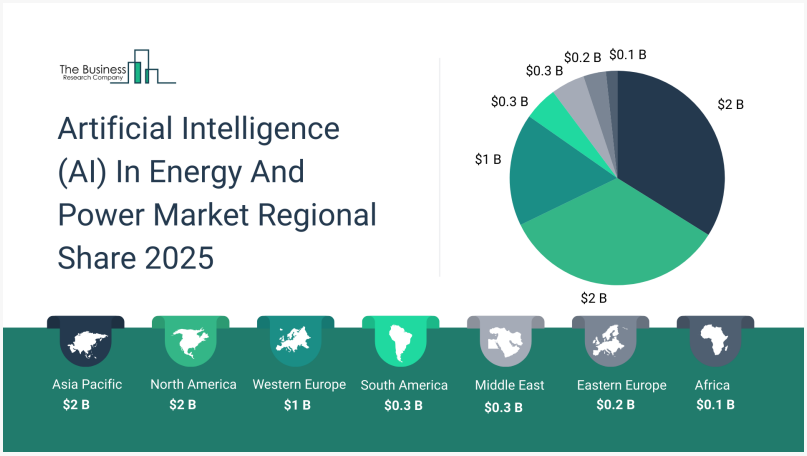
Artificial Intelligence (AI) In Energy And Power Market In 2029

The Business Research Company's Artificial Intelligence (AI) In Energy And Power Market In 2029



artificial intelligence ai in energy market growth

LONDON, GREATER LONDON, UNITED KINGDOM, January 9, 2026 /EINPresswire.com/ -- "Artificial Intelligence (AI) In Energy And Power Market to Surpass $15 billion in 2029. In comparison, the Artificial Intelligence Services which is considered as its parent market, is expected to be approximately $184 billion by 2029, with Artificial Intelligence (AI) In Energy And Power market to represent around 8% of the parent market. Within the broader Information Technology industry, which is expected to be $12,711 billion by 2029, the Artificial Intelligence (AI) In Energy And Power market is estimated to account for nearly 0.1% of the total market value.

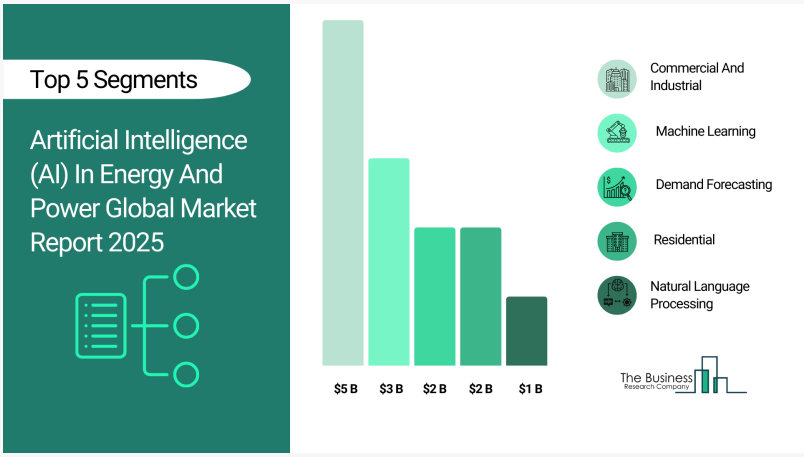
> Expected to grow to $16.96 billion in 2029 at a compound annual growth rate (CAGR) of 25.8%”
>
> *The Business Research Company*

Which Will Be the Biggest Region in the Artificial Intelligence (AI) In Energy And Power Market in 2029
Asia-Pacific will be the largest region in the artificial intelligence (AI) in energy and power market in 2029, valued at $6,026 million. The market is expected to grow from $1,883 million in 2024 at a compound annual growth rate (CAGR) of 26%. The exponential growth in the forecast period can be attributed to the integration of big data and IoT (internet of things) in energy systems and the shift toward renewable energy sources.

