

2024 Greenhouse Gas Emissions Inventory

Patrick Leahy Burlington International Airport

PREPARED FOR

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OCTOBER 2026

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Introduction

Patrick Leahy Burlington International Airport (Leahy BTV or the Airport) is owned and operated by the City of Burlington, Vermont. The Airport is committed to reducing its greenhouse gas (GHG) emissions through the adoption of clean, renewable, and efficient energy systems and improved operational practices.

Leahy BTV intends to use this report to support its pursuit of Level 2 (Reduction) certification under the Airports Council International (ACI) Airport Carbon Accreditation (ACA) Program. The ACA Program is the only global carbon management certification program designed specifically for airports. It relies on internationally recognized methodologies to provide a consistent framework for active GHG emissions management.

Leahy BTV achieved ACA Level 1 (Mapping) accreditation in Fall 2024 based on its 2022 emissions inventory and policy commitment to reduce emissions. The Airport then renewed its Level 1 accreditation in Fall 2025 based on its 2023 emissions inventory. Building on this progress, the Airport now seeks to advance to ACA Level 2 (Reduction) based on its 2024 emissions inventory, further demonstrating its commitment to reducing GHG emissions.

In accordance with ACA program requirements, to achieve Level 2 accreditation, Leahy BTV must:

- Measure and inventory its annual Scope 1 and Scope 2 emissions;
- Validate its GHG reduction commitment through an established emissions reduction target; and
- Demonstrate GHG emissions reductions over the applicable multi-year average.

Leahy BTV selected 2022 and 2023 as analysis years to compare with the 2024 GHG inventory. For this initial Level 2 application, these years will form a two-year average. A full three-year rolling average will be established when a third year of data becomes available in the next ACA iteration cycle. The selected years provide a recent and representative sample of typical activity levels.

To formalize its GHG reduction commitment and track performance, Leahy BTV designated 2022—the year of its first independently verified Scope 1 and Scope 2 inventory—as its baseline year. **From this baseline, Leahy BTV has adopted an interim target to reduce combined Scope 1 and Scope 2 emissions intensity by 60 percent by 2035, measured in kilograms of carbon dioxide equivalent (kg CO_2e) per passenger movement. The Airport has also established a long-term goal of achieving net-zero Scope 1 and Scope 2 emissions by 2050**.

This GHG emissions inventory supplements the ACA Level 2 verification application by:

- Identifying and describing Leahy BTV's Scope 1 and Scope 2 emissions sources;
- Documenting data collection and analysis methodologies; and
- Detailing current and planned actions to advance GHG emissions reductions consistent with the Carbon Management Plan.

Airport Background

Owned and operated by the City of Burlington, Leahy BTV is Vermont's primary commercial service airport and the principal air gateway for northwestern Vermont, northern New York (particularly the Plattsburgh area), and parts of southern Quebec (including the Montreal region). Serving both business and leisure travelers, the Airport supports scheduled passenger operations, general aviation, and military activity through its role as home to the Vermont Air National Guard (VTANG).

Located in South Burlington, approximately 3 miles east of downtown Burlington, the Airport comprises a compact but well-developed airfield and landside campus. The airfield consists of two intersecting runways, associated taxiways, and paved aprons that accommodate regional jets, narrow-body mainline aircraft, and smaller general aviation aircraft.

Passenger facilities are consolidated in a single main terminal that houses ticketing, security screening, departure gates, baggage claim, and ground transportation functions. The terminal provides multiple gate positions with loading bridges and ground-boarding, along with restaurants, cafés, news and gift shops, rental car counters, and other traveler services. Its compact design supports short walking distances and a streamlined passenger experience.

Ground access is provided by local and regional roadways linking the Airport with Burlington, South Burlington, and surrounding communities. On-Airport structured and surface parking offers short-term, long-term, and employee options near the terminal, with curbside and designated zones for private vehicles, taxis, app-based rideshare services, and shuttles. Public transit connections further integrate the Airport into the region's transportation network, reinforcing its role as a critical element of Vermont's mobility and economic connectivity.

In addition to its commercial passenger role, the Airport supports extensive general aviation (GA) operations, including based aircraft, flight training, corporate aviation, and charter services. Dedicated GA facilities, such as hangars, fixed-base operator (FBO) services by Heritage Aviation, and maintenance areas, are located on the airfield away from primary commercial passenger activity but integrated within the overall Airport campus. The VTANG installation occupies a significant portion of the Airport's airfield environment, operating military aircraft and supporting state and national defense missions while sharing runway and airspace resources with civil aviation.

