

Asia-Pacific Power - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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Report description:

The Asia-Pacific Power Market size is estimated at 4.36 terawatt in 2024, and is expected to reach 5.84 terawatt by 2029, growing at a CAGR of 6.04% during the forecast period (2024-2029).

Key Highlights

- Over the medium term, factors such as increasing demand for electricity in residential, commercial, and industrial segments and the governmental push towards the adoption of renewable energy sources coupled with rising investment in the power sector are expected to drive the market.
- On the other hand, a huge investment that is required for setting up and modernizing of power generation, transmission and distribution network, and weak private sector investment along with the plans to shut down coal-fired power plants are expected to impede the growth of the market.
- Nevertheless, new models of solar cells made of a thin film technology that uses thin coatings of cadmium telluride in solar cells, which has higher efficiency and lower cost, may prove to be an opportunity in the sector.

Asia-Pacific Power Market Trends

Thermal Power to Dominate the Market

- The Asia Pacific region consists of a substantial amount of fossil fuel energy sources, which in earlier eras became the first choice of the major countries for generating power by the use of steam turbines, i.e. thermal power stations.

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- Electricity generation in Asia-Pacific was around 14546.4 TWh in 2022. Among all the segments, thermal power contributes the highest, with a market share of approximately 67.7% in 2022.
- As of January 2023, China has the highest number of operating coal thermal power plants in the world. Till January 2023, China has around 3092 units of operating coal thermal power plants, 499 under-construction coal power plants, and 112 announced coal power plants. Hence, such a trend would propel the thermal sector in the upcoming years.
- Apart from coal, the country has a significant share of electricity generation from fossil fuels like natural gas. As of January 2023, the country has nearly 377 operating gas power plants. The units for gas power plants are likely to increase during the upcoming years on account of various forthcoming projects. As of January 2023, China has around 238 under-construction gas power plants and 78 announced gas power plant projects.
- Furthermore, Thailand is also significantly reliant on thermal energy sources. In 2022, natural gas accounted for the highest power generation capacity in Thailand, with approximately 114.64 thousand GWh, followed by coal and lignite.
- In October 2022, Mitsubishi Power announced the completion of a 2,650-MW natural gas-fired power plant in Chonburi, Thailand. The company has delivered M701JAC power trains to the joint owner of the plant Gulf Energy Development PCL and Mitsui & Co., Ltd. The Gulf SRC (GSRC) power plant is the first gas-fired independent power project developed by the two companies under their joint venture, Independent Power Development Co. (IPD). The first two 660-MW units at the GSRC plant went online in March 2021 and October 2021, respectively. The third and fourth units were completed in 2022.
- Thus the above points clearly mention that, the thermal power plants are likely to dominate the Asia-Pacific power market due to their competitive costs of construction and operating and the continued investment in the thermal power sector.

India is Expected to Have a Significant Share in the Market

- India is one of the major economy in the world and is home to a vast power market that has been fully liberalized. The electric power industry in India covers the generation, transmission, distribution, and sale of electric energy in India.?
- India is one of the prominent power-generation and consuming markets in the Asia-Pacific region. Fossil fuel-based power generation, particularly natural gas and coal, had a significant share, paving the way for the increased deployment of the power market in the country.?
- According to the Ministry of Power statistics, as of October 2023, the total electricity generation was dominated by fossil fuels, which account for more than 56% (~6% from natural gas, 1.6% from lignite, ~0.1% from diesel, and ~49% from coal) of the electricity produced in India, followed by renewable energy, which accounts for about 41.4% (11.2 % from hydro, 10.3 % from wind, 16.1 % from solar, 1.2% from small hydro power and 2.6% other sources). Though the share of renewable power sources is increasing rapidly in the country, fossil fuels-based power sources, especially coal-fired power plants, are likely to dominate the sector in the short term. Such a scenario in the power generation industry is expected to influence the growth of the power market during the forecast period.?
- The power sector in India is undergoing a rapid transformation, owing to the increasing population, rising energy demand, and growing industrial sector. ?Moreover, India's electricity generation mix shifted to natural gas, and renewable energy sources over the past decade. ?
- The renewable energy sector is governed by the Ministry of New & Renewable Energy (MNRE) which is responsible for creating and enforcing India's renewable energy laws and regulations, including the Feed-in Tariff system (FIT).?
- For instance, as of 2022, the Ministry of New and Renewable Energy (MNRE) provides Central Financial Assistance (CFA) of up to INR 2.5 million per solar park for the preparation of Detailed Project Report (DPR). Besides this, CFA of up to INR 2 million per MW or 30% of the project cost, including grid-connectivity cost, whichever is lower, is also provided. Additionally, the CFA of INR 2 million/MW is apportioned on 60:40 basis towards development of internal infrastructure of solar park to the SPPD and for development of external transmission system to Central Transmission Utility (CTU)/ State Transmission Utility (STU) respectively. ?
- India is also one of the largest renewable energy markets in Asia-Pacific. India's renewable energy installed capacity reached more than 132 GW as of November 2023, excluding hydropower. Solar, wind, and bioenergy are the major renewable energy

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sources in the country. As of November 2023, renewable energy sources, including hydropower, accounted for approximately 41.4% of the total electricity generation mix.?

- Therefore, with the above cited points, India is expected to have a significant share in the market due to its large electricity consumption and massive investment in power projects.

Asia-Pacific Power Industry Overview

The Asia-Pacific power market is fragmented. Some of the key players in the market (in no particular order) include Power Construction Corporation of China, NTPC Limited, Tokyo Electric Power Company Holdings, State Grid Corporation of China, and Korea Electric Power Corporation., among others

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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