The uranium supply strategy of China

S. Gao

China Uranium Corporation, CNNC, Beijing, China

E-mail address of main author: gao_shx@cnnc.com.cn

Currently there are 28 units of nuclear power plants (NPPs) under construction in China. Most of these plants will be put into operation sequentially in a couple years. The paper will present the operational and construction status of NPPs in China.

As the reactor fleet increases, the requirement for uranium will also substantially increase. Due to declining air quality, as atmospheric pollution spreads rapidly from northern parts to southern parts of China, the option to develop nuclear power has become the highest priority. Uranium demand will be the key to support the expanded nuclear power in the future. Current and future requirements of uranium and the envisaged supply strategy will be discussed.

Domestic production is seen as one of the channels to meet the increased requirement. As the uranium price remain low, there will be limited the expansion of domestic production in the short term. The exploration of economic resources is being promoted. Decreasing production costs is mandated in operations due to low uranium prices at present.

Development of overseas uranium resources is another channel to supply for the NPPs. Through acquisition of uranium mining projects, advanced uranium projects and exploration projects, China can meet the requirement of NPPs in the long-term. Joint venture partnership is also flexible option for developing uranium resources overseas.

Purchasing uranium in the market is the third option. Complementing the supply by domestic production and overseas development, purchase of uranium product in the market is a simple and easy option.

Advantages and disadvantages of these three channels and how these can be combined into an integrated strategy of supply and the proprotionate weightage of each channel for the potential future supply of uranium to the NNP fleet will be discussed.