

Nuclear Power Market: Market Research Report

<https://marketpublishers.com/r/N0ECB99FA62EN.html>

Date: October 2009

Pages: 79

Price: US\$ 950.00 (Single User License)

ID: N0ECB99FA62EN

Abstracts

The outlook series on Nuclear Power Market - India provides a collection of statistical anecdotes, market briefs, and concise summaries of research findings.

This GIA report discusses the prevailing trends, issues, and activities that affect the industry.

The report offers an aerial view of the Indian Nuclear Power Market, identifies major short to medium term market challenges, and growth drivers.

The report offers an indexed, easy-to-refer, fact-finder directory listing the addresses, and contact details of 121 companies active in the market.

Contents

1. MARKET OVERVIEW

Nuclear Power in India – An Overview

Growth of Nuclear Power Industry in India

India – One of the Fastest Growing Markets for Nuclear Energy

Nuclear Power Prospects in India

Table 1. Percentage Share Contribution of Nuclear Energy to Total Electricity Generation in Select Countries (2006-2008)

Business Opportunities for Nuclear Power in India

Energy Security and Nuclear Power Policy

Energy Security in the Indian Context

Table 2. Percentage Share of Annual Electricity Generation Potential by Energy Source

Indian Nuclear Power Policy

The Three-Stage Nuclear Power Program

India - Only Country Active in All Three Fuels

Stage 1

Stage 2

Stage 3

Nuclear Power Plants in India

Active and Planned Capacities for Nuclear Power in India

Kaiga Atomic Power Station

Kakrapar Atomic Power Station

Kudankulam Nuclear Power Plant

Madras Atomic Power Station

Rajasthan Atomic Power Station

Tarapur Atomic Power Station

Narora Atomic Power Station

Legislative Measures for Safety and Regulation in India

Research in Nuclear Reactors

Uranium Mining in India

Uranium Processing

Thorium Cycle
US-India Nuclear Deal
Separation of Military and Civilian Nuclear Programs
IAEA Safeguards for Civilian Nuclear Establishments
Non-Proliferation of Nuclear Technology
Economic Elements Behind US-India Nuclear Deal
Interests of the US Economy in Indian Nuclear Market

2. TRENDS IN INDIAN NUCLEAR POWER MARKET

Uranium Shortage Dents India's Nuclear Power Dreams
India to Foray into the Global Nuclear Reactors Market
Engineering Companies to Benefit from NSG Waiver
NSG Waiver to Open Up Nuclear Energy Market

3. NUCLEAR POWER – A GLOBAL PERSPECTIVE

Impact of the Global Economic Recession on Nuclear Power Industry
Current Scenario: A Review
Amidst Controversies Nuclear Power Makes a Comeback to the Fore
Nuclear Energy: A Growing Need for Both Developed and Emerging Economies
Global Nuclear Power Generation Dips In 2007
Global Nuclear Power Generation to Cross 3750 billion kWh by 2030
US Remains a Major Contributor in the Industry
Despite Growth in Generation, Nuclear Power Share in Global Electricity Declines
Growth Drivers in a Capsule
Rapid Growth in Electricity Demand
High Crude Oil Prices Stimulate Growth of Nuclear Power
Government Support Encourages Adoption of Nuclear Power
Experience Gain and Rise in Average Load Factor of Nuclear Reactors
Plant Life Extensions Breathe Life into the Industry
Expansion in Asia and Issues Over Energy Supply Security Drive Nuclear Power
Financial Incentives Motivate Nations to Increase Nuclear Power Production
Challenges in Store
High Safety Risk Associated with Nuclear Power
Mishaps Remain Cause of Concern For Nuclear Power Industry
High Investment
Economic Risks of Nuclear Power
Environmental Issues with Storage and Management of Spent Fuel

Non-Proliferation Issues
Supply of Technical Man-Power
Public & Political Acceptance
Present Nuclear Power Capacity & Proposed Additions
World Nuclear Power Capacity - 2008

Table 3. World Nuclear Power Capacity (2008): Break-Up of Units and Capacity of Operating Nuclear Power Reactors by Country/Region

Operating Nuclear Power Reactors - By Type

Table 4. World Nuclear Power Capacity (2008): Break-Up of Units and Capacity of Operating Nuclear Power Reactors by Reactor Type

