
Akron-Canton Airport Revenue-Generating Renewable Energy Infrastructure

Akron-Canton Airport | 5400 Lauby Road NW

North Canton, OH 44720 | 330-499-4059

Mission, Vision, Values

Our Mission

To offer our customers an exceptional travel experience while serving as a major driver in the economic growth of Northeast Ohio; an approach that manages our business sensibly plus remains socially and environmentally responsible.

Our Vision

By promoting superior customer service, maintaining fiscal responsibility, and constantly investing in the improvement of the travel experience through innovation and employee engagement, we will continue to be a better way to go.

Our Values

Safety
Accountability
Growth
Integrity
Respect

Core Areas

Customer (Guest) Experience
Asset Preservation
Revenue Generation
Community Engagement

Planes are easy to move – how do we counter?

- Reduced airport operating costs, plus
 - Advocated and utilized local, state and federal grant programs
 - Supported air service and airlines through regional air service task force and formation of Airport Development District



a better way to go.®

CAK Renewable Energy Initiative



- In the last 10 years transmission and distribution cost have gone up 50%.
- Unreliable power? High energy costs? Budget constraints?
- Airport facilities that can demonstrate controlled energy costs will be a key consideration for businesses locating to a specific Airport.

a better way to go.®

CAK Renewable Energy Initiative



- On December 17, 2017, a fire at an underground electrical facility damaged two substations that serve Atlanta's Hartsfield-Jackson International Airport — then and now the world's busiest airport. The resulting 11-hour-long power outage led to the cancellation of nearly 1,200 flights.
- The Atlanta outage, and another that disrupted power for several hours at Los Angeles International Airport in June 2019, is motivating airport operators across the United States to take steps to ensure an uninterrupted supply of power.

a better way to go.®

A New Approach @ CAK

a beginning, not an end

This project is an opportunity.
The kind of opportunity that beckons
only once in a generation, perhaps
once in a lifetime!



The CAK Real Estate Strategic Development Plan

The CAK Real Estate Strategic Development Plan supports the Airport's core aviation mission by capitalizing on CAK's size and location to create innovative, sustainable, and economically beneficial commercial development of the Airport's non-aviation land.

a better way to go.®

The Conceptual Plan

The ACRAA seeks to save money and maximize opportunities for capital cost avoidance through a partnership with a qualified entity with demonstrated experience in the planning, financing, development, construction, operation, management, and maintenance of solar energy collection and electricity generation and/or storage systems for a turnkey distributed energy project with a guaranteed energy savings contract (GES) or similar on the ACRAA property.



PROJECT PARAMETERS

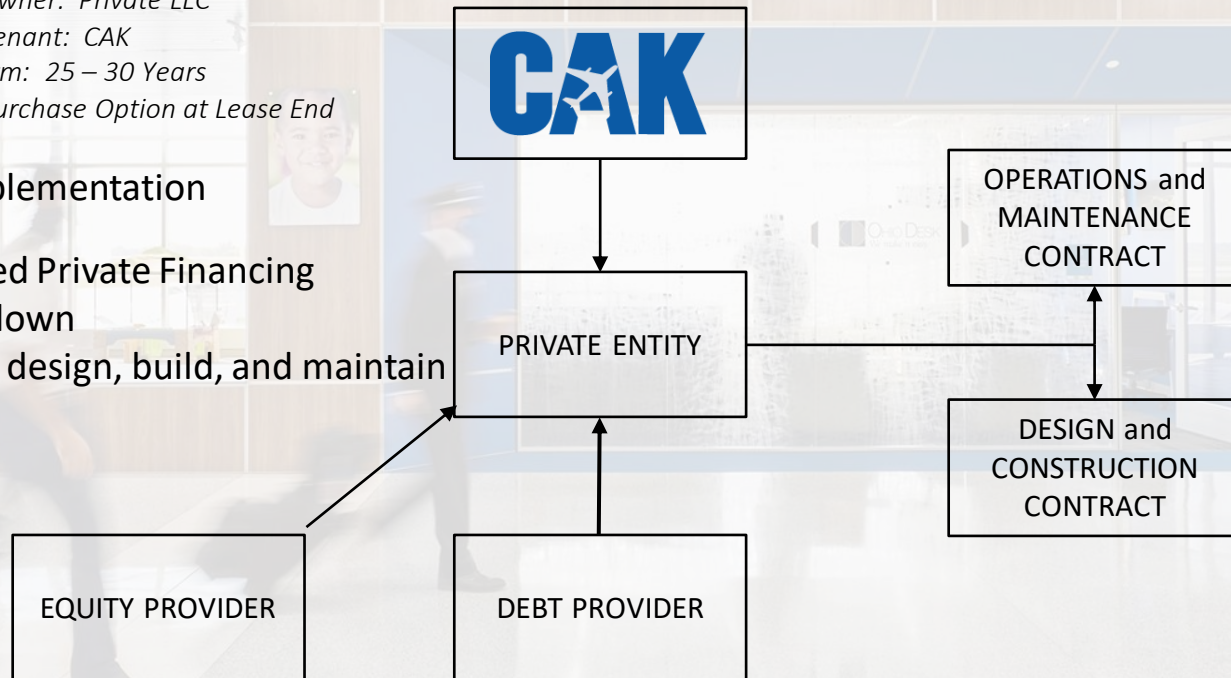
- **Public Private Partnership (P³) Structure**

