the current state of Truckee Tahoe Airport's decarbonization journey, they would likely be able to surpass the initial levels of the program quickly, as they track and reduce emissions through a variety of initiatives. Acceptance to the program includes an application and fees based on official passenger figures. For more information visit their website here.

Airport Carbon and Emissions Reporting Tool

The Airport Carbon and Emissions Reporting Tool (ACERT) is a tool provided by ACI to enable airport operators to calculate their greenhouse gas (GHG) emissions inventory. Given Truckee Tahoe Airport's partnership with NZero to track Scope 1, 2, and 3 emissions, this tool would be of relatively low internal use, however, it would support the larger goals of the program. ACI would like to use ACERT data to compile regional and global aggregate emissions, enhancing understanding of airports' contribution to total aviation industry emissions. More information on the tool & program can be found here.

State & Federal Programs

Airport Improvement Program

The Airport Improvement Program (AIP), administered by the FAA, provides federal grants primarily to enhance environmental compliance and sustainability at public-use airports in the United States. As a part of the broader scope of fostering airport safety, capacity, and security, the AIP specifically allocates funds for projects like noise reduction, pollution control, and environmental mitigation. These projects extend to initiatives like upgrading airport infrastructure for better energy efficiency, implementing advanced stormwater management systems, and developing wildlife hazard management plans to protect natural ecosystems. More information on the program can be found on its website.

Currently, Truckee Tahoe Airport does not qualify for most state and federal programs and funding opportunities. The most common disqualifying factors are airport size, being in a clear-air district, and that it is not located within a low-income and disadvantaged community (LiDAC). It is recommended to bi-annually search for state and federal programs (such as the one below) as criteria and eligibility may change.

Voluntary Airport Low Emissions Program

VALE helps airport sponsors meet their state-related air quality responsibilities under the Clean Air Act. Through VALE, airport sponsors can use Airport Improvement Program (AIP) funds and Passenger Facility Charges (PFCs) to finance low-emission vehicles, refueling and recharging stations, gate electrification, and other airport air quality improvements. Truckee Tahoe Airport is currently disqualified for being in an attainment area of NAAQS. More information can be found here.

Relevant Legislation

EPA Endangerment Finding on 100LL Fuel

Piston-engine aircraft are the leading source of lead emissions in the US, contributing 70% annually. The EPA has conducted thorough investigations into these emissions and their impact on air quality, including lead concentration assessments near airports and communities. Consequently, the EPA has issued an endangerment finding, identifying specific aircraft engines as significant contributors to air pollution and potential health hazards under the Clean Air Act. Despite not imposing immediate restrictions or new control measures on leaded fuel, this finding prompts regulatory action. The EPA plans to establish standards targeting lead emissions from aircraft engines, while the FAA will focus on fuel composition standards to address the issue. Truckee Tahoe Airport's transition to blended SAF has helped them prepare for EPA and FAA 100LL fuel regulation, as they now only provide limited quantities to piston aircraft that require it.

California SB 1193

This Senate Bill has been introduced in California aiming to prohibit the sale of leaded airplane fuel due to its detrimental effects on public health, particularly impacting communities near airports. Supported by a 2021 study revealing heightened lead levels in children residing near airports, SB 1193 proposes a phased approach to eliminate leaded aviation fuel sales by 2030. Backed by community members and environmental justice groups, SB 1193 is supported to safeguard vulnerable populations from lead pollution. The EPA and FAA have acknowledged the dangers of lead emissions from aircraft and initiated programs to address the issue, recognizing the urgency echoed by California's history of phasing out leaded gasoline and paint (as previously addressed in the EPA endangerment finding on 100LL fuel). Scheduled for review in policy committees during the spring session, SB 1193 underscores the critical need to address leaded aviation fuel. While having transitioned to blended SAF, Truckee Tahoe Airport still supplies small amounts of 100LL fuel to piston aircraft that require it, which can be phased out completely before restrictions from SB1193 are implemented.

