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Market Guide for Energy Management and Optimization Systems

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Volatile energy prices and weakening energy security, added to existing climate concerns, are transforming organizations' relationships with energy. CIOs in energy-intensive industries should use this Market Guide for insight into the evolving EMOS software market to support production optimization.

Overview

Key Findings

- Energy-intensive enterprises are actively looking for solutions to optimize energy consumption and reduce carbon emissions, while meeting operational goals.
- With margins under pressure, energy-intensive enterprises are focusing on improving management and performance of industrial assets to coordinate and optimize production portfolios.
- Legacy energy management system deployments are focused on reducing demand charges that vary by territory, resulting in fragmented business capabilities, which constrain production optimization across organizational silos.
- Foundational investments in measurement (i.e., submeters, industrial Internet of Things (IIoT) that improve visibility of energy consumption are necessary but are not sufficient to optimize production.

Recommendations

When managing technology and optimization, CIOs of energy-intensive enterprises must:

Define energy management and optimization goals by engaging stakeholders to streamline reporting requirements and, more importantly, set energy efficiency goals to inform EMOS capability requirements.

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- Build the business case for investing in EMOS by focusing on "two for one" benefits such as improved productivity and waste reduction to reduce utility costs and carbon emissions.
- Maximize the value of EMOS measurement and production optimization across facilities by improving IT/OT/ET/CT alignment and integration.
- Move beyond energy measurement and foundational capabilities by assessing EMOS products based on the vendors' industry-specific expertise and their ability to manage intelligent industrial assets. Seek out complex digital twins that will deliver predictive and prescriptive hyperautomation.

Market Definition

This document was revised on 6 October 2023. The document you are viewing is the corrected version. For more information, see the Corrections page on gartner.com.

Energy-intensive organizations use energy management and optimization systems (EMOSs) to design, implement, measure and optimize enterprisewide programs that manage and optimize energy performance to meet production goals. This is achieved through the provision of data collection, management, analytics, planning and reporting tools. A fully fledged EMOS provides decision support and predictive analytics capabilities to help identify opportunities for improvement, enabling organizations to conserve energy, save money, manage GHG emissions and comply with regulatory mandates. With its "manage and control" insights, an EMOS should optimize and act on decisions through adaptive asset configuration, addressing operational issues that include:

- Energy cost management
- Supply resilience
- Energy system interactivity
- Decarbonization and sustainability reporting

An EMOS creates a holistic view of the main energy consumption sources within a wide multisite organization, empowering users with near-real-time insights and decision making. For example, an EMOS may embed AI to guide (or make) decisions and integrate automation to enable process autonomy. Core functionality must integrate with external data feeds and applications. A foundational platform provides core functionality on which complementary products or services, such as emissions management and energy procurement management, can be layered.

This Market Guide does not cover building energy management systems (BEMS) or home energy management systems (HEMS).

Market Description

Energy-intensive industries such as chemical, construction, energy and utilities, healthcare, manufacturing, mining, oil and gas, pharmaceuticals, and transportation represent a large addressable market for EMOS.

Volatile energy costs and supply constraints are placing large energy consumers in new risk scenarios across energy affordability, availability and acceptability. ¹ Legacy energy management systems focused on static reduction of energy demand are becoming obsolete. Energy-intensive organizations use these incumbent solutions for a narrow purpose (such as asset optimization). However, energy management can have a broader impact across the organization's operational performance by leveraging the extended real-time capabilities provided by an EMOS.

Investments in smart energy meters and submetering allow the measurement, insight, connection and coordination of an enterprise's industrial assets (equipment and devices) that create the means of production. An EMOS must be able to ingest this measurement data and process the time series data with tools such as Al to generate predictive guidance to an operator or even prescriptive actions in high-speed operations.

An EMOS manages customers' energy loads to optimize energy against productivity objectives such as reducing waste, lowering carbon footprint and complying with regulated energy-reduction mandates. It combines a holistic view of the main energy consumption sources within a wide multisite organization with advanced optimization capabilities. Figure 1 highlights core EMOS functionalities. These functionalities are explained in more detail in Note 1.



