

## 2. SUSTAINABILITY PLAN FINAL

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### 2.1 Introduction

As part of the Terminal Area Master Plan (TAMP), Central Wisconsin Airport (CWA or the Airport) developed this Sustainability Plan to proactively integrate sustainable measures into the Airport's long-range planning efforts. Even prior to this formalized plan, CWA has had a long history of incorporating sustainable practices that make sense into its development projects and day-to-day operations.

A primary driver for developing this plan was airport administration's desire to drive down operating expenses, specifically through increased efficiency of operations and resource consumption, to keep expenses low for airport users. Between the pilot shortage and a slower post-pandemic recovery than the industry as a whole, CWA is fighting for every dollar it can get and airport administration acknowledges the importance of stretching every dollar to maintain its financial self-sufficiency. Additionally, CWA desires to contribute to the Federal Aviation Administration's (FAA) goal of building a net-zero sustainable aviation system by 2050. The FAA has made a commitment to making aviation cleaner, quieter, and more sustainable.

According to the [FAA's Airport Sustainability webpage](#), sustainable actions "reduce environmental impacts; help maintain high, stable levels of economic growth; and help achieve 'social progress,' a broad set of actions that ensure organizational goals are achieved in a way that's consistent with the needs and values of the local community." In November 2021, the FAA published the United States Aviation Climate Action Plan, which describes a government-wide approach to set the aviation industry on a course to achieve net-zero emissions by 2050. In April 2022, the FAA, along with industry stakeholders, launched an Airports Climate Challenge to help achieve this goal. Developing this Sustainability Plan and identifying actions it can take to become more sustainable is one way CWA can contribute to achieving this industry-wide goal. Further, with recent infrastructure grant funding trends prioritizing sustainability criteria, airport administration recognized the importance of documenting sustainability measures and goals to better position the Airport for these funding opportunities.

### 2.2 Sustainability Visioning Session

In February 2023, the project team facilitated a sustainability visioning session with Airport leadership. This included a brief presentation on various definitions of sustainability, local context, and common drivers for sustainability. This was followed by an interactive discussion with Airport leadership to determine its specific definition of sustainability, gain an understanding of CWA's sustainability vision and drivers, develop a customized sustainability statement, and identify sustainability focus areas. The scope of work for this project included the identification of three to four focus areas that would be used to develop CWA's Sustainability Plan, which is a component of the overall Terminal Area Master Plan. Each of these elements of the visioning process is discussed in the following sections. A copy of the sustainability visioning session meeting summary and presentation is included at the end of this chapter.



### 2.2.1 Sustainability Definition

While sustainability generally refers to balancing financial, environmental, and social considerations (the “triple bottom line”) in decision making, organizations can take different approaches to defining sustainability depending on the unique characteristics of their airport, the local environment, and community factors. To develop CWA’s customized definition of sustainability, airport administration reviewed several commonly cited sustainability definitions during the sustainability visioning session to better understand how a focus on sustainability will meet CWA’s needs, while recognizing that this definition can evolve over time. Ultimately, airport administration developed a customized definition of sustainability based off the Airports Council International – North America (ACI-NA) EONS (Economic, Operational, Natural Resources, and Social) definition, which goes beyond the “triple bottom line” of sustainability. Including Operational considerations means airports consider sustainability in their governance, the way they do business, and the ways they manage both day-to-day operations and long-term planning. CWA defines sustainability as:

***A holistic approach to managing an airport to ensure the integrity of the economic viability, operational efficiency, resource conservation, and the Airport’s responsibility to the communities we serve.***

### 2.2.2 Sustainability Statement

After identifying a sustainability definition for CWA, the next step in the sustainability visioning process was for airport administration to consider how this idea can be embraced at the Airport. A sustainability statement clarifies the vision and direction in which an organization wants to move in terms of sustainability and how it relates to social, financial, operational, and environmental factors. This statement also serves as a guiding beacon that affects decision-making, operations, and strategy for the Airport’s future. After discussion, Airport staff identified the following sustainability statement:

***CWA aims to preserve and continuously improve the Airport as an economic engine, responsible community partner, and a resilient resource.***

### 2.2.3 Identification of Focus Areas

Sustainability Focus Areas help narrow the focus within planning to those elements that are most applicable to an organization. After reviewing and discussing more than a dozen potential Focus Areas during the sustainability visioning session, CWA staff selected the Focus Areas below as being most relevant and important to the Airport and community. These Focus Areas will help CWA prioritize its sustainability goals and efforts and provide a roadmap for implementation. CWA is committed to implementing sustainable initiatives that benefit three key areas:

- **Airport Finance.** As a vital economic engine in the region, a focus on financial sustainability will allow CWA to serve the community into the future and fulfill its mission to be a catalyst for economic growth. A focus on finance considers generating revenue, considering return on investment (ROI) in decision-making, and reducing expenses to allow the airport to continue to operate and grow long into the future.



- **Planning and Resilience.** The Airport's ability to plan for and adapt to changing circumstances while fulfilling its core purpose is essential in an age of unforeseeable disruption and volatility.
- **Energy.** Improving energy efficiency and sustainability will result in both environmental and financial benefits for CWA because reducing energy/fuel use can reduce greenhouse gases (GHG) and general pollution, as well as operating costs for the Airport.

A detailed discussion of each Focus Area can be found in Section 2.6. Additionally, the sustainability effort for the TAMP included an electric vehicle planning analysis and solar feasibility study. More detailed information on each of those can be found in **Appendices B** and **C**, respectively.

