

# NUCLEAR FUEL MARKET ISSUES & INSIGHTS

NAC International's annual front-end market analysis report, *Nuclear Fuel Market Issues & Insights*, will be available in July 2021.

With some exceptions, obstacles still impede significant increases in commercial nuclear generating capacity. While a few countries aggressively pursue expansions in their programs, many others plan cutbacks. Difficult decisions are required against the backdrop of the:

- High capital cost of nuclear new build
- Mandates in some countries to shut down reactors prematurely
- Desire to reduce carbon dioxide emissions
- Desire to preserve domestic energy sovereignty
- Difficulty of many operating reactors to compete in the electricity markets

To address such uncertainties, NAC performs country-by-country assessments to derive a forecast of nuclear generation (MWe) through 2035. Our analyses provide the basis for the most likely projection of future demand, leading to conclusions that result in important insights into the future direction of the front-end markets.

Some of the key issues addressed in the report include the following:

- How has Covid-19 affected supply?
- Will primary U<sub>3</sub>O<sub>8</sub> producers, particularly Kazatomprom, continue to limit near-term production?
- How will China handle its excess uranium inventory?
- How will the influx of financial investors and funds influence market prices and affect the competitive landscape?
- How will U.S. government policies impact supply and prices?
- What is the outlook for the conversion market now that Honeywell has decided to restart the Metropolis Works facility?
- Will enrichment prices rebound and if they do, when is that likely to occur?



## NUCLEAR FUEL MARKET ISSUES & INSIGHTS | 2021

### WHY YOU NEED THIS REPORT

Descriptions of the **Issues** that will drive front-end markets and NAC's **Insights** into future trends will provide critical inputs to the business decisions of both buyers and suppliers. NAC International's *NFMI&I 2021* meets these needs.

Featuring **concise commentaries** on the main issues and conclusions, *NFMI&I 2021* presents NAC's expert opinion of where the markets are heading and why.

**AVAILABLE JULY 2021 | \$9,000**

- How will underfeeding impact the markets?
- How will fabrication facilities be affected by premature reactor shutdowns and new build?
- What factors influence the degree of competition in fabrication markets?
- What is the status of the new fuel designs and Accident Tolerant Fuel?

Overall, our market analyses and price forecasts, which make use of detailed supply demand models together with cost of production benchmarks, provide a solid evaluation tool in support of planning and developing strategy, whether for buyers, sellers or investors.

*Continued*

### CONTACT:

Dave Culp, Director, Fuel Cycle Consulting  
+1-980-253-3591 | [dculp@nacintl.com](mailto:dculp@nacintl.com)

# REPRESENTATIVE TABLE OF CONTENTS FOR 2021 EDITION OF *NUCLEAR FUEL MARKET ISSUES & INSIGHTS*

## 1. EXECUTIVE SUMMARY

- 1.1 Nuclear Generating Capacity
- 1.2 U<sub>3</sub>O<sub>8</sub> Market
- 1.3 Conversion Market
- 1.4 Enrichment Market
- 1.5 Fabrication

## 2. NUCLEAR GENERATING CAPACITY

- 2.1 Introduction
- 2.2 Forecast (including SMR development)

## 3. U<sub>3</sub>O<sub>8</sub> MARKET

- 3.1 Current Market Overview
- 3.2 Key Issues Affecting the Market
- 3.3 Review of Primary Supply
- 3.4 Review of Secondary Supply
- 3.5 Supply/Demand Comparisons
- 3.6 Cost Trends
- 3.7 Outlook for Future Prices

## 4. CONVERSION MARKET

- 4.1 Introduction
- 4.2 Supply-Side Developments
- 4.3 Conversion Capacities and Secondary Supply
- 4.4 Supply/Demand Comparisons
- 4.5 Outlook for Future Prices

*NFMI&I 2021* evaluates the worldwide markets for U<sub>3</sub>O<sub>8</sub>, UF<sub>6</sub> conversion and enrichment services, and nuclear fuel fabrication including demand, the status of major suppliers, as well as projected ranges of and general trends for spot and long-term price movements. The report addresses the relative sensitivity of the price forecasts to changes in supply-demand balance driven by plausible future scenarios. It also assesses the market and technical drivers for the fabrication market.

NUCLEAR FUEL MARKET  
ISSUES & INSIGHTS | 2021

## 5. ENRICHMENT MARKET

- 5.1 Introduction
- 5.2 Capacity, Projects and Financial Performance
- 5.3 Supply-Demand Analyses
- 5.4 Enrichment Production Costs
- 5.5 Market Competition
- 5.6 Outlook for Future Prices

## APPENDICES

- Appendix A: Other Secondary Supply Sources
- Appendix B: Price Forecasting Methodology

## 6. FABRICATION

- 6.1 Introduction
- 6.2 Market Drivers
- 6.3 Nuclear Plant Shutdowns— Impact on Fabrication
- 6.4 Nuclear Construction and License Renewal— Impact on Fabrication
- 6.5 LWR Fuel Markets
- 6.6 Accident Tolerant Fuel
- 6.7 Fuel Designs and LTA Programs
- 6.8 Fabrication Industry Issues and Prices