Table 1-1 provides Leahy BTV's 2024 Airport Activity Metrics.

Table 1-1: 2024 Airport Activity Metrics

Metrics	2024	Source
Passenger Enplanements	681,952	Leahy BTV Airport Operations
Passenger Deplanements	678,455	Leahy BTV Airport Operations
Aircraft Operations	95,438	ATADS: Airport Operations: Standard Report
Cargo Activity (Tons)	3,407	Bureau of Transportation Statistics TranStats Database[1]
Airport Operator Staff	55-65	Leahy BTV Administration
Tenant Staff	~1,225-1,235	Patrick Leahy Burlington International Airport Economic Impact Assessment[2]

Source:

1 U.S. Department of Transportation, Bureau of Transportation Statistics, TranStats: T-100 Domestic Market (All Carriers) Database, accessed July 2, 2026, Bureau of Transportation Statistics TranStats Database.

2 Patrick Leahy Burlington International Airport, Economic Impact Assessment: Technical Report (South Burlington, VT: Patrick Leahy Burlington International Airport, 2025), https://www.btv.aero/images/uploads/2026_Leahy_BVT_Economic_Impact_Assessment.pdf.

Inventory Boundaries

Organizational Boundary

This GHG emissions inventory is prepared in accordance with the latest version of the ACA Technical Documents (effective as of May 15, 2026), which align with the GHG Protocol, ISO 14064, and ISO Net Zero Guidelines (IWA 42:2022). It applies the operational control approach described in the *GHG Protocol: A Corporate Accounting and Reporting Standard*. Under this approach, Leahy BTV accounts for 100 percent of emissions from operations over which it has operational control (i.e., where it has the authority to introduce and implement operating policies).

The organizational boundary, therefore, includes activities and facilities directly associated with the operation, maintenance, ground transportation, and development of Leahy BTV. Emissions from airline operations, tenant-controlled facilities, and military activities are excluded, as these sources fall outside Leahy BTV's operational authority.

A detailed inventory of facilities evaluated under the organizational boundary is provided in **Appendix A**, which identifies individual buildings located on and off Airport property and documents whether each facility is included in or excluded from the inventory based on operational control. Facilities operated by Leahy BTV, such as the main terminal, parking garage, maintenance and storage buildings, and other Airport infrastructure, are included. Facilities operated by third parties, such as tenant hangars, fuel farms, and military installations, are excluded, consistent with the operational control approach applied in this inventory.[1]

[1] In certain cases where Leahy BTV retains operational control of utility services (e.g., during tenant vacancy at off-Airport properties or for specific infrastructure such as lighting associated with the VTANG property), associated energy consumption is included in the inventory, as documented in Appendix A.

This facility-level boundary definition informs the inclusion of utility accounts, fuel use data, and other activity data used in the 2024 GHG inventory, including the exclusion of tenant-attributable energy consumption and emissions sources.

Internal Airport departments responsible for activities within the organizational boundary, and for associated emissions sources, include:

- Airport Administration/Leadership – provides overall oversight of the Carbon Management Plan, including policy direction, resource allocation, and coordination with the City of Burlington.
- Engineering, Planning, and Sustainability – leads carbon management implementation, GHG inventory development, utility and energy management, refrigerant tracking, capital project integration, and emissions reduction planning.
- Operations – manages airfield and operational activities, fleet fuel use, deicing operations, equipment utilization, and implementation of operational emissions-reduction practices.
- Maintenance – maintains building systems and equipment, tracks energy use and refrigerants, and supports implementation of energy and emissions reduction measures.
- Finance – supports budgeting, grant management, utility documentation, procurement, and cost tracking related to carbon management initiatives.

Operational Boundary

The operational boundary of this GHG emissions inventory encompasses Leahy BTV's Scope 1 and 2 emissions. "Scopes" define categories of emissions based on ownership and control that an entity has over emissions generation, while "sources" are the operations or activities generating those emissions. The scope categories are described as follows:

- **Scope 1** includes direct emissions from sources owned and controlled by Leahy BTV, such as fuel combustion in Airport-owned vehicles and equipment, natural gas consumed to heat Airport facilities and provide hot water, and refrigerant leaks from Airport-owned HVAC and refrigeration systems.
- **Scope 2** includes indirect emissions associated with purchased electricity used to power Airport facilities, including lighting, heating and cooling systems, and other electrical equipment.
- **Scope 3** includes other indirect emissions generated by third parties at or as a result of Airport activities, such as aircraft operations, tenant activities, ground transportation, and waste.