### 2.3 Local and Regional Context

Alignment of CWA's sustainability efforts with those of the local community can increase the Airport's chances of success in implementing sustainable measures and obtaining community buy-in. A review of local sustainability efforts revealed that the Airport's internal efforts to be financially sustainable are in line with efforts currently being made by local jurisdictions. For example, local counties are linking economic vitality and environmental health in their comprehensive plans, many of which include a segment dedicated to sustainability. Regionally, jurisdictions are searching for ways to reduce energy consumption, improve energy efficiency, and promote use of renewable energy through efficient building design, solar implementation, and electrification. Specifically, many regions served by CWA incorporate some level of sustainability into their broader planning efforts. This includes Marathon County's commitment to economic sustainability and sustainable land use, along with their inclusion of airport resilience in the [Marathon County 2016 comprehensive plan](#); [Wausau's 2017 comprehensive plan](#) goal to develop sustainability initiatives; and [Stevens Point's standalone sustainability plan](#).

Additionally, the airlines and rental car companies serving CWA have documented sustainability goals and initiatives to which they are dedicated. These goals include waste diversion, electrification, and fuel reduction. This indicates that CWA's passengers and other users are likely to be receptive to new sustainability initiatives as they are used to seeing and participating in similar efforts throughout the community. Aligning efforts with local and regional partners will allow the Airport to leverage momentum in attaining greater sustainability, such as improvements in energy efficiency and contributing to the FAA's Net-Zero goals.

### 2.4 Community Engagement

The overall TAMP project engaged the community through a Public Advisory Committee (PAC) and Technical Advisory Committee (TAC) that met throughout the project, as well as through a public open house held midway through the planning process. Community feedback was also sought as project updates were shared regularly at the CWA Joint Airport Board meetings, which are open to the public. In December 2023, the key components of CWA's Draft Sustainability Plan were presented to both the joint PAC and TAC stakeholder groups and the Joint Airport Board, and members of both groups had the opportunity to ask questions and provide input. As initiatives from this Plan are implemented, CWA will further engage community members and stakeholders, as appropriate.



## 2.5 Baseline Data

The project team reviewed energy use and costs over several years to identify any trends in electric, natural gas, and fuel use over the review period. This report focuses primarily on 2021 and 2022 data, as those were the most recent full years with complete and available information at the time of the review. However, to better understand trends in cost and consumption, data will be compared to years outside of this time period in a few instances.

Over the two-year period from 2021-2022, the average cost of gasoline increased by 87 cents per gallon, the average cost for electricity increased by 1 cent per kilowatt hour, and the average cost of natural gas increased by 22 cents per therm. While consumption of fuel decreased, electricity consumption remained relatively consistent, only increasing by 1.47 percent between 2021 and 2022. Natural gas usage increased by 23 percent between 2021 and 2022, which reflects the increase of natural gas consumption by Wisconsin as a whole. As shown in **Figure 2-1**, a large spike in natural gas use in January and February 2022 has the most impact on the overall increase in natural gas use in that time frame. **Figure 2-2** shows a decrease in natural gas consumption between 2020 and 2021 while the amount spent on natural gas increased by \$2,701. It is important to include 2020 data when examining natural gas costs and consumption to account for an anomaly in data between April and August 2021<sup>1</sup>. The inverse relationship between dollars spent on fuel and natural gas and the consumption of fuel and natural gas at the Airport is attributed to the significant increase in fuel and natural gas prices. **Figure 2-1** highlights the changes in spending on fuel and electricity between 2021 and 2022, and on natural gas between 2020 and 2022. **Figure 2-2** shows an overall decline in fuel, a slight increase in electricity use, and a larger increase in natural gas use.

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<sup>1</sup> Natural gas data for April, May, June, July, and August of 2021 is derived from an average of 2020 and 2022 natural gas bills. This is intended to account for a gap in data where natural gas use was reported to be 0 kWh during those months, which is about 150 kWh less than average for May through August and over 1,000 kWh less than average in April.

Figure 2-1 Changes in Energy Spending

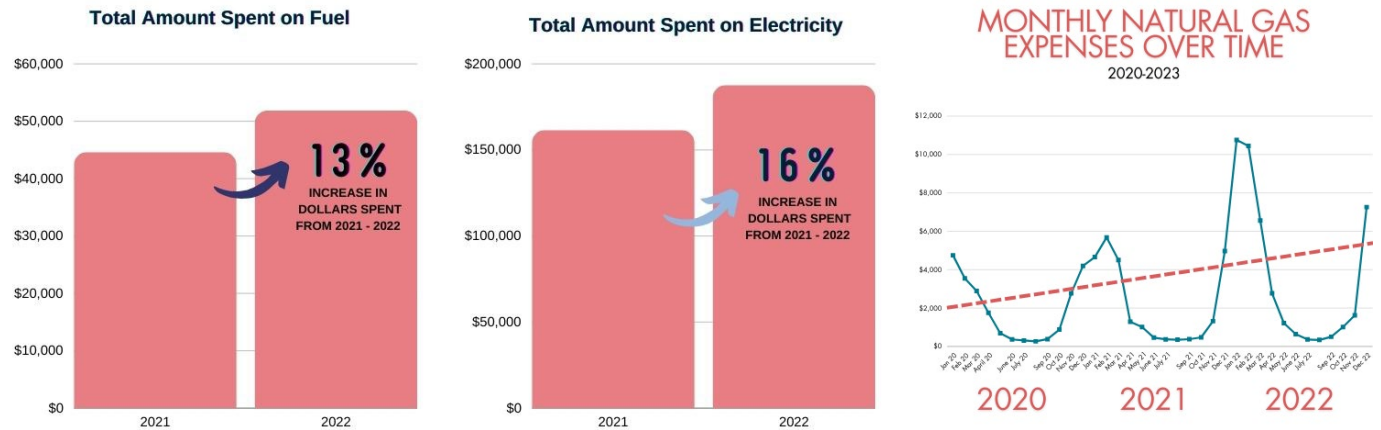
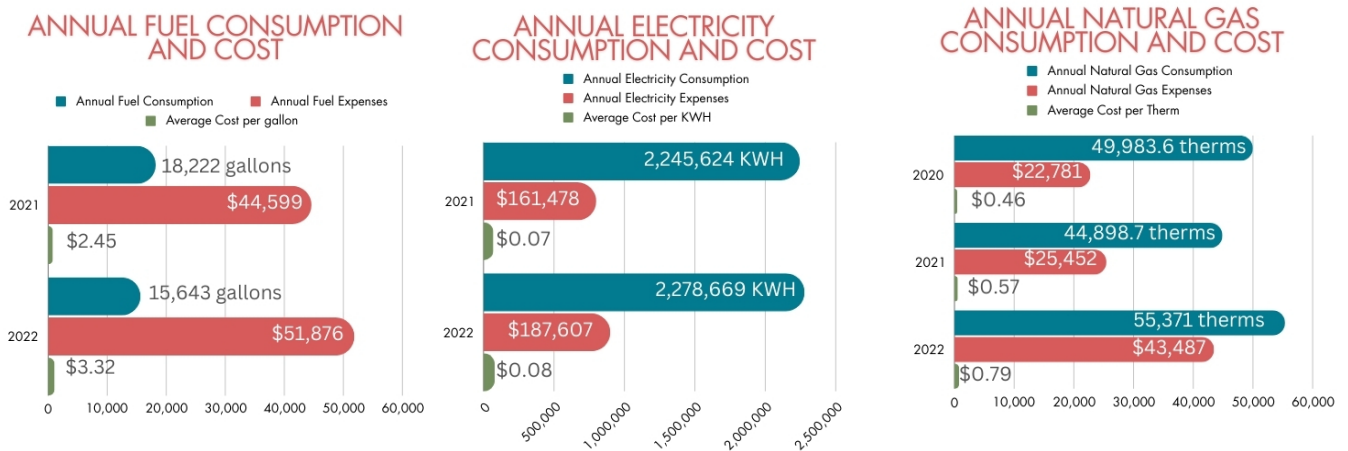