- *Project Owner: Private LLC*
- *Project Tenant: CAK*
- *Lease Term: 25 – 30 Years*
- *CAK \$1 Purchase Option at Lease End*

- **Phased Implementation**

- **Consolidated Private Financing with Drawdown**

- **Contract to design, build, and maintain the project**



Sustainability Airport Master Plan (SAMP)

Integrate with renewables such as solar, battery storage, combined heat and power, plus natural gas fueled Tier 4 generators.



RENEWABLE ENERGY PROGRAM MICROGRID/SOLAR/BATTERY STORAGE/GENERATOR

PROPOSAL AND AWARD SCHEDULE

1. May 5th, 2022 RFP released to the public
2. May 18th, 2022 Mandatory Pre-Proposal Conference 2:00 PM EDT
3. May 26th, 2022 Last day for receipt of questions concerning the RFP by 2:00 PM EDT
4. June 2nd, 2022 All proposals are due by 2:00 PM EDT
5. June 9th, 2022 Interviews with the finalists (if necessary) by ACRAA Staff and Economic Development Advisory Committee (EDAC)
6. June 13th, 2022 ACRAA Staff and EDAC consider the recommendation for award.
7. June 16th, 2022 ACRAA Board Meeting to consider the ACRAA Staff and EDAC recommendation

The ACRAA reserves the right to adjust the schedule as necessary.

Errata and FAQ

Supplemental documents and files will be posted on the website

- Errata
- Questions & Answers
- Interval data



DBE Goals

To meet the requirements of Federal Department of Transportation Regulation 49 CFR Part 26, all bidders will provide evidence of the methods they have used to meet DBE/Joint Venture goals as published in the sponsor's DBE Plan and approved by the Department of Transportation.

The DBE participation goal for this project is 14 percent.

Energy Efficiency & Operational Resiliency

Upgrade existing infrastructure and incorporate new equipment for continuous power, even when utility power is lost due to storms or other disruptions (IV.B.10. & V.A.)



Current State of Infrastructure

The current electrical vault is the culmination of 75 years of compromises due to funding and technology



- lacks redundancy,
- is below grade and prone to flooding
- needs an arc flash study,
- Lacks fire suppression,
- Lacks emergency egress,
- Switching gear limits instrument approaches

What's Included



CAK Renewable Energy Initiative

IDEAL SYSTEM DETAILS

- Microgrid and Solar equipment
 - 4 MW solar PV
 - 10 MWh Battery Energy Storage Solution
 - Microgrid controller (device to direct energy to airport in most economical fashion)
 - All necessary electrical devices to make system function (wire, inverters, etc.)
 - Can be tied to tier 4 generator for demand response and/or economic demand response solution
 - Option for expansion to include additional end user (i.e., Electric Vehicle charging station, building end user demand response, natural gas end users, combined heat and power, etc.)
- New electric vault
 - Replaces current vault solving safety issue as well as freeing up mechanical space for expansion
 - New vault location will be located a distance from terminal, eliminating risk of Atlanta type event
- New Generator(s) – Tier 4 (2 MW output)
 - Replaces two existing generators
 - Allows for runtime based on economics, not just in emergency cases

a better way to go.[®]

Utility Grid

The utility grid is operated and managed by the electric utility provider. However, their power quality and stability are not always predictable. Mission-critical facilities like airports require a robust and dependable energy supply to assure continuous operation.

Utility Grid

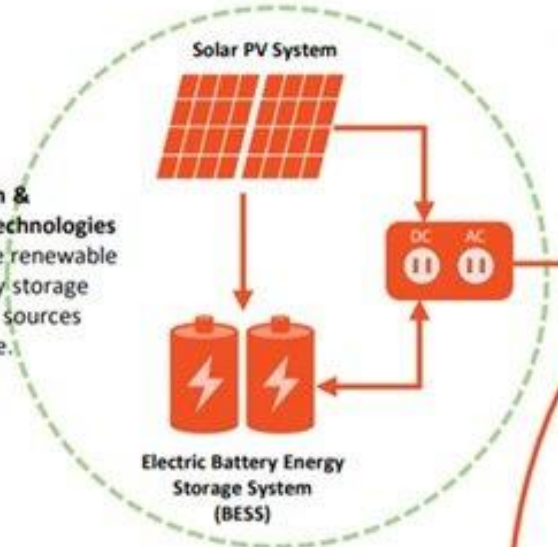
Utility Natural Gas

Island Mode

Point of Common Coupling (PCC) allows the site to connect or disconnect to the utility grid. When critical events cause a power outage from the utility grid, this technology can still provide required power supply to the airport.

