

China Nuclear Power Industry Report, 2009-2010



As of Apr.2010, there had been 438 nuclear power units in operation all over the world, 52 nuclear power units under construction, and 143 units planned to be built in the future. Till Apr.2010, the global nuclear power installed capacity arrived at 374,127MWE, the nuclear power installed capacity of the units under construction 51,242MWE, and that of the units planned to be built 157,932MWE.

As of Apr.2010, a total of 11 nuclear power units had put into production, with the installed capacity of 9,100 MW; and 24 nuclear power units were under construction with the installed capacity of 25,400MW. In 2010, the authorities like National Energy Administration will make adjustments in the Planning for the Nuclear Power Development in the Medium and Long Term (from 2005 to 2020) (hereinafter referred to as Nuclear Power Planning), covering the promoting of nuclear power proportion and installed capacity scale as well as the arrangements in the operation time, sequence and layout etc.

Nuclear Power Units (Eleven) That Put into Production as of Apr.2010 Name of Units

Name of Units	Capacity: MW	Date of Putting into Operation	Location	Type	Service Lifetime (Years)
Qinshan NPP Phase I #1	300	Apr.1991	Zhejiang	PWR	
Qinshan NPP Phase II#1	650	Apr.2002	Zhejiang	PWR	40
Qinshan NPP Phase II#2	650	Mar.2004	Zhejiang	PWR	40
Qinshan NPP Phase III#1	700	Dec.2002	Zhejiang	HWR	40
Qinshan NPP Phase III#2	700	Nov.2003	Zhejiang	HWR	40
Dayawan NPP#1	984	Feb.1994	Guangdong	PWR	
Dayawan NPP#2	984	May.1994	Guangdong	PWR	
LingAo NPP#1	990	May.2002	Guangdong	PWR	
LingAo NPP#2	990	Jan.2003	Guangdong	PWR	
Tianwan NPP#1	1,060	May.2007	Jiangsu	PWR	40
Tianwan NPP#2	1,060	Aug.2007	Jiangsu	PWR	40

Source: ResearchInChina

According to the Nuclear Power Planning constituted in the year of 2007, China should attain the goal of nuclear power installed capacity up to 40,000 MW by 2020. Yet, China began to revise the Nuclear Power Planning under the influences from energy saving & emission reduction and the expansion of domestic demand. Zhang Guobao, the director general of National Energy Administration expressed to the public in May, 2010 that China's nuclear power installed capacity will reach above 70,000 MW by 2020.

In respect of the suppliers of nuclear power equipment, the manufacturers of nuclear island equipment castings include China First Heavy Industries and China ErZhong Group (DeYang) Heavy Industries Co., Ltd; the manufacturers of nuclear island equipment consist of Dongfang Electric Corporation, Shanghai Electric Group and Harbin Power Equipment Co., Ltd etc; and the main manufacturers of nuclear valves are comprised of CNNC Sufa Technology Industry Co., Ltd and Jiangsu Shentong Valve Co., Ltd.

Chinese Manufacturers of Main Nuclear Power Equipment

Nuclear Power Equipment Sub-industry	Typical Company	Product Manufacturing Capacity
Casting and Forging Parts of Nuclear Power Equipment	China First Heavy Industries	Casting & forging/pressure vessel/steam generator
	China ErZhong Group (DeYang) Heavy Industries Co., Ltd	Casting & forging/pressure vessel/steam generator
Nuclear Island Pipes	Zhejiang Jiuli Hi-tech Metals Co., Ltd	Nuclear island pipes
Main Equipment	Dongfang Electric Corporation	Main equipment of nuclear islands and conventional islands
	Shanghai Electric Group	Main equipment of nuclear islands and conventional islands
	Harbin Power Equipment Co., Ltd	Main equipment of nuclear islands and conventional islands
Nuclear Fuel	China National Nuclear Corporation	The platform of CNNC to carry overseas uranium strategy
HVAC/Nuclear Air-conditioning	Nanfang Ventilator Co., Ltd	HVAC system solutions
Valve	CNNC Sufa Technology Industry Co., Ltd	Nuclear 1, 2,3-grade valves
	Jiangsu Shentong Valve Co., Ltd	Nuclear 1,2,3-grade valves
	Yantai Moon Co., Ltd	Nuclear 1, 2,3-grade valves/coolant units

