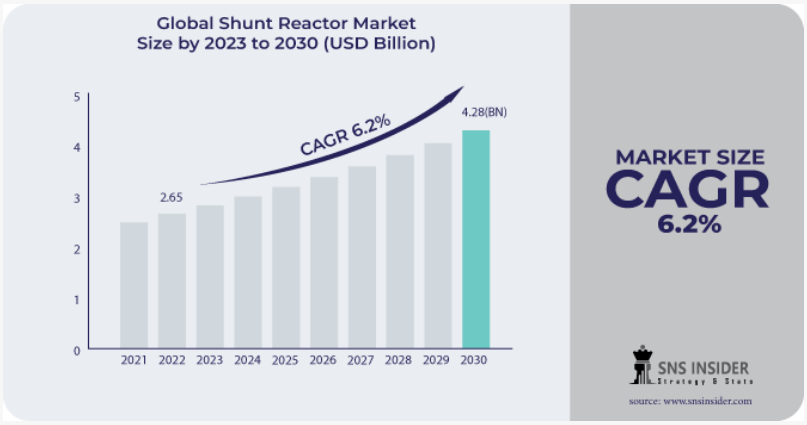
# Shunt Reactor Market to USD 4.28 Billion by 2030, Fueled by Global Energy Demand, Enhancing Power Grid Stability

*Increasing worldwide power demand, driven by rapid urbanization and the surge in renewable energy, propels the Shunt Reactor Market's robust growth.*



Shunt Reactor Market

TEXAS CITY, TEXAS, UNITED STATES, February 22, 2024 /EINPresswire.com/ -- The SNS Insider report reveals that the Shunt Reactor Market was valued at USD 2.65 Billion in 2022, projecting a growth to USD 4.28 Billion by 2030 at a CAGR of 6.2%. Shunt reactors, vital in high-voltage power transmission networks, contribute to voltage stability during load variations.

The Shunt Reactor Market is experiencing a resurgence fueled by the increasing integration of renewable energy sources into the power grid. As the demand for clean energy continues to soar, utilities are faced with the challenge of maintaining grid stability amidst intermittent renewable generation. Shunt reactors emerge as critical components in voltage regulation, providing reactive power compensation to counteract the effects of capacitive loads and voltage fluctuations. With advancements in grid infrastructure and the deployment of smart grid solutions, the market is witnessing a paradigm shift towards high-capacity, ultra-efficient shunt reactors capable of seamlessly integrating renewable energy resources while ensuring grid reliability and power quality.

> The Shunt Reactor Market size was valued at USD 2.65 billion in 2022 and is expected to grow to USD 4.28 billion by 2030 and grow at a CAGR of 6.2% over the forecast period of 2023-2030."
>
> *Sr. Researcher Sushant Kadam*

Furthermore, the Shunt Reactor Market is witnessing rapid innovation driven by the growing emphasis on energy efficiency and grid modernization initiatives worldwide. From advanced materials and compact designs to intelligent control

systems and predictive maintenance solutions, manufacturers are leveraging cutting-edge technologies to enhance reactor performance and optimize operational efficiency. Moreover, with the advent of HVDC (High Voltage Direct Current) transmission and FACTS (Flexible Alternating Current Transmission Systems) technologies, shunt reactors play a pivotal role in ensuring efficient power transfer, voltage stability, and grid reliability across long-distance transmission networks. As utilities strive to meet the evolving demands of the energy transition era, the Shunt Reactor Market is poised for sustained growth, offering indispensable solutions for enhancing power system performance and resilience in an increasingly electrified world.

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KEY PLAYERS:

• Siemens AG
• ABB Limited
• Alstom SA
• Toshiba
• Crompton Greaves
• Zaporozhtransformator
• Fuji Electric
• Mitsubishi Electric Corporation
• Hyundai Heavy Industries
• Tebian Electric Apparatus Stock Company Ltd.

Market Report Scope:
A shunt reactor, a crucial electrical device in power transmission networks, maintains voltage stability amid load variations. Operating as an absorber of reactive power, it enhances energy system efficiency. Shunt reactors play a crucial role in balancing reactive power in cable systems and high-voltage transmission lines, contributing to power factor correction and voltage regulation.

The Shunt Reactor Market is witnessing substantial growth due to the increasing worldwide power demand. Energy consumption has surged with rapid urbanization, industrialization, and population expansion. Shunt reactors are essential in maintaining a steady power supply by correcting power factors and regulating voltage. As renewable energy sources gain prominence, shunt reactors become indispensable for stabilizing grids amid their intermittent nature.

Market Analysis
The Shunt Reactor Market experiences a surge in demand due to the escalating number of global transmission line development projects. As nations undertake extensive modernization initiatives within their transmission and distribution networks to accommodate the escalating power demand, the deployment of shunt reactors becomes imperative. These reactors play a

pivotal role in regulating voltage and compensating for reactive power generated during system failures, ensuring the stability and reliability of power transmission. The ongoing global trend of upgrading infrastructure aligns with the critical role that shunt reactors play in mitigating voltage variations and ensuring seamless energy delivery, thereby fostering their increasing adoption in the rapidly evolving landscape of transmission line development projects worldwide.

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Segment Analysis:

By Phase
The three-phase segment dominates the market, driven by rapid industrialization, especially in emerging economies in Asia and Latin America. Three-phase settings are preferred for high-voltage applications, accommodating both single and three-phase applications. The single-phase segment is expected to grow due to urbanization and smart city projects.

By Type:
Oil-immersed reactors hold a major share due to their compatibility with high-voltage systems. Air-core reactors gain traction in low-voltage systems, with ongoing efforts to improve their performance. Trench Group's advancements in air-core reactors sustaining voltages up to 500 kV contribute to this shift.

By Product:
The variable segment dominates, offering flexibility across voltage fluctuations, aligning with the growth of renewable energy sources. Variable reactors adapt to unpredictable power fluctuations, while fixed reactors remain cost-effective for grids requiring a single unit.

By End-User:
Electric utility is the largest consumer globally, while renewable energy is expected to witness the highest CAGR. As the world shifts towards renewable sources, including hydropower, solar, and wind, the demand for shunt reactors in the renewable energy segment is set to surge.

Key Regional Development:
North America leads globally, driven by the pharmaceutical and biomedical industries. The United States, with a strong focus on high-quality products and biotechnological breakthroughs, is a market leader. Asia-Pacific is expected to witness the highest CAGR due to increasing industrialization and urbanization, particularly in India and Southeast Asia.

Key Takeaway:
Shunt Reactor Market poised for significant growth, reaching USD 4.28 Billion by 2030.
Three-phase reactors dominate, driven by rapid industrialization, while variable reactors lead in response to renewable energy fluctuations.
North America leads globally, propelled by the pharmaceutical and biomedical industries, while

Asia-Pacific exhibits the highest CAGR.

Recent Developments:
In June 2023, London-based DORE - Downing Renewables & Infrastructure Trust acquired Mersey Reactive Power for £11 million, aiding in managing Merseyside's energy supply.

In September 2022, ABB divested its remaining 19.9% stakes in the joint venture Hitachi ABB Power Grids formed in 2020.
In March 2022, Siemens Energy divested its 35% stake in Voith Hydro, making Voith Group the sole owner.

In January 2022, Trench Group, owned by Siemens Energy, introduced a 500kV Dry-Type Reactor, claiming it as the world's first.
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