



An aircraft engine manufacturer uses artificial intelligence to transform facility operations in large manufacturing facilities.

The manufacturer transformed complex equipment and system maintenance processes to reduce greenhouse gas emissions by over 4,000 MT CO₂ equivalent & saved over USD 250,000 in a year.

The Client

A subsidiary of one of the largest aerospace, intelligence services providers, and defense manufacturers in the world. The client is an American aerospace manufacturer with global service operations and their aircraft engines are widely used.

The Challenge

As part of their corporate social responsibility initiatives, the manufacturer was looking to optimize its operations to reduce greenhouse gas emissions (GHG). Presently these targets were planned to be achieved through retrofits and upgrades. At the same time, the manufacturer was looking to reduce capital expenditure and wanted to adopt new technologies like Artificial intelligence (AI) and Internet of Things (IoT) to reduce operations costs and improve energy efficiency across their manufacturing and office spaces.

To achieve these objectives, the aircraft engine manufacturer engaged with EcoEnergy Insights.

The Solution

EcoEnergy Insights implemented a solution that leveraged the CORTIX™ platform, a proprietary AI and IoT platform that constantly monitors & analyzes facility equipment performance, predicts equipment issues, offers prescriptive recommendations. By collecting and analyzing data on a continuous basis from the connected equipment, the platform identified changes in equipment behavior. It would then provide appropriate recommendations, in natural language, to correct issues and prevent them from growing into larger problems.

The integrated solution of hardware, platform and remote services, addressed the objectives of reducing energy consumption, improving equipment health and availability, reducing maintenance costs, and managing demand for facilities. The solution combined energy data, equipment operations, sensors, and weather data to drive down energy, GHG emissions and operation cost savings.

The manufacturer's key 12 mixed-use buildings (manufacturing, office and R&D) in a single campus were onboarded to the CORTIX platform, during which all HVAC, lighting, and other facility equipment, connected to the Building Management Systems (BMS) were integrated with the platform to create an intelligent infrastructure network. The CORTIX platform provided unprecedented visibility into facility operations around equipment performance, post-maintenance interventions. It also helped increase the overall comfort and IAQ compliance levels across the buildings.

The insights & recommendations from the platform were prioritized and converted into a periodic report by our expert advisory team from our BluEdge™ Command Center. Our experts used predictive actionable insights from the platform to define action plans and ensure implementation of insights in a timely manner.

The combination of the CORTIX platform and the advisory experts helped in making the facility operations more proactive & efficient, leading to continuous savings and operational improvements.

The Result

This engagement helped address the challenges and yielded the following results across the 12 buildings in a single campus a year:

- Greenhouse gas emissions reduced by over **4,000 MT CO₂e**
- **2 million** kWh units of electricity savings
- **241 thousand** therm units of gas-savings
- **0.96 million** kWh units of electricity optimized through schedule corrections
- **129 thousand** kWh units of electricity optimized through temperature setback during unoccupied hours
- **73 thousand** kWh units of electricity optimized through AHU duct static pressure optimization
- **Less than 12-month payback** on the investment into the program

This project won 2 major awards in 2022:



**Environment + Energy Leader
Top Project of the Year award.
Colorado, USA.**



**2nd place in the category
'Growing the Green Way – Using IIoT to
Realize Your Decarbonization Goals'.
Berlin, Germany.**

Write to us at info.ecoenergy@carrier.com and elevate your business now.

About EcoEnergy Insights - EcoEnergy Insights is a leading provider of AI and IoT-enabled solutions to digitally transform building and equipment operations. Their CORTIX™ platform collects data from multiple sources, analyzes it, acts on defined deviations autonomously and offers predictive actionable insights. The platform, combined with expert human analytics, has been delivering award-winning outcomes in comfort, maintenance and energy efficiency across multiple industries such as retail, hospitality and banking. EcoEnergy Insights is a part of Carrier Global Corporation, global leader in intelligent climate and energy solutions that matter for people and our planet for generations to come.

For more information on EcoEnergy Insights and the CORTIX™ platform, visit ecoenergyinsights.com and cortix.ai. Join the conversation on LinkedIn, Twitter and Facebook.

