

REGULATION IMPACT STATEMENT

for the

AGREEMENT BETWEEN THE GOVERNMENT OF AUSTRALIA AND THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA ON THE TRANSFER OF NUCLEAR MATERIAL

and the

AGREEMENT BETWEEN THE GOVERNMENT OF AUSTRALIA AND THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA FOR COOPERATION IN THE PEACEFUL USES OF NUCLEAR ENERGY

BACKGROUND

In 2004 Australian uranium mining companies and the Chinese Government approached the Australian Government seeking an agreement to provide for Australian uranium exports to China for nuclear power generation. Following the announcement by the Minister for Foreign Affairs in August 2005 that the Australian Government had decided formally to proceed with negotiations, negotiations on a Nuclear Transfer Agreement and a Nuclear Cooperation Agreement were concluded in March 2006. The agreements were signed by the Australian and Chinese Ministers for Foreign Affairs on 3 April 2006.

Under long-standing Australian Government policy, Australian uranium and nuclear material derived from it (termed Australian Obligated Nuclear Material (AONM)) can only be exported to countries with which Australia has concluded a nuclear safeguards agreement. These agreements prescribe strict safeguards and control measures to ensure that exported uranium, nuclear equipment or technology are used solely for peaceful, non-military purposes. Currently Australia has 19 nuclear safeguards agreements in force covering 36 countries, plus Taiwan. The agreements with China, once in force, will add China to this list of countries that are eligible to receive Australian uranium.

A number of Australia's other bilateral safeguards agreements include provisions for cooperation (e.g. R&D collaboration) in nuclear-related areas. In the case of China, the nuclear transfer component and the nuclear cooperation component are covered in two separate agreements. China requested this arrangement to reflect its domestic responsibilities for international agreements. One agreement covers transfer of nuclear material, and the other covers nuclear cooperation, including transfer of nuclear-related material, equipment or technology. The two agreements, read and applied together, have the same effect as previous Australian safeguards agreements, and fully meet all of Australia's safeguards requirements.

1. PROBLEM

China is seeking secure, long-term sources of energy to fuel its economic growth, and currently is the second largest energy consumer behind the US. Meeting its expanding energy demand with non-fossil fuel technologies such as nuclear power will have clear positive environmental benefits. China is planning a 4-fold increase in nuclear energy by 2020. For China's current nuclear power industry, most uranium needs are met through indigenous supplies, however, given China's limited uranium resources, China will need to become a major uranium importer over the coming years. China's planned total nuclear electricity capacity by 2020 will require an annual supply of about 8000 tonnes of uranium – a little less than Australia's total annual uranium exports over recent years.

With Australia holding over 35% of the world's low cost uranium reserves, the inclusion of China in Australia's network of bilateral safeguards partners has the potential to expand uranium exports significantly. Australian uranium producers are keenly interested in selling uranium to China, but are currently denied access to this potentially substantial export market due to the long-standing policy of Australian Governments that uranium can only be supplied to countries with which Australia has a bilateral safeguards agreement. This led Australian uranium mining companies to approach the Government in 2004 to request the Government consider negotiating a bilateral safeguards agreement with China.

2. OBJECTIVES

The Australian Government policy that determines to which countries, and under what conditions, uranium can be exported is the uranium export policy adopted in 1977. Practical implementation of this policy is primarily the responsibility of the Australian Safeguards and Non-Proliferation Office (ASNO). Details of the implementation of the policy are published each year in ASNO's Annual Report.

The objective of the Nuclear Transfer Agreement is to allow Australian uranium producers to supply China's expanding nuclear power industry under strict safeguards conditions. These conditions are designed to ensure that any nuclear material transferred between Australia and China will be used solely for peaceful, non-military purposes. Providing for such exports is consistent with the growing trade and economic relationship between Australia and China and has the benefit of consolidating Australia's position as a secure energy supplier. In this context, proscribed military purposes means: any direct military application of nuclear energy such as nuclear weapons, military nuclear reactors, production of tritium for military purposes, military nuclear propulsion and depleted uranium munitions.

The objective of the Nuclear Cooperation Agreement is to provide mechanisms for cooperation across the spectrum of peaceful uses of nuclear science and technology, including uranium exploration. The Agreement also provides for transfers of nuclear equipment and technology. However, given Australia's limited nuclear industry, there is limited scope for the implementation of this component at present. In other Australian

bilateral safeguards agreements cooperation and transfer agreements are contained in one agreement.