The GHGs evaluated as part of this inventory include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and hydrofluorocarbons (HFCs), which are relevant to airport operations and associated emissions sources. Perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6), which are included in the Kyoto Protocol list of regulated gases, were reviewed but are not present within Leahy BTV's operational boundary and are therefore not included in the inventory.

GHG emission sources controlled by Leahy BTV (i.e., Scope 1 and 2 emissions) include (in order from largest to smallest):

Scope 1 (Direct Emissions):

- Natural gas for building heating and hot water systems
- Fleet vehicles and ground support equipment
- Refrigerant leaks from HVAC and refrigeration systems

- De-icing chemicals applied to airfield pavements
- Emergency generators and backup power systems

Note: Leahy BTV's purchased electricity is supplied by Burlington Electric Department (BED) and Green Mountain Power (GMP), which provide 100% carbon-free electricity. Under the market-based accounting method, Leahy BTV's Scope 2 emissions are zero.

Inventory Years

Leahy BTV previously developed GHG inventories for 2022 and 2023 as part of earlier ACA certification applications. **Table 1-2** identifies which inventory years were submitted in those filings and which are included in this 2026 submission.

Outside of the ACA program, Leahy BTV also completed non–third-party-verified inventories for 2010 and 2019. The initial GHG inventory, completed in 2010 as part of the City of Burlington Climate Action Plan (2012), was limited to the Airport's vehicle fleet and its natural gas and electricity consumption.

Table 1-2: ACA GHG Inventory Years by Certification

ACA Verification	2022	2023	2024
Level 1 (2024)	☑		
Level 1 Renewal (2025)		☑	
Level 2 (2026)	☑	☑	☑

Carbon Management at Leahy BTV

Leahy BTV's Carbon Management Plan (CMP) provides the framework for reducing GHG emissions from sources under the Airport's operational control and for supporting ACA Level 2 compliance. The CMP focuses on Scope 1 and Scope 2 emissions and establishes Leahy BTV's implementation approach, governance structure, and performance tracking process.

Using its independently verified 2022 inventory as the baseline, **Leahy BTV has adopted an intensity-based target to reduce combined Scope 1 and Scope 2 GHG emissions by 60 percent by 2035, measured in kg CO_2e per passenger movement, with a long-term goal of achieving net-zero Scope 1 and Scope 2 emissions by 2050**. This approach accounts for changes in passenger activity over time while tracking emissions performance from Airport-controlled sources. Leahy BTV's Scope 1 and Scope 2 target framework is consistent with the ACA carbon management framework recognized by ACI-NA and supports BED's local electrification and fossil-fuel-reduction goals.

The CMP identifies a set of measures to help achieve this target, including annual GHG inventories and improved data governance, thermal decarbonization planning for buildings, HVAC optimization, fleet transition planning, refrigerant management, deicing process improvements, optimization of emergency generator testing practices, and carbon screening for capital projects. It also builds on actions already underway, including renewable electricity supply, electric vehicle

(EV) deployment, EV charging installation, and sustainability features incorporated into major capital projects.

The plan also defines oversight, implementation, monitoring, training, and annual review procedures so Leahy BTV can track progress, maintain documentation, and demonstrate continued improvement under ACA.

The Carbon Management Plan is provided as a separate supporting document for the ACA Level 2 application.

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GHG Emissions Inventory Results

Total GHG emissions for calendar year 2024 were estimated to be 1,193.5 metric tons (MT) of CO_2e. All reported emissions are attributable to Scope 1 sources under Leahy BTV's operational control, as Scope 2 emissions from purchased electricity are zero under the market-based accounting method due to the Airport's 100 percent carbon-free electricity supply.

Scope 3 emissions were not quantified as part of this inventory, consistent with ACA Level 2 requirements, which focus on emissions sources under the Airport's operational control.

2024 Emissions Inventory

The results of the 2024 Leahy BTV GHG emissions inventory are summarized in **Table 2-1**. The methodology used to derive these results is described in **Chapter 3, Methods**.