Figure 1: Core Functionalities and Capabilities of EMOS

Core Functionalities and Capabilities of EMOS

No Capability Full Capability

Core Functionality	Capability	Energy Reporting	EMS	EMOS
Production Planning	Energy Procurement	\circ	\circ	•
Collect	Overview of Main Sources of Energy Consumption	•		•
	Energy Reporting			
Monitor	Dashboarding, Monitoring and Insights	•	•	•
	Asset or Site Benchmarking	\bigcirc		
	Process Benchmarking	\circ	\bigcirc	
	Carbon Tracking	\circ	\circ	•
Manage and Control	Onsite Control of Energy Generation	0	0	
	Energy Market Arbitration	\bigcirc	\bigcirc	•
Optimize	Asset Energy Optimization	0		
	Process Energy Optimization	\circ	\bigcirc	
	Process Automation	\bigcirc	\bigcirc	
	Intelligent Operations	\bigcirc	\bigcirc	

Source: Gartner 779914_C

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These capabilities can be deployed separately or combined to enable proactive, data-led decisions, which reduce expenses and environmental liabilities while improving energy performance and energy resilience. When correctly deployed, an EMOS can support enterprises obtaining ISO 50001 alignment or certification for energy management. ²

Gartner positions EMOS as an emerging technology offering significant operational energy cost reductions from a wide range of vendors, with technology and adoption rapidly evolving (see Hype Cycle for Low-Carbon Energy Technologies, 2023). As an emerging technology, EMOS products may only natively cover a subset of the five core functionalities. EMOS are generally newly architected SaaS-centric offerings available as a set of API-enabled capabilities that natively support composability with integration into third-party and multiple-party environments.

Market Direction

Ongoing volatility and uncertainty surrounding energy markets may herald an acceleration of efficiency gains after years of slow progress. Energy efficiency is the single largest measure to reduce energy demand in the IEA Net Zero Emissions by 2050 Scenario. ³ Among respondents to Gartner's 2022 Sustainability Opportunities, Risks and Technologies Survey, 50% of business leaders agreed that energy cost increases in operations are impacting their organizations' business viability for organizations that are heavily dependent on supply chains. ⁴

In addition, the vast majority (89%) of these same surveyed business leaders (in supply-chain-based industries) indicated they either already have, or they plan to deploy, digital EMOS solutions by 2024. ⁴ This buyer lead demand is creating a market that is attracting new players that are SaaS-centric, focused on solving customers' operational trade-offs. These offerings span across IT, OT, ET, production, supply chain and finance, challenging the primarily OT-focused, established EMS vendors. This has led to a number of acquisitions and partnerships, allowing buyers to realistically include carbon management and ESG requirements.

Rising Demand for Energy Services

The market for energy services across planning, financing, installation and operations of on-site generation is exploding. Add to this energy optimization, energy storage, electric vehicle chargers, microgrids and energy as a service. An EMOS creates a platform with an ambition to manage all these energy services seamlessly across all production sites, providing a single layer for integrations so new software can be connected to legacy systems and data sources.

Buyers of an EMOS must recognize two competing product approaches — a stand-alone EMOS solution or an EMOS as part of a bundle of related energy service solutions. The market is shifting toward a breadth of energy management capabilities in a flexible composable environment that drives upsell and cross-sell services. Buyers need to include these services upfront, even if they might not be switched on, in order to secure their negotiating position, reduce future cost creep for additional services and ensure backward compatibility within upgrades.

Intelligent Energy Optimization

Digital maturity, environmental sustainability ambitions, energy strategy and regulatory requirements will influence the value of an EMOS within an energy-intensive enterprise. Intelligent operations (IOPS) is a design pattern that can scale across broad networks of intelligent industrial assets to optimize multiple (and even conflicting) objectives across connected ecosystems.

IOPS is not a single technology, but a roadmap to energy independence (see Figure 2). The near-term business goal for EMOS platforms on their IOPS journey is to deliver real-time adaptive operations with a composite digital twin (see 6 Top Practices for Winning the Race Toward Intelligent Assets).

Figure 2: Roadmap to Intelligent Energy Management and Optimization

Customer Energy Ambition Level 5 Level 1 Level 2 Level 3 Level 4 **Passivity Awareness Adaptiveness** Advantage Autonomy **Customer Business Objective Externally Focused Internally Focused** Cost Energy Energy Energy Operations Reduction Reduction Resilience Independence Activities Activities **Establishing** Intelligent Energy Energy Energy **Base Load Optimization Orchestration Operations** Management Tracking Energy Load Profiling Production Distributed Microgrids Energy Bill • Demand Planning Reporting Energy Management Response Optimizina Generation **Energy Arbitrage** · Energy Efficiency Distributed Understanding Consumption • Real-Time Energy **Energy Profile** Power Factor Storage Buying Correction Management Electrification Renewable Load Flex Forecasting Report Energy Consumption Reporting Energy Generation Certificates Corporate Savings Managing and Controlling Power Purchase Agreements On-Site Generation · Digitizing Data · Reporting Cost Savings **Energy Product** Commodity Energy Energy Energy Trading Sales Efficiency Management Arbitrade

