

Turbo Expander - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Turbo Expander Market size is estimated at USD 1.13 billion in 2025, and is expected to reach USD 1.41 billion by 2030, at a CAGR of 4.6% during the forecast period (2025-2030).

Key Highlights

- Over the medium term, the increasing investment in the adaption of natural gas for power generation and fuel for various industries is expected to increase the demand for a turbo expander market.
- On the other hand, an increasing share of renewable energy sources such as solar and wind energy is expected to hinder the market growth.
- Nevertheless, the increasing technological investments in the market to produce energy efficiently and control carbon emissions are expected to create huge opportunities for the turbo expanders market.

Turboexpander Market Trends

Power Generation Segment to Have a Significant Share

- A turboexpander is a rotating machine with an expansion turbine that converts the energy contained in a gas into mechanical work, much like a steam or gas turbine. A steam or gas turbine's goal is to convert the mechanical work into helpful power by either driving an electric generator or being the prime mover for another rotating machine, such as a compressor or a high-power pump.

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- Natural gas played a significant role in electricity generation in 2022, accounting for almost 23% of the total. It was mainly due to robust growth in electricity generation from natural gas in the United States and China. The global installed capacity of gas-fired power plants is expected to increase over the next twenty years, with more than 1,500 GW of new capacity projected to be added to the power network by 2040.
- In 2022, electricity generation through natural gas was recorded at 6631.4 TWh, an increase of 1% compared to 2021. A similar trend is expected during the forecasted period due to the increasing demand for adapting cleaner energy sources and the early retirement of coal power plants worldwide.
- Additionally, since 2011, Japan largely replaced its nuclear power generation capacity with plants powered by liquefied natural gas (LNG).
- In December 2022, A power production development firm in Maryland revealed that a planned 1.8 GW combined-cycle natural gas-fired power facility in West Virginia would contain carbon capture technology. Competitive Power Ventures (CPV) announced the new CPV Shay Energy Center location in Doddridge County, West Virginia.
- Therefore, the increasing shift towards natural gas-based power generation is expected to drive the turbo expander market in the power generation sector during the forecast period.

Asia-Pacific to Dominate the Market

- In 2022, the turbo expander market was mainly dominated by Asia-Pacific, which is predicted to continue in the upcoming years. One of the major reasons for the rising demand for turbo expanders is the growing utilization of natural gas to generate power. With most nations aiming to reduce their carbon emissions by transitioning to cleaner fuel alternatives like natural gas, there is an anticipated increase in the consumption of this resource. It is expected to lead to a surge in demand for turbo expanders.
- China formulated a gas-to-power strategy to raise the percentage of natural gas in its overall power generation blend to 15% by 2030, up from 4.2% in 2021.
- In addition, numerous refineries and LNG projects are anticipated to emerge in the Asia-Pacific region in the projected timeframe. As a significant quantity of turbo expanders are utilized for recuperating energy in refineries and in the expansion of LNG within LNG plants, it is expected that there will be a surge in demand for such equipment.
- For instance, in January 2022, Petronas and the Malaysian State of Sabah disclosed their intentions to establish a liquefied natural gas (LNG) terminal with a capacity of two million metric tons/year (mmt). The upcoming facility in the Sipitang Oil and Gas Industrial Park is a component of Petronas' cooperation with the state in expanding Sabah's distribution of cleaner energy to industrial and commercial entities.
- Furthermore, many developing economies, such as India, are growing quickly, potentially leading to increased industrialization. As a result, the market for turbo expanders is expected to be stimulated due to their utilization in various industrial applications such as refrigeration and energy extraction.
- Therefore, due to the abovementioned points, the Asia-Pacific region is expected to dominate the turbo expander market during the forecasted period.

Turboexpander Industry Overview

The turbo expander market is semi-consolidated. Some of the major players in the market (in no particular order) include Atlas Copco AB, Baker Hughes Company, Cryostar SAS, Nikkiso ADC, and PBS Group., among others

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

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