

# **Analyzing Nuclear Power in Russia**

https://marketpublishers.com/r/A0ED57055D8EN.html Date: June 2011 Pages: 315 Price: US\$ 400.00 (Single User License) ID: A0ED57055D8EN

## **Abstracts**

The Russian energy strategy of 2003 sets policy priority to reduce the use of natural gas for electricity and to double the nuclear output by 2020. In 2006 the Federal Atomic Energy Agency (Rosatom) announced a target of nuclear providing 23% of electricity by 2020 and 25% by 2030.

Russia has made plans to increase the number of reactors in operation from thirty one to fifty nine, financed with the help of loans from the European Union. Old reactors will be maintained and upgraded, including RBMK units similar to the reactor in Chernobyl. China and Russia have agreed on cooperation in the construction of nuclear stations in October 2005.

The report – Analyzing Nuclear Power in Russia – 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 indepth in this report.

Aruvian's offering includes a complete analysis of the Russian Nuclear Power Industry, including an analysis of the nuclear power stations in Russia, the major Russian players in nuclear power, 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 Russian nuclear power industry.



## Contents

## A. EXECUTIVE SUMMARY

#### SECTION 1: UNDERSTANDING NUCLEAR POWER

## **B. BASICS OF THE NUCLEAR INDUSTRY**

- B.1 History of Nuclear Power
- **B.2 Types of Nuclear Reactors**
- **B.2.1 Fission Reactor**
- B.2.2 Radioisotope Thermoelectric Generator
- B.3 New & Upcoming Nuclear Technologies
- B.4 Components & Parts of a Nuclear Power Plant
- B.5 Analyzing the Fuel Cycle
- B.6 Managing the Radioactive Waste

#### C. PROFILING THE GLOBAL NUCLEAR POWER INDUSTRY

- C.1 Industry Overview
- C.2 Uranium Market
- C.3 Market Features
- C.4 Price Trends
- C.5 Managing the Risk in Nuclear Power
- C.6 Industry Trends
- C.7 Economic Trends
- C.8 Nuclear Hedging
- C.9 Future Outlook

#### D. ANALYZING THE ECONOMICS OF NUCLEAR POWER

- D.1 External Costs
- D.2 Fuel Cost
- D.3 Electricity Generation with Other Forms of Energy
- D.4 Cost Competitiveness in the Future

#### E. GLOBAL CLIMATE CHANGE & NUCLEAR POWER

## F. CHALLENGES & BARRIERS TO NUCLEAR POWER



- F.1 Air Pollution
- F.2 Financial Challenges
- F.3 Nuclear Safety
- F.4 Nuclear Proliferation
- F.5 Leadership Challenges
- F.6 Regulatory Barriers
- F.7 Water Pollution
- F.8 Other Challenges
- F.9 Obama's New Nuclear Policy

## G. FUTURE OF THE NUCLEAR POWER INDUSTRY

#### SECTION 2: ANALYZING THE RUSSIAN ENERGY INDUSTRY

#### A. INTRODUCTION TO THE INDUSTRY

## **B. DRIVERS OF ENERGY DEMAND**

- **B.1 Demand Drivers**
- B.2 Final Energy Demand per Industry
- **B.2.1 Industrial Use**
- B.2.2 Transportation Energy Consumption
- B.2.3 Residential & Commercial Use
- **B.3 Primary Energy Demand**

#### C. MAJOR ISSUES IN THE RUSSIAN ENERGY INDUSTRY

- C.1 Lowering of Energy Intensity
- C.2 Development of Export Outlets & Facilities
- C.3 Development of the Nuclear Energy Industry

#### D. ROLE OF THE STATE IN THE RUSSIAN ENERGY INDUSTRY

#### E. ANALYZING RUSSIA'S ENERGY POLICY

- E.1 Introduction
- E.2 Objectives of the Russian Energy Strategy
- E.3 Primary Energy Resources in Russia



