



CVG

CVG Carbon Management Plan



1. GOVERNANCE STRUCTURE AND ORGANIZATIONAL COMMITMENT



1.1 Governance Structure

The Cincinnati/Northern Kentucky International Airport (CVG) is located in Hebron, Kentucky. Since 1947, it has been serving commercial passengers throughout the Cincinnati region, including Ohio, Kentucky, Indiana, and beyond. CVG is owned and operated by the Kenton County Airport Board (KCAB), which is the governing body that sets the policies under which the airport operates. CVG is led by the airport's Chief Executive Officer (CEO) and the executive management team and is guided by its 2050 Master Plan and 2021–2025 New Heights Strategic Plan. These leaders are supported by a group of vice presidents who oversee key business functions, ensuring seamless coordination across all areas of the airport authority's business.

The CEO has the authority for CVG's day-to-day management with the Board providing policy and governance oversight. CVG is tasked with driving operational excellence and implementing key initiatives. Together, the Board and the executive management team exemplify a collaborative, forward-thinking approach that propels CVG's vision to be a catalyst for regional transformation, economic growth, and innovation.

1.2 Organizational Objectives

In 2022, CVG published an Energy and Sustainability Master Plan (SMP) which guides CVG with the goal of pursuing continuous sustainability improvements.¹ The SMP outlines the following goals:³

1. Align with ACI's airport industry goal of Net Zero Carbon emissions by 2050
2. Become an active participant in ACI's Airport Carbon Accreditation Program
3. Assist in efforts to bring sustainable aviation fuels (SAF) to our campus

CVG will utilize the SMP to provide practical and cost-effective guidance for reducing carbon emissions. Implementation of the SMP goals will be evaluated within the context of making the airport an increasingly appealing business hub by lowering operational expenses, enhancing passenger services, attracting new partners and tenants, and enabling growth in passenger and cargo operations.

¹ CVG Energy and Sustainability Master Plan, October 2022, https://assets.ctfassets.net/38z8fjm5i4nh/1P2zxHXEofV3AN6Uq7UDcY/ef5bfc6976163ad697724bafab51bad2/CVG_Airport_Authority_-_Energy_and_Sustainability_Master_Plan_Executive_Summary_Website_2.0.pdf

² *Ibid.*

³ *Ibid.*

2. RESOURCE ALLOCATION



2.1 Roles and Responsibilities

A Carbon Management Plan (CMP) contains carbon-focused initiatives that require planning and resources to execute, including staff time, expertise, and financial resources. CVG is responsible for ensuring compliance with environmental laws, noise management and sustainability planning, through education, training, inspection, analysis, design, implementation, and enforcement. The SMP was developed through collaboration among many parties through a holistic review of all processes, utility consumption, and facility conditions to reflect current operational efficiency and environmental impacts. The executive management team, advised by several external sustainability experts, were engaged through listening sessions, and a charette which helped establish short- and long-term sustainability goals.

The senior management team is responsible for leading and managing the CMP. The senior management team is supported by the Airport Utilities Manager as well as the Sr. Program Manager Terminal Modernization. Planning and Development, Asset Management, Facilities Maintenance, and Finance also provide support. This partnership is collectively responsible for collaborating on energy and carbon management across the organization to identify challenges and opportunities in carrying out the CMP.

2.2 Capital Improvement Plan Funding

CVG allocates funding for capital projects through the Capital Improvement Plan (CIP). The five-year rolling CIP includes terminal modernization, airfield, commercial development, parking and ground transportation projects, vehicles and equipment, IT, innovation and other asset

management facilities. Funding for the CIP comes from general airport revenue bonds, passenger facility charges, customer facility charges, federal and state grants, certain funds generated by the operations of the airport, and other third-party funding received from tenants.⁴

In terms of financial resource allocation, sustainability projects can be funded through the CIP and through the annual operating budget. Since sustainability is cross-functional, projects may be funded through various planning, design, and construction projects. CVG intends to consider the future emissions impact of investments and capital improvement projects as part of the project formulation process informed by the SMP.

2.3 External Funding

CVG also leverages external funding for carbon management and sustainability projects that align with priorities established in the SMP. CVG has been successful in securing utility rebates to fund projects; for example, CVG has received incentives from the Duke Energy Smart Saver Business Program⁵ to fund energy efficiency projects. See Section 4 for additional information on rebate value and projects.

Based on the project type, CVG also pursues state, regional, and federal grant funding. In 2023 and 2024, CVG secured grants from Ohio-Kentucky-Indiana Regional Council of Governments (OKI) for Carbon Reduction Program funds for installation of electric vehicle (EV) charging infrastructure. In September 2024, CVG secured Fiscal Year 2023 AIP Supplemental Discretionary Grants funding for a runway lighting project, further described in Section 3.

