



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. The CVG Airport Authority (CVGAA,) led by the airport's Chief Executive Officer (CEO) and the executive management team, 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.

Along with the Board's oversight, the CEO has the authority to handle CVG's day-to-day management. While the Board provides critical strategic governance, the CVG Airport Authority 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 Commitment

In 2022, CVG published an Energy and Sustainability Master Plan (SMP) in which the CVG Airport Authority committed to “continuous sustainability improvements.”¹ These improvements align with the Airports Council International's (ACI's) definition of sustainability, which includes the “approach to Economic Viability, Operational Efficiency, Natural Resource Conservation, and Social Responsibility (EONS) across all operations of an airport.”² Within the SMP, the CVG Airport Authority committed to achieving 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 to further our commitment to carbon reduction and environmental sustainability
3. Commit to an innovative approach to bring sustainable aviation fuels (SAF) to our campus
4. Develop and adopt an Environmental, Social, and Governance (ESG) reporting framework.

With a goal of creating a viable future for the region and industry, sustainability is a critical part of the CVG Airport Authority's mission. The CVG Airport Authority aims to drive progress across the region, industry, and beyond by utilizing the Sustainability Master Plan and providing a practical, cost-effective model for reducing carbon emissions. Achieving the Sustainability Master Plan goals will position the airport as a more 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. CVGAA is responsible for ensuring compliance with environmental laws, including 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 at CVG. The executive management team, led by several external sustainability experts, were engaged through listening sessions, and a charrette which helped establish short- and long-term sustainability goals.

The Senior Manager of Sustainability and Environmental, Social, Governance (ESG) Compliance is responsible for leading and managing the CMP. This position is supported by the Airport Utilities Manager, responsible for many of the energy management activities at CVG, as well as the Sr. Program Manager Terminal Modernization. Planning and Development, Asset Management, Facilities Maintenance, and Finance also provide supporting effort. 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

CVGAA 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 ESG operating budget. Since sustainability is cross-functional, projects may be funded through various planning, design and construction projects. CVGAA intends to consider the future emissions impact of investments and capital improvement projects as a basis for prioritizing sustainability projects, as set forth in the Sustainability Master Plan. The ESG Department is part of the CIP appropriations review process.

2.3 External Funding

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

Based on the project type, CVGAA 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, CVGAA 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



CVGAA employs numerous strategies to address carbon emissions at all levels of operations, such as strategies to reduce Scope 1 and 2 emissions by addressing fleet, buildings, and other infrastructure. Additionally, CVGAA employs strategies to address carbon emissions through highlighting partnerships with airlines and other tenants. 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 CVGAA's carbon emissions are due to the purchase of electricity and natural gas. CVGAA has made, and will continue to make, a marked effort 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, geothermal ready renovation for the Police Department, 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 replaced lighting around the airport, saving money on electricity costs and reducing Scope 2 greenhouse gas (GHG) emissions. In 2024, CVGAA 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.

CVGAA'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 CVGAA to increase the efficiency of heating and cooling delivered to its facilities.

3.2 Terminal Modernization Program

CVGAA 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, and terminal improvements for security queues, restroom improvements, circulation improvements, and concourse improvements. The first phase of the program is upgrading the baggage handling system to enhance baggage handling capacity and efficiency to support the implementation of a new baggage handling system. The current baggage handling systems draws a significant amount of electricity, and the new system should help reduce the energy usage at CVG.⁶

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

CVGAA developed an EV Framework, a roadmap for planning the implementation of EV infrastructure across campus. In 2023, CVGAA 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 CVGAA 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, CVGAA partnered with several key business partners, 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. CVGAA continues to coordinate the activities of this Coalition, which boasts nearly two dozen partners across the aviation, energy, and agriculture industries.

While CVGAA aims to meet 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. This work will support local communities with new market access, bolster existing Kentucky industries such as agriculture—an industry finding new uses for commodities—and ensure that Kentucky's strong aviation industry, with CVG as a dominant entity, has the tools required to conduct business effectively for many years to come.⁷

⁷ CVG Airport Authority, Environmental, Social, and Governance Report, 2023, https://downloads.ctfassets.net/38z8fjm5i4nh/50CcRh96knAuj8u1G3Jtva/4a1df4b219b1b3f6cc2048a2e6702d6e/2023_ESG_Report.pdf

4. REPORTING EMISSIONS REDUCTION PERFORMANCE

In CVGAA’s inaugural Airport Carbon Accreditation (ACA) application in 2024, CVGAA decided 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 CVGAA achieves come from energy efficiency projects. CVGAA has received over \$350,000 in rebate incentives

from the Duke Energy Smart Saver Program since 2019. This program was utilized to install LED lighting and controls in the parking garage at CVGAA. 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.

