



A Power Generation Solutions Company

**Developer, Owner and Operator of
Distributed Power Generation Assets**

**PA Chamber Air & Aviation Infrastructure
Roundtable – September 22, 2022**



IMG Energy Solutions



IMG's portfolio approach to distributed generation provides a unique combination of renewable energy complemented by flexible, quick start, base load power generation, designed to optimize intermittent renewables while maintaining a reliable, low carbon intensity power grid.

Headquartered in Pittsburgh, PA, IMG's vision is to provide cost-effective, clean, and resilient energy to businesses and institutions to help them meet their energy goals.



Some Shameless Self-promotion



IMG is addressing the emerging need for reliable, innovative and environmentally conscious energy solutions that bridge the gap to a carbon neutral energy future.

About Us:



- Fully integrated development, construction, operations, maintenance, asset management, and project financing
- Expertise across various energy technologies, but with a focus on solar and natural gas power
- We think like an Owner because we are an Owner

Renewable energy goals are being formed across many organizations, while various sectors of our economy can benefit from a new approach to local energy production



Corporations



Hospitals



Universities



Manufacturing



Airports



Data Centers



Government/
Municipalities



Agriculture/
Indoor Farming

IMG's Natural Gas Power Solution



Clean, Flexible Power

- Start-up – less than 5 minutes
- Ability to load follow
- 65% reduction in CO₂ vs. coal
- 95% of NOx emissions removed

Robust, Proven Design

- Standard and repeatable Gen3
- Easily scalable/expandable

Siting Flexibility

- Modular, building blocks of 3-4 MW
- 20MW of power = one acre

Simplified Construction

- Onsite construction as short as four months
- Kick-off to operations < 12 months

***Pre-built and Pre-tested Modular
Building Blocks, Easily Coupled
with Clean Energy Sources like
Photovoltaic Solar***

ACAA Microgrid – An Airport First



The Airport's Goals: 1. Reduce Utility Costs, 2. Support the Local Natural Gas Industry, and 3. Make the Airport Facility More Resilient to a Major Power Outage

The Challenge:

- Goals #1 and #3 do not typically complement one another
- Typically, resiliency is driven by equipment redundancies; a project cost adder

The Solution:

- ☑ ACAA's energy load profile was a perfect fit to IMG's standard five engine, 20MW powerplant where ACAA's power demand is typically 10-12MW
- ☑ Historical load has never exceeded the output of four engines, meaning the proposed solution was inherently resilient
- ☑ When regional power prices are above the plant's cost to produce energy, unutilized ACAA plant capacity is sold into the market

The Result: With this built-in flexibility, Peoples Gas, with the assistance of CNX and IMG, is able to supply resilient power at a cost savings over current and projected grid-supplied energy

What is a Microgrid?

The definition of a microgrid is broadly a small version of the large, centralized grid typically serving an individual customer or an aggregated industrial complex

Some microgrids may have multiple power sources (solar, gas, wind, biomass) but all can self-supply their energy needs independent of, or in parallel with the grid



The Pittsburgh International Airport is the first airport facility to deploy a microgrid, but other industries have a history of relying on microgrids for resiliency and better cost control



Hospitals are required to have back-up generation which, many times, comes in the form of a microgrid. AHN, in our region, is an adopter of microgrids



Datacenters, historically, are an early adopter due to their need for resiliency



Indoor greenhouses rely on microgrids for energy, heat, cooling and CO₂ harvesting in the form of CHP facilities with clean energy (typically solar) additions

Microgrid vs. Utility Power

The Status Quo:

Large, centralized power plants have typically provided the lowest cost energy on a levelized basis due to their scale and construction cost efficiencies measured on an installed cost per kilowatt of energy

The Barrier:

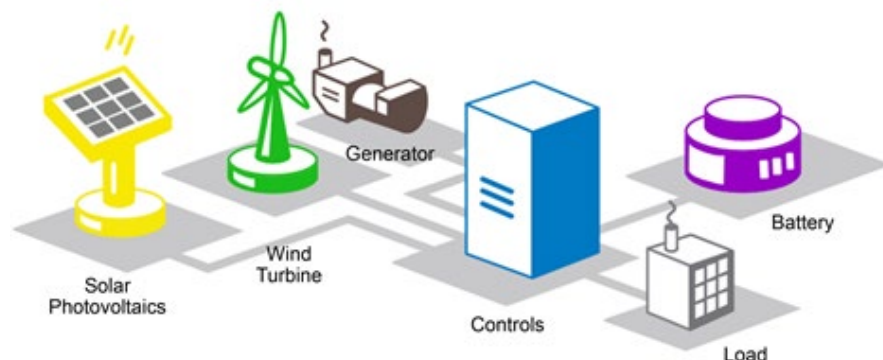
Historically, excitement over installation of a microgrid stalled when the calculated payback exceeded short-term organizational capex payback thresholds.