⁴ CVG, *Cincinnati/Northern Kentucky International Airport Basic Financial Statements and Other Required Information issued under the provisions of the Office of Management and Budget Uniform Guidance*, December 31, 2023 and 2022, https://assets.ctfassets.net/38z8fjm5i4nh/6f421JTeLH26AQK5DyTP3z/17f66f5e7b0fdde4b9f1213cf66e9611/KCAB_2023_financial_and_audit_reports__client_copy.pdf

⁵ Duke Energy, <https://www.duke-energy.com/Business/Products/SmartSaver>

3. CARBON MANAGEMENT INITIATIVES



CVG employs numerous strategies to address carbon emissions such as methods to reduce Scope 1 and 2 emissions by addressing fleet, buildings, and other infrastructure. Additionally, CVG partners with airlines and other tenants to address carbon emissions reductions. The emissions-reduction strategies are organized into the following categories, and each has a corresponding subsection to further describe the initiatives.

3.1 Energy Management

The majority of CVG carbon emissions are due to the purchase of electricity and natural gas. CVG has made, and will continue to make, reasonable efforts to reduce its carbon footprint and reduce its operational costs by optimizing its use of these two commodities. The SMP outlines a number of energy management upgrades for energy efficiency throughout the airport campus. Specific future actions include LED lighting upgrades across the entire campus, HVAC renovations of Concourse A, Airfield Maintenance Building 3, controls upgrades at CVG Centre, upgrades to chilled water plants at the Main Terminal and Concourse B, and heating plant upgrades at the CVG Centre, Main Terminal, and Concourse B.

Over the past several years, new energy efficient LED lighting has been installed around the airport, saving money on electricity costs and reducing Scope 2 greenhouse gas (GHG) emissions. In 2024, CVG received an Airport Improvement Program grant for the reconstruction of Runway 18C-36C lighting, and reconstruction of electrical vault equipment to enhance operational resiliency, increase energy efficiency, and improve safety during nighttime or inclement weather conditions.

CVG's building HVAC systems are monitored by the Airport Utilities Manager through building management systems designed to optimize energy use. Recent HVAC upgrades include replacing chillers in the CVG Centre in 2022 and new chillers with variable speed drives for Concourse B in 2021. These actions represent significant investment by CVG to increase the efficiency of heating and cooling delivered to its facilities.

3.2 Terminal Modernization Program

CVG is currently undergoing a terminal modernization program, Elevate CVG, from 2025 through 2029. The program is taking a phased approach to improve the baggage handling system, terminal, concourses, restrooms, and overall circulation. The first phase of the program is upgrading the baggage handling system to enhance baggage handling capacity and efficiency. The current baggage handling systems draws a significant amount of electricity, and the new system should help reduce the energy usage.

3.3 Electric Vehicle (EV) Charging Infrastructure Program

CVG currently has several Level 1 chargers offered to customers at parking facilities around the airport, as pictured in Figure 1 and Figure 2.

