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## INTRODUCTION

The renewable energy sector is growing at a fast pace globally thanks to falling prices and improving technology. China renewable energy market, which is estimated to be worth USD XX billion in 2016 will grow at a CAGR of XX percent and reach USD XX billion by 2021.

Living standards of the growing population, supported by urbanization, is influencing the demand for power around the world. Conventional power generation methods like thermal power plants are finding it hard to meet this increase in demand, thus paving way for the growth of renewables. Another factor that is aiding the renewable industry is the efficient collaboration between the governments, and the private sector. There is a growth in industrial investments backed by supportive government policies in renewable technologies. This is resulting in affordable technologies for applications ranging from power plants to small rooftop installations. Growing concerns regarding greenhouse gas emissions and other pollutants has led to consequences like environmental damage and global warming. This is prompting governments to look for cleaner power generation options, which is again proving to be beneficial to the renewables industry.

Renewable energy generation is hindered by various factors. Solar and wind, which are the most popular renewable sources today, are heavily dependent on factors such as the weather, making them unreliable. Power generation from these sources is also intermittent. In addition to these factors, some of the renewable energy plants have a large space requirement. For example, a thermal power plant would require only 10% of space than that of a solar power plant generating the same amount of electricity would require. These factors are however not hindering the growth of the renewables industry, as can be

seen from the arowing investments and technological advancements in the industry.

There is a growth in small scale power generation such as from solar rooftop photovoltaic installations. Smart grids, which are gaining popularity around the world, help integrate renewable sources effectively to the power grid. Battery technologies are also improving. All these factors will help in the long term to overcome the hindrances that renewable energy sector faces today.

China Renewable energy market report provides a comprehensive analysis of the market for wind, solar, hydro and other renewable energy sources. This report also includes key project information of both pipeline and upcoming projects. Key drivers and restraints that are effecting the growth of this market are discussed in detail. The study also elucidates on competitive landscape and key market players (both domestic and international) across various types of renewable energy sources.

The global renewable energy market was valued at \$928.0 Billion in 2017, and is expected to reach \$1,512.3 Billion by 2025, registering a CAGR of 6.1% from 2018 to 2025. Renewable energy technologies convert the energy from different natural sources such as sun, tides, wind and others, into its usable forms such as electricity.

The global renewable energy market is anticipated to grow significantly during the forecast period owing to increased emissions of greenhouse gases (GHGs), particularly CO2 due to utilization of fossil fuels for generation of energy. In addition, limited presence of fossil fuel on the earth as well its volatile prices fuels the renewable energy market. However, generation of energy from renewable sources requires huge

Market Analysis

investment. This factor is anticipated to hamper the market growth during the forecast period. Furthermore, in the Middle East, fossil fuels are majorly used to generate energy owing to its cost effective nature as compared to other regions. This hampers the growth of the market. On the contrary, continuous advancement in technologies and increased government funding in renewable energy sector to offer lucrative growth opportunities during the assessment period. The renewable energy market size is increasing due to rise in stringent government regulations regarding climate change in the developed and developing economies.

The <u>renewable energy market</u> is segmented into type, end use, and region. Based on type, the market is divided into hydroelectric power, wind power, bioenergy, solar energy, and geothermal energy. Based on end use, the market is categorized into residential, commercial, industrial, and others. Based on region, it is analyzed across North America, Europe, Asia-Pacific, and LAMEA.

Asia-Pacific is expected to grow at the fastest rate during the forecast period. Owing to increase in demand for energy due to rise in industrialization in developing countries such as China, and India. Presence of these countries boosts the renewable energy market owing to factors such as rise in population, rapid industrialization along with favorable policies for the renewable energy sector.

The renewable energy market analysis covers in-depth information of major industry participants. Some of the major players in the market include ABB Ltd., General Electric (GE), The Tata Power Company Limited (Tata Power), Innergex, Enel Spa (Enel), Xcel Energy Inc. (Xcel Energy), EDF, Geronimo Energy, Invenergy, and ACCIONA.

Other players in the value chain of the market include Vestas Wind Systems A/S, UpWind Solutions, Inc., Senvion S.A., and Sinovel Wind Group Co., Ltd. ENERCON GmbH.

Key players are adopting numerous strategies such as product launch, acquisition, collaboration, partnership, and business expansion, to stay competitive in the market. For instance, Innergex acquired Alterra. The acquisition included two geothermal facilities in Iceland. This acquisition added 485 MW (gross 1,049 MW) of renewable energy assets, to its portfolio.

In addition, Enel won the first ever renewable energy tender in India through its subsidiary BLP Energy Private Limited. Enel is expected to invest \$290 billion in the construction of the wind farm. The plant is scheduled to start its operations in the second half of 2019 and is estimated to generate 1, 000 GWh of renewable energy.