Table 2-1: 2024 Leahy BTV Emissions Inventory

Scope	Source	MT CO_2e	% of Total
1	Building Heating (Natural Gas)	755.3	63.3%
	Airport Fleet Vehicles	306.0	25.6%
	Refrigerants	78.8	6.6%
	De-icing Chemicals	52.8	4.4%
	Emergency Generators	0.6	<1%
	Total Scope 1 Emissions	**1,193.5**	**100%**
2	Purchased and Self-Produced Electricity	0	0%
	Total Scope 2 Emissions	**0**	**0%**
	Total 2024 Emissions	**1,193.5**	**100%**

1 Totals may not sum due to rounding.

The 2024 inventory indicates that Scope 1 emissions are dominated by building heating and fleet fuel consumption, which together account for approximately 90 percent of total emissions. Natural gas use for terminal and facility heating represents the single largest emissions source, highlighting the importance of building energy performance in achieving future reductions.

Historical Trends

Historical Scope 1 and Scope 2 GHG emissions and corresponding emissions intensity metrics are summarized in **Table 2-2** and **Table 2-3**. These results provide a baseline for assessing emissions performance over time and support Leahy BTV's demonstration of emissions reduction under the ACA Level 2 (Reduction) framework.

Table 2-2 summarizes historic market-based emissions and emissions intensity for the baseline year (2022), 2023, the available-year average, and the 2024 reporting year. **Table 2-3** presents the corresponding location-based results for informational purposes.

Based on this analysis, the 2024 market-based emissions intensity of 0.877 kg CO_2e per passenger movement is lower than the two-year average of 0.909 kg CO_2e per passenger movement, demonstrating a reduction in emissions intensity consistent with ACA Level 2 requirements.

Table 2-2: Historical Scope 1 and 2 Inventories – Market-Based (MT CO_2e)

	Scope 1	Scope 2	Total Scope 1 + 2	Passenger Movements	Emissions Intensity (kg CO_2e/Movement)
2022	1,226.9	0	1,226.9	1,232,455	0.996
2023	1,073.9	0	1,073.9	1,305,626	0.823
2-Year Average	**1,150.4**	**0**	**1,150.4**	**N/A**	**0.909**
2024	**1,193.5**	**0**	**1,193.5**	**1,360,407**	**0.877**

Table 2-3: Historical Scope 1 and 2 Inventories – Location-Based (MT CO_2e)

	Scope 1	Scope 2	Total Scope 1 + 2	Passenger Movements	Emissions Intensity (kg CO_2e/Movement)
2022	1,226.9	1,117.6	2,344.5	1,232,455	1.902
2023	1,073.9	1,216.3	2,290.2	1,305,626	1.754
2-Year Average	**1,150.4**	**1,167.0**	**2,317.4**	**N/A**	**1.828**
2024	**1,193.5**	**1,231.0**	**2,424.5**	**1,360,407**	**1.782**

Source: Burlington International Airport (BTV), *Passenger Enplanements Data (June 2026)*, https://www.btv.aero/images/uploads/ENPLANEMENTS_JUNE_2026.pdf; Burlington International Airport (BTV), *Passenger Deplanements Data (June 2026)*, https://www.btv.aero/images/uploads/DEPLANEMENTS_JUNE_2026.pdf

1 Emissions intensity is calculated as total Scope 1 and Scope 2 emissions divided by annual passenger movements (enplanements and deplanements).

2 Scope 2 emissions are reported as zero under the market-based accounting method due to Leahy BTV's carbon-free electricity supply.

3 The two-year average intensity represents the average of annual intensity values for 2022 and 2023.

4 Totals may not sum due to rounding.

Leahy BTV's market-based Scope 1 and Scope 2 emissions decreased from 1,226.9 MT CO_2e in 2022 to 1,073.9 MT CO_2e in 2023, reflecting reduced energy consumption across primary emissions sources. Emissions increased modestly in 2024 to 1,193.5 MT CO_2e, but remained below the 2022 baseline year. This increase is likely attributable to increased passenger activity (1,305,626 movements in 2023 v. 1,360,407 movements in 2024), refrigerant leaks occurring and corrected in the reporting year, as well as changes in facility configuration and associated building system performance following the completion of the Terminal Integration Project (TIP), which

introduced a significant terminal addition and reconfigured passenger processing areas, including expanded seating, amenities, and a consolidated security checkpoint.

When normalized by passenger activity, emissions intensity declined from 0.996 kg CO_2e per passenger movement in 2022 to 0.823 kg CO_2e per passenger movement in 2023, before increasing slightly to 0.877 kg CO_2e per passenger movement in 2024. Compared to the two-year average intensity of 0.909 kg CO_2e per passenger movement, the 2024 value represents an approximate 4 percent reduction, demonstrating overall progress toward reducing emissions per unit of passenger activity.

