

Industry Insight

Nuclear Energy

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Cygnus

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SYNOPSIS

India is now the world's fifth largest consumer of energy and its demand for electricity is expected to increase from 105GW in 2008 to 400GW in 2030. But availability was 89GW in February 2008, causing deficit of 16GW. Need for increased power generation arises from the fact that with a targeted GDP growth rate of 7–8% and an estimated energy elasticity of 0.80, energy requirements of the country are expected to grow 5–6%. So where is the fuel reserve to feed the growing requirement for primary energy? This underscores the role of nuclear energy in India's plans for energy security.

Current installed nuclear power capacity in India is 4.12GWe and contributes only 2.92% to total power capacity. India is targeting to double the capacity in the next five years and scale up five times by 2020. Government of India is putting together an enabling policy framework for investments in this sector.

In view of the recent deal struck between the US and India, more private participation is expected in this otherwise closely guarded industry and there is enough reason for foreign technology collaborators to get benefited due to the deal. It is expected that the deal could produce an investment of US\$ 27 billion in 18 to 20 nuclear plants in India over the next 15 years.

In this backdrop, this report on “Nuclear Energy in India” presents the current nuclear energy scenario in the country and its future growth potential, along with impact analysis of the Indo-US nuclear deal. The report also profiles the nuclear power plants – currently operational and new plants planned- covering areas like technology deployed and involvement of foreign companies. The economics of nuclear power generation in comparison to thermal power is also discussed briefly. Besides, role of Indian government in atomic energy, its organisation structure and regulatory aspects are also covered in the report. The report also highlights the importance of FBRs and thorium-based research, which is on the main agenda for the third phase of India's nuclear power programme.

The report is of immense help to suppliers of equipments, technology and service providers and consultants for business development as well as for building business partnerships with Indian companies. It will also help Indian corporate and consultants that plan foray into this field in one or multiple parts of the value chain.

No of Pages: 112

No of Figures: 03

No of Tables: 35

CONTENTS

Executive Summary	10
Highlights	14
1. Introduction to Nuclear Energy in India	17
1.1 Significance of Nuclear Energy	17
1.2 Indian Nuclear Power Program	19
1.3 Natural Uranium Fuelled Pressurised Heavy Water Reactors	19
1.4 Fast Breeder Reactors utilising Plutonium-Based Fuel	19
1.5 Advanced Nuclear Power Systems for Utilisation of Thorium	20
1.6 Vision 2020	20
2. Government policies	21
2.1 Policy for Nuclear Power	21
2.2 Focus on Reforms	21
2.3 Key Definitions related to fuel cycle	22
2.4 Objective of Closed Fuel Policy	22
2.5 Key Policy Changes needed to free India’s Nuclear Power Business	23
2.6 Conclusion	24
3. Indian Nuclear Energy Value Chain & Investments	25
3.1 Types of Players in Indian Nuclear Energy Value Chain	25
3.2 Details of Key Players	26
3.3 Nuclear Power Generators	28
3.4 Atomic Energy Related Companies	29
3.5 Major Investments in Nuclear Science in India	34
3.7 Other Investments	36
4. Nuclear Power Plants in India	38
4.1 Overview	38
4.2 Profiles of Nuclear Power Plants in Operation	39
4.2.1 Plants at Tarapur	41
4.2.2 Plants at Rawatbhata	43
4.2.3 Plants at Kalpakkam	46
4.2.4 Plants at Narora	48
4.2.5 Plants at Kakrapar	49
4.2.6 Plants at Kaiga	51

4.3 Nuclear Power Plants under Construction.....	53
4.3.1 NPCIL Plants	53
4.3.2 BHAVINI Plant.....	56
4.4 Reactors Development beyond the Trade Restrictions	57
4.4.1 Possible Locations for New Nuclear Power Plants.....	58
5. Economics of Nuclear Power from Heavy Water Reactors	60
5.1 Introduction	60
5.2 Cost Comparison	61
6. Regulatory Issues	64
6.1 Setting up Nuclear Plants.....	64
6.2 Construction.....	68
6.3 Provisions of the existing act.....	68
6.4 Suggested Changes in Regulatory Framework.....	69
7. Initiatives by Foreign Companies.....	71
7.1 Investments	71
7.1.1 CIRUS Research Reactor	71
7.1.2 RAPP-1 Power Reactor	71
7.1.3 RAPP-2 Power Reactor	71
7.2 Technology Collaborations	72
7.3 Supply of Equipment/Raw Materials	74
7.3.1 CIRUS Research Reactor	74
7.3.2 RAPP-1 Power Reactor	74
7.3.3 RAPP-2 Power Reactor	74
7.4 Research and Development.....	90
7.5 Development of Nuclear Energy for Peaceful Purposes – International Cooperation	90
7.6 Major Collaborations in Nuclear Science.....	93
8. Indo-US Nuclear Deal & its Impact.....	95
8.1 Indian Energy demands - Nuclear based power generation	95
8.2 Necessity of Indo-US Nuclear Deal	95
8.3 Impact of Indo-US Nuclear Deal	96
9. Opportunity for Private Companies/PSUs	98
9.1 Future Opportunity in Nuclear Power-based Electricity Market.....	98
9.2 Private Sector Concerns	100
9.3 Impact of NSG waiver	102