Source: ResearchInChina

Table of Contents

- **1. Overview of Global Nuclear Power Industry**
- 1.1 Number of Nuclear Power Units
- 1.2 Installed Capacity
- 1.3 Nuclear Power Development in Major Countries
 - 1.3.1 U.S.A
 - 1.3.2 Canada
 - 1.3.3 France
 - 1.3.4 Germany
 - 1.3.5 UK
 - 1.3.6 Russia
 - 1.3.7 Japan
 - 1.3.8 South Korea
 - 1.3.9 India
 - 1.3.10 Finland
- **2. Nuclear Power Development in China**
- 2.1 Policies on Nuclear Power Industry
- 2.2 Construction of Nuclear Power Plants
 - 2.2.1 Existing Nuclear Power Units
 - 2.2.2 Nuclear Power Units under Construction or Planned to be Built
 - 2.2.3 Nuclear Power Units to be Constructed
- 2.3 Nuclear Power On-grid Price and Cost Analysis
- 2.4 Nuclear Power Operation
 - 2.4.1 Number of Nuclear Power Units
 - 2.4.2 Installed Capacity
 - 2.4.3 Nuclear Power Generation
 - 2.4.4 Operation Events
- **3. Development of Nuclear Power Equipment**
- 3.1 Constitution
- 3.2 Investment
- 3.3 Industry Chain
- 3.4 Progression
 - 3.4.1 Import Substitution of 2G Nuclear Power Equipment

- 3.4.2 Import Substitution of 3G Nuclear Power Equipment
- **4. Main Segmented Sectors of Nuclear Power Equipment in China**
- 4.1 Nuclear Casting & Forging Parts
 - 4.1.1 Profile
 - 4.1.2 Development
 - 4.1.3 Profitability
 - 4.1.4 China First Heavy Industries
 - 4.1.5 China ErZhong Group (DeYang) Heavy Industries Co., Ltd
- 4.2 Main Nuclear Power Equipment
 - 4.2.1 Nuclear Island Steam Generator
 - 4.2.2 Reactor Pressure Vessel
 - 4.2.3 Reactor Internals Fabrication
 - 4.2.4 Primary Coolant Pump
- 4.3 Conventional Island Equipment
- 4.4 Suppliers of Main Nuclear Power Equipment
 - 4.4.1 Hailu Heavy Industry
 - 4.4.2 Dongfang Electric Corporation
 - 4.4.3 Shanghai Electric Group
 - 4.4.5 Xiangtan Electric Manufacturing Co., Ltd
- 4.5 Nuclear Power Valve
 - 4.5.1 Market Overview
 - 4.5.2 Competition Pattern
 - 4.5.3 CNNC Sufa Technology Industry Co., Ltd
- 4.6 Nuclear-Grade Stainless Steel Tube
 - 4.6.1 Progression
 - 4.6.2 Zhejiang Jiuli Hi-tech Metals Co., Ltd
- 4.7 Other Equipment
 - 4.7.1 HVAC Equipment
 - 4.7.2 Nanfang Ventilator Co., Ltd
- **5. Companies in Nuclear Power Operation**
- 5.1 China Guangdong Nuclear Power Holding Corporation
 - 5.1.1 Company Profile
 - 5.1.2 DaYaWan Nuclear Power Plant
 - 5.1.3 LingAo NPP Phase I
 - 5.1.4 LingAo NPP Phase II
 - 5.1.5 Liaoning HongYanHe Nuclear Power Plant
 - 5.1.6 Fujian NingDe Nuclear Power Plant

- 5.1.7 YangJiang Nuclear Power Plant
- 5.1.8 Guangdong TaiShan Nuclear Power Plant
- 5.1.9 Guangxi FangChengGang Nuclear Power Project
- 5.1.10 Guangdong LuFeng Nuclear Power Project
- 5.1.11 Hubei XianNing Nuclear Power Project
- 5.1.12 Anhui WuHu Nuclear Power Project
- 5.1.13 Jiangsu No.2 Nuclear Power Project
- 5.2 China National Nuclear Corporation
- 5.2.1 Company Profile
- 5.2.2 Qinshan NPP Phase I
- 5.2.3 Qinshan NPP Phase II
- 5.2.4 Qinshan NPP Phase III
- 5.2.5 Jiangsu Tianwan Nuclear Power Project
- 5.2.6 Fujian Fuqing Nuclear Power Project
- 5.2.7 Sanmen Nuclear Power Project
- 5.2.8 Hunan Taohuajiang Nuclear Power Project
- 5.3 CPI Jiangxi Nuclear Power Co., Ltd
- 5.3.1 Company Profile
- 5.3.2 Intro to Nuclear Power Plants
- 5.3.3 Shandong Haiyang Nuclear Power Project
- 5.3.4 Jiangxi Pengze Nuclear Power Project
- 5.3.5 Hunan Xiaomoshan Nuclear Power Project
- 5.3.6 Jilin Jingyu Nuclear Power Project
- 5.3.7 Chongqing Fuling Nuclear Power Project
- 5.3.8 Henan Nanyang Nuclear Power Project

