

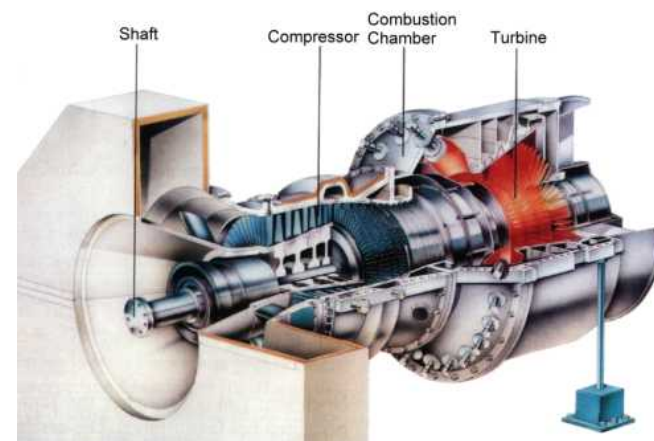
# The China CHP Equipment Market

## Product Briefing



### Contents

- Product Overview
- Market Snapshot
- Market Dynamics
- Drivers and Inhibitors
- Purchasing the Study



## CHP Equipment in China

This LPS provides an in-depth understanding of the market for CHP equipment in Mainland China, which was produced from our primary survey in 2H, 2011.



This study focuses on domestic sales of CHP equipment which are divided into six product categories: power station boilers, steam turbines, gas turbines, generators, heat recovery steam generators and reciprocating engines. A quantitative and qualitative assessment of the following is included:

- Market Figures
- Competitive Analysis
- Channel Analysis
- Analysis by industry
- Growth Rates & Forecasts
- Market Opportunities

Interviewed Companies include:

**Babcock & Wilcox Beijing, Babcock-Hitachi Dongfang Boiler, Beijing Beizhong, Caterpillar, Dongfang Electric Group, GE, Hangzhou Boiler, Harbin Electric Group, Hitachi, Jinan Boiler, Jieneng Group, Nanjing Turbine, Shengli Oil Field Shengli Power Machinery, Shanghai Electric Group, Wuhan Turbine, Wuxi Huaguang Boiler**

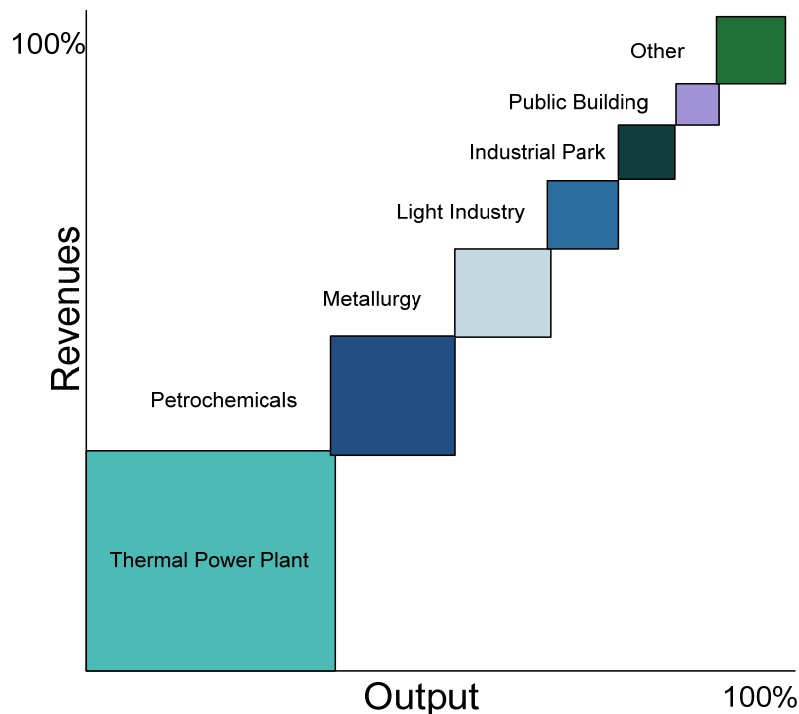
The following figure shows a breakdown of the interviews conducted for this study.