Overall, the observed trend reflects the effects of operational improvements, continued reliance on carbon-free electricity, and evolving facility conditions associated with recent capital projects. The use of an emissions intensity metric accounts for changes in Airport activity levels, providing a consistent and comparable measure of emissions performance over time.

3

Methods

The following sections describe the methodology used to calculate the 2024 GHG emissions inventory, including the emission factors, calculation approaches, and data sources applied to each Scope 1 and Scope 2 emissions category.

Emissions Factors and Formulas

The 2024 GHG emissions inventory was developed using ACI's Airport Carbon and Emissions Reporting Tool (ACERT) (version 7.2532) to estimate Scope 1 and Scope 2 emissions. The methodologies implemented within ACERT are consistent with ACI's Guid*ance Manual: Airport Greenhouse Gas Emissions Management* (2009) and the Greenhouse Gas Protocol.

The data generated through ACERT are directly transferable to the ACA Online Application Portal and are structured to support reporting requirements for each level of the ACA program (e.g., Level 2 – Reduction).

Limitations and Exclusions

Leahy BTV made reasonable efforts to quantify emissions for all applicable categories under the ACA Level 2 framework. However, certain emission sources do not apply to Airport operations or are not present within the established organizational and operational boundaries. These exclusions are summarized in **Table 3-1**. Additional detail on each category is provided in the sections below, including the basis for exclusion.

Table 3-1: Excluded Emissions Categories

Scope	Category	Reasoning
1	Solid Waste Treatment	No on-site solid waste processing
1	Wastewater Treatment	No on-site wastewater processing
2	Purchased Heat or Steam	No purchased heat or steam

Data Sources

Data collection for the 2024 GHG emissions inventory was coordinated by Leahy BTV staff, including Madison Reagan, Environmental Compliance and Project Manager, and Larry Lackey, Director of Planning, Engineering and Sustainability. These staff members were responsible for internal coordination and collecting data from the departments identified within the organizational boundary described in **Chapter 1, Introduction**, as well as directly from relevant vendors and service providers. VHB, preparers of this inventory, obtained utility consumption data from BED, GMP, and VGS directly from utility billing records and online account portals.

Scope 1 Emissions

Scope 1 emissions include direct emissions from sources owned and controlled by Leahy BTV. At Leahy BTV, these emissions are primarily associated with natural gas combustion for building heating, fuel use in Airport-owned vehicles and equipment, emergency generator operation, refrigerant leakage, and surface de-icing activities.

Natural gas is the primary fuel used for stationary combustion in building heating systems. Diesel and natural gas consumed in Airport-owned emergency generators are also included as stationary emission sources. The combustion of gasoline and diesel in Airport-owned vehicles and equipment is classified as a mobile emission source under Scope 1.

Additional Scope 1 sources include refrigerant use and surface de-icing. Fire training, as well as solid waste and wastewater treatment, were excluded from this inventory, as these activities do not occur within Leahy BTV's operational boundaries.

Data for each relevant emissions category were compiled from source records or developed using standardized estimation methods, and all resulting values were converted to consistent metric units for input into the ACERT model. All values were then processed within ACERT to calculate Scope 1 emissions in metric tons of carbon dioxide equivalent (MT CO_2e).

Stationary Combustion Emissions

Fuel Use for Heating

Leahy BTV facilities are heated with natural gas supplied by Vermont Gas Systems (VGS). Usage data were obtained directly from the VGS online portal at the individual account level and compiled for all Airport-operated meters for the 2024 reporting year. Monthly consumption data for each account were aggregated into a single dataset, as documented in *VGS Gas Report Usage CY24-Summary Level.xlsx*.

Total natural gas consumption across all accounts was 154,225 Ccf for 2024. Of this total, 13,137 Ccf was associated with Account #245184-7 (Meter #118494), which serves the Quick Turnaround (QTA) Facility and is fully backbilled to rental car tenants (Enterprise, National/Alamo, Avis/Budget, and Hertz/Dollar). Consistent with the organizational boundary defined for this inventory, these tenant-attributable emissions were excluded.

The remaining 141,088 Ccf represents natural gas consumption attributable to Leahy BTV operations and is used as the basis for Scope 1 stationary combustion emissions in the GHG inventory.

Table 3-2: Natural Gas Consumption for Building Heating

Fuel Type	Fuel Consumption
Natural Gas	141,088 Ccf

Fuel for Emergency Power Generation

Leahy BTV operates six emergency generators at the Airport: two fueled by diesel and four fueled by natural gas. These generators are used primarily for periodic testing and backup power and are therefore characterized by relatively low annual operating hours.