Figure 2-2 Changes in Energy Consumption



## 2.6 Focus Areas

The three focus areas CWA selected—Airport Finance, Planning & Resilience, and Energy—complement each other in that some initiatives will benefit multiple goals across the Focus Areas, allowing the Airport to make progress on different goals (i.e., improvements in energy efficiency will both reduce operating expenses and reduce energy usage). This Plan defines “goals” as the desired results within each focus area, “metrics” as ways to measure the success of each goal, and “initiatives” as future recommended actions the Airport can implement to help attain a goal. As initiatives are implemented, financing mechanisms, community engagement efforts, and schedules will be developed, as needed. The following sections detail goals, metrics, and initiatives that CWA can consider implementing in its day-to-day operations and integrating into long-term planning efforts.



### 2.6.1 Airport Finance

An airport's financial stability is crucial to its long-term viability, along with the viability of tenant businesses. Further, CWA's financial sustainability takes into account the economic value that the Airport provides to its community and the entire region. CWA emphasizes this priority in its mission statement: the Airport aims to "provide premier access to the world through aviation and be a catalyst for economic growth in our communities."

Airport finance includes all revenue and expenditures associated with the operation, maintenance, and improvement of the facility. CWA's existing practices focusing on enhanced financial stability include measures that are unique to the Airport, such as leasing out non-aeronautical airport property for ginseng farming and selling items that would previously have been landfilled through the Wisconsin Surplus Online Auction. These practices generate revenue for the Airport that can offset operating costs. Additionally, CWA recently applied for and received an FAA air traffic control tower modernization grant as part of Bipartisan Infrastructure Law funding. In part, the funding will go toward installing new sunshades leading to climate control efficiency improvements in hot weather.

CWA's goals in this category focus on generating increased revenue and increasing financial self-sufficiency for the Airport. The Airport finds financial benefit in balancing development on Airport property with tenant relationships to support these goals. CWA understands that maintaining positive tenant relationships leads to less tenant turnover or potential for vacancy, while leases for new development must be economically viable and support Airport economic sustainability.

#### **Goals**

***Airport Finance Goal 1: Maximize local, state, and federal grant funding opportunities.***

***Metrics: Grant dollars received, number of grants***

#### ***Initiatives:***

- Integrate sustainability measures in projects based on current grant funding opportunities that require meeting sustainable criteria. (For example, roof-mounted solar on newer buildings.)
- Explore sustainability-specific grant options. (See below for examples of State and Federal funding opportunities)

The first airport finance goal seeks to take advantage of all grant opportunities and financial incentives offered by local and state jurisdictions in addition to the FAA. Implementing additional sustainability measures can be a way to secure grant funding from the FAA and other sources, as sustainability measures such as emission reductions and improved access to disadvantaged communities have become a more significant criterion in awarding competitive grants. The FAA provides airports with Airport Improvement Program (AIP) grant funding to develop comprehensive sustainability plans. This could be an opportunity for CWA if it desires to complete a full sustainability management plan, which would allow for further analysis on a broader range of sustainability subjects (i.e., GHG emissions, accessibility). AIP funds can also be used for energy efficiency improvements as long as they meet the criteria in Chapter 3, Section 70



of the AIP Handbook. Other state and FAA grants can assist in the development and maintenance of sustainable infrastructure. For example, Section 512 Energy Efficiency AIP discretionary grants are focused on energy savings. A sampling of grant programs and other financial incentives that may be applicable to CWA are described below.<sup>2</sup>

Examples of applicable Federal grants and financial incentives:

