Self-Healing Grid Market is anticipated to surpass US$8765.106 million by 2029 at a CAGR of 14.59%

The Self-healing grid market is anticipated to grow at a CAGR of 14.59% from US$3378.609 million in 2022 to US$8765.106 million by 2029.

NOIDA, UTTAR PARDESH, INDIA, March 15, 2024 /EINPresswire.com/ -- According to a new study published by Knowledge Sourcing Intelligence, the Self-healing grid market is projected to grow at a CAGR of 14.59% between 2022 and 2029 to reach US$8765.106 million by 2029.

The growing need for automation, smart solutions, and technology stems from improved industry standards and increased concerns among industry players about lowering total costs.

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> *Knowledge Sourcing Intelligence*

Industry standards are developing, and product and solution needs for many sectors are increasing, prompting organizations to create automated solutions using cutting-edge technology to efficiently deal with difficulties. As the infrastructure ages, the power distribution system, which manages power and controls its distribution and transmission, faces new issues.

Self-healing grids serve a critical role in modernizing and strengthening electrical power distribution networks. By automating problem detection and response operations, these systems assist utilities in increasing grid dependability, reducing downtime, and better serving their customers.

The rising use of renewable energy, particularly wind and solar, presents issues due to its intermittent nature. Notably, iea.org reports that by 2024, the combined electricity output from wind and solar PV is expected to exceed that of hydropower. The intermittent nature of these renewable sources needs novel solutions.

Advanced data analytics and control technologies enable self-healing grids to integrate

unpredictable energy sources, allowing for a seamless transition to a low-carbon future while also assuring stability and resilience.

For example, Duke Energy, which provides self-healing capabilities on its principal power distribution lines to nearly 59% of its Florida consumers, is a significant example of effective climatic event utilization. The firm intends to increase its coverage, to reach around 80% of clients in the future years. This example demonstrates the practical use of self-healing grid technology to meet issues caused by natural disasters and climate phenomena.

There are many product launches and developments that are taking place in the self-healing grid market during the forecast period. For instance, in October 2023, Avangrid, a sustainable energy firm, received a $30 million grant from the US Department of Energy's Grid Deployment Office for its subsidiary, Central Maine Power (CMP). The project, awarded via the Grid Resilience and Innovation Partnerships (GRIP) program, intends to build advanced grid restoration and sequential reclosing technologies.

Access sample report or view details: https://www.knowledge-sourcing.com/report/global-self-healing-grid-market

The global self-healing grid market, based on different applications is categorized into- power transmission and power distribution. Power transmission refers to the long-distance transportation of electricity from power plants to substations or regions. Grids use high voltages to minimize energy losses. Self-healing systems increase dependability by identifying and isolating problems, reducing power outages over vast distances.

Power distribution is the process of transporting energy from substations to end consumers, which might include residential, commercial, and industrial clients. Distribution grids govern power flow within local areas and operate at lower voltages. Self-healing grid technologies in power distribution networks decrease outage durations by isolating faults and restoring service to impacted regions, hence improving consumer energy supply dependability.

The global self-healing grid market, based on different grid integration sources is categorized into- conventional and non-conventional. Conventional self-healing grid systems rely on existing infrastructure and technology, such as distribution lines, transformers, switches, and substations. They may also use smart sensors, communication networks, and automated switching devices to identify, isolate, and restore faults automatically. Advanced automation and control systems improve grid stability and resilience.

Non-conventional self-healing grid solutions use cutting-edge technology such as microgrids, distributed energy resources, and sophisticated control algorithms, with a focus on decentralized, modular designs. They use renewable energy, energy management technologies, predictive analytics, and enhanced communication and cybersecurity measures to ensure grid resilience.

The North American region is expected to have a substantial market share self-healing grid market throughout the projected period, owing to quicker adoption of power grid systems by power grid owners as transmission and distribution losses rise, notably in the United States.

The US Energy Information Administration forecasts 5% power losses in energy transmission and distribution across the power grid, encouraging industry participants to expand investments in sophisticated technology to improve distribution grid management automation and efficiency.

As a part of the report, the major players operating in the global self-healing grid market that have been covered are ABB, Siemens, Cisco Systems, Inc., General Electric Company, Eaton, Schneider Electric, S&C Electric Company, Itron, and IBM Corporation.

The market analytics report segments the global self-healing grid market using the following criteria:

- By Application

o Power Transmission
o Power Distribution

- By Grid Integration Source

o Conventional
o Non-Conventional

- By Geography

o North America

- USA
- Canada
- Mexico

o South America

- Brazil
- Argentina
- Others

o Europe

- Germany

- France
- United Kingdom
- Spain
- Others

o Middle East and Africa

- Saudi Arabia
- UAE
- Israel
- Others

o Asia Pacific

- Japan
- China
- India
- South Korea
- Indonesia
- Thailand
- Taiwan
- Australia
- Others

Companies Mentioned:

- ABB
- Siemens
- Cisco Systems, Inc.
- General Electric Company
- Eaton
- Schneider Electric
- S&C Electric Company
- Itron
- IBM Corporation

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Ankit Mishra
Knowledge Sourcing Intelligence LLP
+1 850-250-1698
email us here
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