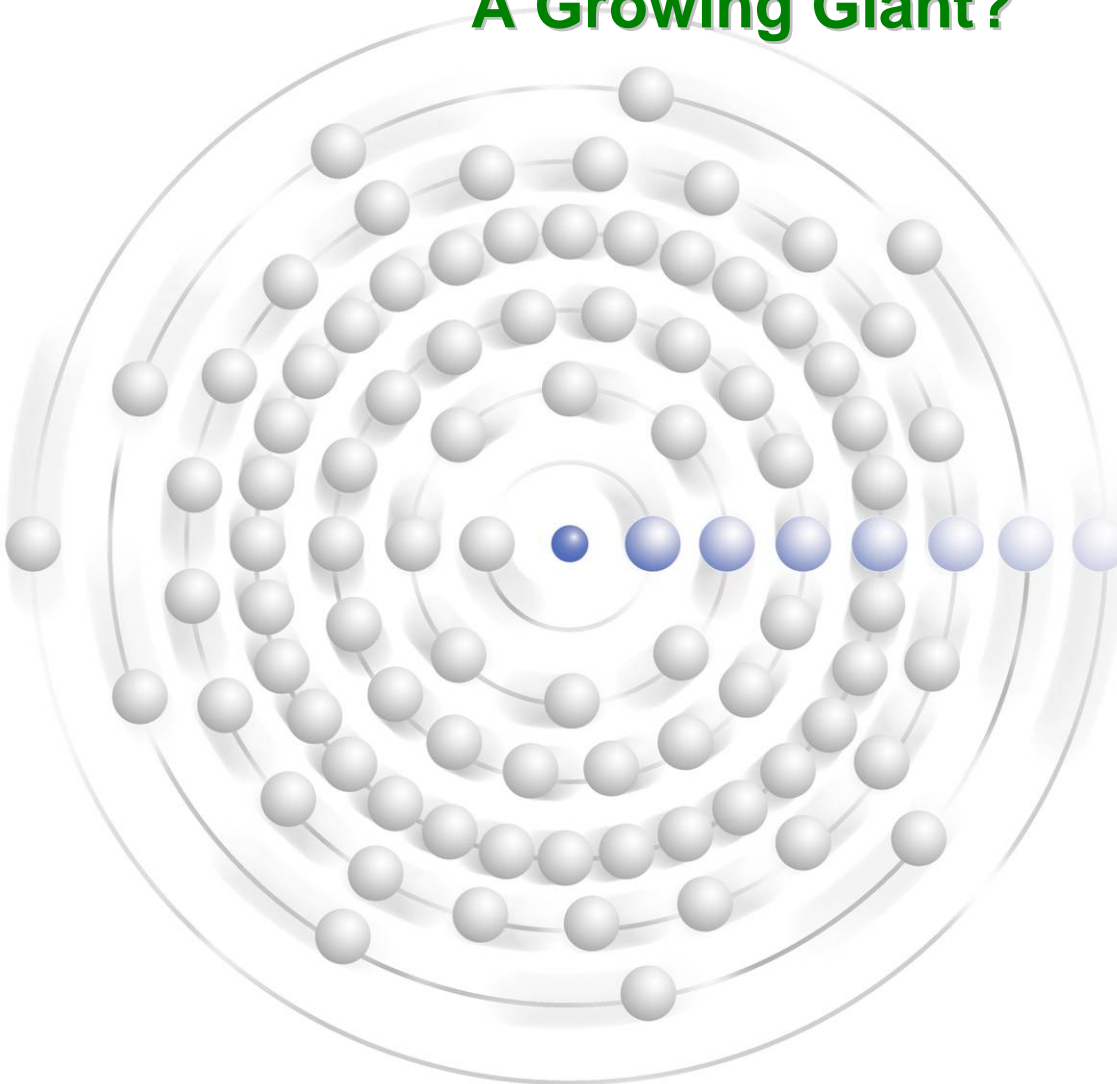




Enrichment Market Outlook

Essay: China's Enrichment Program: A Growing Giant?



A service of



Ux Consulting
1501 Macy Drive
Roswell, GA 30076
(770) 642-7745
www.uxc.com

– NOTICE –

The Ux Consulting Company, LLC (“UxC”) shall have title to, ownership of, and all proprietary rights in this Report. Under United States federal copyright law (17 USC 101 et seq.) it is illegal to reproduce this Report by any means without written permission from UxC.

The information contained in this Report is obtained from sources that UxC believes to be reliable. UxC makes no warranty or representation, express or implied, with respect to the accuracy, completeness or usefulness of the information contained in this Report and UxC, to the maximum extent permitted by law, assumes no liability for the use or effects of any of the information or data contained in this Report.

It is UxC’s strict policy not to endorse, promote, or recommend any particular securities, currencies, or other financial products or instruments. Nothing contained in this Report is intended to constitute investment, legal, tax, accounting or other professional advice and the reader should not rely on the information provided in this Report for making financial decisions.