(CAPEX investments for most businesses fall within a 1-3 year payback horizon, while energy supply from a microgrid has run outside of this window with historical payback periods of 9-10 years without financial incentives)

Organizations historically have had difficulty valuing improved resiliency from self-generation over utility supply from large, centralized power plants.

The Upside:

Microgrids have a measurable and predictable pay back in the long-term and that term continues to shorten with improved incentives and design/build cost efficiencies



Microgrid Adoption is Growing

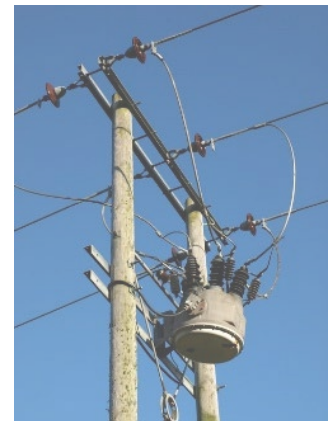


Just look to California where alternatives to grid supplied power are gaining momentum due to:

- Power outages brought on by wildfires
- High electricity rates from their utilities
- Lack of adequate supply with more frequent and intense temperature spikes
- Desire for cleaner energy sources

Businesses are now making resilient, cost-effective, clean energy supply a mainstream topic with an appetite for a longer payback due to other benefits

- Our centralized infrastructure is aging – average age of 40 years with over 25% greater than 50 years old across the US
- Transmission infrastructure is aging and severely lagging in replacement/upgrades
- Resilient transmission doesn't always align with power demand – think rural PA



Cybersecurity Considerations

- Increasingly common cybersecurity threats are raising the awareness for improved energy resiliency
 - Look to the Ukraine and highly effective attacks on their energy infrastructure by Russia dating back to early 2017
 - Closer to home, in April, 2013, an attack was carried out on PG&E's Metcalf transmission substation near the border of San Jose. The assault, lasting only 19 minutes, caused over \$15 million in damage
 - In a 2019 global survey, of more than 1,700 people specifically responsible for security of gas, solar, wind, and water assets, 56% experienced at least one shutdown or data loss in the last 12 months due to a cyber security intrusion
- Large, centralized plants create single point of failure vulnerabilities
- Whether an airport or other critical infrastructure, the ability to disconnect from the grid provides significant energy security



The Bottom Line on Microgrids

A diverse cross-section of organizations are increasingly recognizing the value of microgrids and on-site power production

Consider how your organization would benefit:



Gain more control over your energy costs



Protect your facilities from potential grid disruptions



Establish your organization as a leader in the clean energy economy

A Strong History of Success

With a seasoned leadership team with over 130 years of collective Solar, Natural Gas Power as well as CHP sector experience, IMG is devoted to playing an integral role in North America's sustainable energy landscape and we're actively exploring ways to integrate clean natural gas power with renewable energy sources similar to the innovative ACAA project



Development

- 29 ISA queue positions
- 8 executed IA's
- No contested land development or zoning approvals



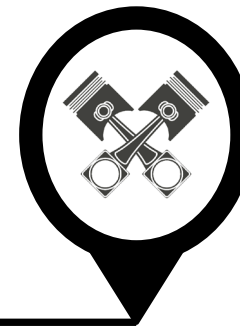
Permitting

- 21 air permits
- 11 sites fully permitted
- No appealed permits or NOV's



Construction

- 6 plants
- 11,300 linear feet of pipelines
- 8 gas interconnections
- 127 MW of installed capacity



Operations

- Over 1.0 million MWH generated
- Best-in class availability
- Zero lost time accidents and OSHA violations



Asset Management

- PJM Market Certified
- Commodity market operations and optimization
- Financial hedging and risk management