

# Market Definition

## Product Definition

The global steam turbine market in this study involves all new turbines used for power generation.

## Market Segmentation by Output Category

The global steam turbine market has been categorized into the following output categories:

- Up to xx MW
- xx MW to xx MW
- xx MW to xxx MW
- xxx MW to xxx MW
- xxx MW to x,xxx MW
- Greater than x,xxx MW

## Market Segmentation by Geographical Region

The global steam turbine market has been categorized into the following five groups:

- North America
- Latin America
- Europe
- Asia Pacific
- Rest-of-World

## Steam Turbine: An Introduction

A steam turbine is a mechanical device that converts thermal energy into mechanical energy. This rotary motion is utilized to drive an electrical generator connected through a shaft. Steam turbines are one of the oldest technologies used to generate power. At present, there are different types of steam turbines that are used for various applications. The different types of steam turbines are

- Noncondensing turbines
- Condensing turbines
- Reheat turbines
- Extracting type turbines
- Induction turbines

In the aforementioned list, the condensing, reheat, and induction turbines are widely used in the electrical power plants, whereas the noncondensing turbine is used in pulp and paper industry, district heating, and refineries. The extracting type turbines are used in all types of applications. The operational efficiency ranges from xx to xx percent, depending on the application of the turbines.

# Research Objectives and Time Frame

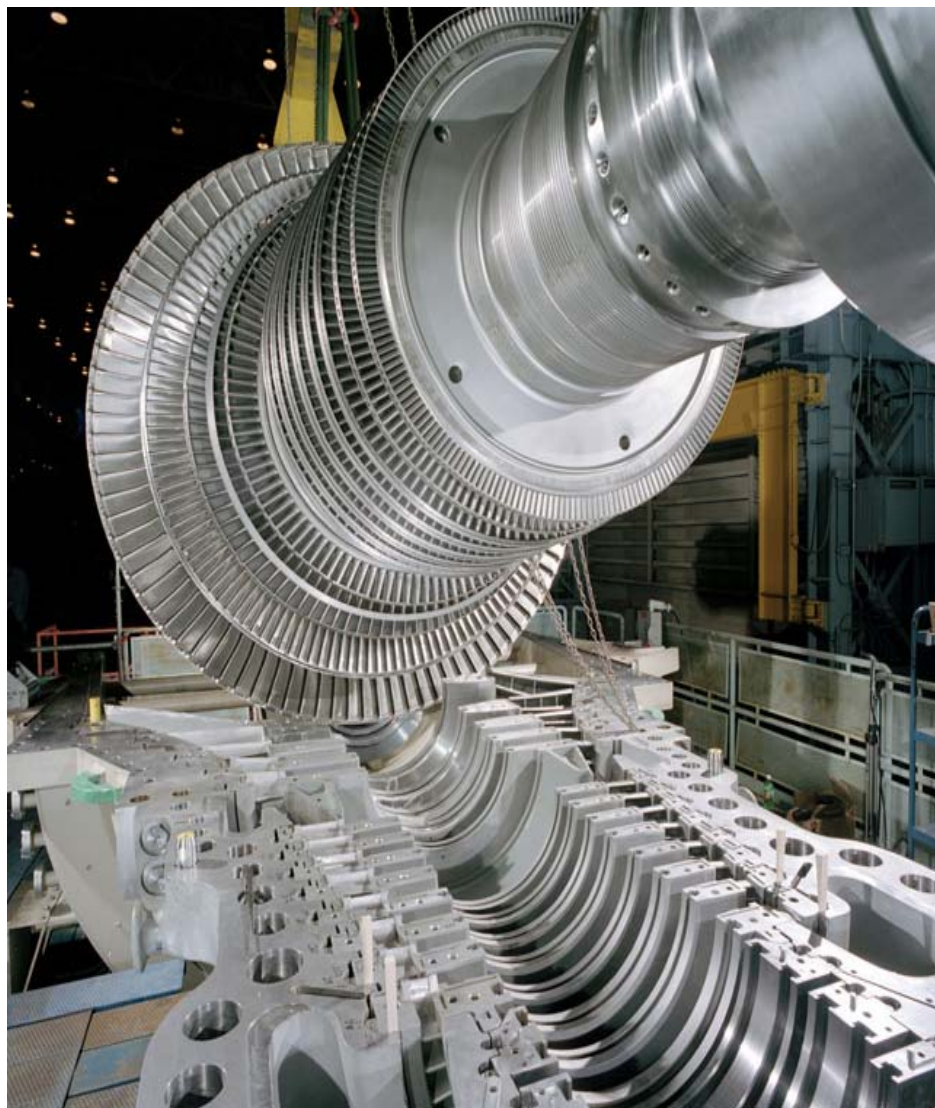
## Steam Turbine Market: Research Objectives and Time Frame

