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Global Energy Transition

Market Insights Trends and Analysis

By SN Global Infra Research

Global Energy Transition Market Insights Trends and Analysis

As part of the 2015 Paris Agreement on Climate Change, 196 signatories pledge to limit global warming to 1.5°C compared to pre-industrial levels. Countries agreed to achieve the carbon neutrality and reduce greenhouse gas emission as soon as possible with their long-term greenhouse gas emission development strategies and plans. The agreement affirms to provide financial, technical, and capacity building framework to countries, realizing the fact that these efforts require global effort and support for successful implementation and realization.

The COP26 summit held 2021 brought all the signatories together to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change. Global economy challenged with COVID-19, after 13 days of negotiations between 200 countries agreed to enhance transparency framework for reporting emissions, common timeframes for emissions reductions targets and mechanisms and standards for international carbon markets.

The key outcome of the summit was 190 countries agreeing to phase down coal power, resulting in a 76% decrease in planned new coal power plants and over 40 countries, several states and organizations declared their support for the global coal to clean power transition statement.

As per the World Energy Transition Outlook, the 1.5°C Scenario will require investments of USD 5.7 trillion per year until 2030. Around USD 0.7 trillion of these investments are expected to be directed towards fossil fuels and should be redirected towards energy transition technologies. Since these investment decisions are long-lived, and the associated risks of stranded assets are high, so decisions must be guided by long-term strategic decisions.

Transition towards net-zero low carbon economy is essential to address issues with global warming, long-term energy security and to attain a secured sustainable climate. These requires actions at national and regional scale to accelerate and attain the global energy transition. A holistic framework needs to be designed and agreed to attain a global sustainability.

The report presents global scenario on renewable installations and coal decommissioning considering the short to long term scenario based on policy support and country level targets as phasing out fossil fuels is a complex task for countries heavily reliant on coal. The three technologies that were deemed to have the most impact on the speed of the energy transition before 2030 are solar, wind and Energy Storage. Experts believe a combination of wind; solar and energy storage could help decarbonize up to 90 percent of electricity generation The report provides insights on the global and regional installations of energy storage projects and the future capacity build up, countries initiatives and policies towards energy storage and security; and utilities investment towards energy storage for self-sufficiency; cost effectiveness; grid integration and stability.

Another technology that will play a major role in energy transition is the Hydrogen. Where, Renewable technologies like Solar and wind are essential and expected to play a key role towards energy transition given the maturity, scalability, and cost-effectiveness of these technologies. Energy storage and hydrogen are considered indispensable for grid integration of renewables and decarbonization of hard-to-abate sectors. The report provides in-depth insights and analysis into hydrogen market capacity, installations, and future implications with respect to its role towards global energy transition. Hydrogen being at nascent stage requires to attain cost effectiveness, and therefore the report highlights countries policies and targets to attain scalability for large scale deployment and implementation of the technology.

Apart from the electricity generation, there are serious concerns whether other energy intensive industries will be able to achieve net zero by 2050. The transport sector looks to make a strong progress towards emission reduction followed by construction, chemical and other sectors. The key role played in achieving the emission target for the transportation sector comes from with the deployment of Electric Vehicles. The report analyses the installations and future of electric vehicle installations, policy support at country level and major barriers in successful implementation of the technology.

Power utilities across the globe are making huge investments and shift towards renewable adoption. Major oil and gas companies are also investing huge amounts in renewable installations, emission control and shift towards clean technologies. The report analyses some of the major companies plans, targets and actions for energy transition and security.

The report provides in-depth analysis and opinions on technology implementation, policies that are governing the energy transition efforts, turnkey technologies at global, regional and country level and analysis of some of the major companies towards energy transition.

Themes addressed:

- 1. Renewable Energy
 - a. Solar, Wind, Coal Decommissioning
 - b. Energy Storage
 - c. Hydrogen
 - d. Electric Vehicles
- 2. Policies, Regulations
- 3. Industry Transition

Key queries addressed in the report

- Energy Transition: Implications and Way-Forward
- Technology: Implications and Challenges
- Policy and Regulatory: Support and Policies
- Participants: Implementation and Barriers
- Major Companies: Energy Transition Plans and Actions

Companies who will be interested in buying this report

- Power Utilities
- Oil and Gas Utilities
- Renewable Energy Companies
- Hydrogen Producing Companies
- Energy Intensive Companies
- Other Industry Players and Participants
- International Energy Agencies and Associations
- Regulators and Policy Makers
- Financial Institutions and Lending Companies

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