Nuclear Power Reactors Under Construction – 2008

Table 5. World Nuclear Power Capacity (2008): Break-Up of Units and Capacity of Under Construction Nuclear Power Reactors by Country

Table 6. World Nuclear Power Capacity (2008): Break-Up of Units and Capacity of Under Construction Nuclear Power Reactors by Reactor Type

Planned Nuclear Power Reactors

Table 7. World Nuclear Power Capacity (2008): Break-Up of Units and Capacity of Planned Nuclear Power Reactors by Region/Country

Proposed Nuclear Power Reactors

Table 8. World Nuclear Power Capacity (2008): Break-Up of Units and Capacity of Proposed Nuclear Power Reactors by Region/Country

Outlook
Regulations: An Overview

Global Nuclear Energy Partnership (GNEP)
Nuclear Non-Proliferation Treaty
Mined Uranium Continues to be the Major Source of Fuel Supply

Table 9. Global Uranium Market (2006): Percentage Breakdown of Uranium Supply by Source for Primary Sources (Mines) and Secondary Sources (Stocked Inventories, Dismantled Warheads, Depleted Uranium Tails and Reprocessed Spent Fuel)

Production of Uranium

Table 10. Global Uranium Production (1970-2005) from Mines (Million lbs of U₃O₈)

Canada Leads in Global Mine Production

Table 11. Global Uranium Mine Production (2006): Percentage Breakdown of Uranium Mine Production for Canada, Australia, Kazakhstan, Russia and Others

Table 12. Global Leading Producers of Uranium (2006): Percentage Breakdown of Production by Companies for Cameco, Cogema, ERA, Rossing, KazAtomProm, BHP Billiton and Others

Rising Uranium Prices
An Overview of Uranium Pricing

Table 13. Global Spot Prices of Uranium (1970-2005) in US\$ per pound of U₃O₈

Table 14. Global Spot Prices of Uranium (2005-2007) in US\$ per pound of U₃O₈

Miners Gain Upper Hand
Concerns over Global Warming to Drive Demand for Nuclear Energy
Energy Security to Drive Nuclear Power Market

4. STRUCTURE OF NUCLEAR POWER IN INDIA

DAE – The Nodal Body for Nuclear Power in India

Atomic Energy Commission of India
Research Bodies Under DAE
Bhabha Atomic Research Center
Indira Gandhi Center for Atomic Research
A Leading Publisher of Papers Worldwide
Raja Ramanna Centre for Advanced Technology
Atomic Minerals Directorate for Exploitation and Research
Industrial Units Under DAE
Heavy Water Board
Nuclear Fuel Complex
Facilities in the Nuclear Fuel Complex
Board of Radiation & Isotope Technology
Public Sector Undertakings Under DAE
Nuclear Power Corporation of India Limited
Global Recognition Mirrors Superior Capabilities of NPCIL
Bharatiya Nabhikiya Vidyut Nigam Limited
Uranium Corporation of India Ltd.
Indian Rare Earths Ltd.
Electronics Corporation of India Ltd.

5. PRODUCT OVERVIEW

Defining Nuclear Power
Historical Development of Nuclear Power
Early Development of Nuclear Reactors
The Progress Phase
Present Usage of Nuclear Power
Nuclear Power – A Key Aspect of Future of Power Generation
Alternatives for Nuclear Fission Energy
Fossil Fuels
Oil
Coal
Natural Gas
Nuclear Fusion
Solar
Solar Thermal
Solar PhotoVoltaics
Wind
Biomass

Geothermal Energy
Enhanced Geothermal Energy
Hydrogen
Advantages of Nuclear energy
Disadvantages of Nuclear Energy
Lifecycle of Nuclear Power Generation
Fission Material
Uranium – The Conventional Fuel for Nuclear Power Generation
Uranium-235 (235U)
Uranium-233 (233U)
Plutonium-239 (239Pu)
Consumption and Reserves of Uranium On the Rise

Table 15. Worldwide Uranium Reserves by Type (2003 & 2005): Assured Reserves and Additional Reserves

