



Uranium Production Cost Study – 2017

Pinning Down Production Costs

Given the move toward cleaner energy, reduced carbon emissions, and more secure long-term energy sources, uranium supply is becoming more important to utilities worldwide. Currently, in our post-Fukushima demand case, uranium demand is projected to increase by 9% through 2030.

However, secondary supplies continue to be a huge factor impacting uranium prices and the viability of new and existing uranium projects. Given the impact of secondary supplies on the ultimate need for primary production, there is enough prospective production below \$40 per pound to meet demand through 2020, and potentially longer if production cuts do not arise in the next couple of years. Thus, planned or potential projects with production costs at or above \$40 per pound will likely be deferred until after 2020 when higher demand necessitates this higher-cost production.

While uranium exploration experienced a revival in the last price run-up, exploration expenditures since the Fukushima accident have started to fall off with many producers finding it more difficult to obtain project financing in a flat market. As a result, the current menu of worldwide projects is not all that exhaustive because most of the recent exploration has been on brownfield sites that were discovered 20, 30, or even 40 years ago. Although uranium resources are extensive, the vast majority of these are neither delineated nor developed. As the nuclear industry transforms itself into a safer and more robust industry, one of the challenges

for the supply side of the industry is to expand and bring new production to a market still in recovery mode.

This detailed 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 110 worldwide projects to meet future nuclear fuel demand through 2030.

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

Factors Affecting Production Costs

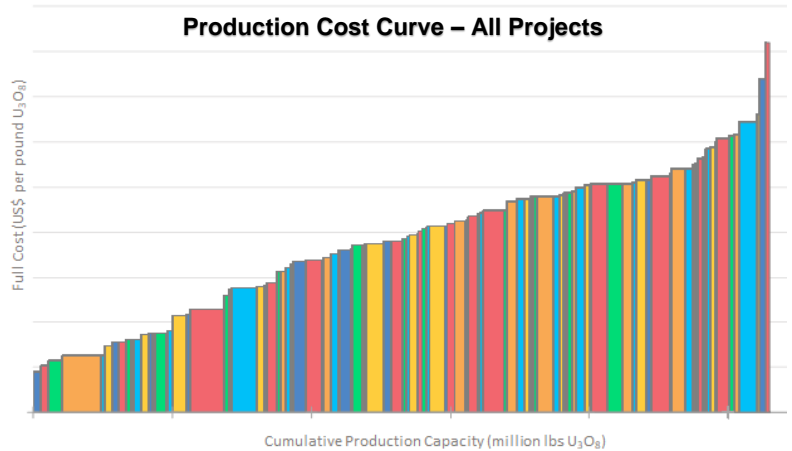
Extensive review of factors impacting production costs, such as ore grade, reserve tonnage, deposit depth, spatial density, ore thickness, deposit composition and chemical agents, various technical factors, water flows and drainage, energy costs, labor costs, transportation/hauling costs, etc.

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 is also presented.

World Production Costs

Cost curves for operational, planned,



and potential projects are developed to identify those projects most likely to produce in the future, as well as expected cost curves for 2017, 2020, 2025, and 2030 production. The UPCS also includes a competitive cost comparison of 2016 production by average full cost for each producing region.

Matching Production Costs to Prices

Analysis of why prices are considerably lower than in our marginal-cost pricing picture, with a broad discussion of floor prices, term prices, and spot prices.

Order Today!

UxC's *Uranium Production Cost Study* is available for US\$6,000.00. Subscribers of either UxC's UMO or USA reports receive a discounted rate of US\$4,500.00. Subscribers of both UxC's UMO and USA reports receive a further discounted rate of US\$3,000.00. For more information please contact Nick Carter at nick.carter@uxc.com or +1 (770) 642-7745.

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