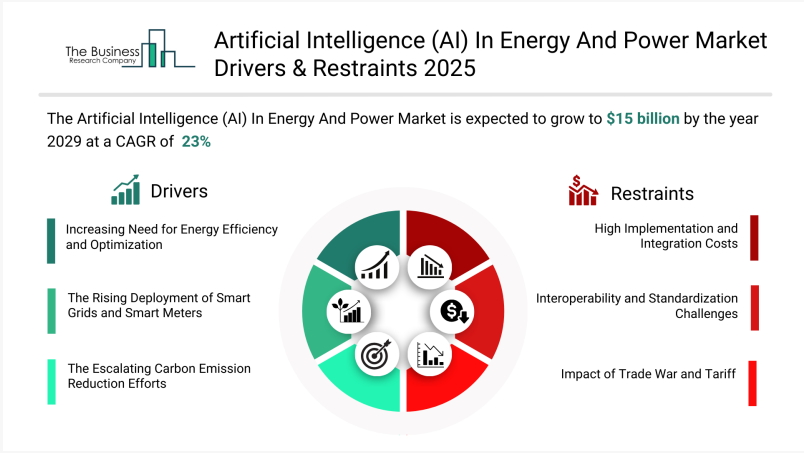
Which Will Be The Largest Country In The Artificial Intelligence (AI) In Energy And Power Market In 2029?
The USA will be the largest country in the artificial intelligence (AI) in energy and power market in 2029, valued at $3,610 million. The market is expected to grow from $1,324 million in 2024 at a compound annual growth rate (CAGR) of 22%. The exponential growth in the forecast period can be attributed to the integration of big data and IoT (internet of things) in energy systems and the

shift toward renewable energy sources.

Request a free sample of the Artificial Intelligence (AI) In Energy And Power Market report: https://www.thebusinessresearchcompany.com/sample_request?id=13578&type=smp



artificial intelligence ai in energy and power market overview



artificial intelligence ai in energy and power market share

What will be Largest Segment in the Artificial Intelligence (AI) In Energy And Power Market in 2029?
The artificial intelligence (AI) in energy and power market is by technology into machine learning, natural language processing, computer vision, and other technologies. The machine learning market will be the largest segment of the artificial intelligence (AI) in energy and power market segmented by technology, accounting for 48% or $7,176 million of the total in 2029. The machine learning market will be supported by the growing need for predictive analytics and intelligent decision-making in energy operations, increasing adoption of AI-driven solutions for real-time monitoring and optimization of electricity generation, distribution, and consumption, rising deployment of smart grids and connected infrastructure and the integration of renewable energy sources such as solar and wind into industrial, commercial, and residential systems.

The artificial intelligence (AI) in energy and power market is segmented by application into demand forecasting, energy production and distribution optimization, energy management, smart grids, smart meter, and other applications. The demand forecasting market will be the largest segment of the artificial intelligence (AI) in energy and power market segmented by application, accounting for 28% or $4,173 million of the total in 2029. The demand forecasting market will be supported by the increasing need for accurate load prediction and energy consumption planning, rising adoption of AI-driven solutions for optimizing grid operations and reducing peak demand, growing integration of renewable energy sources requiring dynamic forecasting, expansion of smart metering infrastructure enabling real-time data collection and the focus on cost efficiency and sustainability in industrial, commercial and residential energy management systems.

The artificial intelligence (AI) in energy and power market is segmented by end-user into commercial and industrial and residential. The commercial and industrial market will be the largest segment of the artificial intelligence (AI) in energy and power market segmented by end-user, accounting for 75% or $11,315 million of the total in 2029. The commercial and industrial market will be supported by the increasing need for energy efficiency and cost reduction in large-scale operations, rising adoption of AI-driven solutions for real-time energy monitoring, predictive maintenance and load optimization, growing integration of renewable energy sources and smart grids in commercial and industrial facilities, expansion of AI-enabled energy management systems and the focus on sustainability, regulatory compliance and improved operational performance across manufacturing plants, data centers, office complexes and other large energy-consuming establishments.

What is the expected CAGR for the Artificial Intelligence (AI) In Energy And Power Market leading up to 2029?
The expected CAGR for the artificial intelligence (AI) in energy and power market leading up to 2029 is 23%.

What Will Be The Growth Driving Factors In The Artificial Intelligence (AI) In Energy And Power Market In The Forecast Period?
The rapid growth of the global artificial intelligence (AI) in energy & power market leading up to 2029 will be driven by the following key factors that are expected to reshape grid operations, asset management, and energy manufacturing processes worldwide.