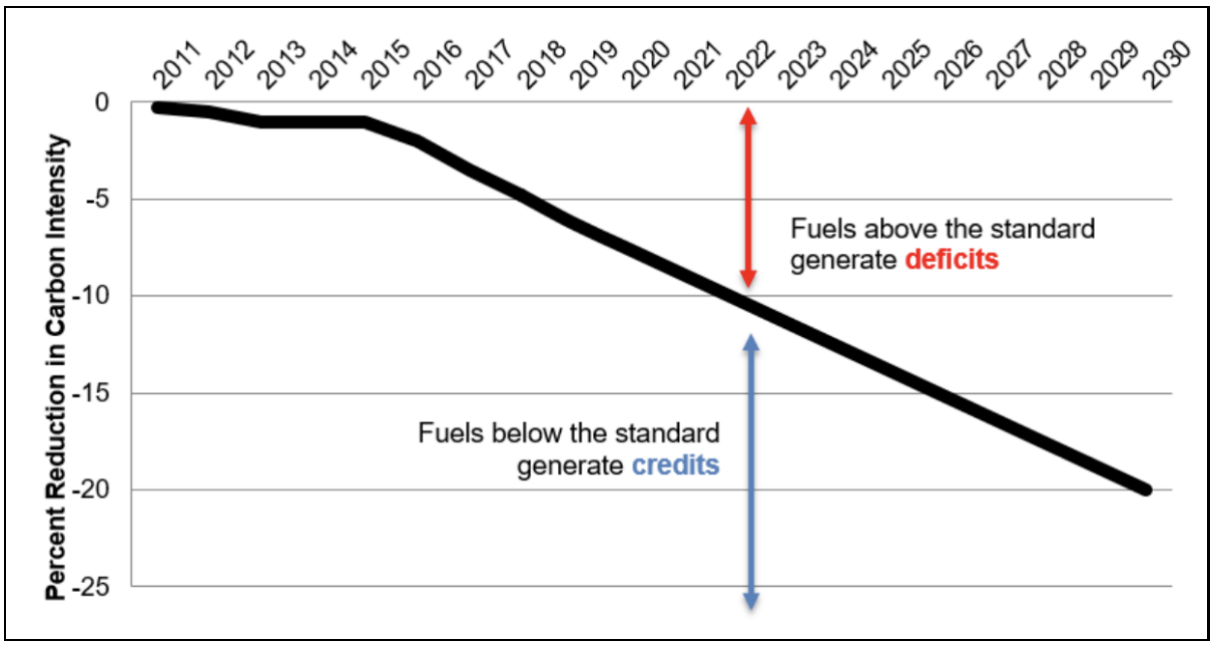
California SB 253

SB 253 is a recently passed bill in California requiring public and private companies doing business in California to disclose their Scope 1, 2 & 3 emissions. While Truckee Tahoe Airport is not directly impacted by this bill, they may be indirectly impacted through charter company tenants such as NetJets. This means they will likely be

requesting Scope 3 data from Truckee Tahoe Airport when reporting is required (2027 for the 2026 fiscal year).

California Air Resources Board LCFS Policy Update

The California Air Resources Board's Low Carbon Fuel Standard (LCFS) is currently reviewing amendments to the policy. Originally passed in 2009, the LCFS is a regulatory program aimed at reducing the carbon intensity of transportation fuels in California by setting annual benchmarks and incentivizing the use of low-carbon alternatives through credit generation and trading. The proposed updates aim to increase the stringency of carbon intensity reduction targets from the current target of a 20% reduction by 2030, to a 30% reduction by 2030 and a 90% reduction by 2045. As of late March 2024, the policy update is under reevaluation by the CARB due to substantial feedback.



CARB annual reduction targets before the policy update

As part of the program, fuel suppliers who produce fuels below the annual carbon intensity target receive credits, which can be sold to parties producing fuel above the annual carbon intensity target to meet the minimum credit requirement. Truckee Tahoe Airport's supplier, Neste, currently receives credits through this program due to the low carbon intensity of their blended SAF. However, as the carbon intensity targets increase (through the existing program and the proposed update), Neste will receive fewer credits, as credits are distributed based on the difference between their supplier's fuel carbon intensity and the annual target. A reduction in credits from the program results in less revenue for Neste, which could force Neste to increase the price of blended SAF fuel to compensate for the lost revenue. As of March 2024, the policy update is under reevaluation by CARB due to substantial feedback from various stakeholder groups.

Truckee Tahoe Airport is not subject to certain recent environmental legislation due to its:

- Non-profit government organization status
- Size
- Location within a clean-air district
- Location outside of a low-income and disadvantaged community (LiDAC)

The scope of compliance legislation will likely expand in the coming years; the following regulations could impact Truckee Tahoe if the scope of the legislation were to expand.

SB 720

SB 720 is a currently unpassed law within the California legislature surrounding airports and carbon emissions. The current bill requires airports in low-income and disadvantaged communities (LiDACs) with over 50,000 annual takeoffs to submit a report disclosing their Scope 1, 2, and 3 emissions to the California Air Resources Board (CARB). While Truckee Tahoe Airport is not in a LiDAC area, nor does it have 50,000 takeoffs, they should be aware that the scope could broaden and may require the disclosure of Scope 1, 2, and 3 emissions.

Zero-Emission Airport Shuttle Regulation

Adopted in June 2019 by the California Air Resources Board, the Zero-Emission Airport Shuttle Regulation requires airport shuttle operators to transition to 100 percent zero-emission vehicle (ZEV) technologies. Airport shuttle operators must begin adding zero-emission shuttles to their fleets in 2027 and complete the transition to ZEVs by the end of 2035. The regulation applies to airport shuttle operators who own, operate, or lease vehicles at any of the 13 California airports regulated under this rule (LAX, SNA, SFO, SMF, SAN, SJC, BUR, PSP, OAK, SBA, ONT, LGB, FAT). This regulation signifies a kickoff to fleet electrification at airports, and while not immediately impacting Truckee Tahoe Airport, their kickoff to electrification will help them stay ahead of similar legislation.

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