- **FAA AIP Supplemental Appropriation Discretionary Funds.** In March 2022, the President signed into law “Further Consolidated Appropriations Act, 2022,” which included an additional \$547 million of discretionary grants. Approximately half of this was specified for Community Project Funding/Congressionally Directed Spending. The remaining \$268 million was part of the Supplemental Grant Program commonly referred to as the “Climate Challenge.” Applicants seeking funding under the Climate Challenge were required to document how their projects reduced emissions and improved access for disadvantaged communities. Grants were awarded in summer of 2023. Examples of projects that were funded include solar panels and associated infrastructure, electric buses, charging stations and electrification studies. It is anticipated that FAA may do a Climate Challenge each year, so this is a funding source CWA should continue to track.
- **FAA Bipartisan Infrastructure Law (BIL) Grants.** For a period of five years, beginning in 2022, FAA is awarding nearly \$1 billion annually from the Bipartisan Infrastructure Law (BIL) Airport Terminal Program (ATP) to airports across the US to improve terminals, including increasing energy efficiency. During this same period, the FAA is also awarding \$3 billion annually from the BIL Airport Infrastructure Grant Program (AIG) for “runways, taxiways, safety and sustainability projects, as well as terminal, airport-transit connections and roadway projects.” Within the AIG Program is the FAA Contract Tower (FCT) Competitive Grant Program, providing \$20 million per year for five years to airport-owned ATCTs, such as CWA’s, to address aging infrastructure. If CWA intends to pursue BIL funding for sustainability initiatives, early coordination with the FAA ADO and Wisconsin Bureau of Aeronautics (BOA) is recommended.
- **Section 512 of the FAA Modernization and Reform Act of 2012 (Section 512).** This grant is part of the AIP discretionary program. Funding is awarded by Region and Section 512 projects are focused on energy savings, which could include projects related to energy efficiency, integration of renewable energy, or similar projects. The Section 512 Program was established to increase energy efficiency of airport power sources by making these types of projects eligible for AIP funding.
- **FAA Zero Emissions Vehicle (ZEV) and Infrastructure Pilot Program.** The Airport ZEV and Infrastructure Pilot Program is focused on improving airport air quality by facilitating use of zero emissions technologies at airports. Created in 2012, the program allows airport sponsors to use Airport Improvement Program (AIP) funds to purchase ZEVs and to construct or modify infrastructure needed to use ZEVs.

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<sup>2</sup> The Voluntary Airport Low Emissions Program (VALE) was considered for CWA; however, to be eligible for VALE, the airport must be within an Environmental Protection Agency (EPA)-defined maintenance or non-attainment area for one of the National Ambient Air Quality Standards (NAAQS). CWA is not in a non-attainment or maintenance area for any of the NAAQS and is, therefore, not eligible for VALE grants.



- **Inflation Reduction Act (IRA)**. The Inflation Reduction Act (IRA) (H.R.5376) was signed into law on August 16, 2022, providing an unprecedented \$369 billion of federal funding for energy and climate provisions. This legislation fundamentally revises the tax code to incentivize the deployment of low-carbon technologies. The IRA allows taxpayers, in some situations, to elect a direct pay option instead of a tax credit, or the option to monetize the credits by transferring them to another entity. So even if a public or governmental entity represents an airport, that entity can directly benefit from the incentives without having to go to a third party such as a power purchase financier for developments, who may or may not pass on the entire tax incentives directly to the owner. This applies to alternative vehicle fueling, renewable electricity production, carbon sequestration, clean hydrogen, zero-emission nuclear power, and more.
  - The IRA includes provisions to expand the Federal Tax Credit for Solar Photovoltaics, otherwise known as the Investment Tax Credit (ITC), offering a 30 percent tax credit to those who install a PV system between 2022 and 2032. Battery storage, geothermal, and wind systems are also eligible. Tax-exempt entities are eligible to receive the ITC in the form of a direct payment. More on the IRA's provisions to expand the ITC and how CWA could benefit from this if it pursues a solar energy project can be found in **Appendix C**.
  - The ITC also offers two bonus credits<sup>3</sup> for which CWA may be eligible that can be stacked on top of the 30 percent tax credit.
    - According to the [U.S. Department of Energy's Energy Community Tax Credit Bonus mapping tool](#), CWA is located within an IRA-defined "energy community," as it is in a directly adjoining census tract to a census tract in which a coal mine was closed after 1999 or in which a coal-fired electric generating unit was retired after 2009<sup>4</sup>. This means CWA could qualify for an additional 10 percent tax credit.
    - Further, if a project qualifies for the domestic content bonus, it is eligible for an additional 10 percent tax credit.
    - Layering these two bonus credits means CWA could potentially achieve up to a 50 percent tax credit for a solar energy project; however, eligibility should be confirmed on a project-by-project basis.
  - The IRA also offers businesses and tax-exempt organizations a commercial clean vehicle tax credit or elective pay for the purchase of commercial electric vehicles (EVs) in the amount of \$7,500 for light duty EVs and up to \$40,000 for heavy duty EVs with no model restrictions.<sup>5</sup>
- **U.S. Department of Energy (DOE) Energy Efficiency and Conservation Block Grant (EECBG) Program**. This program helps fund projects and programs that cut carbon emissions, improve energy efficiency, and reduce energy use. Approximately \$430 million in funds is available for eligible state, local, and Tribal governments. Marathon County, one of the owners of CWA, was allocated \$78,300 through this program and has until April 30, 2024, to apply for the use of those funds. Additionally, the State of Wisconsin was awarded over \$2.3 million to establish a sub-granting program to local governments for energy planning, audits, and renewable resource planning.

<sup>3</sup> <https://www.energy.gov/eere/solar/federal-solar-tax-credits-businesses>

<sup>4</sup> <https://energycommunities.gov/energy-community-tax-credit-bonus/>

<sup>5</sup> <https://www.irs.gov/credits-deductions/commercial-clean-vehicle-credit>





Examples of applicable State of Wisconsin grants and financial incentives:

