Uranium Production Cost Study – 2021

Pinning Down Production Costs

Given the global shift toward cleaner energy production, reduced carbon emissions, and reliable long-term energy sources, uranium supply is becoming more important to utilities worldwide. Between 2030 and 2035, UxC’s Base Case demand rises by 10%, which is a period wherein new primary production will be needed.

Although secondary supplies account for 33% of total supply in 2021, this share is expected to decline significantly to 19% of total supply in 2025, before dwindling to only 11% of total supply in 2030. Much of this secondary supply stems from utility inventories, which are being drawn down at an accelerated pace.

Uranium supply deficits against base case demand are projected to be minimal through 2027 and likely filled through a combination of unutilized production capacity, the restart of mines on standby, and additional inventory drawdown. However, UxC foresees a dire need for new uranium projects to enter service between 2027 and 2035, which will require incentive pricing as the reserves from operating mines are depleted and base case demand strengthens.

Uranium exploration expenditures over the last seven years have plummeted as many producers and junior miners instead focused their efforts on reducing operating and capital costs in response to depressed market conditions. As the nuclear industry is an important component of the growing clean energy paradigm, one of the challenges for the supply side will be to produce uranium in a socially responsible manner that mitigates detrimental impacts to the surrounding environment.

This detailed cost study complements UxC’s Uranium Market Outlook (UMO) and Uranium Supplier’s Annual (USA) in identifying where expanded and new uranium supply will come from among 105 global projects to meet nuclear fuel demand through 2035.

UxC’s Uranium Production Cost Study addresses a wide range of production cost issues including the following:

Factors Affecting Production Costs
Extensive review of factors impacting production costs, such as ore grade, reserve tonnage, deposit depth, spatial density, ore thickness, deposit composition and chemical agents, various technical factors, water flows and drainage, energy costs, labor costs, transportation/hauling costs, etc.

Uranium Mining/Milling Costs
Overview of mining/milling costs for conventional and ISR deposits, focusing on operating and capital costs for each mining method. The breakdown of typical operating costs for both acid leach and alkaline leach processing circuits are also presented.

World Production Costs
Cost curves for operational, planned/advanced, and potential projects are developed to identify those projects likely to produce in the future, as well as projected production cost curves for 2021, 2025, 2030, and 2035. New to the UPCS this year are cost curves for the above-mentioned years that account for full production costs plus a projected rate of return (ROR). The UPCS also includes a competitive cost comparison of 2020 production by average full cost for major producing regions.

Order Today!
UxC’s Uranium Production Cost Study is available for US$6,000. Subscribers of either UxC’s UMO or USA reports receive a discounted rate of US$4,500. Subscribers of both UxC’s UMO and USA reports receive a further discounted rate of US$3,500.00. For more information, please contact Nick Carter at nick.carter@uxc.com or +1 (407) 689-0605.

© 2021 UxC, LLC. All rights reserved.