

## Uranium a hot commodity again George Werniuk

Uranium has played a pivotal role in the 20<sup>th</sup> century, in war and peace. Ken Seitz, of Cameco in Saskatoon, addressed a couple of hundred delegates late Sunday afternoon on the outlook for uranium. He opened his talk by reviewing the history of uranium. The period from 1950 to 1979 was dubbed the birth and emergence of nuclear power. Ironically, while Atoms for Peace was being touted in the West, the world's two super powers were stockpiling uranium to use in nuclear weapons. Originally demand outstripped supplies but eventually uranium stockpiles grew beyond requirements and the nuclear industry found itself in decline as mines shut, and producers went under. Most of the uranium needs were drawn from stockpiles, devastating the nuclear exploration business.

Seitz sees the period between 1980 and 2000 as the Middle Ages for uranium. There was a growing anti-nuclear movement, nuclear power projects were abandoned and uranium prices dropped to less than \$US10.00 per pound. Accidents at Three Mile Island and Chernobyl did not help. A secondary market for uranium developed and uranium was available for well below the cost of production.

Uranium exploration companies went out of business or were consolidated into a few producers. By 1998 only six companies were producing more than 70% of the world's uranium.

Beginning in 2003 there has been a renaissance in nuclear power. The high cost of natural gas generators, improved nuclear power plant performance, the cost competitiveness of nuclear energy, the absence of greenhouse gas production from nuclear energy, high oil prices and Middle Eastern conflicts focussed attention on the stability of nuclear energy supplies.

Today, nuclear energy is back in demand. The growth of nuclear energy production in China and India is driving up demand for nuclear fuel. At present there are 436 nuclear plants in operation in the world. By 2019 there will be 110 new reactors while 19 reactors will shut down in the same period. China, which has 11 reactors today, will have 53 in 2019, while India will add 13 new reactors in the next 10 years.

Where will the fuel come from to power these new reactors? Production of uranium has been increasing this decade. Up to 2004, production averaged about 93 million pounds per year. From 2004 to 2007 production increased to 106 million pounds per year. In 2008 production was 114 million pounds and it is estimated that 2009 production will be 130 million pounds. This trend bodes well for producers

New sources will come from Kazakhstan and Africa. In 2009 Kazakhstan overtook Canada as the world's largest producer of uranium. Planned production during the next 10 years will increase but

will supply only two-thirds of demand. This is good news for uranium exploration companies and producers.

The shortfall in supplies will be met by the conversion of nuclear weapons to useful fuel for civilian reactors. Currently this is a significant source of fuel but will be dwindling as time goes by. The United States will also supply uranium from its stockpile.

Today 60% of world uranium production comes from 10 mines in six countries. The current low prices for uranium have clouded the future production situation, as exploration declines due to low spot market prices.

Concluding his talk Seitz was optimistic that the uranium industry will rise to the challenge of meeting demand, but it will require investment and the support of stakeholders, namely the energy producers themselves.