- **Wisconsin Public Service (WPS) Business EV Charger Pilot Program.** CWA's utility provider, WPS, offers a pilot program to help businesses offset the upfront costs of installing electric vehicle (EV) chargers. The program applies to Level 2 or DC fast chargers. Customers need to apply for the pilot program, confirm their WPS rate is eligible, and start working with WPS's EV team prior to installing equipment.
- **Clean Diesel Grant Programs.** The Environmental Protection Agency (EPA) allocates funding for programs designed to reduce diesel emissions. In Wisconsin, these grants are administered by the Department of Natural Resources (DNR). The Clean Diesel Grants fund the retrofitting or replacement of existing diesel engines, vehicles, and equipment on both public and private fleets. All nonroad engines, equipment, or vehicles including those used in construction, handling of cargo, agriculture, mining, or energy production are eligible.
- **Energy Innovation Grant Program (EIGP).** The EIGP, administered by the Public Service Commission of Wisconsin, supports a wide variety of energy projects related to energy efficiency, renewable energy, energy storage, energy planning, and more.
- **Focus on Energy.** Focus on Energy is a Wisconsin statewide program for energy efficiency and renewable energy that helps eligible businesses save energy and money while protecting the environment. Focus on Energy information, resources, and financial rebates help to implement energy efficiency and renewable energy projects.
  - Focus on Energy's New Construction Online Tool for businesses offers technical and financial support to design teams, owners, builders, and developers throughout all stages of the design and construction process through energy design assistance and energy design review. This tool can be used for new buildings as well as for substantial renovations or major additions to existing buildings. Through this tool, Focus on Energy also offers financial incentives for designing solar-ready buildings.
  - More information on Focus on Energy's solar rebates and incentives can be found in **Appendix C, Solar Feasibility Study.**
- **Technology Investment Fund.** The Technology Investment Fund by Clean Tech Partners provides energy efficiency project financing in partnership with Focus on Energy. Eligible projects include commercial and industrial businesses seeking financing between \$50,000 - \$600,000+ with a payback of five years or less. Interest rates can be as low as 0 percent. An Energy Advisor from Focus on Energy should be contacted for additional information and to confirm project eligibility.

As Federal funding sources are becoming increasingly more competitive, it is recommended that CWA strongly consider all available funding opportunities, including local funding, for the projects evaluated in this Study. As new opportunities frequently arise, CWA may want to track the following resources for up-to-date funding opportunities:

- Focus on Energy Financing and Funding Resources: <https://focusonenergy.com/financial-resources>
- Energy On Wisconsin Funding Opportunities: <https://energyonwi.extension.wisc.edu/funding/>
- Database of State Incentives for Renewables & Efficiency (Wisconsin): <https://programs.dsireusa.org/system/program/wi>



**Airport Finance Goal 2:** *Integrate sustainability in decision making to achieve increases in revenue.*

Metrics: Annual revenue

Initiatives:

- Evaluate fee structure for parking, including when incorporating covered or EV charging options.
- Evaluate hangar rents, especially for new facilities.
- Promote the value of CWA through marketing campaigns and public relations to bolster community and stakeholder support.
- Publicize advertising opportunities at the Airport.

Future Considerations:

- Align with airline sustainability goals to enable CWA to help attract additional air service.
- Conduct a benefit-cost analysis to determine if there is a potential revenue stream associated with better protection of GSEs and other ground equipment from the weather.

**Airport Finance Goal 3:** *Integrate sustainability in decision making to achieve reductions in operating expenses.*

Metrics: Annual expenses

Initiatives:

- Incorporate energy saving measures to reduce costs of power and fuel.
- Consider energy efficiency criteria in design of new facilities. (For example, occupancy sensors and daylighting in new and updated buildings to reduce energy use.)
- Review HVAC controls and set points.
- Evaluate potential to leverage geothermal field for future cooling and heating needs.
- Enhance airport staff training to reduce duplication of efforts and long-term maintenance costs.
- Reduce, reuse, or repair materials wherever possible.
- Implement sustainable procurement practices such as purchase of renewable energy and energy efficiency technologies, and purchase of locally sourced, durable, reusable, recyclable materials, as applicable.

Future Consideration:

- Consider battery storage for solar power to reduce demand from the grid during peak hours, thus reducing costs.

Reducing operating expenses is closely tied to reducing energy usage and increasing energy efficiency; therefore, several of these initiatives are listed in both Focus Areas.

## 2.6.2 Planning & Resilience

This report defines “resilience” as the ability to adapt and recover from unexpected disturbances or unpredicted changes. Given the Airport’s mission to provide premier access to the world through aviation,



it is important to enhance both the operational and physical resiliency of CWA to avoid interruption of service and be able to quickly adapt and bounce back from any type of challenge – whether it's flooding, a global pandemic, or a power outage. For CWA, a focus on planning and resilience relates not only to infrastructure (operational resilience), but also could involve staff training (workforce resilience), community support (network resilience), or diversification of revenue sources (financial resilience).

The aviation industry experienced dramatic impacts as a result of the COVID pandemic. Materials shortages and supply chain issues have affected construction of facilities. And, with record warming temperatures and more frequent severe weather events, the Airport's ability to adapt to changed circumstances while fulfilling its core purpose is essential. Therefore, it is important that the Airport integrate resilience considerations in its planning to be able to better prepare for, adapt to, and recover from any disruption.

The ways in which development projects at the Airport are planned and contracted can support and prioritize resilience in a variety of ways. Facilities and infrastructure that are efficient and compatible in the long term help ensure the viability of the Airport and contribute to all aspects of sustainability, including financial, operational, and environmental elements. CWA has incorporated many resilience measures in the recent past, including securing a secondary runway designation by the FAA to provide options for critical aircraft in varying conditions. In addition, the Airport prioritizes long-term planning for the longevity and compatibility of facilities, financial self-sufficiency, and sources of power not dependent upon the larger grid, including solar panels.

Resilience-related recommendations can be integrated into planning, design, and contracting processes. Initiatives identified in this Focus Area will support continuity of service, build in redundancy, and help the Airport become more resilient. Additionally, sharing information with stakeholders (i.e., community and airport users) will promote greater buy-in and support for the Airport, in turn, enhancing resilience.

### **Goals**

***Planning and Resilience Goal 1: Improve operational and infrastructure resilience.***

***Metrics: Resilience measures integrated in planning and design; operational resilience practices***

### **Initiatives:**

- Consider the efficiency of snow removal in facility layout and design.
- Incorporate resilience into planning and design. (For example, considering maintenance impacts of underlying soils on new pavements, accommodating future growth in facility design, considering efficiency and reliability of electrical systems, evaluating drainage capabilities, and reserving space for future needs such as alternative fuel sources.)
- Continue to consider opportunities to create redundancies. (For example, optimal generator placement and capacity.)
- Co-locate snow removal and maintenance equipment with the maintenance facility in a central location to preserve fast response times to snow events, etc.