⁶ Elevate CVG, <https://www.cvgairport.com/business/elevate-cvg/>



Figure 1. Level 1 Charging Stations at CVG ValuPark Lot

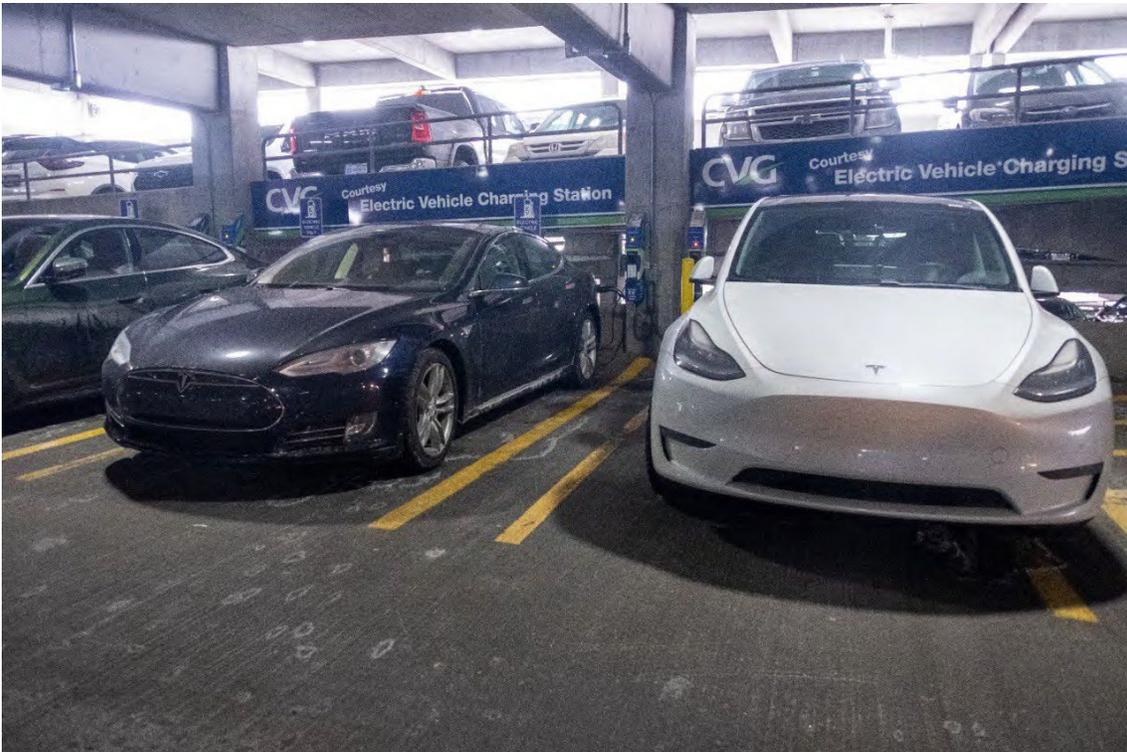


Figure 2. Level 2 Charging Stations in Terminal Parking Garage

CVG developed an EV Framework, a roadmap for planning the implementation of EV infrastructure across campus. In 2023, CVG was awarded \$750,000 in funding from the OKI Carbon Reduction Program Grant to install four direct current fast chargers (DCFCs) at the airport Transportation Network Company parking lot. In 2024, OKI awarded CVG an additional \$2,250,000 to

support EV Infrastructure projects at the CVG Centre, Terminal Garage and Valet. The chargers are scheduled to be procured in 2025.

There is also charging infrastructure on the airfield that airlines use for electric ground support equipment. This equipment is installed and managed by the airlines and ground handlers. An example is portrayed in Figure 3.



Figure 3. Charging Station for Electric Ground Support Equipment at CVG

3.4 Stakeholder/Tenant Partnership - Kentucky SAF Coalition

In 2021, CVG partnered with several key businesses, such as DHL and Amazon, as well as large companies in the Cincinnati region and from across Kentucky, including GE Aerospace and UPS, respectively, to form the Kentucky SAF Coalition. CVG continues to support the activities of this Coalition, which boasts nearly two dozen partners across the aviation, energy, and agriculture industries.

While CVG supports airline partners' need to have SAF available for use at the airport, the objective of the Kentucky SAF Coalition is much broader. It is working to (1) advocate for supportive SAF policy to the Commonwealth

of Kentucky, (2) study and validate the market opportunity for SAF in Kentucky to produce a diversity of SAF feedstocks, which would lead to SAF production locally through several pathways, (3) raise awareness about and educate key stakeholders on the economic opportunity that SAF presents, and (4) realize a long-term vision to see as much of the SAF value chain—producers, blenders/refiners, and users—operate in Kentucky.

4. REPORTING EMISSIONS REDUCTION PERFORMANCE

In CVG's inaugural Airport Carbon Accreditation (ACA) application in 2024, CVG indicated that absolute emissions would be the metric for evaluating emissions reduction performance. GHG emissions are tracked on an annual basis, and many of the emissions reductions that CVG achieves come from energy efficiency projects. CVG has received more than \$350,000 in rebate incentives

from the Duke Energy Smart \$aver Program since 2019. This program was utilized to install LED lighting and controls in the parking garage. Duke Energy estimates the energy savings from the lighting upgrades to be 3,942,875 kilowatt-hours (kWh) per year. Duke Energy projects financial savings of almost \$200,000 a year related to the lighting upgrades for the parking garage.

