

CIO Review

ISSN 2644-237X

The Navigator for Enterprise Solutions

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**ARTIFICIAL
INTELLIGENCE**

EDITION



Mansoor Ahmad,
Managing Director

**MAXIMIZING
ENERGY
EFFICIENCY AND
COMFORT OF
BUILDINGS**

**ECOENERGY
INSIGHTS**



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EcoEnergy Insights



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*The annual listing of 10 companies that are at the forefront of providing
Artificial Intelligence solutions and transforming businesses*

CIOReview
(ISSN 2644-237X)

Published from
600 S ANDREWS AVE STE 405,
FT LAUDERDALE, FL 33301

www.cioreview.com



ECOENERGY INSIGHTS

MAXIMIZING ENERGY EFFICIENCY AND COMFORT OF BUILDINGS

By Justin Smith

Sustainability is the driving force of the current business landscape, and for good reason. Numerous businesses are recognizing the importance of conducting operations in a way that preserves the environment. The mantra of 'reduce, reuse, and recycle' is gaining traction, paving the way for a greener future.

As businesses strive to reach their net zero goals, the focus is increasingly on the buildings they operate in. With people spending 90 percent of their time indoors, decarbonizing building operations is a critical step toward decarbonizing the world.

This is where EcoEnergy Insights comes in with its building equipment operations management solutions and services. Its AI and IoT platform can predict equipment performance and autonomously troubleshoot and maintain them, assisting businesses in their efforts to reduce their carbon footprint.

Commercial businesses often face the challenge of balancing two conflicting goals: profitability and sustainability. They want to provide a great in-store experience for customers while also minimizing energy consumption to save costs and reduce environmental impact. This is true even for workplaces where the lighting and air conditioning within the building is critical to maintaining productivity and employee satisfaction.



Mansoor Ahmad,
Managing Director



OUR SOLUTIONS ARE DRIVING THE ADOPTION OF ENVIRONMENTALLY CONSCIOUS PRACTICES IN THE COMMERCIAL SECTOR. WITH ECOENERGY INSIGHTS, BUSINESSES SAVE ENERGY, REDUCE EXPENDITURE, AND MEET THEIR SUSTAINABILITY GOALS, WHILE THEIR EMPLOYEES FIND GREATER COMFORT AT WORK AND CUSTOMERS HAVE GREAT IN-STORE OR DINING EXPERIENCE

To address this challenge, EcoEnergy Insights leverages AI and IoT to enable smart and optimal management of equipment such as HVAC, refrigeration, and lighting. By providing real-time insights into energy usage and equipment performance, businesses can make data-driven decisions to optimize energy consumption and equipment maintenance.

“Our solutions are driving the adoption of environmentally conscious practices in the commercial sector. With EcoEnergy Insights, businesses save energy, reduce expenditure, and meet their sustainability goals, while their employees find greater comfort at work and customers have great in-store or dining experience,” says Mansoor Ahmad, managing director of EcoEnergy Insights.

PREDICTIVE MONITORING WITH AI AND IOT

At the heart of EcoEnergy Insights’ cutting-edge solution is the CORTIX platform, which combines AI, IoT, and cloud capabilities. Along with notifying the users about equipment health, it analyzes their equipment and delivers predictive insights, prescriptive recommendations, and autonomous actions across a network of buildings.

Whether they are small retail stores with four rooftop units or large malls with over 30 units, the CORTIX platform can connect to them all, either through a Building Management System (BMS) or using the unified control software offered by the CORTIXedge system. While the edge layer is implemented as hardware for older buildings with disconnected units, it can also be installed as software for structures where the HVAC equipment is controlled by a BMS.

Even though some retailers have BMS connecting their HVAC equipment, they are like islands in the broader retail network. EcoEnergy Insights connects these islands so all equipment across multiple locations can be monitored and controlled from one place. The CORTIXedge devices installed across commercial buildings—convenience stores, restaurants, gyms, salons, or clinics—are all connected to the CORTIX platform. Currently, data from over 310,000 pieces of equipment spread across the globe flows into the platform, where it is processed, and the insights are used to identify and fix any equipment issues in real-time. The resolution is autonomously transmitted back to the edge device from where the action is executed.

“The smart facility management powered by our predictive and prescriptive solutions translates into users saving time, making precise decisions, and improving productivity,” adds Ahmad.

PROACTIVELY SOLVING THE EQUIPMENT CHALLENGES IN BUILDINGS

Once the solution is implemented, EcoEnergy Insights proactively monitors the energy-consuming equipment at client sites. A store may have a summer policy of 72 degrees Fahrenheit and a winter policy of around 65 degrees, but the HVAC system may not be able to maintain this, and the energy consumption might be higher than expected.



**Mansoor Ahmad,
Managing Director**

Detecting these problems might have been difficult and time consuming until now, but with the CORTIX platform overseeing the equipment, the issues are quickly identified. It can be as simple as a refrigerant leak or a stuck damper. Instead of spending days to find the problem and scheduling a technician visit, the platform assesses patterns, detects, or suggests the likely root causes, and autonomously fixes the problem, where possible, in the shortest time.