Energy Generation & Battery Storage Technologies

Microgrids can use renewable energy and battery storage systems as energy sources during island mode.



Traditional Emergency Power

Diesel engine-generators are commonly used to provide emergency power during a utility outage. However, they are considered too expensive for continuous operation, cannot immediately supply power for mission-critical circuits, and may be operationally limited by air quality regulations.

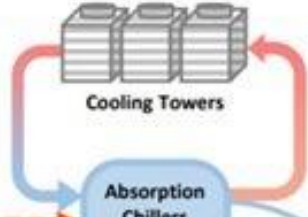


Point of Common Coupling (PCC)

- ### Airport Electrical Loads
- Lighting
 - HVAC
 - Baggage Handling
 - Airline ticketing and boarding
 - Concessions
 - Security
 - Fuel management



Waste Heat



Airport Cooling Load

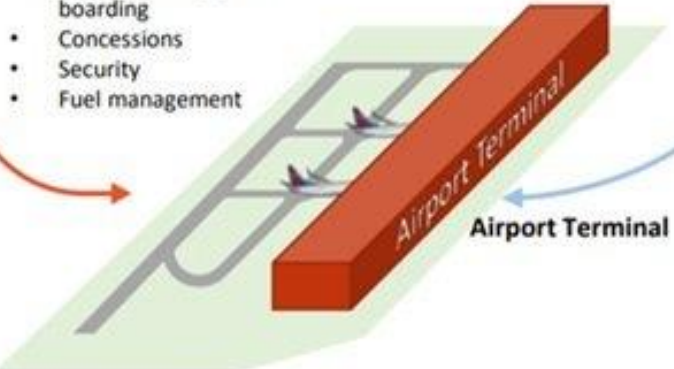


Diagram: Arup

CAK Renewable Energy Initiative



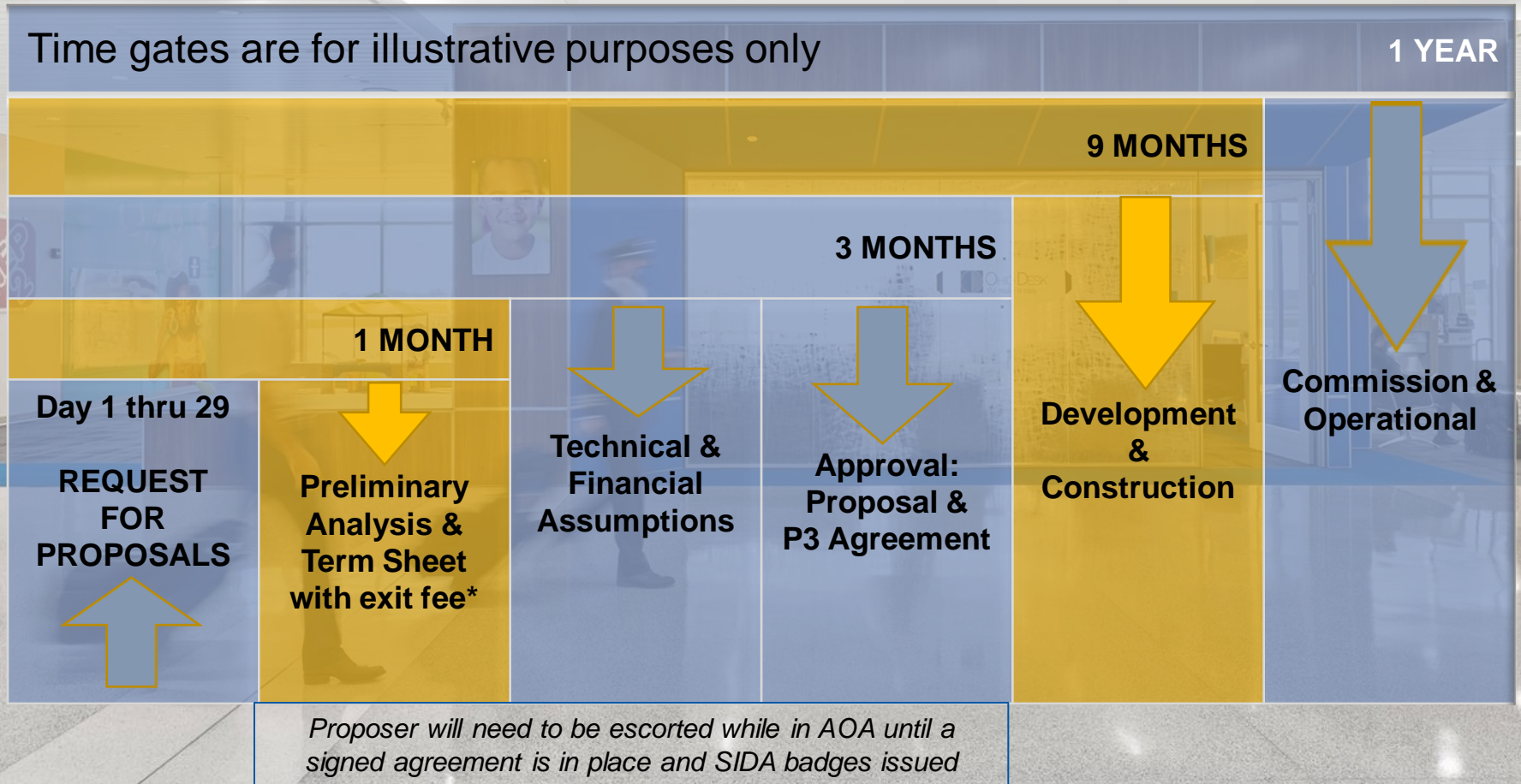
a better way to go.®

Glare and Glint Analysis

Any property identified for solar production will need to pass a glare & glint analysis keeping in mind flight operations and air traffic control operations.



