

Analyzing Nuclear Power in India

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Abstracts

India boasts of a quickly advancing and active nuclear power program. It is expected to have 20 GW of nuclear capacity by 2020, though they currently stand as the ninth in the world in terms of nuclear capacity.

However, India is not a signatory of the Nuclear Non-Proliferation Treaty. This has many times in their history prevented them from obtaining nuclear technology vital to expanding their use of nuclear industry. Another consequence of this is that much of their program has been domestically developed, much like their nuclear weapons program.

India been using imported enriched uranium and are under International Atomic Energy Agency (IAEA) safeguards, but it has developed various aspects of the nuclear fuel cycle to support its reactors. Development of select technologies has been strongly affected by limited imports. Use of heavy water reactors has been particularly attractive for the nation because it allows Uranium to be burnt with little to no enrichment capabilities. India has also done a great amount of work in the development of a Thorium centered fuel cycle. While Uranium deposits in the nation are extremely limited, there are much greater reserves of Thorium and it could provide hundreds of times the energy with the same mass of fuel. The fact that Thorium can theoretically be utilized in heavy water reactors has tied the development of the two. At present, a prototype reactor that would burn Uranium-Plutonium fuel while irradiating a Thorium blanket is under construction at the Madras/Kalpakkam Atomic Power Station.

The report – Analyzing Nuclear Power in India – by Aruvian's R'search, explores the importance of nuclear power in today's world, with Section One being dedicated to Understanding the Basics of Nuclear Power. The report looks at the basics of the nuclear industry that is, how a plant works, analyzing and understanding the fuel cycle, the various components which are involved in the working of a nuclear power plant, and

much more. Economics, issues and barriers, and other such factors are also explored in-depth in this report.

Aruvian's offering includes a complete analysis of the Indian Nuclear Power Industry, including an analysis of the nuclear power stations in India, the US-India Nuclear Cooperation Agreement, the major Indian player in nuclear power – that is, the Nuclear Power Corporation of India Limited, and much more. Industry profile, industry developments, technological developments, non-proliferation issues, Uranium fuel cycle developments, and lots more information is included in this research report. This research offering from Aruvian is a comprehensive A to Z guide on the Indian nuclear power industry.

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