Fuel consumption data for emergency generators were compiled and documented in *Emergency-Gen_2024 Summary.xlsx*, which includes both measured fuel use and estimated consumption.

For 2024, diesel consumption was directly measured for the Electric Vault 3 Generator and estimated for the Maintenance Shop Generator. The Electric Vault 3 Generator consumed 55 gallons of diesel, based on tracked fuel use data. Diesel consumption for the Maintenance Shop Generator was conservatively estimated at 1 gallon annually, based on limited available records. Total diesel consumption for emergency generation was therefore 56 gallons.

Natural gas consumption for the North Garage, South Garage, Terminal, and TIP Project generators is not separately metered; it is included in BTV's total natural gas consumption. To avoid double counting, natural gas use from these generators is not included in the emergency-generator emissions summary spreadsheet.

Table 3-3: Emergency Power Generation Fuel Use

Fuel Type	Fuel Consumption
Diesel	56 gallons

Mobile Combustion Emissions

Fuel Used in Vehicles

Vehicles and equipment owned and operated by Leahy BTV consume gasoline and diesel fuel. Fuel use data for 2024 were obtained from *SHOP USTs Inventory Control.xls*, which tracks daily fuel levels and dispensing activity for Leahy BTV's underground storage tanks (USTs) at the Maintenance Shop.

The dataset includes daily readings for Tank 1 (diesel) and Tank 2 (gasoline), along with calculated volumes of fuel dispensed. To determine annual fuel use, the "Total Pumped" values for each fuel type were summed across the reporting year. Negative values, which reflect inventory adjustments or measurement discrepancies, were excluded to capture only actual fuel dispensing activity.

In addition to fuel dispensed at the Maintenance Shop, BTV-owned mowers and other small equipment consume gasoline from the QTA UST. This gasoline use was added to the Maintenance Shop gasoline total to determine total 2024 gasoline consumption. No diesel fuel is dispensed from the QTA UST.

Table 3-4: Mobile Source Fuel Use

Fuel Type	Fuel Consumption
Gasoline (Maintenance Shop + QTA)	5,786 gallons
Diesel (Maintenance Shop)	24,937 gallons

Fugitive Emissions

Refrigerants

Refrigerant emissions at Leahy BTV were quantified based on annual recharge activity associated with maintenance and servicing of HVAC equipment. Refrigerant data were provided by Alliance Group Services, LLC in a *Refrigerant Usage by Tech* report for 2024 (file: *Leahy BTV – refrigerant report – 2024.pdf*), which summarizes refrigerant types, quantities added, and service dates.

The Airport's refrigerant inventory includes multiple systems using R-22 and R-410A, as documented in *Leahy BTV Refrigerant.xlsx*; however, emissions were calculated based solely on refrigerant quantities added during the reporting year, consistent with standard GHG inventory practices for fugitive emissions.

Table 3-5: Refrigerant Use

Refrigerant	Consumption
R-22	9.19 lbs.
R-410A	75 lbs.

Fire Extinguishers

Fire extinguishers at Leahy BTV are serviced by Impact Fire Services. Inspection records for 2024 were documented in *Burl Airport Report Apr-May 2024.pdf*, which summarizes the results of annual testing and servicing activities.

The inspection report indicates that all fire extinguishers were inspected and remained in service, with no CO_2 extinguishers replaced or refilled during the 2024 reporting year. As a result, CO_2 emissions from fire extinguisher servicing were reported as zero in the GHG inventory.

Process Emissions

Fuel Used for Fire Training

Fire training at Leahy BTV is conducted by a third party, the Vermont Air National Guard (VTANG) Fire Department. As a result, emissions associated with fire training activities are classified as Scope 3 and are not included in this inventory.

De-Icing Chemicals

Leahy BTV applies de-icing chemicals to pavement surfaces on the airfield. In 2024, surface de-icing products included the NEWDEAL® Blend Solid Airfield Deicer, supplied by Bourdeau Bros. of Middlebury, and CRYOTECH E36 Liquid Runway Deicer, supplied by Ninja De-Icer. Quantities of each product were obtained from vendor invoices and compiled in *Leahy BTV Surface Deicing 2024 Summary.xlsx*, which documents total annual usage and supporting calculations.

The NEWDEAL® product is a blended solid deicer composed primarily of sodium formate and sodium acetate, while CRYOTECH E36 is a liquid potassium acetate formulation. Total quantities applied in 2024 were derived directly from invoiced purchase data, including multiple deliveries of the solid deicer and a single bulk delivery of liquid potassium acetate.