NEXT STEPS



Innovation

Electric Vehicle Chargers, eVTOL and
Advanced Air Mobility chargers are the
next wave innovation



DMTF Level 2 EV Charging Station



a better way to go.®

USAF Agility Prime & Beta Technologies



- Advance Air Mobility is the future
- Electric aircraft need to re-charge

a better way to go.®

Business / Industrial Park

CAK is a great place to locate

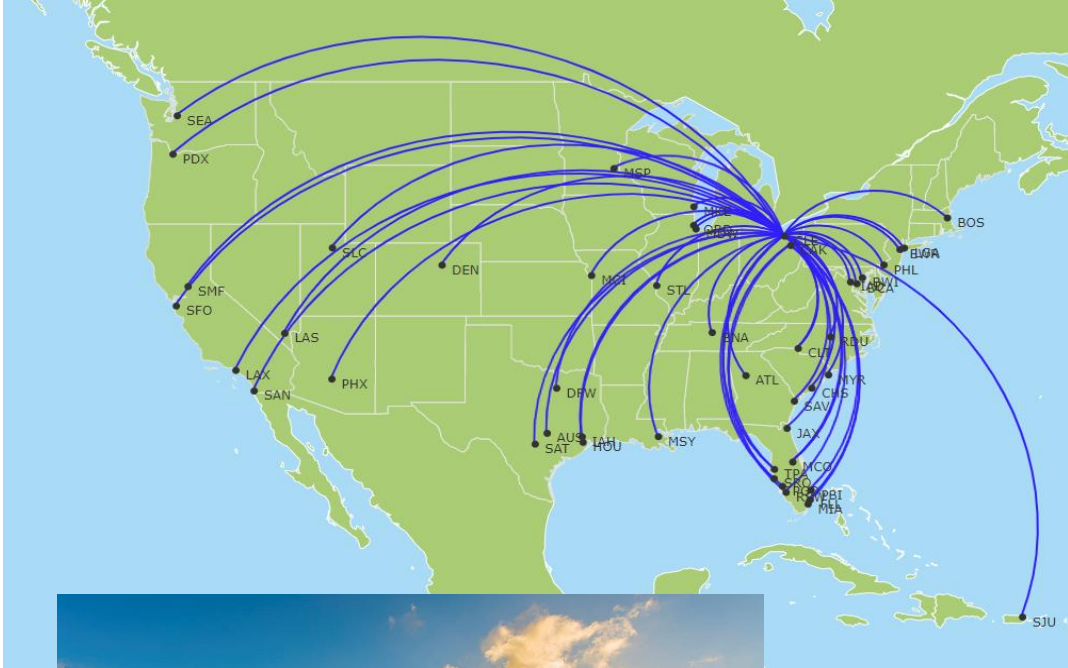


CAK Industrial Park – Port Green



a better way to go.®

Our work continues...



a better way to go.®

a better way to go.[®]

Akron-Canton Airport | 5400 Lauby Road NW
North Canton, OH 44720 | 1-888-434-2359

<https://www.cantonrep.com/story/news/2021/12/14/washington-township-solar-farm-open-house-scheduled-wednesday/6434750001/>

<https://flypittsburgh.com/acaacorporate/newsroom/news-releases/pittsburgh-international-airport-goes-live-with-first-of-its-kind-microgrid-powering-entire-facility-with-natural-gas-and-solar-energy/>

<https://www.arup.com/perspectives/microgrids-for-resilient-airports>