If the problem cannot be solved autonomously, the insights and recommendations are sent to one of EcoEnergy Insights’ BluEdge Command Centers in the U.S., the Czech Republic, and India, based on the location and the services offered to the retailer. The highly skilled personnel at the command centers either perform remote support or schedule site visits. The BluEdge Command Centers provide online support and closely collaborate with third-party field technicians and vendor partners of the retailers. They can determine if the problem is solved based on the data coming into the platform, ensuring a client’s HVAC or refrigeration systems are operating optimally and that there was no disruption to the business. The BluEdge Command Centers currently manage or monitor over 54,000 buildings across the globe.

REDUCING EMISSIONS EVERY STEP OF THE WAY

Buildings are not the only contributors to emissions. Even the varied processes that go into the building’s functions contribute to the carbon footprint, whether it is the emissions from the vehicles of maintenance personnel or the resources used to keep the equipment up and running. The autonomous troubleshooting facilitated by EcoEnergy Insights reduces much of the physical intervention needed on-site. While the operators at the BluEdge Command Centers act on the insights from the platform and other data, and try to solve the problem remotely, there might be cases when physical intervention is required. In such situations, EcoEnergy Insights adopts a smart dispatch approach.

Technicians are equipped with the information they need, outlining the problem and what needs to be done to fix it. The technicians are given the essential data regarding the specific equipment, along with the parts they will need to solve the problem. If there is any other equipment on the site that needs the technician’s attention, the visit is scheduled together so as to solve the problems at once. When the technicians reach the site, they know exactly what has to be done. This reduces the need for additional visits, which in turn reduces the associated emissions from driving to and from the building. By reducing the frequency of visits, EcoEnergy Insights reduces costs for the client while minimizing their environmental impact.



AT THE HEART OF ECOENERGY INSIGHTS’ CUTTING-EDGE SOLUTION IS THE CORTIX PLATFORM, WHICH COMBINES AI, IOT, AND CLOUD CAPABILITIES. ALONG WITH NOTIFYING THE USERS ABOUT EQUIPMENT HEALTH, IT ANALYZES THEIR EQUIPMENT AND DELIVERS PREDICTIVE INSIGHTS, PRESCRIPTIVE RECOMMENDATIONS, AND AUTONOMOUS ACTIONS ACROSS A BUILDING’S NETWORK

UNPARALLELED VISUALIZATION FOR PROACTIVE DECISION-MAKING

EcoEnergy Insights aims to make store operations more proactive, as that is when businesses can take advantage of opportunities to optimize operations. This focus on being proactive is designed into all the solutions. For instance, the CORTIX platform prioritizes the units of equipment that need immediate attention, in terms of repair or maintenance, based on where the business can get better returns, whether through greater energy savings or improved customer experience. The actionable insights are in the form of easy-to-understand, natural language recommendations and are placed on a single pane of control for clients and their vendor partners to diagnose equipment issues and facilitate corrective actions. All this is done when the issue is growing and before it manifests into a larger, more expensive, and more carbon-intensive problem.

Data from the three action pillars—CORTIX platform, CORTIXedge system, and BluEdge Command Centers—can be easily visualized by building managers through a master or executive dashboard called CORTIXone. Clients can use the dashboard to track a number of performance metrics, such as the improvement in energy savings, the improvement in occupant comfort, and monitor their vendor partners and equipment performance. Clients also use the CORTIXone

dashboard to keep their teams on the same page and use the presented insights to inform their decisions, such as helping them to optimally spend their capital.

Many commercial facilities, including hotels, banks, restaurants, and retail stores, have significantly improved customer satisfaction after implementing the CORTIX platform driven solution.

A case in point is a large home improvement retailer that has been working with EcoEnergy Insights for over 10 years. Besides witnessing a significant rise in their energy savings, the client transformed their model of store equipment operations and reduced their maintenance expenditure. This is just one of the many multi-site enterprises across the world benefiting from working with EcoEnergy Insights.

USHERING IN THE FUTURE OF ENERGY OPTIMIZATION TECHNOLOGY

The backing of a highly experienced workforce drives EcoEnergy Insights’ successes. Its domain expertise in a broad range of building equipment systems, such as HVAC and refrigeration, and their control engineering aspects translates to faster fixes for client problems. The technical talent also includes specialists in AI, IoT, data analytics, and remote services.

The integrity brought by EcoEnergy Insights’ workforce inspires clients to trust the company to enable them to meet sustainability goals as well as improve their business – with better occupant comfort and product safety. Diversity is another pillar of EcoEnergy Insights’ workforce. It encourages the participation of women in this building operations industry by providing them with the technology tools needed to contribute with high-value work.

Its strong foothold in over 15 countries is a springboard for EcoEnergy Insights to grow further. EcoEnergy Insights is also expanding its solutions to address use cases in industrial facilities and data centers where HVAC systems are critical to operations. Customer collaboration and feedback form the basis of its innovation.

As clients bring forth problems and use cases, new features and upgrades are added to EcoEnergy Insights’ solution suite. Along with back-end processes, EcoEnergy Insights intends to improve the front-end features. The technicians using the CORTIX platform do not have to read charts and graphs to understand problems. Instead, they depend on conversational AI assistant features to resolve issues.

EcoEnergy Insights’ role is becoming prominent in managing buildings as commercial and industrial facilities become connected and digitalized. By exploring various energy consumption and utilization improvement opportunities, as well as working with clients on multi-year engagements, EcoEnergy Insights will keep developing new solutions and bring cost savings to clients. Its solutions can serve as the perfect tools in a retailer’s arsenal to take control of their equipment, unlock optimal performance and meet their ambitious sustainability goals. 