Cost of Uranium Extraction
Economic Use of Uranium
Recycling Power Plant Steam
Production of Nuclear Power
Mechanism Underlying Nuclear Power Production
Nuclear Reactor
Types of Nuclear Reactors
Pressurized Water Reactors
Heavy Water Reactors
High Temperature Gas Cooled Reactors
Boiling Water Reactors
Advanced Nuclear Reactors
Uranium Fast Breeder Reactors
Thorium Breeder Reactors
Fourth Generation Reactors
Second, Third and Fourth Generation Reactors: A Comparison
Advantages of New Generation Nuclear Reactors
Safety Issues – At the Forefront of Nuclear Reactor Design
Radioactivity Control
Core Cooling Maintenance
Maintaining Barriers to Prevent Radiation Release
Development Costs of Nuclear Reactors

Nuclear Waste and Emissions

Table 16. Major Isotopes and Half Life Periods

Disposal of Nuclear Waste
Reprocessing of Nuclear Waste
Outline of Nuclear Waste Disposal Methods
Cooling in Supervised Pools
Reprocessing Radioactive Waste
Disposal of Remaining Waste
Solidifying Nuclear Waste
Multibarrier System
Cost Incurred on Waste Disposal and Decommissioning
Radiation and Effect on Human Life
Cosmic Radiation
Terrestrial Radiation
Internal Radionuclides
Apoptosis
Cancer
Skin Burns
Genetic Changes
Research and Development in Nuclear Power

6. RECENT INDUSTRY ACTIVITY

India Plans to Set Up Four Additional Nuclear Reactors in Kudankulam
GEH Reaches Agreements with NPCIL and BHEL
NPCIL, NTPC Sign MoU to Set Up JV
NPCIL, Areva Sign MoU
NPCIL, KAZATOMPROM Sign MoU
India to Sign Nuclear Cooperation Agreements With France, Russia
Andhra Pradesh to Establish New Nuclear Power Plants
India, Canada to Sign Nuclear Agreement
Japanese Companies Eye Indian N-power Sector
India, Belgium Sign Nuclear Agreement
CCCL Eyes Nuclear Power Generation
Adani Group Plans to Enter Nuclear Power Sector
Indo-US Nuke Deal Obtains Clearance from House of Representatives

Hinduja Eyes Indian Nuclear Power Sector
JSPL to Foray into Nuclear Power Sector
ONGC to Venture into N-Power Generation
NTPC to Increase Planned Nuclear Power Capacity
SJVN to Form Joint Venture with NPCIL
GMR Energy to Construct Nuclear Power Plant
GVK Power & Infrastructure and NPCIL to Purchase Reactors
NPCIL to Build Nuclear Reactors in Association with France and Russia
BHEL and GMR to Import Overseas Technologies for Nuclear Power
Siemens to Supply Nuclear Turbines to India
BHEL-Bhopal to Venture into High-Capacity Turbine Manufacture
NPCIL to Source Reactors from Foreign Manufacturers
Reliance Infrastructure to Enter Nuclear Power Generation
Areva to Enter Indian Nuclear Power Segment
BHEL to Foray into Manufacture of Nuclear Components
NTPC to Establish a Nuclear Power Project
Avasarala Technologies Enters Nuclear Component Market
Alstom and Bharat Forge to Form Joint Venture
BHEL-Ramachandrapuram to Invest in Capacity Expansion
GMR Group to Venture into Nuclear Power
Haryana Government to Establish Nuclear Power Plant
BHAVINI Commences Construction of Fast Breeder Reactor
Federal Atomic Energy Agency Signs Deal with NPCIL
NPCIL to Introduce Fresh Wave of Investments in Nuclear Program
India, South Africa and Brazil Agree on Joint Collaboration
Larsen and Toubro to Foray into Nuclear Power Sector
TAPS-3 Achieves Full Operation Level
Kaiga-3 Begins Commercial Operations
NPCIL to Establish New Atomic Power Plant in Maharashtra
Korea Electric Power Corporation to Establish Joint Venture
Government Approves Establishment of Nuclear Power Plants in Rajasthan
Russian FAE Signs Mol with DAE
Government of India to Establish Coastal Nuclear Power Stations
Government of Uttaranchal to Establish Nuclear Power Plant
GE to Establish Nuclear Power Plants in India
AP Genco Teams Up with NPCIL for Nuclear Power Plant
Cala Casa SI to Establish Nuclear Power Plant in Orissa
TAPS-3 Begins Commercial Operations

GLOBAL DIRECTORY

I would like to order

Product name: Nuclear Power Market: Market Research Report

Product link: <https://marketpublishers.com/r/N0ECB99FA62EN.html>

Price: US\$ 950.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/N0ECB99FA62EN.html>