### Interview Sampling

Target Groups	Companies (No.)
Suppliers	52
Downstream Players	25
Experts	5
<b>Total</b>	<b>82</b>

The market grew by approximately 13% in 2011 and will maintain a robust growth through to 2015.

## Market Size Figures 2011



Source: GCiS

## Definitions

**Cogeneration** Also known as Combined Heat and Power (CHP) is the use of a heat engine or a power station to simultaneously generate both electricity and useful heat. Target products in this study are equipment used solely in cogeneration projects.

**Power Station Boiler (PSB)** Is a closed vessel in which water or other fluid is heated. The heated or vaporized fluid exits the boiler for use in various processes or heating applications.

**Steam Turbine (ST)** uses pressurized steam to turn rotor. Unlike gas turbine and reciprocating engine CHP systems where heat is a byproduct of power generation, steam turbines normally generate electricity as a byproduct of heat (steam) generation.

**Gas Turbine (GT)** Is prime mover for CHP. Electricity is generated through gas ignition that turns rotor. In the mean time, exhaust heat produced can be used in CHP configurations to reach overall system efficiencies (electricity and useful thermal energy) of 70 to 80 percent.

**Generator** is a device that converts mechanical energy to electrical energy.

**Heat Recovery Steam Generator (HRSG)** Is a steam boiler that uses hot exhaust gases from the gas turbines or reciprocating engines in a CHP plant to heat up water and generate steam. The steam, in turn, drives a steam turbine and/or is used in industrial processes that require heat.

**Reciprocating Engine** Include two basic types of reciprocating engines – spark ignition (SI) and compression ignition (CI). The most prevalent on-site CHP generation application has been SI. The hot water and low pressure steam produced by reciprocating engine CHP systems is appropriate for low temperature process needs, space heating, potable water heating, and to drive absorption chillers providing cold water, air conditioning or refrigeration.

**Target Market:** The target market of this study is defined as the market in China for these six types of CHP equipment among the main end-user industries: thermal power plants, petrochemicals, metallurgy, light industry, public buildings among others.

**Most major international suppliers are already in the market. They control slightly below 30% of revenues, mainly in product segments of advanced technology. Their domestic rivals are looking to improve technological capabilities but remain primarily in competing for large scale projects.**

## Market Entry

Market entry for foreign companies is complicated by dominance of domestic players due to high government influence on power products. Opportunity resides in cooperation with domestic suppliers and high quality and technology required products.

## Trends

Key trends are the rise in domestic demand for natural gas-fueled cogeneration, which results in a growing demand for both imports and for high quality domestic products.

