

Predictive Maintenance in the Energy - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 100 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License \$4750.00
- Team License (1-7 Users) \$5250.00
- Site License \$6500.00
- Corporate License \$8750.00

Report description:

The Predictive Maintenance in the Energy Market size is estimated at USD 1.79 billion in 2024, and is expected to reach USD 5.62 billion by 2029, growing at a CAGR of 25.77% during the forecast period (2024-2029).

Key Highlights

- The predictive maintenance (PdM) platform has recently gained market traction. PdM solutions are integrated with new or existing machinery infrastructure to assess machine health and detect signs of impending failure. PdM integration ensures return on investment (ROI) and enables organizations to meet and exceed sustainability goals by enabling global remote machine monitoring.
- Predictive maintenance is significantly assisting the energy industry in improving asset efficiency. Emerging technologies such as big data analytics, the Internet of Things (IoT), and cloud data storage enable industrial equipment and sensors to send condition-based data to a centralized server, making fault detection more practical and direct. The increase in uptime, lower maintenance costs, unexpected failures, and spare part inventory have propelled and flourished the market simultaneously. Furthermore, reducing repair and overhaul times is critical for the predictive maintenance market's growth.
- The majority of energy companies are asset-intensive businesses. It takes time and effort to ensure that these resources work correctly to provide energy to consumers. Machine learning techniques, such as decision trees, can be used to optimize the operation of the equipment and, by extension, the entire system. Similarly, comparable algorithms can automate the transformation of preventative maintenance programs into predictive ones. It also allows for marginal pricing, time shifting, and asset utilization, allowing energy to be generated and delivered.
- Predictive maintenance services and solutions send out an alert before the machine fails. Integrating business information, sensor data, and enterprise asset management (EAM) systems allow for the rapid transition from reactive to predictive maintenance services and solutions.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- However, factors such as high installation costs, environmental concerns, rising operating costs, rising consumer expectations, and data misinterpretation leading to false requests hinder predictive maintenance market growth. Because of the growing need for better insights into usage and performance patterns to help make better decisions, these challenges increase the adoption rate of various analytics tools.
- COVID-19 significantly impacted the market. The global economic slowdown had both positive and negative consequences for the market. For example, the drop in energy consumption was caused by the lockdowns, which hurt the market. However, due to a lack of personnel and a disrupted supply chain during the outbreak, companies operating in the industry attempted to keep the machinery running in good condition.

Predictive Maintenance in the Energy Market Trends

Solutions Segment is Anticipated to Witness Significant Growth

- In the energy sector, there has been an increase in demand for customized industrial predictive maintenance solutions, primarily for remote monitoring operations. Big data has also played an essential role in analyzing processes, assets, and heavy equipment.
- Several vendors, including SAP, IBM, and Microsoft, are active in the market, offering customized predictive maintenance solutions and services based on the needs of organizations. These solutions can help organizations protect their critical equipment and gain a competitive advantage in productivity.
- Artificial intelligence (AI) and machine learning (ML) enable organizations to gain complete visibility of their operations and generate insights that can aid in the resolution of some of the industry's most disruptive challenges. Because of the volume of big data generated by energy sector companies, forward-thinking businesses invest in monitoring and predictive analytics tools that help leverage this data to its full potential. According to Gartner, 40% of new monitoring and control systems in this sector will use Internet of Things (IoT) to enable intelligent operations by the forecasted period.
- Due to the depletion of coal resources, the power generation industry is shifting away from coal and toward solar and wind energy. Because of changing climatic conditions, most countries strictly regulate coal power plants. As electricity consumption rises, developing countries invest in advanced technologies and equipment to expand their production capacities.
- The deployment of predictive maintenance solutions is expected to empower end users to increase productivity while minimizing failures in the power generation industry by maximizing innovative maintenance activities. The power generation industry in the Asia-Pacific developing countries requires higher efficiency, better control, and faster monitoring to reduce the likelihood of operational failure.
- Investments in renewable energy generation, particularly wind turbines, offshore wind farms, and solar farms, have fueled the predictive maintenance solutions market growth in countries such as China and India.

North America to Occupy a Significant Market Share

- The predictive maintenance in the energy market is dominated by North America, followed by Europe. This is due to underlying factors such as the existence of many service providers, technological advancements, and increased knowledge of preventative maintenance. The growing emphasis on research & development (R&D) for technological advances in developed economies such as Canada and the United States has fueled demand for predictive maintenance solutions throughout the region. According to the United States Energy Information Administration (US EIA), the total energy consumption rate is expected to rise by 5% between 2020 and 2040.
- Businesses must provide energy efficiency and reduce downtime to remain profitable. This drives the data analytics market in

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

utilities and energy. Rising environmental concerns and increased investments in sustainable energy will impact market growth.

