

Uranium-REE-Lithium Opening Address

THE CHALLENGES OF OPERATING A URANIUM MILL IN THE MODERN ERA

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ABSTRACT

The share of nuclear generation in global electricity supply is currently about 10%, down from a peak of about 17% in 1996. One contributing factor to the decline in the percentage of nuclear power generation globally was response to the 2011 Fukushima Daiichi accident in Japan where all 52 nuclear reactors were shut down. The reduction in nuclear power generation combined with uncertainty regarding the long-term sustainability of the nuclear power industry caused the uranium spot price to fall from about \$US22.50/kg U₃O₈ in February 2011 to its current price of about \$US10/kg U₃O₈. In addition, the reduction in global nuclear power reduction has resulted in an over-supply scenario with respect to uranium ore concentrate inventories and this has further contributed to the downward pressure on the uranium spot price over the past six years. The sustained low uranium spot price has put significant pressure on primary uranium production operators and several have been operating in a negative cash flow situation. As a result, several of these operators have been forced to place their uranium mines and milling facilities into care and maintenance.

The IAEA has identified that the demand for electricity globally is expected to continue to grow, in particular in developing countries. As a result, the global total electrical generating capacity is forecast to increase from 6,671 GW(e) in 2016 to 9,826 GW(e) by 2030 and to 12,908 GW(e) by 2050. Based on the IAEA forecasts, the share of nuclear generating capacity in the global total electrical capacity will be about 3% in the low scenario and about 6.8% in the high scenario by 2050.

The forecasts indicate positive growth for the nuclear industry for the medium to long term. However, when looking at the historical spot price trends for uranium, the peaks in the spot price have been relatively short lived and the valleys have been unfortunately long-lived. Primary producers of uranium ore concentrate must continuously look for innovation, optimization and collaboration with operational peers and researchers in order to make uranium mills profitable during times of extended low uranium spot pricing. This presentation will focus on key aspects that uranium producers should consider as they look to advance innovation, improve efficiencies and ultimately reduce unit operating costs, whilst maintaining safety performance and high environmental and social standards.

Keywords: Nuclear Power Forecast, Uranium Spot Price, Innovation, Optimization