Roadmap to Intelligent Energy Management and Optimization

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Source: Gartner 789069 C

CIOs must articulate the future technology state that will enable their organizations to deliver intelligent energy management and optimization and improved business outcomes. This will involve migration from existing legacy custom-made and siloed applications toward a platform approach. New asset configurations such as intelligent industrial assets will create new operating models, culminating in fully autonomous operations. Platforms offer improved secure environments and a base for further extending capability.

The CIO and the IT organization must break down silos across IT, OT, engineering/energy technology (ET) and operations, and exploit the IIoT. In addition, CIOs need to address new issues with security, the increasing challenges of data management and the extent to which they participate in external ecosystems.

Extending Beyond Energy Management to Include Environmental Impact

The scope being offered by EMOS vendors is broadening to adjacent domains such as environmental performance, including water and wastewater management, emissions reduction glide path tracking and integration of voluntary carbon offset exchanges.

EMOS is critical to the organization's core value chain, as it directly connects the manufacturing environment to corporate sustainability initiatives by showing reduction potential or by directly reducing Scope 1 and Scope 2 energy-driven emissions. As such, an EMOS must be a part of the enterprise operations software architecture to both manage operations and to ensure effective data sharing across organizational silos. EMOS buyers must articulate their adjacent business ambitions and include the related data exchange and integrations as part of their scope. The ability to share data and interface with these systems improves data quality, ensures transparency and improves user experience (see 4 Scenarios to Guide Your ESG and Sustainability Software Choices).

Market Analysis

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Market Analysis

Leverage Existing Digital Investments

The incremental cost of adopting intelligent industrial assets is falling rapidly, driven by ongoing foundational investments in increasingly digitized operations. EMOS buyers should evaluate products that leverage already incurred technology investments such as technologies that include 5G, blockchain, foundational digital twins, artificial intelligence (AI), Internet of Things (IoT) and machine learning (ML). This will shorten time to value and avoid duplicate spending. For example, AI embedded in EMOS can provide real-time intelligent capabilities. These include forecasting energy demand driven by IoT measurements and optimizing the energy profile by purchasing energy during lower-cost, off-peak hours to store in on-premises batteries for later use. Integrate data from smart meters, sensors, enterprise sustainability initiatives, and utility or grid operators to establish interconnections among data, solutions, and activities, yielding insights to help optimize operator decisions.

As confidence in Al guidance grows, additional trade-offs can be included in the Al optimization, and by communicating with a utility or grid operator, GenAl could help orchestrate additional operational use cases, such as emissions management and energy procurement management.

Business Agility Delivered Through Composable Architecture

There is growing demand for EMOS platform delivery, with composable modules of packaged business capabilities deployed on a platform that can reorchestrate them to meet shifting use-case boundaries. This is still unusual for a COTS product — and vendors who claim this capability should be diligently tested in the RFP evaluation and pilot phase. The scope of the EMOS platform spans asset management, operations and wider ecosystem partnerships.

The end result is a composable model that can dynamically reconfigure operations across discrete assets, controllers and business processes from unit to site level, across multiple geographies and markets. A composable architecture offers modularity, creating opportunities to reposition IT applications from "built to last" to "built for change," delivering adaptive flexibility in an ongoing dynamic business environment. The complexity and ambition of the energy management program rises in step with digital capabilities within the organization. Given the difficulty in meeting this diverse range of needs with one solution, ClOs should use composable architecture to deliver agility.

Drive Decarbonization Outcomes With Operational Transparency

Through measurement and energy performance tracking, an EMOS can support ESG goals and reporting requirements, particularly as they relate to decarbonization efforts. CIOs require more transparency to improve operations and business decisions. Having rules and alerts in place enables the production of robust and consistent carbon footprint measurements, allowing operational teams to be more productive.