- Regularly review and update CWA's Airport Emergency Plan and crisis communication plan subsection, outlining roles, responsibilities, and protocols during IROPs.
- Pursue procurement and transition to F3/unleaded aviation fuels, as able.

Future Consideration:

- Consider indoor storage solution for GSEs and other ground equipment to reduce maintenance on equipment currently stored outside while providing a potential rental income stream to the Airport.

**Planning and Resilience Goal 2:** *Develop public awareness of sustainability measures.*

Metrics: *Public awareness campaign, available webpage showcasing sustainability accomplishments*

Initiatives:

- Develop sustainability accomplishments report.
- Develop a marketing and communications plan to report on progress and initiatives. (For example, provide social media or newsletter updates on sustainability efforts and successes.)

### 2.6.3 Energy

Airport facilities use energy in a variety of ways, from powering, heating, and cooling buildings to fueling airport fleet vehicles and construction equipment. Energy is measured based on the type of energy being consumed; electricity is measured in kilowatt hours (kWh), natural gas in therms, and liquid fuels like diesel or unleaded gasoline in gallons. With a direct link between energy consumption and greenhouse gases, improvements in energy efficiency can reduce emissions, as well as lead to cost reductions in airport operations. The amount of energy used can be affected by operational considerations and day-to-day decisions such as light fixture or fuel type, as well as in long-term planning in how infrastructure is laid out and where it is built, which can influence how much energy is used to reach and maintain any given facility.

CWA has prioritized energy-oriented sustainability measures such as LED conversion in buildings and on the airfield and designing to LEED certification standards for the existing terminal concourse. Additionally, CWA will consider energy efficiency and associated cost reductions for new projects during planning and design. Improvements related to energy efficiency, renewables, and reduction in energy consumption will help CWA contribute to the FAA's Net-Zero goal.

The Airport's goals as they relate to energy are to implement practices that reduce energy usage, improve efficiency, explore renewable energy, and expand infrastructure for charging electric vehicles. The Airport has already begun implementing energy-saving and fuel-saving measures, providing momentum to accomplish these goals within the long-term planning period.



## Goals

**Energy Goal 1:** *Implement practices that reduce energy usage.*

**Metrics:** *kWh of electricity, therms of natural gas, gallons of fuel*

CWA is actively pursuing ways to conserve energy. Electricity consumption at CWA from 2021 to 2022 has remained consistent, only increasing by 1.47 percent while a more significant increase was seen nationwide. According to the U.S. Department of Energy, household electricity use increased by 2.6 percent between 2021 and 2022, while buildings in the commercial use sector, such as airports, increased by 4.7 percent in that same timeframe. While 2023 data is not complete, electricity bills between June 2022 and June 2023 show an overall decline of 3 percent, which implies an overall decrease in electricity use between 2022 and 2023 can be expected. This can likely be attributed to CWA switching to all LED lights in all Airport-owned buildings and facilities including the airfield.

### Initiatives:

- Track and evaluate energy usage annually.
- Integrate required energy efficiency measures in contracts.
- Collaborate with tenants to implement energy-saving measures.
- Integrate energy-efficiency standards in planning and design to reduce operational costs while reducing energy use, such as occupancy sensors and daylighting to reduce use of interior lighting systems.
- Co-locate snow removal and maintenance equipment with the maintenance facility in a central location to minimize vehicle and equipment miles travelled to access the airfield.
- Design new General Aviation terminal to achieve net-zero emissions.
- Engage with utility provider WPS to explore any additional incentives or strategies to reduce energy usage and save money.

### Future Considerations:

- Conduct an energy audit to establish baselines for Airport facilities that use the most power and identify specific areas of improvement.
- Align with FAA net zero by 2050 commitment.

**Energy Goal 2:** *Incorporate electric vehicle (EV) planning into future projects.*

**Metrics:** *Number and type of EV charging stations*

An electric vehicle planning analysis was conducted as part of the TAMP. The analysis anticipated demand for EV charging at CWA for a planning horizon five years into the future (2028). The results of this analysis can be found in **Appendix B**. The recommendations of the EV Planning Report are summarized in the initiatives below.



Initiatives:

- Increase available EV charging options for passengers and CWA employees by installing at least 10 Level 1 EV charging ports in the West Passenger Lot.
- Collaborate with rental car tenants to incorporate four Level 2 and two DC Fast EV chargers in the rental vehicle lot, with the DC Fast chargers also available for public use.
- Provide two Level 1 EV charging ports in the General Aviation Terminal parking lot.
- Establish a new electrical service to provide power to the recommended chargers in the West Passenger Lot and Rental Car Lot.
- Work with utility provider WPS to take advantage of special utility rate for EV charging as soon as it becomes available.
- Track how much electricity is used for EV charging.
- Develop a policy addressing fees for usage of the Level 2 and DC Fast EV chargers.

Future Considerations:

- Consider electrifying GSE.
- Investigate airport-owned vehicle and equipment replacement with electric/alternative fuel options.
- Monitor EV charging use and install additional EV charging ports, as needed.

**Energy Goal 3:** *Incorporate solar power into future projects.*

Metrics: *Energy generated via solar, cost savings*

A solar feasibility analysis was conducted between July and November 2023 as part of the TAMP. This analysis considered capacity, energy generation, system efficiency, first costs, and simple payback for several potential locations and types of solar photovoltaic (PV) installations at the Airport. The analysis compared options for rooftop, parking lot carports, and ground-mounted solar installations. Locations for PV arrays that could contribute to the proposed new GA terminal building's net-zero goal were also identified. The results of this analysis can be found in **Appendix C**.

