



# Conversion & Enrichment Supplier Assessments



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# Table of Contents

<b>Introduction &amp; Overview</b>	<b>3</b>
• Companies Profiled in this Report	4
• Compendium to Conversion and Enrichment Market Outlooks	4
Structure of Report	4
<b>1 – Conversion Supplier Profiles</b>	<b>5</b>
Cameco Corporation	6
• Company Overview	6
• Operations	6
• Market Strategy	7
Honeywell/ConverDyn	8
• Company Overview	8
• Operations	8
• Market Strategy	9
Orano	10
• Company Overview	10
• Operations	10
• Market Strategy	11
TVEL/TENEX	12
• Company Overview	12
• Operations	12
• Market Strategy	14
China National Nuclear Corporation (CNNC)	15
• Company Overview	15
• Operations	15
• Market Strategy	16
Other Suppliers	17
Global Capacities and Market Shares	18
• Production Capacities	18
• Market Shares	19
<b>2 – Conversion Supplier Risk Assessments</b>	<b>20</b>
UxC Conversion Supplier Risk Assessment Methodology	20
• Company-Level Risks	20
• UF <sub>6</sub> Production Facility and Operational Risks	20
UxC Conversion Supplier Risk Matrix	22
Discussion of Converter Risk Ratings	22
• Cameco	22
• ConverDyn	23
• Orano	24
• TVEL/TENEX	24
• CNNC	25
<b>3 – Enrichment Supplier Profiles</b>	<b>26</b>
Orano	27
• Company Overview	27
• Operations	27
• Market Strategy	28
Urenco	29
• Company Overview	29
• Operations	29
• Market Strategy	30
TVEL/TENEX	32
• Company Overview	32
• Operations	32
• Market Strategy	33
Centrus Energy	36
• Company Overview	36

• Operations.....	36
• Market Strategy.....	38
China National Nuclear Corporation (CNNC).....	39
• Company Overview.....	39
• Operations.....	39
• Market Strategy.....	40
Other Suppliers .....	41
Global Market Shares.....	42
• Market Shares.....	43
<b>4 – Enrichment Supplier Risk Assessments</b> .....	<b>44</b>
UxC Enrichment Supplier Risk Assessment Methodology.....	44
• Company-Level Risks .....	44
• SWU Production Facility and Operational Risks.....	45
UxC Enrichment Supplier Risk Matrix .....	46
Discussion of Enricher Risk Ratings .....	46
• Orano .....	46
• Urenco.....	47
• TVEL/TENEX .....	47
• Centrus Energy .....	48
• CNNC.....	48

## List of Figures

Figure 1. Uranium Conversion Market Shares (Primary Only).....	19
Figure 2. Uranium Conversion Market Shares (Including Secondary).....	19
Figure 3. Regional Portfolio Shares of TENEX's Annual Sales in 2019 .....	33
Figure 4. Uranium Enrichment Market Shares (Primary Only).....	43
Figure 5. Uranium Enrichment Market Shares (Including Secondary).....	43

## List of Tables

Table 1. World Conversion Capacity vs. 2019 & 2020 Estimated Production .....	18
Table 2. Conversion Supplier Risk Matrix .....	22
Table 3. Urenco's Enrichment Plants and Capacities in 2020 .....	29
Table 4. TVEL's Enrichment Plants and Capacities in 2020 .....	32
Table 5. CNNC's Enrichment Plants and Capacities in 2020 .....	39
Table 6. World Enrichment Capacity vs. 2019 & 2020 Estimated Production .....	42
Table 7. Enrichment Supplier Risk Matrix .....	46

## Introduction & Overview

UxC, LLC (UxC) is pleased to present this inaugural edition of a special report on the topic of **Conversion & Enrichment Supplier Assessments (CESA)**. In this report, we evaluate the supply sectors for the second and third steps in the enriched nuclear fuel cycle. Specifically, these represent the services for the supply of uranium hexafluoride (UF<sub>6</sub>) conversion and enrichment of the <sup>235</sup>U isotope from the 0.711<sup>w</sup>% level found in natural uranium (i.e., through the supply of separative work units or SWU).

The conversion and enrichment sectors of the nuclear fuel markets are dynamic and significantly affect other parts of the fuel cycle, such as the uranium market. Conversion and enrichment also represent important parts of the overall cost of finished nuclear fuel and are critical aspects of the procurement considerations for operators of nuclear power plants around the world that rely on enriched uranium fuel. Thus, while there are fewer international suppliers of conversion and enrichment compared with the more diverse uranium industry, utilities still have crucial decisions to make when evaluating their supply options for these two services.

Thus, the CESA report has two main objectives:

- 1) Providing concise profiles of each of the suppliers in the conversion and enrichment markets with an emphasis on issues that affect their current state in the industry and ability to supply in the coming years. This also includes a comparative analysis of each supplier's relative standing in the market in terms of market shares based on current sales estimates.
- 2) Assessing the risk rating for each supplier based on ten distinct factors that affect their operations and ability to consistently perform as suppliers. These assessments are intended to be completely unbiased and based on UxC's independent review and comprehensive understanding of each company's latest performance and potential risk profile.

To support utilities active in these markets and interested in evaluating their current and possible prospective suppliers, the CESA report offers a unique set of data and information to evaluate each supplier and inform future procurement decisions. This report also can help utilities looking to conduct comparative risk evaluations based on existing supply portfolios.

For suppliers active in either conversion or enrichment, the CESA report provides a unique tool to evaluate competitive strengths and weaknesses in comparison to their competitors.

And, for any entity interested or engaged in aspects of these two markets, such as financial investors, government policymakers, commodity traders, or others, this report presents fresh insights and quantitative data to make informed business decisions.

## • Companies Profiled in this Report

The primary suppliers profiled in this report and assessed on the basis of overall risks in their respective fuel markets include the following:

- Cameco Corporation (conversion)
- Centrus Energy (enrichment)
- China National Nuclear Corporation (conversion and enrichment)
- ConverDyn/Honeywell International (conversion)
- Orano (conversion and enrichment)
- Urenco (enrichment)
- TVEL Fuel Co. and TENEX (conversion and enrichment)

## • Compendium to Conversion and Enrichment Market Outlooks

Finally, it should be noted that this CESA report is intended to supplement UxC's *Conversion Market Outlook (CMO)* and *Enrichment Market Outlook (EMO)* reports. Both the CMO and EMO standard reports provide detailed coverage of their respective markets, including updated contracting activity, supply and demand outlooks, market trends, and price forecasts through 2035.

## Structure of Report

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The CESA report includes the following chapters:

**Chapter 1 – Conversion Supplier Profiles** provides profiles of all the suppliers currently active in the UF<sub>6</sub> conversion market and also includes an analysis of current market shares as of 2020.

**Chapter 2 – Conversion Supplier Risk Assessments** presents UxC's risk assessments for conversion suppliers based on current market and operating conditions through a comprehensive risk matrix. Also included are an explanation of UxC's methodology for assessing conversion supplier risks as well as a review of the key considerations that impact each company's current risk ratings.

**Chapter 3 – Enrichment Supplier Profiles** provides profiles of all the suppliers currently active in the enrichment market and also includes an analysis of current market shares as of 2020.

**Chapter 4 – Enrichment Supplier Risk Assessments** presents UxC's risk assessments for enrichment suppliers based on current market and operating conditions through a comprehensive risk matrix. Also included are an explanation of UxC's methodology for assessing enrichment supplier risks as well as a review of the key considerations that impact each company's current risk ratings.