Selected Charts

- The Number of Nuclear Power Reactors in Major Countries as of Apr.2010
- Nuclear Power Reactor Installed Capacity of Major Countries as of Apr.2010
- SWOT Analysis of Nuclear Power Development in the U.S.A.
- Uranium Minerals Output, 2003-2009
- Major Nuclear Power Plants in France
- Major Nuclear Power Plants in Germany
- Major Nuclear Power Plants in the UK
- Planned and Proposed Nuclear Power Plants in the UK
- Major Nuclear Power Plants in Russia
- Major Nuclear Power Plants in Japan
- Major Nuclear Power Plants in South Korea
- Major Nuclear Power Plants in India
- Major Nuclear Power Plants in Finland
- Evolution of Nuclear Power Planning and the Policies about Nuclear Power Technology
- Policies Supporting Nuclear Power Development in China
- Nuclear Power Units That Put into Production as of Apr.2010
- Part of Nuclear Power Units under Construction as of Apr.2010
- Part of Nuclear Power Units Planned to be Built as of Apr.2010
- Cost Structure of Nuclear Power
- Benchmark Generation Price Comparison between On-grid Electricity Price of the Built Nuclear Power Plants and the Local Coal-fired Generation Units in Mar.2010
- Unit Investment of Domestic Nuclear Power Plant in China

- The Number of Nuclear Power Units in China, 2002-2009
- Nuclear Power Installed Capacity of China, 2005-2009
- Nuclear Power Generation of China, 2005-2009
- Working Principles of Pressurized Water Reactor (PWR) Nuclear Power Plant
- Main Cost Structure of Nuclear Power Plant with Different Technology Roadmaps
- Nuclear Power Equipment Industry Chains
- Chinese Authority Documents on Nuclear Power Equipment
- Import Substitution of Crucial Equipment for LingAo NPP Phase II
- Key Equipment Outsourcing of Hongyanhe NPP Project
- Import Substitution Mainbody of Main Equipment with AP1000 Technology and the Rate of Import Substitution
- China Nuclear Power Equipment Market Shares, 2009
- Main Manufacturers of Nuclear Castings and Forgings in China, 2009
- Forging Orders of Nuclear Power Plants under Construction
- New Orders Make-up of China First Heavy Industries
- New Contracts of China First Heavy Industries, 2006-2009
- Business Revenue Structure of China ErZhong Group (DeYang) Heavy Industries Co., Ltd, 2006-2009
- Operating Revenue Structure of China ErZhong Group (DeYang) Heavy Industries Co., Ltd, 2009
- Sketch Map of Nuclear Castings Supporting of China ErZhong Group (DeYang) Heavy Industries Co., Ltd
- Flows of Steam Generator Manufacturing Process
- Using Amount of Castings for Nuclear Main Pump
- Comparison of the Suppliers of Nuclear Island Equipment
- List of Orders for Main Nuclear Island Equipment
- Prime Operating Revenue of Hailu Heavy Industry, 2004-2009

- Nuclear Power Equipment Business Ratio of Hailu Heavy Industry, 2009
- Relevant Nuclear Power Equipment Output Capacity of Dongfang Electric Corporation
- Proportions of Dongfang Electric Corporation in the Projects of Nuclear Operators
- Prediction of Progress in the Bid-winning Nuclear Power Projects of Dongfang Electric Corporation
- Prime Operating Revenue of Shanghai Electric Group, 2004-2009
- Product List of Main Equipment for Conventional Nuclear Island of Shanghai Electric Group
- Proportions of Shanghai Electric Group in the Projects of Different Nuclear Operators
- Prime Operating Revenue of Harbin Power Equipment Co., Ltd, 2004-2009
- Main Nuclear Power Equipment of Harbin Power Equipment Co., Ltd
- Prime Operating Revenue of Xiangtan Electric Manufacturing Co., Ltd, 2005-2009
- Proportions for Nuclear Power Plant Valve Classifications
- Proportions for Nuclear Power Plant Valve Varieties
- Major Nuclear Power Valve Enterprises in China
- Prime Operating Revenue of CNNC Sufa Technology Industry Co., Ltd, 2005-2009
- HVAC Nuclear Power Equipment Orders of CNNC Sufa Technology Industry Co., Ltd, 2008-2010
- Main Products, Profitability and Output Capacity of Zhejiang Jiuli Hi-tech Metals
- Prime Operating Revenue of Nanfang Ventilator, 2006-2009
- Ratio for Nuclear Power Equipment Business of Nanfang Ventilator, 2009
- Nuclear Power HVAC Demand of Nanfang Ventilator, in Next Three Years
- On-grid Energy of Dayawan Nuclear Power Plant, 2006-2009
- Nuclear Power Projects with Shares Held by China National Nuclear Corporation

How to Buy

Product details			How to Order
Single user	USD 1,600	File PDF	By email: report@researchinchina.com
Enterprisewide	2,400	PDF	By fax: 86-10-82601570
Publication date: May 2010			By online: www.researchinchina.com
For more information, call our office in Beijing, China:			
Tel: 86-10-82600828			
Website: www.researchinchina.com			