

Tidal Power - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2020 - 2029

Market Report | 2024-02-17 | 125 pages | Mordor Intelligence

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Report description:

The Tidal Power Market size is estimated at 0.67 gigawatt in 2024, and is expected to reach 2.32 gigawatt by 2029, growing at a CAGR of 28.11% during the forecast period (2024-2029).

Key Highlights

- Over the medium term, factors such as the global energy transition toward renewables and the rollout of new technologies in many developed countries are expected to be one of the most significant drivers for the tidal power market during the forecast period.
- On the other hand, the market is highly obstructed due to the exorbitant costs and environmental impacts of the technology. This poses a threat to the tidal power market during the forecast period.
- Nevertheless, the research and innovation endeavors by the industry leaders present an enormous opportunity for the market's growth. The ground-breaking Tidal Turbine Power Take-off Accelerator (TiPA) project is a perfect demonstration of the statement. It recently developed a highly reliable, efficient, and cost-effective power-take-off system for a tidal turbine. This factor is expected to create several opportunities for the market in the future.
- The European region is expected to dominate the market during the forecast period due to many planned tidal energy projects across the region.

Tidal Power Market Trends

Floating Tidal Power Platform Expected to Witness Significant Growth

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- Tidal energy uses tidal currents consistent in volume and direction throughout the year, making it an incredibly efficient renewable energy source with a high power output.
- The tidal power market recently witnessed increased floating power production system deployments. In the system, the turbines are aligned in a particular way and attached to a standard moving beam. They produce more energy as compared to fixed structures.
- According to the International Renewable Energy Agency, the estimated global marine energy capacity accounted for 524 MW in 2022, which includes the ocean energy derived from the kinetic energy of ocean waves, tides, salinity, and differences in ocean temperatures. Most of this was due to the added capacity from floating tidal power stations and wave energy. The industry is expected to grow even more in the coming years, parallel with the net-zero emission goals in many countries. Thus, several upcoming projects are lined up to harness the technology for power production.
- The US Department of Energy has a Water Power Program to develop marine energy and technologies. In October 2022, the US Department of Energy agreed to fund USD 35 million to advance tidal and river current energy systems as part of measures to boost a sector whose current impact is negligible.
- Such developments will likely significantly boost the market due to the expansion of floating/instream tidal energy platform installations.

Europe Expected to Dominate the Market

- Europe planned a series of tidal power plants coming into operation or getting grid-connected recently. Countries like the United Kingdom and Denmark are the most highlighted parts of the region.
- According to a 2021 study conducted by experts at Edinburgh University, tidal stream alone has the potential to produce 11% of the United Kingdom's current annual electricity demand, which is the same as the combined contribution of solar and biomass over the previous year.
- The British Hydropower Association adds that tidal range projects under development, which are now delayed, would provide 10 GW of extra capacity by 2030 if permission and enough funding were granted. These projects throughout the United Kingdom include Swansea Bay, Merseyside, the North Somerset Coast, and the North Wales Coast.
- In March 2023, authorities in Liverpool wanted the River Mersey to be the site of a massive tidal power plant that could power up to 1 million homes while creating thousands of employment in the region. If constructed, the plant would have a capacity of at least one gigatonne and use Mersey's tidal range.
- Moreover, in May 2022, Minesto completed the first week of commissioning the Dragon 4 tidal power plant in Vestmanna, Faroe Islands, Denmark, including energy production and verification of all critical operations. Minesto's Deep Green Kite technology is cost-effective in places with low-flow tidal streams and ocean currents.
- Such developments will likely boost the region's position in the tidal power market's growth.

Tidal Power Industry Overview

The tidal power market is semi consolidated. Some of the key players in the market (in no particular order) include Andritz AG, Nova Innovation Ltd, Orbital Marine Power Ltd, SIMEC Atlantis Energy Ltd, and Sustainable Marine Energy Ltd.

Additional Benefits:

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

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