This is driving requirements for newer and more comprehensive design patterns (including digital twins) that demand a data fabric. However, common barriers are a lack of physical infrastructure, digital immaturity, data silos and poor time series data. Often, there is inconsistent use of time series data because it is not standardized, and some vendors have not yet invested in data normalization, leaving this task to AI and ML models downstream (see 2023 Planning Guide for Data Management). A data fabric measures, transports and makes operational time series data available for further use by validating, estimating and correcting data before staging (see Data and Analytics Essentials: How to Define, Build and Operationalize a Data Fabric). Adopting an EMOS platform approach to data and digitalization is a critical building block to optimized energy management and transparent energy performance. EMOS (and digital twins) will be further enabled by developing and establishing a bidirectional connection to a data fabric.

Operational transparency starts at the "plan" stage, which includes standardized time series data and improves the consistency and repeatability of operational decisions. It also aligns demand across predictive and prescriptive analytics to generate actionable insights in real time (see 2022 Strategic Roadmap for IT/OT Alignment).

Region-Specific Requirements

EMOS buyers must account for regional energy efficiency and energy policy directives such as energy efficiency, electrification, behavioral change and digitalization. Regulations are shaping global energy intensity — and will impose tracking and reporting obligations as an additional operational cost. Governments are revisiting energy efficiency targets and policies to reflect increased urgency in a focused effort to lower reliance on high-price fossil fuels, to protect consumers from high energy bills and to reduce dependency on imported energy. Recently, countries representing more than 70% of the world's energy consumption have introduced new or strengthened efficiency policies. This will help drive standardized regulatory reporting, as well as cross-regional operational reporting to compare constrained operational performance outcomes (see Note 2 for regional developments).

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Industry-Specific Requirements

Industries such as chemical, construction, energy and utilities, healthcare, manufacturing, mining, oil and gas, pharmaceuticals, and transportation represent a large part of the market for EMOS. This is due to stricter environmental compliance regulations and high energy demands. Energy demand depends on how products are designed and manufactured, enterprise services and how assets are distributed and operated. The need for industry-specific capabilities will continue to impact the direction of the market and may contribute to its prolonged fragmentation.

Representative Vendors

The vendors listed in this Market Guide do not imply an exhaustive list. This section is intended to provide more understanding of the market and its offerings.

Vendor Selection

Gartner selected the 38 vendors named in this Market Guide to represent the breadth of offerings in this market, covering different aspects of EMOS (see Table 1). This representative sample also provides a good geographical spread of the vendors in this market (see Note 3).

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Table 1: Representative Vendors in Energy Management and Optimization Systems

(Enlarged table in Appendix)

Vendor 🕠	HQ ↓	Product, Service or Solution
ABB	Switzerland	ABB Ability Energy Manager
Arcadia	U.S.	Arc
C3 AI	U.S.	C3 Al Energy Management
Centrica Business Solutions	U.K.	Panoramic Power
CO2 Smart Tech	Spain	cost TEM
COI Energy	U.S.	Optimizer
CoolPlanet	Ireland	CoolPlanet OS
Cotopaxi	U.K.	Strata
Dametis	France	Dametis
EcoMT	Spain	OTEA
Emircom	Abu Dhabi	SEnergy
Energisme	France	N'Gage
Energy21	The Netherlands	EBASE
EnergyCAP	U.S.	EnergyCAP
Energy Pool	France	Energy Pool
Enoptea	France	Enoptea
Eugenie Al	U.S.	Asset Control Digital Twin Process Control Digital Twin
Evogy	Italy	Simon Suite
GE Grid Solutions	France	Industrial Energy Management Systems (IEMS) GridNode Distributed Energy Resources Management
Hark Systems	U.K.	Energy Consumption Monitoring and Management Software
Honeywell Process Solutions	U.S.	Enacto Energy Management
IMS Evolve	U.K.	IMS Evolve
Johnson Controls	Ireland	OpenBlue
KONGSBERG	Norway	Kognitwin Energy
METRON	France	METRON Energy Management and Optimization System (EMOS)
MRI Software (eSight)	U.S.	eSight
Ndustrial	U.S.	Ndustrial Contxt, Ndustrial Nsight
Powerhouse Dynamics	U.S.	SiteSage
Rockwell Automation	U.S.	Industrial Energy Management
Schneider Electric	France	EcoStruxure Facility Expert
Seluxit	Denmark	Energy Management System
Siemens	Germany	Distributed Energy Optimization (DEOP), SENTRON Digital
Spacewell	Belgium	DEXMA
Team	U.K.	Sigma
THG Energy Solutions	U.S.	Energy Intelligence Software
Uplight	U.S.	Uplight
WatchWire by Tango Analytics	U.S.	WatchWire
Yokogawa Electric	Japan	Energy Management Solution
Zoho IoT	India	Energy/Power Management

Market Recommendations

Preimplementation:

- Work with EMOS vendors to deploy a composable solution that aligns with business, energy and sustainability strategies. Effective EMOS implementation requires an ecosystem of partners, data, hardware and software that spans the value chain.
- Define energy management and optimization requirements by reviewing enterprise goals, material issues, and regulatory and reporting requirements, plus stakeholder expectations. Prioritize these capabilities by business need to ensure selected vendors align.

