

The Present Situation and Outlook for the World Uranium Market

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1. Introduction

The recent resurgence of the nuclear power option has raised the issue of whether there is adequate uranium in the world to provide the fuel to meet the substantial projected requirements that will be needed in this century.

Under such an environment, this paper discusses the present situation and outlook for the world uranium market.

2. Uranium Resources and Production

The biennial publication on uranium resources, production and demand, produced jointly by the International Atomic Energy Agency and OECD's Nuclear Energy Agency, estimates the identified amount of conventional uranium resources which can be mined for less than \$130/kgU, just above the current spot price, to be about 4.7 million tones. This amount is sufficient to sustain the nuclear power industry at its current level for 85 years [1].

Uranium was produced in 19 different countries in 2005. As shown in the table 1, worldwide uranium production amounted to some 41,722 ton-Uranium, compared with 40,475 ton-Uranium in 2004. This production is increased by almost three percent. Canada and Australia, just two countries, accounted for 51 percent of the world production in 2005.

	Production in 2005 (tU)	Share in 2005 (%)	Production in 2004 (tU)	Change over 2004(%)
Canada	11,628	27.9	11,597	0.3
Australia	9,516	22.8	9,010	5.6
Kazakhstan	4,329	10.4	3,719	16.4
Russia	3,325	8.0	3,200	3.9
Namibia	3,148	7.5	3,038	3.6
Niger	3,093	7.4	3,282	-5.8
Uzbekistan	2,300	5.5	2,050	12.2
US	1,020	2.4	862	18.4
Ukraine	800	1.9	1,000	-20.0
South Africa	674	1.6	755	-10.7
Others	1,888	4.5	1,962	-3.8
Total	41,722	100.0	40,475	3.1

Table 1. Natural uranium production in 2005, compared to 2004 [2].

3. The Outlook for Uranium demand and Supply

At the end of 2004, 440 commercial nuclear reactors were operating in 31 countries with a net generating capacity of about 369 GWe, requiring uranium about 67,000 ton-Uranium.

As shown figure 1, World Nuclear Association projected a world installed nuclear power capacity of 488 GWe by 2025 in a reference demand scenario. Accordingly, world reactor-related uranium requirements are projected to rise to 100,000 ton-Uranium, representing about a 50 percent increase compared to 2004.

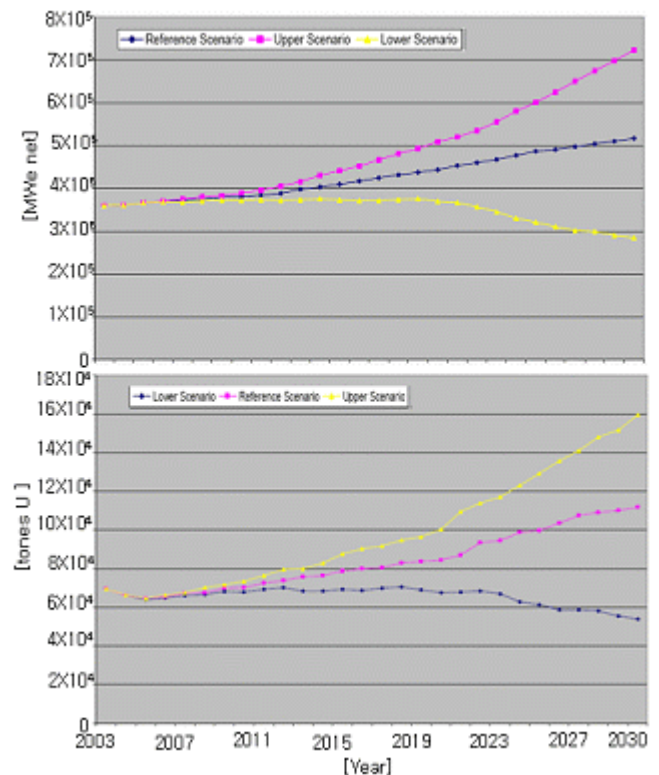


Figure 1. Nuclear generating capacity and uranium requirements to 2030 [3].

In the case of a future uranium production, Production of existing and committed centers is projected to reach 68,600 ton-Uranium in 2010 before lowering to 64,700 ton-Uranium per year by 2025[3].

If we consider the balance in relation to projected uranium supply and demand, Uranium market has a sound supply to 2015 but meeting a demand becomes

more challenging thereafter, unless the primary uranium supply rises sharply to meet the rising market demand.

boom in China, India, or worldwide may deepen a supply and demand mismatch, which will become a major factor of a raising natural uranium price.

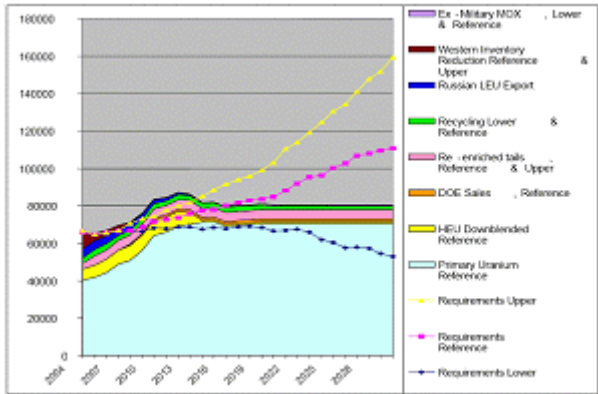


Figure 2. The forecasting of uranium supply and demand to 2030 [3].

According to the increased uranium demand, exploration has already reacted sharply. There has been a recent dramatic increase in exploration expenditures, which could be expected to lead to further additions to the uranium resource base. World exploration expenditures in 2004 totaled over \$133million, an increase of almost 40% compared to the 2002 expenditures, as the market strengthened. But, because of the long lead times required to identify new resources and to bring them into production, there exists the potential for the development of uranium supply shortfalls and continued upward pressure on uranium prices as secondary sources are exhausted [4].

4. Uranium price trend and prospect

During the last 15 years, the price of uranium has been very low due to the availability of excess commercial inventories, uranium released from military use and other secondary sources. Since its 2003 historical low, the spot price of uranium has increased over fivefold [5].

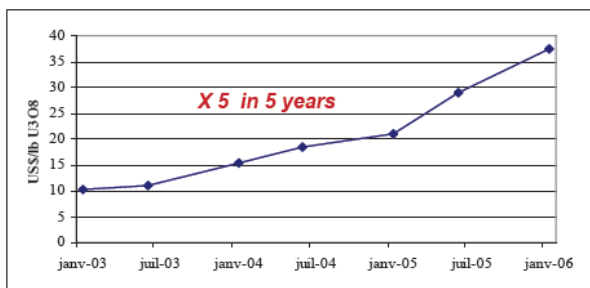


Figure 3. The natural uranium price trend[5].

Rapid depletion of the uranium inventories from 2007 to 2008 and speculative demand by world nuclear utilities are likely to cause the uranium price to rise future for the time being until a supply cushion is felt in the uranium market. Moreover, nuclear construction

5. Conclusion

The objective of the study was to analyze a world uranium market by using projection of uranium demand and supply. To achieve this goals, this paper look into uranium resources, uranium production and uranium demand.

Uranium market has a sound supply to 2015 but meeting a demand becomes more challenging thereafter, unless the primary uranium supply rises sharply to meet the rising market demand. Accordingly, the price of uranium will go up steadily.

Under such an environment, assuming the maintenance of a stable procurement that we have achieved conventionally, to be our priority, we consider that we should establish a new plan on how to secure uranium, by observing the uranium market trends.

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