- E.3.1 Natural Gas
- E.3.2 Oil
- E.3.4 Non-Conventional Oil
- E.3.5 Coal
- E.3.6 Electricity
- E.4 Climate Change Factor
- E.5 EU-Russia Energy Dialogue
- E.6 Russia & the Ratification of the Energy Charter Treaty
- E.7 Major Challenges for the Russian Energy Policy

## SECTION 3: ANALYZING THE RUSSIAN NUCLEAR POWER INDUSTRY

## A. HISTORY OF NUCLEAR POWER IN THE SOVIET TIMES

## **B. ANALYZING NUCLEAR POWER IN RUSSIA**

- B.1 Introduction & Market Profile
- B.2 Russia's Electricity Supply
- **B.3 Nuclear Capacity**
- B.4 Developing the Nuclear Capacity
- **B.5 Sector Organization**
- **B.6 Export Scenario**
- B.7 Research & Development
- B.8 Public Support for Nuclear Power

## C. ANALYZING THE REACTOR TECHNOLOGY

C.1 Looking at Russia's Reactor Technology

#### C.1.1 VVER-1000, AES-92

#### C.1.2 VVER-1200, AES-2006

## C.1.3 VVER-1500

#### C.1.4 Others

C.1.5 Floating VVERs

#### C.1.6 VBER-300

Analyzing Nuclear Power in Russia



### C.1.7 VK-300 BWR

## **C.1.8 RBMK**

C.1.9 HTRs C.2 Fast Reactors

## D. LOOKING AT THE RESOURCES FOR URANIUM & URANIUM MINING

- D.1 Uranium Resources & Uranium Mining
- D.2 Fuel Cycle Facilities
- D.3 Looking at the International Uranium Enrichment Centre (IUEC) Concept

## E. RUSSIAN POLICY ON USED FUEL & REPROCESSING

## F. DECOMMISSIONING OF NUCLEAR REACTORS

#### G. NON-PROLIFERATION IN THE INDUSTRY

#### H. ANALYZING THE NUCLEAR POWER STATIONS IN RUSSIA

- H.1 Used Fuel & BN-600 Reactor
- H.2 Balakovo Nuclear Power Plant
- H.3 Beloyarsk Nuclear Power Station
- H.4 Kalinin Nuclear Power Plant
- H.5 Kaliningrad Nuclear Power Plant
- H.6 Kola Nuclear Power Plant
- H.7 Kursk Nuclear Power Plant
- H.8 Leningrad Nuclear Power Plant
- H.9 Novovoronezh Nuclear Power Plant
- H.10 Novovoronezh Nuclear Power Plant II
- H.11 Obninsk Nuclear Power Plant
- H.12 Russian Floating Nuclear Power Station

## I. RUSSIA NUCLEAR POWER: FUTURE PERSPECTIVE

#### J. LEADING INDUSTRY PLAYERS



- J.1 Atomstroyexport
- J.2 Energoatom
- J.3 Rosatom Nuclear Energy State Corporation (Rosatom)

#### **SECTION 3: CONCLUSION**

## A. APPENDIX

- A.1 Case Studies of Nuclear Accidents
- A.1.1 The Chernobyl Accident
- A.1.2 Three Mile Island
- A.1.3 Tokaimura Accident
- A.2 Nuclear Trade & Industry Organizations
- A.3 Regulation & Regulators for the Nuclear Industry
- A.4 Worldwide Nuclear Research Centers
- A.5 Major Nuclear Power Plants around the World
- A.6 Non Proliferation & Safeguards Organizations
- A.7 Figures & Tables

#### **B. GLOSSARY OF TERMS**



## I would like to order

Product name: Analyzing Nuclear Power in Russia

Product link: https://marketpublishers.com/r/A0ED57055D8EN.html

Price: US\$ 400.00 (Single User License / Electronic Delivery) If you want to order Corporate License or Hard Copy, please, contact our Customer Service: <u>info@marketpublishers.com</u>

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <u>https://marketpublishers.com/r/A0ED57055D8EN.html</u>