As CWA moves forward with any PV installation project, it would plan to coordinate with its utility provider (WPS), Focus on Energy, and local government units to comply with all state and local building codes, ordinances, and requirements.

Initiatives:

- Compare the pros and cons of the renewable energy measures in the Solar Feasibility Study and identify CWA's preferred/initial PV installation location.
- Coordinate with FAA on potential for discretionary AIP funding for PV equipment.
- Explore the Federal Investment Tax Credit (ITC) to accelerate the return on investment of a PV installation.
- Engage with Focus on Energy for financial support (rebates and other incentives) and implementation expertise.



- Once initial PV array is installed, monitor and track PV annual production, energy use reduction, energy cost reduction, and percent reduction in annual electrical usage; consider installing additional PV arrays as needed to offset CWA's electrical usage.
- Consider renewable energy sources such as solar installations and geothermal systems for all new buildings, including SRE/maintenance facility.
- As roofs are replaced throughout the Airport campus, consider incorporating solar arrays.

Future Considerations:

- Consider battery storage for solar power to reduce demand from the grid during peak hours, thus reducing costs.
- Consider future growth when analyzing capacity.

## 2.7 Terminal Area Master Plan Sustainability Screening Criteria

The goals identified in this chapter will be translated into screening criteria that will help weigh the benefits and drawbacks of the various Terminal Area Master Plan development alternatives through a sustainability lens in **Chapter 3 – Alternatives Analysis**.

## 2.8 Sustainability Plan Review and Improvement

The above goals and initiatives provide a roadmap for improving sustainability at CWA. Because this Plan captures only a moment in time, and conditions, technologies, and airport priorities may change, it is anticipated that sustainability goals and initiatives will evolve. Ultimately, the Airport should continually evaluate progress toward the sustainability goals and effectiveness of initiatives to record successes and to consider revising the plan or incorporating other options where steps toward a particular goal may not seem achievable. This could include a review or revision of the entire sustainability plan at once, or evaluation of individual components of the plan could be analyzed as implementation occurs to determine where improvements can be made or where changes are needed based on updated conditions.

The Airport will continue to refer to the sustainability visioning effort conducted during this Terminal Area Master Plan to ensure that the vision continues to reflect CWA's and the community's values and priorities. So long as it does, CWA should apply this vision to all projects and programs, as well as future goals and initiatives, to support the direction CWA intends to move in terms of sustainability. The Airport will continue to engage with its stakeholders to solicit feedback on integrating sustainability measures in planning for the future of the Airport. As individual sustainability-related projects and initiatives are implemented, CWA will leverage opportunities for broader community and stakeholder engagement.



## 2.9 Summary

The goals, metrics, and initiatives identified in this Sustainability Plan represent the broad effort that the Airport can embark on to continuously improve. It is anticipated that as these initiatives are completed, additional actions will be identified to keep sustainability considerations in the forefront of planning and implementation efforts. As this occurs, additional resources, goals, and actions should be developed based on new information, technology, and changing conditions. By becoming more sustainable, CWA will support a balanced future that is tailored to the unique needs of its passengers and the region it serves.





**SUSTAINABILITY VISIONING SESSION  
MEETING SUMMARY**

February 14, 2023  
11:00 a.m.

<b>Participants</b>	<b>Representing</b>
Brian Grefe	CWA
Mark Cihlar	CWA
Jen Wolchansky	Mead & Hunt
Colleen Bosold	Mead & Hunt
Sarah Emmel	Mead & Hunt
Evan Barrett	Mead & Hunt
Stephanie Nikho	Mead & Hunt
Pat Casey	Mead & Hunt
Joakim Osthus	Mead & Hunt
John Kramer	Mead & Hunt
Cory Leemon	Mead & Hunt

*The attached report represents this writer's interpretation of items discussed during the meeting. Any corrections or additional information should be brought to our attention for clarification.*

## Meeting Summary

Jen Wolchansky, Sarah Emmel, and Colleen Bosold, Mead & Hunt sustainability leads for the Central Wisconsin Airport (CWA) Terminal Area Master Plan, facilitated a sustainability visioning session with Airport leadership. This included a brief presentation on various definitions of sustainability, local context, and drivers for sustainability, and an interactive discussion with Airport leadership to gain an understanding of CWA's sustainability vision and identify sustainability focus categories. These will be used to develop CWA's Sustainability Plan, which is a component of the overall Terminal Area Master Plan. This information will also be used to develop sustainability screening criteria for alternatives developed in the Terminal Area Master Plan. A copy of the meeting presentation is attached and some of the highlights from the discussion follow.

## Actions Taken

### 1. Sustainability Definition

- a. **CWA leadership opted to develop a customized definition of sustainability based on the ACI-NA definition:**
  - i. A holistic approach to managing an airport to ensure the integrity of the economic viability, operational efficiency, resource conservation, and the Airport's responsibility to the communities we serve.

2. Sustainability Vision Statement

- a. **During the session, CWA leadership decided on the following sustainability statement to guide the direction CWA wants to move in terms of sustainability:**
  - ii. CWA aims to preserve and improve the Airport as an economic engine, responsible community partner, and a resilient resource.
- b. **Leadership requested dropping the word “vision” when referring to this, so going forward it will be referred to as the Sustainability Statement.**

3. Focus Categories

- a. **After much discussion, the three sustainability focus categories CWA selected were:**
  - i. Airport Finance
  - ii. Planning & Resilience
  - iii. Energy

4. Next Steps

- a. **Send out these meeting notes to confirm the definition and sustainability statement developed and focus categories selected during the visioning session.**
- b. **Develop information request for data to inform the sustainability plan.**
- c. **Embark on developing sustainability chapter, which will include CWA’s customized sustainability definition and sustainability statement, focus categories, goals, and initiatives.**
- d. **Translate the above into alternatives screening criteria.**

## Additional Discussion Areas

5. Local Context

- a. **Local sustainability efforts are not formalized enough to guide CWA sustainability planning or set benchmarks to align with.**
  - i. CWA would most like to find ways to align with airline goals to be an attractive partner and FAA goals to be competitive for funding.
  - ii. WI Focus on Energy may provide opportunities to align sustainability efforts.
  - iii. Utility provider WPS is another possible source of collaboration.
  - iv. CWA would like to be a leader in the area in intelligent sustainability efforts.