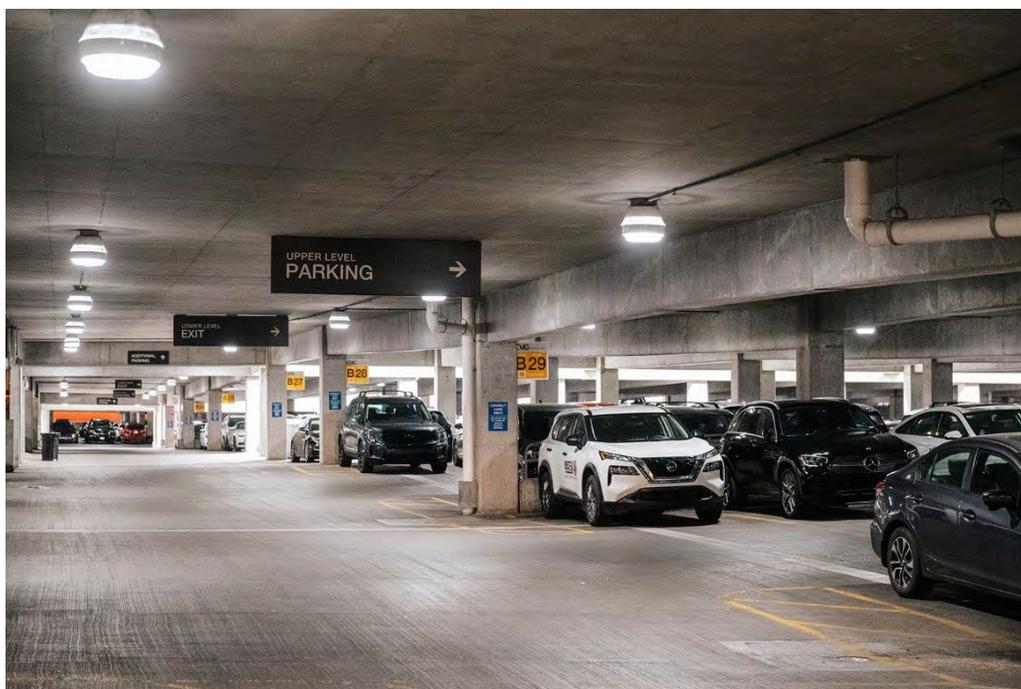


Figure 4. LED Lights in Parking Garage

Table 1. CVG Rebates

Project	Year	Rebate
LED lighting for Parking Garage	2020	\$332,955.00
Roof for High Voltage Building	2019	\$31,0181.50

The SMP quantifies estimated dollar savings for the identified energy conservation measures and opportunities. In 2022, LED

upgrades in Fleet Maintenance Building 4 were estimated to save 199,697 kWh.

5. IMPLEMENTATION



Successful implementation of a CMP will require cross-organizational support with clearly established roles from all levels of the organization. Several departments at CVG have primary responsibilities related to the implementation of the CMP.

The senior management team is responsible for leading the ACI ACA process as well as overarching

sustainability initiatives of the organization. The Vice President of Engineering & Planning assesses opportunities to incorporate sustainability initiatives into capital improvement projects.

The Airport Utilities Manager is responsible for managing electrical and natural gas assets. This role also works on promoting energy efficiency measures and projects for the CIP and acquiring utility rebates. The Airport Utilities Manager is also leading a utility master planning effort.



Figure 5. CVG at Work

Critical to the success of the CMP is communicating across the organization about the value of achieving the carbon reduction goals set by CVG. The communications strategy should raise awareness

of the staff and key stakeholders through emphasis on energy-saving practices and equipment. Staff and stakeholders should be informed periodically of the carbon reduction goals and progress towards meeting them.

6. COMMUNICATION, AWARENESS, AND TRAINING



The CVG Public Affairs Department updates CVG public-facing websites and provides information to the traveling public. The department also leads external communications and outreach and regularly releases articles, newsletters, and press releases to share information with the public through various channels. In the context of the CMP, the Public Affairs Department plays a role in communication of emissions performance to relevant external stakeholders.

CVG intends to further identify job-specific knowledge and skills needed to execute decarbonization initiatives and provide training opportunities, as relevant. In August 2022, CVG held an EV 101 training, and in March 2023, CVG held an electric vehicle supply equipment (EVSE) 101 training with internal stakeholders. The organization will continue to develop staff training on the topics of GHGs and carbon emissions as new initiatives are undertaken across the organization.

7. SELF-ASSESSMENT, ACCOUNTABILITY, AND AUDITING



CVG collects and analyzes utility data on a monthly basis to identify any discrepancies and reconcile them with the utility. CVG uses utility information, generator metered hours, and fueling invoices to conduct an annual GHG inventory for the airport. This inventory is the primary way of monitoring carbon emissions reductions and performance towards CVG's long-term goal of carbon neutrality by 2050. All units are converted to metric tons of carbon dioxide equivalents using recognized GHG Protocol consistent emission factors. This report is produced with

the assistance of an external consultant to ensure accuracy and robustness of data. CVG contracts with a third-party auditor to verify the records and data for the purpose of certification in the ACA program. CVG compiles a quarterly scorecard on the key performance indicators for its New Heights strategic plan to the KCAB.