### Research Objectives

- ❑ To determine the current market size and forecast the future growth rates for the steam turbine market segmented by power range and geographic region
- ❑ To assess and identify opportunities for the steam turbine market in the power generation segment
- ❑ To discuss and analyze the industry challenges, market drivers and restraints
- ❑ To analyze the competitive structure of the steam turbine market

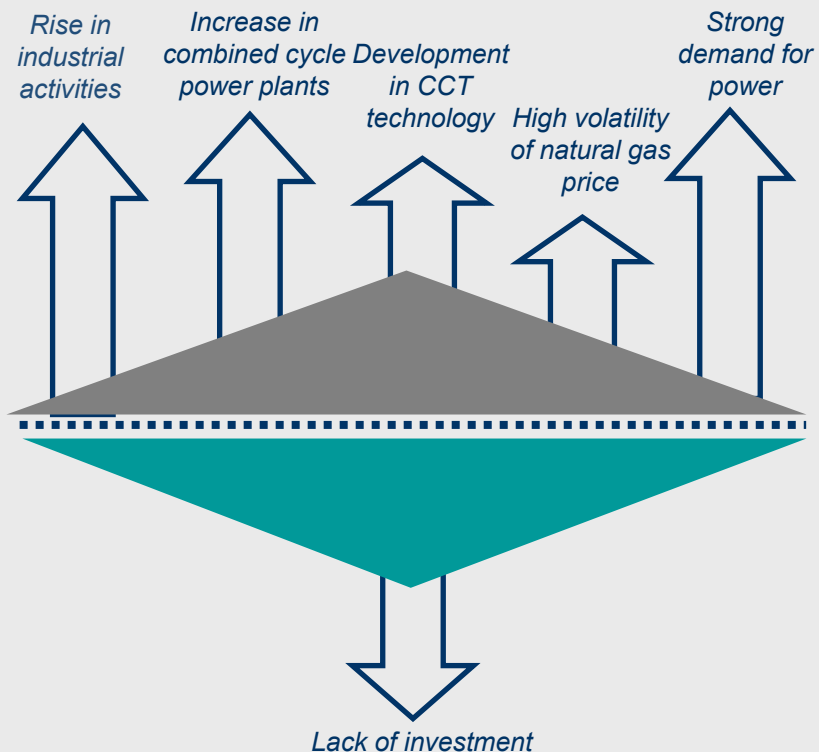
### Time Frame

- ❑ The base year for reporting market values research service is 2008 and the forecasts refer to revenues in U.S. dollars. The market revenues are provided for the study period from 2005 to 2015, segmented by output category and geography.



