

Uranium 2014: Resources, Production and Demand (the “Red Book”) supply and demand projections to 2035

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Since the mid-1960s, with the co-operation of their member countries and states, the OECD Nuclear Energy Agency (NEA) and the International Atomic Energy Agency (IAEA) have jointly prepared periodic updates (currently every two years) on world uranium resources, production and demand. These updates have been published by the NEA in what is commonly known as the “Red Book”. This 25th edition of the Red Book reflects information current as of 1 January 2013.

The Red Book features a comprehensive assessment of uranium supply and demand in 2013 as well as projections of supply and demand to the year 2035. The basis of this assessment is a comparison of uranium resource estimates (according to categories of geological certainty and production cost) and mine production capability with anticipated uranium requirements arising from projections of installed nuclear capacity. In cases where longer-term projections of installed nuclear capacity were not provided by national authorities, projected demand figures were developed with input from expert authorities.

Since the accident at the Fukushima Dai-ichi nuclear power plant in 2011, Belgium, Germany and Switzerland have implemented policies to phase-out nuclear power. All countries with nuclear power facilities have conducted safety reviews of all facilities and most have implemented requirements to further strengthen safety, in particular with respect to beyond design basis natural events and station blackouts. Although no other countries with nuclear generating facilities have decided to phase-out nuclear power, development plans have been delayed in many countries because of the safety reviews, bringing about a decline in nuclear capacity projections to 2035. In addition to costs associated with implementing the strengthened safety features, capital intensive nuclear power construction programmes are experiencing difficulty in financing new build projects since the recession began in 2008 and the technology is facing stiff competition from natural gas generating plants with low fuel prices and subsidized renewable generating sources. Although these factors have reduced long-term nuclear generating capacity projections from those developed prior to the Fukushima accident, prospects for growth in global nuclear generating capacity remain positive, in particular in developing countries facing growing electricity demand with policies to reduce greenhouse gas emissions and poor air quality.

Uranium prices have declined by about 50% since the Fukushima accident as nuclear power plants in Germany were immediately closed all 48 operational reactors in Japan were progressively shut-down for regular maintenance and not re-started until new regulations governing re-starts were developed and implemented. The early retirements and the prolonged shut-downs led to an oversupplied uranium market, putting further downward pressure on uranium prices. In addition, enrichment facilities faced with excess capacity as demand declined have opted to run the plants with reduced tails assays to create additional uranium supplies, adding to the current market oversupply. As a result the current market oversupply and low uranium prices, market based producers have scaled back or deferred mine development plans...

see attachment for full abstract

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