

# **Nanogrid Market by Type (DC Nanogrid, AC Nanogrid), Components (Controller, Gateway, Storage, and Others), Mode of Operation (Island Mode, Grid Connected Mode), Function (Energy Generation, Energy Storage), Energy Source (Solar, Wind, and Others), Application (Residential, Commercial), and Region 2024-2032**

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## **Abstracts**

The Global nanogrid market size reached US\$ 16.2 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 31.3 Billion by 2032, exhibiting a growth rate (CAGR) of 7.4% during 2024-2032. The increasing electricity consumption, stringent policies imposed by governments of several countries to minimize carbon emissions, and various product innovations represent some of the key factors driving the market.

A nanogrid refers to a power distribution system that generates and stores power for a house or a small building. It offers improved electrical services to areas that insufficiently served by a conventional electricity grid. It can operate in either island mode or grid connected mode and comprises a local power production, domestic load, gateway, controller and a storage. At present, the increasing sales of home appliances and smart devices, such as smartphones, tablets, desktops, laptops, on account of rising penetration of high speed internet connectivity is catalyzing the demand for nanogrids across the globe.

Global Nanogrid Market

Nanogrid Market Trends:

*Nanogrid Market by Type (DC Nanogrid, AC Nanogrid), Components (Controller, Gateway, Storage, and Others), Mod...*

Rapid urbanization, expanding global population, and increasing investments in the development of smart cities by governing agencies of numerous countries are driving the application of nanogrids in commercial and residential complexes. This represents one of the major factors strengthening the market growth around the world. Moreover, the surging consumption of electricity worldwide is driving the need for nanogrids to minimize the instances of power failures. In addition, due to rising environmental concerns, governing agencies of numerous countries are imposing stringent policies to reduce carbon emissions and boost the adoption of renewable energy, such as solar photovoltaic (PV) and nanogrids. They are also undertaking measures to facilitate the supply of electricity in rural areas. Apart from this, there is an increase in the awareness among people about the benefits of using nanogrids, such as improving power quality and reliability and storing clean energy. This, along with the launch of the smart grid that allows real-time collection of data about the electricity demand and supply during the transmission and distribution process is favoring the growth of the market. Besides this, the rising adoption of nanogrids in the agriculture sector for various irrigation processes like pumping water and spraying pesticides is contributing to the market growth. Additionally, the growing number of electric vehicle (EV) charging stations that are powered by nanogrids to provide uninterrupted charging on account of the increasing demand for EVs is creating a positive outlook for the market. The market growth can also be attributed to inflating income levels of individuals and improving living standards.

#### Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the global nanogrid market, along with forecasts at the global, regional, and country level from 2024-2032. Our report has categorized the market based on product, components, function, sources, and application.

#### Type Insights:

DC Nanogrid  
AC Nanogrid

The report has also provided a detailed breakup and analysis of the nanogrid market based on the type. This includes DC nanogrid and AC nanogrid. According to the report, DC nanogrid represented the largest market.

#### Components Insights:

Controller  
Gateway  
Storage  
Others

A detailed breakup and analysis of the nanogrid market based on the components has also been provided in the report. This includes controller, gateway, storage, and others. According to the report, controller represented the largest segment.

#### Mode of Operation Insights:

Island Mode  
Grid Connected Mode

The report has also provided a detailed breakup and analysis of the nanogrid market based on the mode of operation. This includes island mode and grid connected mode. According to the report, island mode represented the largest market.

#### Function Insights:

Energy Generation  
Energy Storage

A detailed breakup and analysis of the nanogrid market based on the function has also been provided in the report. This includes energy generation and energy storage. According to the report, energy generation represented the largest segment.

#### Energy Source Insights:

Solar  
Wind  
Others

The report has also provided a detailed breakup and analysis of the nanogrid market based on the energy source. This includes solar, wind and others. According to the report, solar represented the largest market.

#### Application Insights:

Residential  
Commercial

A detailed breakup and analysis of the nanogrid market based on the application has also been provided in the report. This includes residential and commercial. According to the report, residential represented the largest segment.

#### Regional Insights:

North America  
United States  
Canada  
Asia-Pacific  
China  
Japan  
India  
South Korea  
Australia  
Indonesia  
Others  
Europe  
Germany  
France  
United Kingdom  
Italy  
Spain  
Russia  
Others  
Latin America  
Brazil  
Mexico  
Others  
Middle East and Africa

The report has also provided a comprehensive analysis of all the major regional markets that include North America (the United States and Canada), Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others), Europe (Germany, France, United Kingdom, Italy, Spain, Russia, and others), Latin America (Brazil, Mexico, and others), and the Middle East and Africa. According to the report, Asia

Pacific was the largest market for nanogrid. Some of the factors driving the Asia Pacific nanogrid market included numerous initiatives undertaken by governing authorities to reduce carbon emission, integration of advanced technologies, launch of smart grids, etc.

#### Competitive Landscape:

The report has also provided a comprehensive analysis of the competitive landscape in the global nanogrid market. Detailed profiles of all major companies have also been provided. Some of the companies covered include Eaton Corporation plc, Emerson Electric Co., and Sunverge Energy Inc. Kindly note that this only represents a partial list of companies, and the complete list has been provided in the report.

#### Key Questions Answered in This Report:

How has the global nanogrid market performed so far and how will it perform in the coming years?

What are the drivers, restraints, and opportunities in the global nanogrid market?

What are the key regional markets?

Which countries represent the most attractive nanogrid markets?

What is the breakup of the market based on the product?

What is the breakup of the market based on the components?

What is the breakup of the market based on the function?

What is the breakup of the market based on the sources?

What is the breakup of the market based on the application?

What is the competitive structure of the global nanogrid market?

Who are the key players/companies in the global nanogrid market?

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