# Market Drivers and Restraints

## Steam Turbine Market: Market Dynamic Analysis (World), 2009-2015



Note: the length of the arrows represent the degree of impact

Source: Frost & Sullivan

## Steam Turbine Market: Drivers and Restraints

### Market Drivers

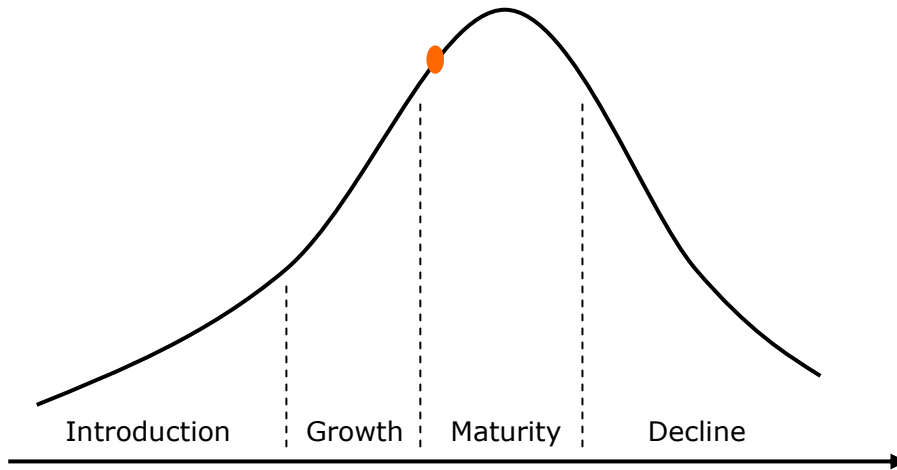
- ❑ Twentieth century has witnessed significant growth in the industrial activities worldwide. This spurred the demand for power. Thus, the increase in the global power demand has been strongly identified as a major driver for the steam turbine market.
- ❑ The future prospects for Clean Coal Technology Carbon Capture Storage and Carbon Sequestration are acting as a major driver for winning new projects across the globe as they are clean and highly efficient compared to the existing power plants.
- ❑ The increased efficiency of the combined cycle plant attracted significant investment from the utility companies to generate more power from the given amount of fuel.
- ❑ The increased industrial activities has favoured the growth of the steam turbine market as the companies tap the waste heat produced to generate power for their needs.
- ❑ The steep rise and fall of oil and natural gas prices in the past couple of years has deterred the utility companies in making significant investment in new gas-fired plants.

### Market Restraint

- ❑ The global economic slowdown has significantly affected the availability of investment for the new power plants. The impact is expected to get reduced once the economy recovers.

# Market Trends

## Steam Turbine Market: Life Cycle (World), 2008

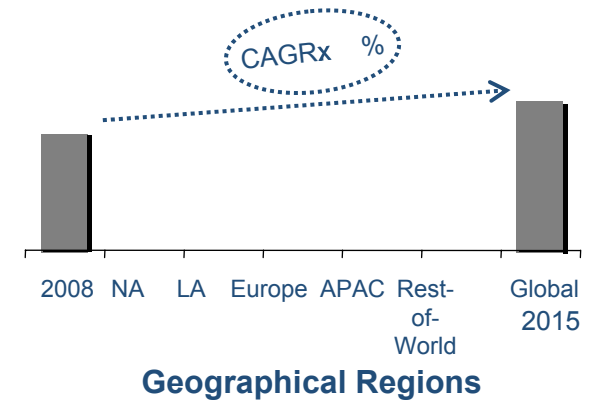


Source: Frost & Sullivan

- European steam turbine market is identified as a potential market in the future as there are number of ageing power plants, which has to be replaced in the near future.
- In the Asia Pacific region, rapid growth is observed in the countries such as India and China, amounting to xxx.xx GW of steam turbine in 2008, which was approximately xx percent of the total global steam turbine market in 2008.
- The Middle East and African markets are expected to grow at annual rate of around x.x percent for the forecast period with South Africa and Egypt are identified as key markets in the African region.
- Brazil is identified as one of the key market for the Latin America region. The total Latin American market is expected to reach around \$xxx.x million in 2010.

- The global steam turbine market is a matured market with slow growth expected to prevail in the market throughout the forecast period.
- The main area of growth is witnessed in the independent power producer and utility sector followed by industrial applications.
- Steam turbine market peaked in 2007 and reduced slightly in the first two quarters of 2008. However, the growth dipped by large margin in the third and final quarter of 2008 due to economic recession.

