

CURRENT AND PROSPECTIVE INDICATORS OF THE GLOBAL THERMAL ENERGY MARKET

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Thermal power plants (PPPs) are the basis of electric energy; they produce electricity as a result of the conversion of thermal energy released during the burning of organic fuel. According to the type of electrical equipment, thermal power plants are divided into steam turbine, gas turbine and diesel power plants.

The global CHP market is primarily driven by the growth in energy consumption and demand by the household and commercial sectors worldwide. Investments in industrialization and urbanization of rural areas have greatly increased the demand for efficient and uninterrupted power supply worldwide. The increasing number of industrial and domestic facilities is expected to increase the demand for efficient power supply leading to the growth of the global thermal power plant market in the coming years.

Rapidly growing population worldwide is expected to increase energy consumption during the forecast period.

According to the United Nations, in 30 years, that is, from 2020 to 2050, the world's population is expected to increase by 2 billion, i.e. By 2050, it will reach from 7.7 billion to 9.7 billion. This will significantly increase the demand for energy, and therefore, significant growth is expected in the global IES market in the near future. The rapid expansion of industry in the economies of developed and developing countries offers market participants the prospects of great economic and social growth processes. In addition, the increasing number of housing construction projects in cities and villages, the acceleration of urbanization processes are increasing energy consumption at a very high speed. Increasing government initiatives to electrify rural areas is significantly influencing the growth of the CHP market across the globe.

The COVID -19 pandemic has had a negative impact on the global IES market, as most commercial areas and industrial facilities have been completely or partially closed. This has significantly reduced the demand for energy. However, as people were forced to stay in their homes due to the implementation of quarantine regulations, household energy consumption increased dramatically.

The rapid penetration of various digital devices into people's domestic and social life, the increasing popularity of electric vehicle applications, and the rapidly



developing consumer electronics industry are contributing significantly to the growth of the global IES market.

However, increasing preference for renewable energy sources and increasing efforts to reduce dependence on conventional fuels for electricity generation are expected to increase the demand for alternative systems and this is a hindrance to the growth of the CHP market. can do.

It can be said that in 2022, the size of the global IES market was 1575.22 billion US dollars, and by 2030, this indicator is expected to increase by 55%. The main reason for such a pessimistic forecast is given by the countries' policies aimed at reducing the large mass of carbon dioxide emissions released as a result of the operation of thermal power plants and encouraging the use of renewable energy sources.

Globally, in terms of regional distribution in 2021, the Asia-Pacific region took the lead in the world IES market. The leadership in this was provided by the production volume of the giant coal producer of India, The Coal India Limited.

Table 1 below examines the current status and outlook of the global IES market:

Table 1 Current and prospective indicators of the global IES market¹

Deadline	Achievable result
Market size in 2022	1575.22 billion US dollars
Expected market size in 2030	2450.19 billion US dollars
Expected growth rate from 2022 to 2030	5.68% of the annual growth rate
Base year	2021
According to the type of fuel	Coal
	Natural gas
	Atom
	Others
According to the size	400 MW
	400-800 MW
	Above 800 MW
According to the type of turbine	Normal cycle
	Combined cycle
Scarred areas	North America
	Europe
	Asia-Pacific region
	Latin America
	Middle East and Africa

¹ <https://www.precedenceresearch.com/thermal-power-plant-market> Access Date 08/03/2023



In addition, rapid industrialization and urbanization in countries such as China, India, South Korea and Indonesia have significantly contributed to the increase in demand for thermal energy in the region. It is known that the two largest producers of Asia, China and India, have the production centers of the world and the presence of several large industries in the region has significantly increased the consumption of thermal electricity.

Growing government investment in urbanization and industrialization is expected to significantly boost market growth over the forecast period. A key driver is the expected increase in government investment in TPPs such as Phulkari Coal Power Plant in Bangladesh, Patratu Super Thermal Power Plant in India, Fuyang Power Plant and HuadianLaizhou Power Plant in China.

Natural gas is one of the main types of fuel that generate electricity from thermal power plants. The abundance of gas from countries such as Russia and the US has contributed significantly to the growth of the CHP market. There is a high demand for natural gas to generate electricity from thermal power plants in the USA and Europe. Availability of well-organized and strong infrastructure for CHPs is the main driver of the CHP market. Growing investment in the US to expand thermal capacity and increase electricity consumption is expected to fuel the growth of the North American thermal power plant market in the coming years.

References

1. <https://www.booksite.ru/fulltext/1/> 03.08.2023
2. <https://www.precedenceresearch.com/thermal-power-plant-market> 03.08.2023
3. <https://www.azocleantech.com/article.aspx?ArticleID=861#:~:text=Thermal%20power%20plants%20are%20known%20to%20pump%20out%20a%20lot,heavily%20reliant%20on%20fossil%20fuels.> Мурожаат санаси 02.08.2023
4. researchgate.net/publication/270596460_Possible_ways_of_reducing_the_effect_of_thermal_power_facilities_on_the_environment/references 03.08.2023.