Table of Contents

| | |
|--|----------|
| Executive Summary | 3 |
| <i>Essay: China's Enrichment Program: A Growing Giant?</i> | 3 |
| 1 – Essay: China's Enrichment Program: A Growing Giant? | 5 |
| China's Nuclear Energy Plans | 6 |
| • Current Reactors in Operation and Under Construction | 6 |
| • China Nuclear Power Targets | 7 |
| • UxC Nuclear Power Forecasts for China | 7 |
| • China Reactor Exports | 8 |
| China's Uranium Enrichment Industry | 9 |
| • History of the Program | 9 |
| Military Program | 10 |
| Analysis | 10 |
| • The Quest for Domestic Enrichment | 10 |
| Initial Efforts | 10 |
| • Russian Cooperation and Centrifuge Imports | 11 |
| Historical Background | 11 |
| Ongoing Cooperation | 12 |
| Technology | 13 |
| Supply of Enriched Uranium Product | 13 |
| Analysis | 13 |
| • Domestic Enrichment Technology R&D | 13 |
| • Possible Future Enrichment Capacity | 14 |
| Developing Domestic Centrifuge Capacity | 15 |
| Additional Russian Centrifuges | 15 |
| Western Enrichment Technology | 15 |
| Foreign Joint Ventures | 16 |
| Analysis | 16 |
| • SWU Imports | 17 |
| China's SWU Supply | 18 |
| • SWU Supply Forecasts | 18 |
| Base Case | 19 |
| High Case | 20 |
| Low Case | 21 |
| • Analysis of Additional SWU Imports | 22 |
| China's SWU Demand | 23 |
| • Domestic Reactor Requirements | 23 |
| • EUP Inventory Building | 24 |
| • SWU Exports | 24 |
| • SWU Demand Forecasts | 25 |
| Low Tails Case | 26 |
| China's SWU Market Presence | 27 |
| • China's Role in the Enrichment Market | 27 |
| The Role of CNEIC | 27 |
| China's SWU Export Contracting History | 27 |
| U.S. Contracting Activity | 28 |
| Non-U.S. Contracting Activity | 28 |
| • SWU Supply & Demand Analysis | 28 |
| Base Case: Probability 50% | 29 |
| High Case: Probability 15% | 30 |
| Low Case: Probability 35% | 31 |
| • Potential for Future SWU Export Contracts | 32 |
| Summary and Conclusions | 33 |

List of Figures

| | |
|---|----|
| Figure 1. China Nuclear Capacity Forecasts Comparison, 2008-2030..... | 7 |
| Figure 2. China Nuclear Reactor Unit Forecasts Comparison, 2008-2030..... | 8 |
| Figure 3. Base Case China SWU Supply, 2008-2030 | 19 |
| Figure 4. High Case China SWU Supply, 2008-2030 | 20 |
| Figure 5. Low Case China SWU Supply, 2008-2030 | 21 |
| Figure 6. China Enrichment Requirements Forecasts, 2008-2030 | 23 |
| Figure 7. China SWU Demand Cases, 2008-2030 | 25 |
| Figure 8. China Low Tails SWU Demand Cases, 2008-2030 | 26 |
| Figure 9. China Base Case Supply vs. Demand, 2008-2030..... | 29 |
| Figure 10. China High Case Supply vs. Demand, 2008-2030 | 30 |
| Figure 11. China Low Case Supply vs. Demand, 2008-2030 | 31 |

List of Tables

| | |
|--|----|
| Table 1. Nuclear Reactors Under Construction in China (as of September 2010) | 6 |
| Table 2. UxC High, Base, and Low Case China Nuclear Capacity Forecasts, 2008-2020 | 7 |
| Table 3. UxC High, Base, and Low Case China Reactor Unit Forecasts, 2008-2020 | 8 |
| Table 4. Nameplate Capacities of China's Enrichment Facilities Built with Russian Support/Technology | 12 |
| Table 5. Assumptions in UxC SWU Supply Cases for China..... | 18 |
| Table 6. Base Case China SWU Supply, 2008-2020..... | 19 |
| Table 7. High Case China SWU Supply, 2008-2020..... | 20 |
| Table 8. Low Case China SWU Supply, 2008-2020 | 21 |
| Table 9. UxC Enrichment Requirements Forecasts for China | 23 |
| Table 10. China SWU Demand Cases, 2008-2020..... | 25 |
| Table 11. China Low Tails SWU Demand Cases, 2008-2020 | 26 |
| Table 12. China Base Case Supply vs. Demand, 2008-2020..... | 29 |
| Table 13. China High Case Supply vs. Demand, 2008-2020..... | 30 |
| Table 14. China Low Case Supply vs. Demand, 2008-2020 | 31 |