## Steam Turbine Market: Market Size (World), 2008 and 2015



Note: All figures are rounded; the base year is 2008. Source: Frost & Sullivan

# Competitive Analysis

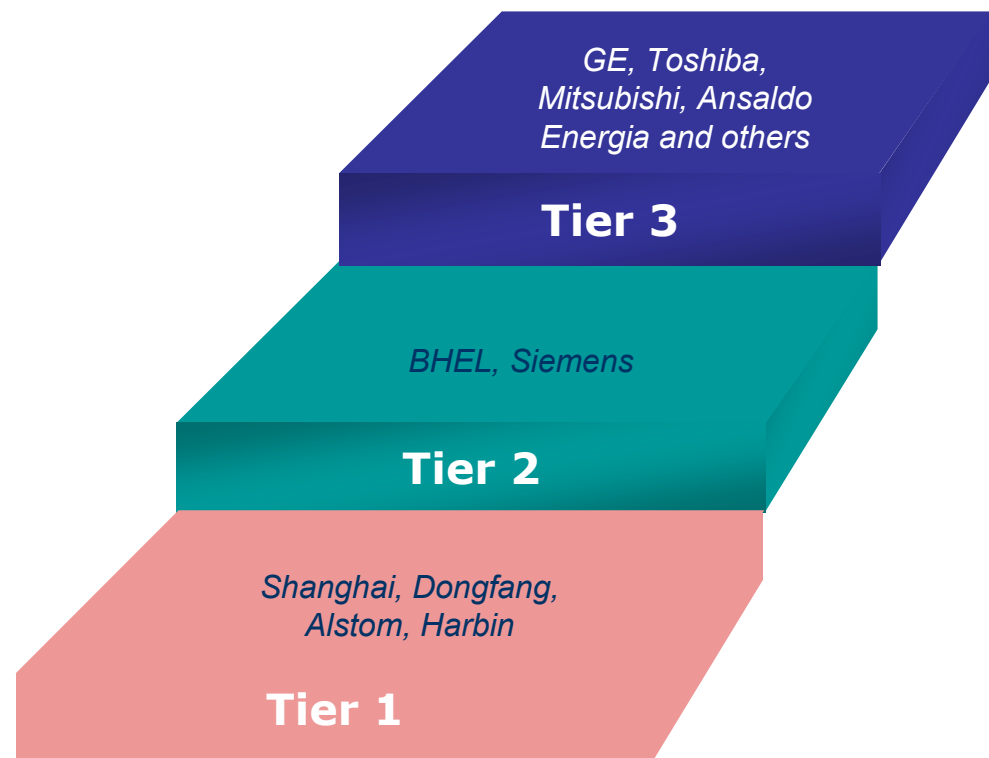
❑ The steam turbine market is highly competitive with Chinese market participants holding the major market share followed by other global participants.

❑ Competition in the steam turbine market possesses various dimensions such as price, customer service, and quality. Different segments of the market witness stiff competition varying in degree and intensity in these dimensions. The market is segmented into three tiers based on their 2008 market share.

❑ The competition is marked by established original equipment manufacturers and no newcomers are expected in the steam turbine market for manufacturing turbines with high output power during the forecast period.

❑ Utility companies and the independent power producers are the key end-user groups.

Steam Turbine Market: Competitive Analysis (World), 2008



Source: Frost & Sullivan

# Key Findings

- The global steam turbine market is expected to face stiff challenges from the alternative fuel sources for power generation such as wind turbine and solar cells market.
- The increase in power demand, rise in the worldwide installation of combined cycle power plants by utility companies, and developments in clean coal technologies are identified as a potential drivers for the market.
- However, the current economic condition has prevented the growth of the steam turbine market temporarily due to the lack of investment in the hands of the utility companies.
- The global steam turbine market size in terms of output power in 2008 was xxx.x GW.
- The market recorded revenue of \$xx,xxx.x million in 2008 and in 2015, the market is expected to reach \$xx,xxx.x million, at a compound annual growth rate of x.x percent.
- With the economic growth witnessed in many of the Asian countries, such as China, India, and so on, the Asia Pacific region is expected to exhibit strong growth for the steam turbine market throughout the forecast period followed by the Middle East region.
- The steam turbine market is a highly competitive market with market participants like Shanghai, Alstom, and Siemens holding the major share of the global market.
- The steam turbine technology is mature and proven and hence no new revolutionary technological advancements are expected in the market.