For emissions calculation purposes, the blended solid deicer was disaggregated into its component chemical constituents based on assumed composition (74 percent sodium formate and 26 percent sodium acetate), consistent with ACERT input requirements.

Table 3-6: De-Icing Chemical Use

Chemical	Consumption
Sodium Formate	96,270.3 lbs.
Sodium Acetate	33,824.7 lbs.
Potassium Acetate	4,174.4 gallons

Aircraft de-icing is performed by airport tenants and is therefore categorized as a Scope 3 emissions source that is not included in this inventory.

Solid Waste and Wastewater Processing

Leahy BTV does not operate on-site solid waste or wastewater treatment facilities. Accordingly, these emission sources were excluded from the quantification of Scope 1 emissions.

Scope 2 Emissions

Scope 2 emissions are indirect emissions associated with purchased electricity used to power Airport facilities, lighting, equipment, and other electrical loads. At Leahy BTV, Scope 2 emissions are limited to purchased electricity, as the Airport does not purchase heat or steam from third parties.

Electricity consumption data were collected from utility account records for BED and GMP and compiled in native units (kilowatt-hours). Consistent with the organizational boundary defined for this inventory, electricity associated with tenant-controlled operations was excluded. Total electricity consumption values were aggregated and used as inputs to the ACERT model to calculate Scope 2 emissions in MT CO_2e.

In accordance with ACA requirements, Leahy BTV reports Scope 2 emissions using the market-based method. Location-based Scope 2 emissions are also reported for reference.

Purchased Energy Emissions

Electricity Purchased from a Third Party

Leahy BTV purchases electricity from BED and GMP. For the 2024 GHG emissions inventory, electricity consumption data were compiled from utility account records summarized in *2024_BED_Compilation_10-29-25.xlsx* and *GMP kWh Report Usage CY 24_06-18-2026.xlsx*.

For 2024, Leahy BTV-associated BED electricity consumption totaled 4,310,399 kWh, while GMP electricity consumption totaled 976,119.03 kWh across reviewed accounts. Of the GMP total, 290,778 kWh associated with the QTA account was identified as electricity backbilled to tenants

and was excluded from the inventory. This resulted in 685,341.03 kWh of GMP electricity consumption attributable to Leahy BTV. Total Leahy BTV-attributable purchased electricity consumption for 2024 was therefore 4,995,740.03 kWh.

Electricity consumption values include both metered usage and non-metered lighting loads calculated by GMP for street lighting and airfield floodlights.

Under the market-based accounting method, Leahy BTV's Scope 2 emissions from purchased electricity are reported as zero. BED's 2024 energy portfolio indicates that renewable resources provided over 100 percent of both retail sales and load for the calendar year, with renewable energy credits (RECs) retired to match consumption.[2] GMP reports that its 2024 energy supply is 100 percent carbon-free on an annual basis. Accordingly, purchased electricity from BED and GMP was reported as 0 MT CO_2e under the market-based method for the 2024 inventory.[3]

For reference, Leahy BTV also reports location-based Scope 2 emissions, which reflect the average emissions intensity of the electricity grid where the energy is consumed. Under this method, Scope 2 emissions totaled 1,231.0 MT CO_2e in 2024.

Table 3-7: Electricity Consumption

Category	Usage
BED Electricity Consumption	4,310,399 kWh
GMP Electricity Consumption (Total)	976,119.03 kWh
QTA Electricity Attributable to Tenants (Excluded)	(290,778 kWh)
GMP Electricity Consumption Attributable to Leahy BTV	685,341.03 kWh
Total Leahy BTV Electricity Consumption	**4,995,740.03 kWh**

Leahy BTV hosts a grid-connected solar photovoltaic (PV) system located on the Airport parking garage; however, the system is owned and operated by BED. The PV system is interconnected directly to the local distribution grid rather than behind individual Airport meters and therefore does not offset electricity consumption at any Leahy BTV utility accounts.

Electricity generated by the system is delivered to the grid and contributes to the overall electricity supply serving the Airport at the substation level. As a result, the system reduces the total electricity required from upstream generation sources but does not reduce Leahy BTV's metered electricity consumption or utility billing.

BED retains ownership of the associated renewable energy credits (RECs) and includes the PV generation within its system-wide renewable energy portfolio. Accordingly, the solar PV system is not separately accounted for in Leahy BTV's Scope 2 emissions inventory, and its environmental attributes are reflected in BED's carbon-free electricity supply under the market-based accounting method.

