

Energy & Utilities Construction Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Type (Energy Construction, Utilities Infrastructure Construction), By Application (Civil Use, Military Use), By Region, By Competition, 2020-2030F

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Abstracts

Market Overview

The Global Energy & Utilities Construction Market was valued at USD 134.6 billion in 2024 and is anticipated to reach USD 213.1 billion by 2030, registering a CAGR of 7.8%. The market is experiencing significant momentum due to the rising global energy demand driven by rapid urbanization, industrial expansion, and population growth, particularly in emerging economies. Simultaneously, the global energy transition is accelerating the construction of renewable power assets such as solar and wind farms, alongside modernization of electricity grids to accommodate decentralized and variable energy sources. Smart grid initiatives and utility digitization are enhancing operational efficiency and resilience. In developed regions, the replacement of aging infrastructure is being prioritized, particularly to mitigate the growing risks from extreme climate events. Furthermore, surging electricity consumption from digital infrastructure like data centers—spurred by cloud computing and AI technologies—is driving investment in energy and utility networks. Government support through policies, subsidies, and partnerships is enabling sustainable development, reinforcing the sector's strategic role in the global push for energy security and carbon neutrality.

Key Market Drivers

Rising Global Energy Demand and Infrastructure Modernization

A major driver of the Energy & Utilities Construction Market is the increasing global energy demand, propelled by expanding urban populations, economic growth, and industrial activity in emerging economies. As cities grow and industries modernize, existing infrastructure is becoming insufficient, leading to a surge in construction of power plants, transmission lines, substations, and water supply systems. This trend is especially prevalent in regions like Asia and Africa, where electricity demand is projected to rise sharply. Concurrently, developed economies face the challenge of upgrading aging infrastructure that no longer meets modern efficiency or climate resilience standards. Frequent climate-related disruptions highlight the need for robust and reliable energy and utility systems. Additionally, the global rise of electric vehicles and digital services is creating additional load on power grids, driving the need for smarter, high-capacity, and decentralized energy infrastructure. Governments and private investors are responding by funding large-scale utility construction projects that support economic growth, sustainability, and energy security.

Key Market Challenges

Supply Chain Disruptions and Skilled Labor Shortages

The global Energy & Utilities Construction Market is significantly impacted by ongoing supply chain disruptions and a widespread shortage of skilled labor. Material shortages—particularly of steel, copper, aluminum, and semiconductors—have caused cost spikes and delays in the delivery of key components like turbines, transformers, and electrical systems. Transportation bottlenecks and port congestion further aggravate the situation, prolonging project timelines and increasing costs. Parallel to material constraints, the industry faces a critical labor shortfall. Specialized roles such as high-voltage technicians, renewable energy engineers, and certified electricians are in short supply, especially as older workers retire and training programs fail to keep pace with demand. This is particularly evident in high-complexity projects like nuclear facilities and offshore wind installations, where strict safety and compliance standards add further recruitment challenges. Together, these issues elevate project risks and operational costs, making it difficult for construction firms to scale operations efficiently. While strategies like local sourcing, modular design, and workforce development are being explored, they require significant time and investment to yield tangible results.

Key Market Trends

Rise of Renewable Energy and Decentralized Power Infrastructure

A prominent trend shaping the Energy & Utilities Construction Market is the rapid global pivot toward renewable and decentralized energy solutions. As countries commit to carbon neutrality and clean energy goals, investment is pouring into the construction of solar farms, onshore and offshore wind projects, hydro plants, and battery energy storage systems. Offshore wind, in particular, is gaining momentum due to its scale and efficiency advantages. This shift is supported by policy frameworks like the EU Green Deal and the U.S. Inflation Reduction Act, which incentivize green infrastructure projects. At the same time, decentralized energy systems—including rooftop solar, local microgrids, and smart home technologies—are transforming energy consumption and distribution. These systems reduce transmission losses and enhance grid resilience while giving consumers more control over their energy use. Construction approaches are evolving to accommodate these new energy paradigms, with emphasis on modular, localized, and smart infrastructure that supports both centralized and distributed power networks.

Key Market Players

NPL Construction Co

Lyles Utility Construction, LLC

Lime Energy

Skanska UK Plc

Denbow Company

Alexander Hughes

Dassault Systemes

BlackEagle Energy Services

Report Scope:

In this report, the Global Energy & Utilities Construction Market has been segmented

into the following categories, in addition to the industry trends which have also been detailed below:

Energy & Utilities Construction Market, By Type:

Energy Construction

Utilities Infrastructure Construction

Energy & Utilities Construction Market, By Application:

Civil Use

Military Use

Energy & Utilities Construction Market, By Region:

North America

United States

Canada

Mexico

Europe

Germany

France

United Kingdom

Italy

Spain

Asia Pacific

China

India

Japan

South Korea

Australia

South America

Brazil

Colombia

Argentina

Middle East & Africa

Saudi Arabia

UAE

South Africa

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Energy & Utilities Construction Market.

Available Customizations:

Global Energy & Utilities Construction Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Energy & Utilities Construction Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, Segme...

Detailed analysis and profiling of additional market players (up to five).

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