This expansion has reinforced its presence in the India renewable energy market.

According to the perspectives of the CXOs, the renewable energy market is witnessing noteworthy growth. There are numerous factors contributing toward growth of the renewable energy market such as rise in industries in developing economies, increase in stringent government regulations toward greenhouse gas emissions across the globe, and surge in favorable policies in the developed and developing economies for the renewable energy sector. However, countries such as India, possess significant growth potential; however, due to inconsistent policy and business environment, the market is growing at a moderate

Based on region, the renewable energy market is analyzed across North America, Europe, Asia-Pacific, and LAMEA. Asia-Pacific emerged as a global leader in 2017 and is anticipated to continue its dominance during the forecast period. In terms of end use, the industrial and residential segments are expected to dominate the Asia-Pacific market owing to rapid industrialization. China is anticipated to account for the highest market share in the Asia-Pacific renewable energy market and is projected to dominate the market during the analysis period. China aims on reducing its dependency on fossil fuels by adopting renewable energy for generation of electricity.

The worldwide sustainable power source showcase is foreseen to develop altogether during the figure time frame attributable to expanded discharges of ozone harming substances (GHGs), especially CO2 because of use of petroleum products for age of vitality. What's more, restricted nearness of petroleum derivative on the earth too its unstable costs powers the sustainable power source showcase. In any case, age of vitality from sustainable sources requires enormous speculation. This factor is foreseen to hamper the market development during the figure time frame. Besides, in the Middle East, petroleum derivatives are significantly used to produce vitality inferable from its financially savvy nature when contrasted with different locales. This hampers the development of the market. In actuality, consistent headway in advancements and expanded government financing in sustainable power source part to offer worthwhile development openings during the evaluation time frame. The sustainable power source showcase size is expanding because of ascend in stringent government guidelines with respect to environmental change in the created and creating economies.

The sustainable power source advertise is portioned into type, end use, and district. In light of type, the market is partitioned into hydroelectric power, wind control, bioenergy, sunlight based vitality, and geothermal vitality. In view of end use, the market is sorted into private, business, modern, and others. In light of area, it is examined crosswise over North America, Europe, Asia-Pacific, and LAMEA. Asia-Pacific is relied upon to develop at the quickest rate during the conjecture time frame. Attributable to increment popular for vitality because of ascend in industrialization in creating nations, for example, China, and India. Nearness of these nations supports the sustainable power source advertise inferable from elements, for example, ascend in populace, fast industrialization alongside good arrangements for the sustainable power source segment.

The sustainable power source advertise examination covers top to bottom data of significant industry members. A portion of the significant players in the market incorporate ABB Ltd., General Electric (GE), The Tata Power Company Limited (Tata Power), Innergex, Enel Spa (Enel), Xcel Energy Inc. (Xcel Energy), EDF, Geronimo Energy, Invenergy, and ACCIONA.

Different players in the worth chain of the market incorporate Vestas Wind Systems A/S, UpWind Solutions, Inc., Senvion S.A., and Sinovel Wind Group Co., Ltd. ENERCON GmbH.

Key players are embracing various procedures, for example, item dispatch, securing, joint effort, association, and business development, to remain aggressive in the market. For example, Innergex obtained Alterra. The procurement remembered two geothermal offices for Iceland. This securing included 485 MW (net 1,049 MW) of sustainable power source resources, to its portfolio.

What's more, Enel won the first historically speaking sustainable power source delicate in Quite a while through its backup BLP Energy Private Limited. Enel is relied upon to put \$290 billion in the development of the breeze ranch. The plant is booked to begin its tasks in the second 50% of 2019 and is assessed to create 1, 000 GWh of sustainable power source. This extension has fortified its quality in the India sustainable power source showcase. As per the viewpoints of the CXOs, the sustainable power source showcase is seeing significant development. There are various components contributing toward development of the sustainable power source market, for example, ascend in businesses in creating economies, increment in stringent government guidelines toward ozone harming substance emanations over the globe, and flood in positive strategies in the created and creating economies for the sustainable power source division. Be that as it may, nations, for example, India, have noteworthy development potential; nonetheless, because of conflicting strategy and business condition, the market is developing at a moderate

In view of district, the sustainable power source showcase is broke down crosswise over North America, Europe, Asia-Pacific, and LAMEA. Asia-Pacific rose as a worldwide innovator in 2017 and is foreseen to proceed with its strength during the figure time frame. As far as end use, the modern and private fragments are required to overwhelm the Asia-Pacific market attributable to fast industrialization. China is foreseen to represent the most noteworthy piece of the overall industry in the Asia-Pacific sustainable power source advertise and is anticipated to rule the market during the examination time frame. China points on diminishing its reliance on petroleum products by embracing sustainable power source for age of power.