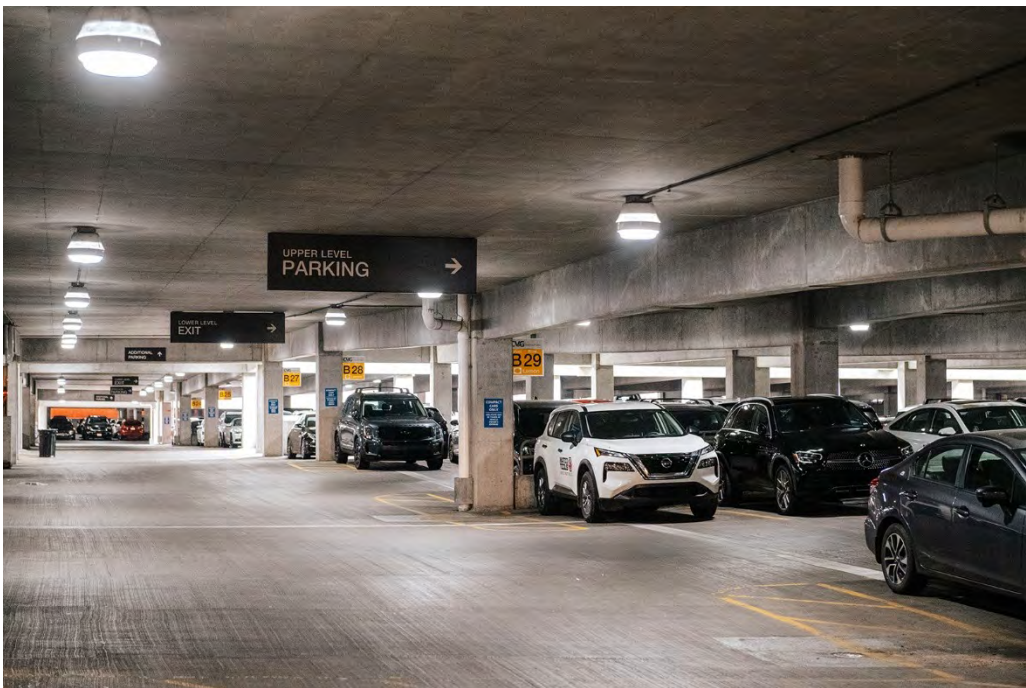


Figure 4. LED Lights in Parking Garage

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 Energy and Sustainability Master Plan 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 and serious commitments and accountability from all levels of the organization. Several departments at CVGAA have primary responsibilities related to the implementation of the CMP.

The Senior Manager of Sustainability and Environmental, Social, Governance (ESG) Compliance is responsible for leading the ACI ACA process as well as overarching

sustainability initiatives of the organization. The Vice President of ESG Initiatives also develops plans and policies and promotes initiatives to help CVGAA attain goals set out in the strategic plan.

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 the understanding and buy-in of staff across the organization. An effective communication strategy will facilitate this and is important to achieving the carbon reduction goals set by CVGAA. The communications strategy should raise awareness

and obtain buy-in from staff and key stakeholders through energy-saving practices and equipment. It should also inform staff and stakeholders of the carbon reduction goals and progress towards meeting them.

6. COMMUNICATION, AWARENESS, AND TRAINING

The CVGAA Public Affairs Department updates CVGAA 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. CVGAA sustainability and carbon management commitments, initiatives, and progress are often documented and shared with the public through the CVG website. This communication helps to raise awareness of the various programs that CVGAA is implementing and shows how stakeholders can contribute to the success of the initiatives. In the context of the CMP, the Public Affairs Department plays a role in communication of emissions performance to relevant external stakeholders.

Internally, the Vice President of ESG Initiatives and the Senior Manager of Sustainability & ESG Compliance

are responsible for developing internal and external communications on implementation of the SMP and other sustainability initiatives. Currently, they periodically contribute to the biweekly CVG Connections employee newsletter, as well as the Terminal Times, a monthly publication from the terminal communications department.

Upon adoption of the CMP, CVGAA intends to further identify job-specific knowledge and skills needed to execute decarbonization initiatives and provide training opportunities, as relevant. In August 2022, CVGAA held an EV 101 training, and in March 2023, CVGAA held an electric vehicle supply equipment (EVSE) 101 training with internal stakeholders. In August 2024, the ESG Report Kickoff was held with CVGAA employees. 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

CVGAA collects and analyzes utility data on a monthly basis to identify any discrepancies and reconcile them with the utility. CVGAA uses the 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 CVGAA'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. CVGAA contracts with a third-party auditor to verify the records and data for the purpose of certification in the ACA program. Data from the carbon footprint is published in CVGAA's Environmental, Social, and Governance Report, which is published on CVGAA's website and is available to all interested stakeholders. In addition, CVGAA compiles a quarterly scorecard on the key performance indicators for its New Heights strategic plan to the KCAB.