Increasing Need For Energy Efficiency And Optimization- The increasing need for energy efficiency and optimization will become a key driver of growth in the artificial intelligence (AI) in energy and power market by 2029. The growing demand for energy efficiency is pushing utilities and industries to adopt AI solutions that can monitor, analyse, and optimize energy systems automatically. AI algorithms enhance operational efficiency by identifying inefficiencies and continuously adjusting systems to minimize waste and improve performance. This transition toward intelligent optimization is helping organizations meet sustainability goals while reducing operational costs, thereby strengthening the long-term adoption of AI in the energy and power sector. As a result, the increasing need for energy efficiency and optimization is anticipated to contributing to a 1.7% annual growth in the market.

Rising Deployment Of Smart Grids And Smart Meters- The rising deployment of smart grids and smart meters will emerge as a major factor driving the expansion of the artificial intelligence (AI) in energy and power market by 2029. The expansion of smart grids and advanced metering infrastructure is generating vast amounts of real-time data essential for AI-driven insights. AI enables smarter grid management, better load balancing and predictive maintenance using this data. As more regions digitize their electricity networks, AI applications in energy forecasting, demand response and outage management will become increasingly integrated into everyday grid operations, driving the market forward. Consequently, the rising deployment of smart grids

and smart meters is projected to contributing to a 1.2% annual growth in the market.

Escalating Carbon Emission Reduction Efforts-The escalating carbon emission reduction efforts as a major factor driving the expansion of the artificial intelligence (AI) in energy and power market by 2029. Global decarbonization goals are driving energy providers to integrate AI for monitoring, analysing, and minimizing emissions. AI assists in optimizing renewable integration, tracking carbon output, and automating low-carbon energy management decisions. As governments and corporations tighten emission standards, the use of AI to manage cleaner and more efficient energy systems will become central to achieving climate targets. Consequently, escalating carbon emission reduction efforts is projected to contributing to a 0.7% annual growth in the market.

Shift To Renewable Energy Sources- The shift to renewable energy sources will emerge as a major factor driving the expansion of the artificial intelligence (AI) in energy and power market by 2029. The increasing share of renewables is transforming energy systems and creating a need for intelligent coordination. AI supports this shift by improving forecasting, optimizing grid stability, and ensuring efficient resource utilization across distributed assets. Its ability to manage variability and enhance the integration of renewables will make AI indispensable in achieving reliable, sustainable energy transitions. AI improves short-term and day-ahead forecasts for renewable generation, predicts curtailment risk, optimizes battery charge and discharge to capture market opportunities and controls inverter or plant behaviour to support grid stability, functions that scale poorly with rule-based systems but fit naturally with ML and probabilistic approaches. Consequently, the shift to renewable energy sources is projected to contributing to a 0.5% annual growth in the market.

Access the detailed Artificial Intelligence (AI) In Energy And Power Market report here: https://www.thebusinessresearchcompany.com/report/artificial-intelligence-ai-in-energy-and-power-global-market-report

What Are The Key Growth Opportunities In The Artificial Intelligence (AI) In Energy And Power Market in 2029?
The most significant growth opportunities are anticipated in artificial intelligence (AI) in energy, power, commercial and industrial (C&I) market, the AI and machine learning in energy and power market, and the artificial intelligence (AI) in energy and power demand forecasting market. Collectively, these segments are projected to contribute over $15 billion in market value by 2029, driven by advances in intelligent grid automation, accelerated adoption of predictive maintenance, and the rising need for high-accuracy demand forecasting across utilities and industrial energy users. This surge reflects the rapid integration of AI technologies that enable real-time optimization, enhanced operational reliability, and improved energy efficiency ultimately fuelling transformative growth across the broader AI-driven energy and power landscape.

The artificial intelligence (AI) in energy, power, commercial and industrial (C&I) market is

projected to grow by $7,457 million, the AI and machine learning in energy and power market by $4,825 million, and the artificial intelligence (AI) in energy and power demand forecasting market by $2,848 million over the next five years from 2024 to 2029.

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