



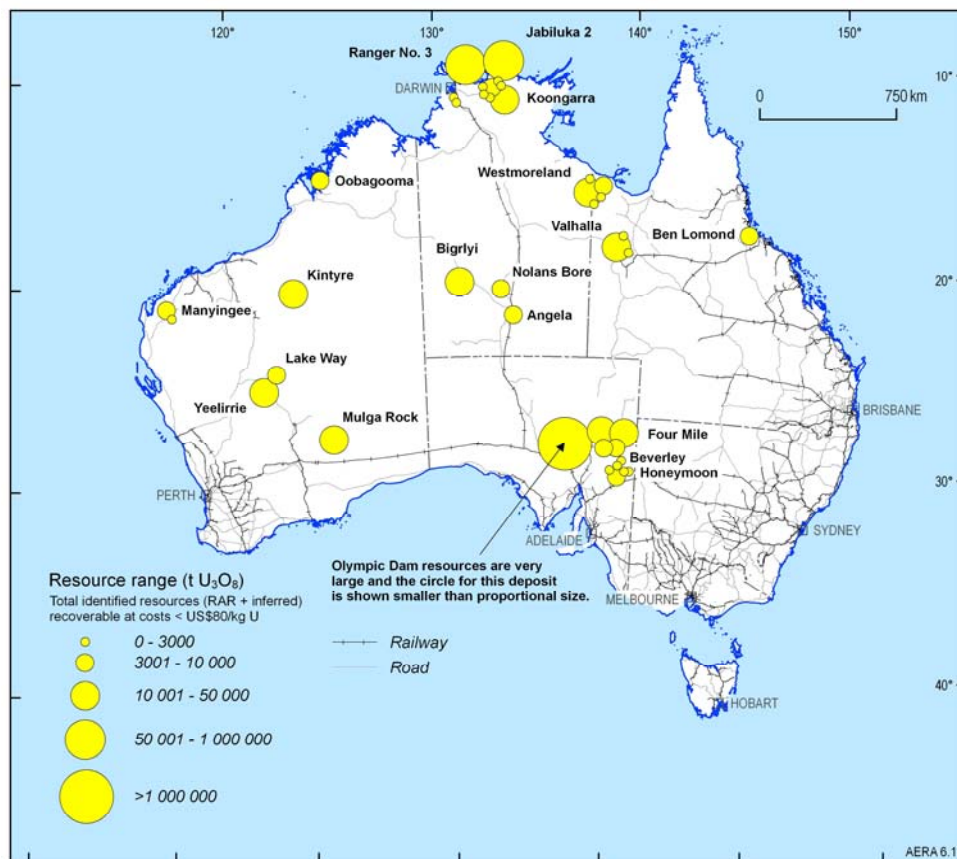
# AUSTRALIA'S URANIUM INDUSTRY

Worldwide, nuclear power accounts for around 15 per cent of total electricity generation and Australia's uranium industry plays an important part in the global electricity market. In 2009-10, Australia exported 7,555 tonnes of U<sub>3</sub>O<sub>8</sub> valued at \$758 million.

Australia only permits the export of uranium for peaceful purposes to countries which are committed to non-proliferation and nuclear safeguards. Countries must be a member of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), have a bilateral safeguards agreement in place with Australia and have an Additional Protocol with the International Atomic Energy Agency (IAEA) in force.

Australia's uranium exports also support global efforts to address climate change by avoiding the further production of significant quantities of greenhouse gas emissions. According to the Australian Academy of Sciences, 10,000t of Australian uranium exports replaces the generation of 400 million tonnes of CO<sub>2</sub> from conventional power sources.

## Australia's total defined uranium resources – March 2010





# AUSTRALIA'S URANIUM INDUSTRY

## Australia's uranium mines

The Australian Government supports the development of a sustainable Australian uranium mining sector in line with world's best practice environmental and safety standards.

Australia currently has three operating mines – the Olympic Dam and Beverley mines in South Australia and the Ranger mine in the Northern Territory. The Honeymoon mine in South Australia is scheduled to begin production in 2011.

The proposed multi-billion dollar expansion of the Olympic Dam mine has the potential to become the world's largest uranium mine. In addition is a proposal to introduce a heap leach facility at the Ranger mine. The Beverley mine is currently extending operations after the discovery of two new deposits in the project area, and several uranium prospects in South Australia and Western Australia are expected commence in the next three years. Western Australian projects alone are forecast to produce a joint 5000t U<sub>3</sub>O<sub>8</sub> per annum by 2014.

Uranium prices grew strongly to September 2006 as countries reconsidered nuclear power as an energy source. This growth further strengthened in 2006, reflecting interest by speculators in the market. In late 2007, prices returned to 2006 levels and since then, prices have flattened due to the global downturn as well as uranium supply factors. These include additional supply from emerging producers, particularly the dramatic increase from Kazakhstan, as well as secondary supplies from surplus stockpiles in the United States and military stockpiles in the United States and the Russian Federation. The trend for uranium is a steady increase over the medium-term and significantly to 2015. This reflects the strong global growth in construction of nuclear reactors. As of February 1 2011, the uranium spot price was approximately \$160.00/kg.

