C3.ai

⊟ C3 AI Energy Management

Reduce Costs and Decrease GHG Emissions with AI

C3 AI® Energy Management helps companies meet ambitious financial and sustainability goals with AI-driven modeling of energy consumption and GHG emissions of any asset to detect anomalies, forecast emissions and efficiency, benchmark equipment performance, and identify opportunities for cost savings and emissions reduction.

15 – 35%

Decrease in energy costs through predictive analytics, optimization, and benchmarking

10 – 25%

Reduction in GHG emissions via AI recommendations and end to end visibility of scope 1 and 2 emissions

Accelerate

Sustainability goals such as net zero and energy efficiency with planning, benchmarking, and measuring impact

C3 AI Energy Management is the only enterprise AI application that provides comprehensive energy, water, waste, and greenhouse gas (GHG) emissions monitoring and insights within and across plants and facilities, down to the equipment level. The application integrates all internal and external energy, emissions, and operational data — including data from equipment and line sensors, historians, meters, utility bills, satellite data, facility schedules and occupancy, ERP systems, building management systems, work order management systems, weather services, and up-to-date emission factor libraries — and offers rapid configuration across a broad range of assets. By unifying data across all operations, C3 AI Energy Management presents a single comprehensive view of energy and sustainability across the whole enterprise, enabling AI-optimized opportunity identification and prioritization of projects to achieve targets.

With comprehensive and continuous AI-based monitoring across the operational footprint, C3 AI Energy Management empowers operators, managers, and executives to optimize energy use, reduce utilities expenditures, lower GHG emissions, and accelerate the energy transition to net zero.

Feature Summary

- **Comprehensive Emissions and Resource Monitoring** – Analyze and report all energy, water, and waste data in near real-time at the levels of equipment, equipment lines, facilities, and products

- **Scope 1 and 2 Emissions Analysis** – Automatically convert all fuel combustion and electricity consumption into GHG emissions at all levels of the business

- **Automated Efficiency Benchmarking** – Continuously and flexibly benchmark equipment, equipment lines, configurations, and products both within and across plants and facilities

- **Anomaly Detection** – Utilize machine learning models to detect and address data issues, billing errors, and operational energy and emissions anomalies

- **AI Baselines and Forecasting** – ML models will generate baselines and forecasts for each asset and asset type, representing expected and ideal values for emissions and efficiency performance

- **AI Gap to Ideal Analysis** – Compare individual asset performance to its ideal performance to uncover hotspots and prioritize opportunities for improvement
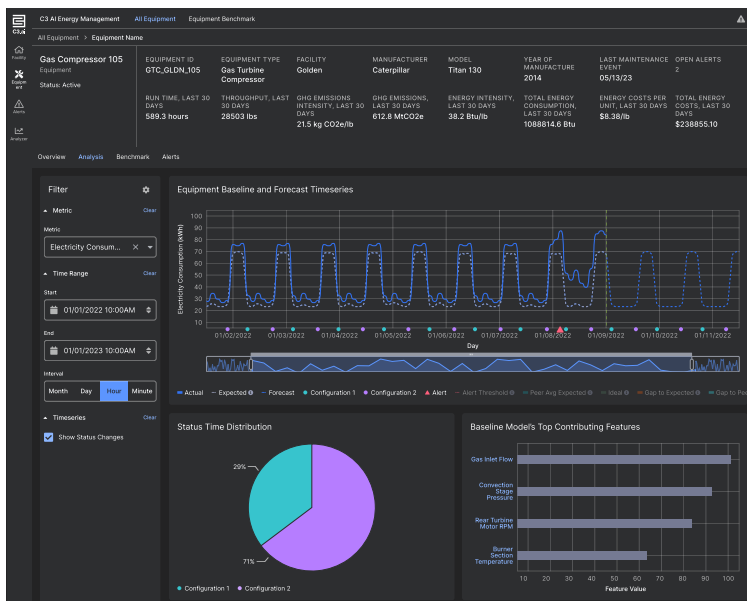

Figure 1. *C3 AI Energy Management home page provides a unified view of energy, emissions, waste, and water within and across facilities.*

Feature Summary (cont.)