10. Future Energy Outlook & Conclusion	103
10.1 Introduction	103
10.2 Importance of First Breeder Reactor	103
10.3 Future Locations of Nuclear Power Plants	104
10.4 Conclusion	107
Annexure 1: List of Abbreviations	108
Annexure 2: List of useful Contacts	109
Annexure 3: Map for Heavy Water Plant Locations in India	112
Annexure 4: Bibliography	113

LIST OF FIGURES

Figure 3.1 : Value Chain of Nuclear Energy

Figure 3.2 : Key Players in Nuclear Ecology

Figure 10.1: Location Map for Nuclear Power Plant

LIST OF TABLES

- Table 1.1: Installed Capacity of Various Power Sectors in India
- Table 3.1: Budget Allocation for Atomic Energy
- Table 3.2: Budget Allocation for Autonomous Institutes by DAE
- Table 4.1: Nuclear Power Plants in Operation
- Table 4.2: NPCIL Performance Highlights
- Table 4.3: Cumulative Generation up to Sep'08- Tarapur Atomic Power Station
- Table 4.4: Generation Statistics during 2008-09- Tarapur Atomic Power Station
- Table 4.5: Performance Details (FY06-FY08) - Tarapur Atomic Power Station
- Table 4.6: Cumulative Generation up to Sep'08- Rajasthan Atomic Power Station
- Table 4.7: Generation Statistics during 2008-09- Rajasthan Atomic Power Station
- Table 4.8: Performance Details (FY06-FY08) - Rajasthan Atomic Power Station
- Table 4.9: Cumulative Generation up to Sep'08- Madras Atomic Power Station
- Table 4.10: Generation Statistics during 2008-09- Madras Atomic Power Station
- Table 4.11: Performance Details (FY06-FY08) - Madras Atomic Power Station
- Table 4.12: Cumulative Generation up to Sep'08- Narora Atomic Power Station
- Table 4.13: Generation Statistics during 2008-09- Narora Atomic Power Station
- Table 4.14: Performance Details (FY06-FY08) - Narora Atomic Power Station
- Table 4.15: Cumulative Generation up to Sep'08- Kakrapar Atomic Power Station
- Table 4.16: Generation Statistics during 2008-09- Kakrapar Atomic Power Station
- Table 4.17: Performance Details (FY06-FY08) - Kakrapar Atomic Power Station
- Table 4.18: Cumulative Generation up to Sep'08- Kaiga Atomic Power Station
- Table 4.19: Generation Statistics during 2008-09- Kaiga Atomic Power Station
- Table 4.20: Performance Details (FY06-FY08) - Kaiga Atomic Power Station
- Table 4.21: Nuclear Power Plants under Construction within trade restrictions
- Table 4.22: Major Milestones Achieved- Kaiga Atomic Power Station
- Table 4.23: Major Milestones Achieved- Kundankulam Atomic Power Station
- Table 4.24: Major Milestones Achieved- Rajasthan Atomic Power Station
- Table 4.25: Nuclear Power Plants under Construction beyond trade restrictions
- Table 5.1: Cost Comparison: Levelised Costs (in Rs/kWh) of Different Options for Power Generation

Table 5.2: Cost Comparison: Total Levelised Costs (in Rs/kWh) of Different Options for Power Generation at Different Discounts Rates

Table 6.1: Documents required for Authorisation of Nuclear Power Plant

Table 7.1: Raw Materials Required for Nuclear Power Generation

Table 7.2: India's Uranium Mines & Mills – Existing & Announced

Table 7.3: Indian Nuclear Imports

Table 7.4: Indian Nuclear Exports