## Regional Focus

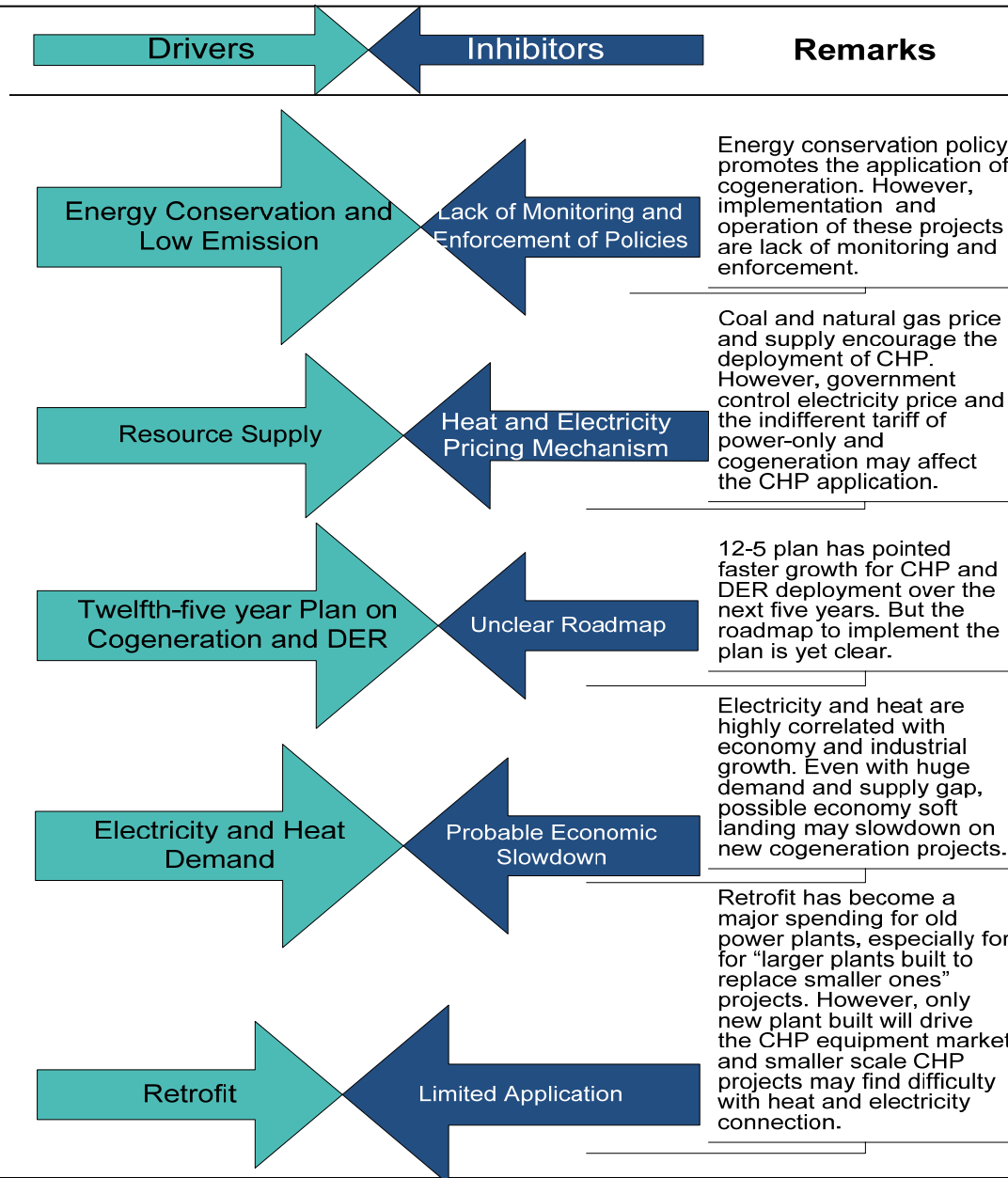
Demand for CHP equipment is highest in the North, followed by the East and Central regions of China. Please see GCiS classification of provinces by region for more information.

## Competitive Environment

## Foreign and Domestic Firms

Foreign suppliers control less than 30% of the market and enjoy advantages from a technological oligopoly for product such as GT and recip. engines. Domestic suppliers are still very much trying to play catch up in terms of meeting quality standards set by foreign products.

# Drivers & Inhibitors “Domestic demand drives future growth”



# Purchasing the Study

This Study is priced at:

Complete Study: **RMB 23,600**

Aggregate Analysis: **RMB 16,100**

Competitive Analysis: **RMB 11,100**

Product Segments Analysis (each): **RMB 8,700**

Executive Summary: **RMB 10,400**

Supplier Profiles: **RMB 13,800**

Influencer Analysis: **RMB 9,800**

*Plus Tax*

Major areas covered include:

- Market size and shares
- Five-year Projections
- Market Structure
- Pricing trends
- Distribution
- Consumption
- Assessment of key suppliers

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