6. Drivers

- a. **A discussion of what is driving CWA to pursue sustainability measures included several factors:**
  - i. FAA funding positioning: net zero by 2050 goals may provide opportunities.
  - ii. Reduction in operating expenses through potential cost savings.
  - iii. The airport wants to implement measures that make sense in a variety of ways, including sustainability.

- iv. CWA would like to improve how they highlight current achievements and improve public perception of sustainability at the airport.

**b. CWA wants to focus on doing what makes sense, when there is a need for action.**

**7. Brainstorming**

**a. A discussion of achievements, challenges, and goals at the airport highlighted several factors:**

- i. CWA has already undertaken several sustainable steps, including updating nearly all lighting to LED, including two EV chargers in the parking area, a geothermal field providing cooling and some heating for the terminal, and recycling many materials on-site.
- ii. Some challenges specific to sustainability efforts included balancing technology with the practical use of airport facilities, for instance the concourse HVAC system does not account for the need to leave doors open.
- iii. Financial viability is a priority for CWA.
- iv. Solar power and vehicle electrification were discussed. The airport is considering expected battery life, the available land for infrastructure, and available funds for these types of efforts, as well as their impacts on energy costs at CWA.

# Sustainability Visioning

CWA Terminal Area Master Plan | February 14, 2023



*fly* **CWA**



# Team Introduction



**Jen Wolchansky, AICP, ENV SP**  
Sustainability Lead



**Sarah Emmel, AICP**  
Sustainability Support



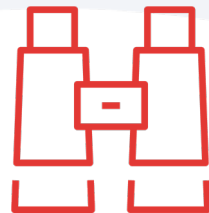
**Colleen Bosold**  
Sustainability Support

# Agenda

- **Definition of Sustainability**
- **Context/Drivers for Sustainability**
- **Sustainability Brainstorming Session**
- **Sustainability Vision Statement**
- **Sustainability Focus Categories**



Definition



Vision



Categories

# Sustainability Definition



## GENERAL DEFINITION

Triple bottom line (environmental, social, financial aspects)

## BRUNDTLAND REPORT

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

## ACI-NA DEFINITION

A holistic approach to managing an airport to ensure the integrity of the Economic viability, Operational efficiency, Natural Resource Conservation, and Social responsibility of the Airport.



**What does sustainability mean to you and your stakeholders?**

# Local Context

- **Regional sustainability efforts**
  - Marathon County
  - Portage County
  - Cities of Wausau and Stevens Point
- **Alignment with tenants**
  - Airlines
  - Concessions
  - Rental Car Companies
- **Airport development goals**
  - Solar
  - Electrification



## Marathon County Comprehensive Plan



### Issues

- **Sustainable Transportation System.** Maintaining the transportation system in a fiscally sustainable manner is an ongoing issue for the County. The costs associated with building new facilities, in addition to the ongoing maintenance costs, need to be. Finding and maintaining a consistent and adequate source of funding for various transportation projects is a continual challenge. It is important to note that the County is only responsible for maintenance on roads under its jurisdiction. Reductions in funding at the state and federal levels and a tight County budget add to the challenge of keeping road maintenance at acceptable levels.
- **Central Wisconsin Airport (CWA).** The vitality of the CWA is essential to the continued economic competitiveness of Marathon County. Airports nationwide of a similar size are struggling to remain strong in the current economy. The airport provides connectivity to larger markets to businesses and residents in Marathon County. In order for businesses to develop or for business retention to occur, the CWA needs to remain a viable provider of air transportation in the area. The CWA is a key link to businesses worldwide and without that connection, Marathon County and central Wisconsin businesses will be forced to reevaluate being in this area without their service.



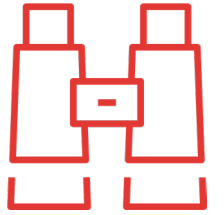
# Drivers for Airport Sustainability

- **Increase operational efficiencies**
- **Realize cost savings**
- **Reduce environmental footprint**
- **Align with local and regional sustainability efforts**
- **FAA's goal of Net Zero by 2050**
- **Improve airport resilience**
- **Funding opportunities**

# Sustainability Brainstorming Session

- **What existing sustainability measures are you proud of?**
- **What are the biggest problems or challenges the airport faces?**
- **What are sustainability elements you would like to see implemented in the future?**
- **What are your biggest constraints to implementing sustainability initiatives?**
- **What types of data do you track relative to energy, water, etc.?**

# Sustainability Vision Statement



- 1. Provide premier access to the world through aviation and be a catalyst for economic growth and sustainability in our communities.**
- 2. To provide exceptional service through socially responsible, environmentally sustainable, and economically valuable means.**
- 3. CWA aims to preserve and improve the Airport as an economic engine, responsible community partner, and a resilient resource.**
- 4. To foster a sustainable and resilient future for the communities we serve.**
- 5. To provide a safe, efficient, and sustainable gateway connecting the people and businesses of Central Wisconsin with the world.**



# Potential Focus Categories

- **Air Quality**
- **Climate**
- **Energy**
- **Water**
- **Waste**
- **Natural Resource Management**
- **Land Use and Transportation**
- **Planned Development**
- **Operations and Maintenance**
- **Airport Finance**
- **Community Relations**
- **Adjacent Land Use Compatibility**
- **Resiliency**
- **User Experience**

# Next Steps

- **Develop Screening Criteria for Alternatives**
- **Draft Sustainability Chapter**
- **Integration with Terminal Area Master Plan**

*Questions*  
&  
*Comments*



*fly* **CWA**

Mead  
& Hunt

*Thank You!*