- Leverage the value of an EMOS to support business intelligence capabilities by moving to horizontal orchestration of data through IT/OT/ET alignment and integration.
- Create an implementation strategy that dictates internal and external responsibilities
 to ensure alignment within the buying team and clear messaging with vendors
 surrounding pricing, implementation timelines and any implementation support
 needed.
- Factor EMOS functionality and solutions into deployment roadmaps in enterprises that support an energy services business.

To prepare a vendor shortlist:

- Evaluate EMOS products based on the vendors' maturity and position with regard to intelligent industrial assets by including criteria to deliver real-time adaptive capabilities with a composite digital twin.
- Take customer use cases, regionality and industry-specific offerings seriously to ensure vendors are able to deliver for your organization size, industry and locations. Ask for peer connections! Ensure administratively that the vendors you're considering fit language and cybersecurity requirements.

For software selection and implementation:

- Identify internal and external data streams that must feed into your EMOS management software. This can be furthered by integrating EMOS into the larger enterprise landscape to enable data quality and traceability.
- Evaluate how EMOS functionalities and digital capabilities should be refined to support operational needs. It is critical to evaluate vendors on their ability to meet the five core areas with native functionality in your desired architecture, or through established partnerships. Otherwise, qualify and quantify customization requirements to ensure business outcomes can be supported.
- Compose an EMOS that supports current and future needs based on a detailed business assessment across business capability, digital maturity and energy strategy mapped to targeted KPIs. Criteria to consider and include in this assessment are defined in IEC 61970:2022 SER. ⁵

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 Partner with selected vendors to integrate EMOS with customers' operations by implementing a flexible load-driven approach using a composable IT system architecture in enterprises that support an energy services business.

Evidence

Gartner surveyed secondary research sources for information on market trends and vendor activity.

Gartner analysts acquired insights from energy services companies and energy-intensive C&I customers upgrading or implementing an EMOS system through the Gartner inquiry process and one-on-one meetings at events. These provided directional support for opinions derived from earlier data.

- ¹ Electricity Market Report Update, International Energy Agency (IEA).
- ² ISO 50001 Energy Management, International Organization for Standardization (ISO).
- ³ Energy Efficiency, International Energy Agency (IEA).

⁴ 2022 Gartner Sustainability Opportunities, Risks and Technologies Survey: This survey was conducted to identify how sustainability can foster opportunities, mitigate risks, amplify responsible digital technologies and control energy costs. The research was conducted online from 21 June through 21 July 2022. In total, 221 respondents were interviewed across North America (n = 75), Europe (n = 77) and Asia/Pacific (n = 69). Respondents represented qualifying organizations in information technology, manufacturing, financial services, retail and other industries with reported enterprisewide annual revenue for fiscal year 2021 of at least \$250 million. Qualified organizations also were currently engaged in sustainability-related activities. Respondents were leaders or executives in director roles or above and were directly involved in making sustainability-related decisions. *Disclaimer: Results of this survey do not represent global findings or the market as a whole, but reflect the sentiments of the respondents and companies surveyed.*

⁵ IEC 61970:2022 SER Series, International Electrotechnical Commission (IEC).

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Note 1: EMOS Capability Definitions

- Production Planning. Forecast the energy plan to support the required production plan by establishing the baseline, the energy performance indicators and the action plans necessary to deliver results.
- Collect. Gather, aggregate and normalize measurement data to enable the optimization process. Users can look at demand management and compare the energy performance of different sites across the world, forecast energy use and manage energy bills.
- Monitor. Monitor and measure processes and the key characteristics of operations that determine energy performance against objectives and report the results.
- Manage and control. Manage and control both cost and environmental impact.
 - Cost. Volatile energy costs are creating energy supply risks especially for energy-intensive companies — bringing an intense focus on the need to maintain, use and conserve energy resources efficiently.
 - Environmental impact. Energy-intensive industries are a major source of greenhouse gas (GHG) emissions. They face increasingly stringent government regulations and investor demand for environmental, social and governance (ESG) performance, compelling them to commit to net-zero targets.
- Optimize. Consolidate and analyze information, enabling the negotiation of better terms with energy supply companies and energy services businesses. In addition, as more and more companies turn to self-generation, EMOS is becoming a critical tool to optimize energy, carbon and financial positions.