- **Project Measurement and Verification** – Automatically track and report project impact using ML algorithms, consistent with IPMVP standards

- **Project Management and Planning** – Identify, prioritize, track, and collaboratively execute a portfolio of projects and sustainability measures in accordance with ISO-50001

- **Product Carbon Footprint** – Identify individual energy end-uses (e.g., heating, cooling, lighting) with AI models

- **AI Recommendations** – Leverage machine learning to identify high-value emissions reduction opportunities and recommend actions to achieve sustainability goals

- **Peak Demand Forecasting** – Leverage machine learning to predict peak energy loads, reducing energy costs and GHG emissions

- **Line and Process Visualization** – Visualize manufacturing operations within and across plants with a digital twin, modeling relationships between equipment, lines, configurations, processes, and products

- **Real-time Alerts** – Utilize pre-built alerts or easily configure custom alerts to maximize savings from the application

- **HVAC Setpoint Optimization** – Configure, run, and manage optimization models to find optimal setpoint handles for HVAC equipment to maximize energy efficiency

- **Self-Serve Data Science** – Configure advanced analytics and run custom analysis projects using self-service tools including C3 AI Ex Machina

- **Open and Extensible Data Interface** – Integrate and normalize data from any enterprise, third-party source (e.g., weather), building management system (BMS), meter data management (MDM), or distributed energy resource management (DERMS) system using industry standard templates, self-service tools, and pre-built integrations

Achieve Ambitious Sustainability Goals with Enterprise AI

Benefits of C3 AI Energy Management include:

- Decrease energy consumption by 15-35% through predictive analytics, optimization, and benchmarking

- Reduce emissions by 10%-25% via AI recommendations and streamline monitoring of scope 1 and 2 GHG emissions with end to end auditability

- Increase CapEx investment ROI by prioritizing the highest value repairs and upgrades to buildings, equipment, and energy infrastructure (e.g., solar, smart lighting, storage, EVs) informed by sustainability goals

- Improve reliability by integrating on-site power, predicting peak and outage events, detecting performance degradation, and optimizing demand across buildings

- Create alignment across the enterprise and externally by empowering operations to collaborate with corporate sustainability teams to achieve goals

- Improve energy demand forecasting accuracy with machine learning models which re-train daily to maximize performance

- Rapidly deploy and configure solutions using self-service tools for AI, analytics, dashboards, and data integrations
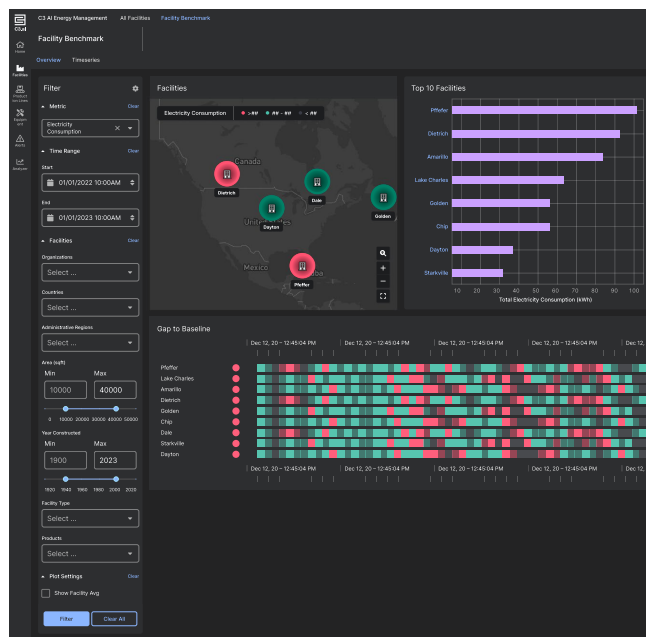

Figure 2. *With C3 AI Energy Management, facility operations have AI-enabled recommendations with supporting evidence to drive decision making and energy savings.*

Proven Results in 8-12 Weeks | Visit C3.ai/get-started