[2] Burlington Electric Department, "Our Energy Portfolio," Burlington Electric Department, accessed June 19, 2026, https://www.burlingtonelectric.com/our-energy-portfolio.

[3] Green Mountain Power, "Energy Mix," Green Mountain Power, accessed June 19, 2026, https://greenmountainpower.com/energy-mix/.

Heat/Steam Purchased from a Third Party

Leahy BTV does not purchase heat or steam from a third party. As a result, this category was excluded from the Scope 2 emissions inventory.

A

Facilities List

Table A-1: Facility List and 2024 GHG Emissions Inventory Applicability

Building ID[1]	Operating Entity	Building Location	Included/Excluded in Inventory	Reason for Inclusion/Exclusion
1	Burlington International Airport	Main Terminal Building/North and South Concourses	Included	Leahy BTV has operational control
2	Burlington International Airport	Parking Garage	Included	Leahy BTV has operational control
3	Burlington International Airport	Car Wash (Car Rental Turnaround)	Excluded	Operated by a third party; utility costs are paid by Leahy BTV and backbilled to tenants
4	Burlington International Airport	FAA/Control Tower – Base Building	Included	Leahy BTV has operational control; Shared footprint with FAA/Control Tower - Tower
4	Federal Aviation Administration	FAA/Control Tower - Tower	Included	FAA has operational control, but Leahy BTV pays the utilities; Shared footprint with FAA/Control Tower – Base Building
5	Burlington International Airport	Building 6 (Landside Maintenance)	Included	Leahy BTV has operational control
6	BETA Technologies	North Hangar	Excluded	Operated by a third party
7	Heritage Aviation	Fuel Farm	Excluded	Operated by a third party
8	Heritage Aviation	Beacon Building	Excluded	Operated by a third party
9	Heritage Aviation	South Hangar	Excluded	Operated by a third party
10	Burlington International Airport	Customs Drive (Building 870)	Included	Leahy BTV has operational control
11	Federal Express	Customs Drive	Excluded	Operated by a third party
12	Heritage Aviation	ASH (Own) Building	Excluded	Operated by a third party
13	Aviatron, Inc.	25 Customs Dr	Excluded	Operated by a third party
14	Heritage Aviation/Customs	Own Building	Excluded	Operated by a third party
15	Pratt & Whitney	Own Building	Excluded	Operated by a third party
16	Vermont Flight Academy	Valley Hangar	Excluded	Operated by a third party
17	Civil Air Patrol	Valley Hangar (Condo Hangar)	Excluded	Operated by a third party

18	Burlington International Airport	Old Continental Hangar	Included	Leahy BTV has operational control
19	Aerodyme, Inc.	Alert Pod #1	Excluded	Operated by a third party
20	Aerodyme, Inc.	Alert Pod #4	Excluded	Operated by a third party
21	Burlington Technical College	Alert Pod #2 and Office Space	Excluded	Operated by a third party
22	Dennis Demers/Shelbourne Limestone	Alert Pod #3	Excluded	Operated by a third party
23	Burlington International Airport	Storage Building (Sand/Snow Equipment Storage)	Included	Leahy BTV has operational control
24	Burlington International Airport	Vault	Included	Leahy BTV has operational control
25	Heritage Aviation	T-Hangar	Excluded	Operated by a third party
Off-Airport Facilities (Owned by Leahy BTV/Leased to Tenants)				
NA	Various	3060 Williston Rd.	Partially Included	Typically operated by a third party; Leahy BTV has operational control of utilities during vacant periods
NA	Outdoor Living South Burlington	3062 Williston Rd.	Excluded	Operated by a third party
NA	Pete's RV Center	3090 Williston Rd.	Excluded	Operated by a third party
NA	Aviation Deli	1223 Airport Dr	Excluded	Operated by a third party
NA	Vermont Air National Guard	880 Air Guard Rd	Partially Included	Operated by a third party; associated lighting is included in Leahy BTV utility accounts
NA	BETA Technologies - Manufacturing and Assembly	154 Davinci Dr	Excluded	Operated by a third party. Not fully completed in 2024.

Source: Burlington International Airport, *Inventory of Existing Conditions*, pp. 51–53, accessed June 19, 2026, https://btvmasterplan.com/wp-content/uploads/2022/01/Chapter-2-Inventory-of-Existing-Conditions.pdf.

1 Building IDs correspond to Table 2-8 (p. 51) and Figure 2-32 (p. 53) in the 2021 Leahy BTV Master Plan.