- Other factors driving market growth include increased investment in artificial intelligence (AI) and machine learning (ML) to reduce asset downtime and maintenance costs, adoption of the Internet of things (IoT), the need to extend the overall lifespan of machinery and equipment, declining sensor prices, advancements in sensor technology, and the evolution of high-speed networking technologies. Furthermore, regulatory compliance has been a significant driver of the Internet of things (IoT) technology adoption in the United States. The passage of the Energy Act (EA) in the United States has sped up efforts to track sustainable energy consumption.
- The energy industry, one of the largest in the United States, is attracting significant investment. For example, according to Bloomberg New Energy Finance (BNEF), the United States is expected to invest approximately USD 7,00,000 million in renewable energy capacity over the next 20 years. These factors are expected to boost the growth of the predictive maintenance market.
- The energy sector remains a target for deal activity as environmental, social, and governance (ESG) strategies are strengthened. General investor interest remains high, although macroeconomic pressures could pose various valuation challenges for North American energy, power, and utility companies. For instance, J.P. Morgan paid USD 7.8 billion (USD 7,800 million) for South Jersey Industries. Similarly, ArcLight Clean Energy Transition Corp paid USD 1.5 billion (USD 1,500 million) to acquire OPAL Fuels LLC. This boosts the growth of predictive maintenance in North America.

Predictive Maintenance in the Energy Industry Overview

Numerous domestic and international firms make predictive maintenance in the energy market extremely competitive. The market is moderately concentrated, with significant players expanding their market dominance through strategies such as product innovation and mergers and acquisitions. IBM Corporation, SAP SE, Robert Bosch GmbH, and Siemens AG are some of the market's major players.

In June 2022, Siemens acquired Senseye, which provides industrial companies with predictive maintenance and asset intelligence. With the acquisition of Senseye, Siemens expanded its portfolio in innovative predictive maintenance and asset intelligence. Senseye is a manufacturer and industrial company that offers outcome-oriented predictive maintenance solutions. The predictive maintenance solution from Senseye allows for a 50% reduction in unplanned machine downtime and a 30% increase in maintenance staff productivity.

In May 2022, Hitachi Ltd. launched Lumada Inspection Insights, developed by Hitachi Energy and Hitachi Vantara, to help businesses automate asset inspection and advance sustainability goals. The new approach employs artificial intelligence (AI) and machine learning (ML) to evaluate resources, hazards, and various image types to address multiple reasons for failure.

Moreover, in January 2022, IBM announced the acquisition of Envizi, a data and analytics software provider for environmental performance management. This acquisition expands IBM's growing investments in artificial intelligence (AI)-powered software, such as IBM Maximo asset management solutions, IBM Environmental Intelligence Suite, and IBM Sterling supply chain solutions, to assist organizations in creating more resilient and sustainable operations and supply chains.

Furthermore, the acquisition broadens the company's product and service offerings. With rising demand for cloud-based services, IBM Cloud's broad range of services and expertise assist the world's smarter businesses to transform their processes, assimilate new technologies and capabilities, and pivot quickly to new market opportunities.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Table of Contents:

1 INTRODUCTION

1.1 Study Assumptions and Market Definition

1.2 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET DYNAMICS

4.1 Market Overview

4.2 Market Drivers

4.2.1 Increasing Investments in the Energy Sector

4.2.2 Increasing Adoption of Automation

4.3 Market Challenges

4.3.1 Higher Deployment Cost

4.4 Industry Value Chain Analysis

4.5 Industry Attractiveness - Porter's Five Forces Analysis

4.5.1 Threat of New Entrants

4.5.2 Bargaining Power of Buyers

4.5.3 Bargaining Power of Suppliers

4.5.4 Threat of Substitute Products

4.5.5 Intensity of Competitive Rivalry

4.6 Assessment of COVID-19 impact on the Market

5 MARKET SEGMENTATION

5.1 By Offering

5.1.1 Solutions

5.1.2 Services

5.2 By Deployment Model

5.2.1 On-premise

5.2.2 Cloud

5.3 By Region

5.3.1 North America

5.3.2 Europe

5.3.3 Asia-Pacific

5.3.4 Latin America

5.3.5 Middle East & Africa

6 COMPETITIVE LANDSCAPE

6.1 Company Profiles

6.1.1 IBM Corporation

6.1.2 SAP SE

6.1.3 Siemens AG

6.1.4 Intel Corporation

6.1.5 Robert Bosch GmbH

6.1.6 Accenture PLC

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 6.1.7 ABB Ltd
- 6.1.8 Schneider Electric
- 6.1.9 Banner Engineering Corp.
- 6.1.10 GE Automation & Control

7 INVESTMENT ANALYSIS

8 MARKET OPPORTUNITIES AND FUTURE TRENDS

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Predictive Maintenance in the Energy - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 100 pages | Mordor Intelligence

To place an Order with Scotts International:

- ☐ - Print this form
- ☐ - Complete the relevant blank fields and sign
- ☐ - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	\$4750.00
	Team License (1-7 Users)	\$5250.00
	Site License	\$6500.00
	Corporate License	\$8750.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2026-03-03
		Signature	

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com



Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com
www.scotts-international.com