These core functions integrate with external data feeds and applications. With its "manage and control" insights, an EMOS can optimize and action decisions through adaptive asset configuration.

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Note 2: Regional Energy Efficiency Developments

- Europe: In March 2023, the European Commission strengthened the EU Energy Efficiency Directive as part of efforts in its Fit for 55 Package to deliver the European Green Deal and The REPowerEU strategy. Under the new agreement, energy savings obligations will nearly double, with EU countries required to achieve a reduction of 1.49% per year in final energy consumption on average from 2024 to 2030, up from the current level of 0.8%.
- United States: The 2022 Inflation Reduction Act (IRA) includes major investment support for energy efficiency. The High-Efficiency Electric Home Rebate Act provides up to \$14,000 per household, including for heat pump heating, ventilation and air conditioning systems, hot water heaters, and electric stovetops, as well as insulation, air sealing and upgrading electrical systems.
- China: In 2022, China strengthened its Industrial Energy Efficiency policies with new laws to improve the energy intensity of the sector by 13.5% by 2025, compared with 2020 levels. This includes detailed targets for the 17 most energy-intensive industries such as steel, aluminum and cement. New targets have also been introduced to upgrade old electric motors and transformers such that 70% and 80% of the stock, respectively, use new, efficient models by 2025.
- Japan: In 2022, the Ministry of Economy, Trade and Industry put forward a plan for stronger energy efficiency standards for heating and cooling by the second half of this decade. This includes up to 35% efficiency improvement for air conditioners, compared to current standards.
- Korea: The government is strongly promoting the "save 1kWh per day" campaign in 2023, while cooperating closely with NGOs, business associations and local governments.
- India: During its G20 Presidency in 2023, India's Lifestyle for Environment Initiative (LiFE) gained new prominence as a global movement to nudge individual and community actions to save energy and promote mindful use of the environment. Its Mission LiFE program aims to enable pro-environment consumer choice and behavior change, including through 19 energy-saving actions. To support LiFE, India passed new efficiency laws in 2022, strengthening building codes and efficiency policies covering appliances, vehicles, industrial facilities and commercial buildings.

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Note 3: Representative Vendor Selection

Multiple EMOS products are available in the market from vendors that cater to residential dwellings to those that serve large commercial and industrial enterprises. We selected the service providers profiled in this Market Guide to represent those that focus on the needs of energy-intensive C&I customers. We endeavored to provide a good spread of the leading and emerging vendors in this market.

Document Revision History

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Hype Cycle for Low-Carbon Energy Technologies, 2023

How CIOs Can Mitigate Energy Costs and Risks

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Use-Case Prism: Smart Manufacturing

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Guide for ESG Management and Reporting Software

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CO2 Smart Tech	Spain	cost TEM
COI Energy	U.S.	Optimizer
CoolPlanet	Ireland	CoolPlanet OS
Cotopaxi	U.K.	Strata
Dametis	France	Dametis
EcoMT	Spain	OTEA
Emircom	Abu Dhabi	SEnergy
Energisme	France	N'Gage
Energy21	The Netherlands	EBASE
EnergyCAP	U.S.	EnergyCAP
Energy Pool	France	Energy Pool

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HQ ↓	Product, Service or Solution 🔱	
France	Enoptea	
U.S.	Asset Control Digital Twin Process Control Digital Twin	
Italy	Simon Suite	
France	Industrial Energy Management Systems (IEMS) GridNode Distributed Energy Resources Management	
U.K.	Energy Consumption Monitoring and Management Software	
U.S.	Enacto Energy Management	
U.K.	IMS Evolve	
Ireland	OpenBlue	
Norway	Kognitwin Energy	
France	METRON Energy Management and Optimization System (EMOS)	
U.S.	eSight	
U.S.	Ndustrial Contxt, Ndustrial Nsight	
U.S.	SiteSage	
	France U.S. Italy France U.K. U.S. U.K. Ireland Norway France U.S. U.S.	

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Vendor ↓	HQ ↓	Product, Service or Solution
Rockwell Automation	U.S.	Industrial Energy Management
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