## World uranium spot prices, indicative long-term contract prices and Australian export value units - 2010



Source: ABARE, 2010



# AUSTRALIA'S URANIUM INDUSTRY

## Uranium reserves

Australia has the largest share of uranium resources globally, with 46% of the world's reasonably assured resources recoverable at costs less than US\$80/kg U (~US\$30/lb U<sub>3</sub>O<sub>8</sub>).

Given our large resources and reputation as a secure long-term supplier, Australia is well placed to capitalise on any expansion of the global nuclear power industry.

Up to date maps of Australia's uranium deposits and highly prospective regions are available on Geoscience Australia's website [www.ga.gov.au](http://www.ga.gov.au).

## URANIUM production

In 2010 Australia remained a significant producer of uranium worldwide.

Australia's production of uranium in 2009-10 was 7,555 tonnes U<sub>3</sub>O<sub>8</sub>. ABARE estimates production to 13,000t U<sub>3</sub>O<sub>8</sub> by 2015 and up to 25,000t U<sub>3</sub>O<sub>8</sub> by 2030 due to Western Australian mines coming online in the short term and the Olympic Dam Expansion.

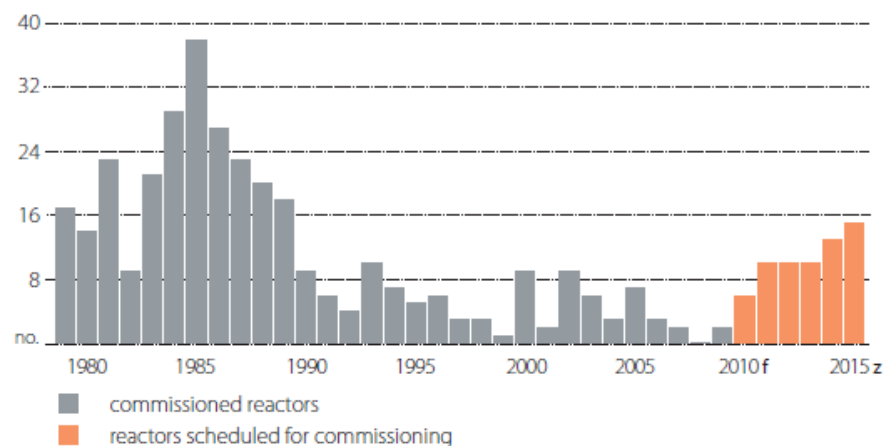
Australia's uranium is used in civilian nuclear power reactors in the United States of America, Japan, France, United Kingdom, Finland, Sweden, South Korea, China, Belgium, Spain, Canada and Taiwan.

## International Nuclear Energy

As of February 2010, there were 436 operational nuclear power plants world wide. The strong demand for uranium as an energy resource is expected to grow with the global expansion of nuclear power. Many countries are adopting the use of nuclear power for the following reasons:

- the relative cost competitiveness of nuclear power versus the alternatives;
- security of supply and independence from fossil fuel energy imports;
- diversity of domestic electricity production and reduction in volatility arising from input fossil fuel costs; and
- reduction in greenhouse gasses and subsequent effects on global climate.

## Nuclear reactors commissioned or scheduled to be commissioned worldwide



Source: ABARE, 2010



# AUSTRALIA'S URANIUM INDUSTRY

**Australian Government**  
**Department of Resources**  
**Energy and Tourism**

Australian mines face increasing global competition as energy markets such as Kazakhstan and Africa continue to grow rapidly, as well as from secondary supply sources. Apart from primary mine production, uranium can be sourced from spent nuclear fuel, downblended highly enriched uranium from nuclear weapons, mixed oxide fuels and surplus stockpiles world wide.

Secondary supplies can potentially account for more than 13 per cent of world reactor requirements. Australia is well placed to make a greater contribution to meeting the projected increase in global demand for uranium because of its low cost uranium resources, development potential, strong record as a reliable supplier and skilled workforce.

Between 2011 and 2015, 58 nuclear power reactors are scheduled to begin. Influences on nuclear energy include the United States with recent government policy changes paving the way for significant growth in nuclear capacity; Sweden, which has repealed its phase-out policy; the United Kingdom where the Government has made a firm commitment to the future of nuclear energy; and Finland, which has advanced provisions for radioactive waste management and disposal.

The International Energy Association (IEA) has identified nuclear energy as an important portion of the future global energy mix given its low carbon emissions and contribution to energy security. Nuclear energy will play an essential role in any attempt to reduce global carbon emissions by 50 per cent by 2050.

## **Benefits from uranium mining**

The current operational uranium mines employ approximately 4,200 jobs, mostly in remote areas of Australia where there are few other employment opportunities.

Uranium mining also generates significant revenues through royalty payments to traditional owners, the South Australian and Northern Territory governments, as well as company taxes paid to the Federal government.