3. OPTIONS

Given that long-standing Government policy requires that uranium only be exported to countries which have concluded with Australia a bilateral safeguards agreement, the options were either to negotiate an agreement with China to allow for uranium exports, or maintain the status quo whereby uranium cannot be exported to China. Australia's uranium export policy – in place for about 30 years and applied through 19 other bilateral safeguards agreements – has a clearly prescribed list of conditions for export. Consequently, once the Government had decided to proceed with negotiations, the parameters for negotiation were well defined.

4. IMPACT ANALYSIS

Concluding an agreement that allows for export of Australian uranium to China will potentially benefit Australian uranium producers. There will be no compliance costs on Australian uranium producers above what are already in place for exporting uranium to countries within the current bilateral safeguards network. An assessment of the impact is contained in the Trade Impact Statement below. There is also a positive impact in assisting China to reduce greenhouse gas emissions through use of nuclear power.

Assurance that AONM will not be used for military purposes derives from a number of factors, which include: (1) China's willingness to give a treaty-level commitment; (2) the safeguards agreements China has with both the International Atomic Energy Agency (IAEA) and Australia; (3) detailed nuclear accounting information to be reported to ASNO; (4) uranium would be bought for power utilities for electricity generation and not sold for unspecified purposes; and (5) open sources indicate that China ceased production of fissile material for nuclear weapons some years ago.

Safeguards conditions in the Agreements

A key condition for supply of AONM to a nuclear-weapon state, such as China, is that AONM must be covered by the state's safeguards agreement with the IAEA. The Nuclear Transfer Agreement ensures that AONM will be used or processed only within jointly agreed facilities, which will be subject to China's safeguards agreement with the IAEA.

Monitoring of AONM will be based on safeguards procedures applied at the facilities where AONM is handled, in accordance with China's safeguards agreement with the IAEA and procedures under the Nuclear Transfer Agreement. As with all transfers of AONM, ASNO will cross-check reports on AONM provided by China for consistency with information from the IAEA and from other sources.

While China has the right to choose which facilities are eligible for IAEA inspections, facilities eligible to use AONM under the Nuclear Transfer Agreement must be jointly agreed between Australia and China. These agreed facilities must then be subject to the China-IAEA safeguards agreement.

Further Australian safeguards conditions required by the agreement include:

- no retransfers to third countries; no enrichment to 20% or greater in the isotope uranium-235; and no reprocessing; without Australia's prior consent;
- an assurance that internationally agreed standards of physical security would be applied to all AONM during use, storage and transport; and
- detailed administrative arrangements setting out procedures for accounting for and reporting on AONM – these are to be concluded between ASNO and its counterpart, the China Atomic Energy Authority.

The factors above were considered in depth by the Australian Government in reaching the decision to conclude the agreements. The Government concluded that the two agreements fully meet all Australia's long-standing policy requirements, and that the necessary safeguards conditions are in place to ensure that any nuclear material, material, equipment, components or technology transferred between Australia and China will be used solely for peaceful, non-military purposes.

Annex D of the Nuclear Transfer Agreement addresses exports of “non-nuclear” ores and concentrates containing trace quantities of uranium and/or thorium, such as tantalite concentrates and mineral sands concentrates. Australian companies have been exporting tantalite concentrates and mineral sands to China for a number of years. China commits in Annex D not to extract any nuclear material for nuclear use from Australian ores and concentrates. This commitment will not impact on Australian exports to China, as these exports have never been for the purpose of extracting nuclear material for nuclear use.

The stakeholders with respect to the Nuclear Cooperation Agreement may potentially be broader, given the wide range of areas of cooperation listed in the Agreement. However, initially, cooperation under the Agreement is likely to be limited to research at the Australian Nuclear Science and Technology Organisation's (ANSTO) new OPAL reactor, which will provide a world class neutron beam science research capability. While ANSTO already has a memorandum of understanding with China on research exchanges, the Nuclear Cooperation Agreement, by applying safeguards conditions on exchanged material, equipment and technology, potentially expands the scope of any future collaborative R&D. Prior to any cooperation commencing under the Nuclear Cooperation Agreement specific written instruments for each particular field of cooperation must be concluded. Unlike the Nuclear Transfer Agreement, there are no immediate economic benefits that may result from the implementation of the Nuclear Cooperation Agreement. Nonetheless, there are clear benefits for Australia's nuclear research programs and use of OPAL for advanced materials science.

Trade Impact Assessment

In 2005, Australia exported 10,480 tonnes of uranium, mostly contained in U₃O₈. This trade was worth \$573 million and the quantity of uranium was sufficient for the annual fuel requirements of approximately 50 nuclear reactors.

Australia is the world's second-largest uranium producer after Canada, accounting for 23% of new mine uranium production. All Australian uranium production is exported under the oversight of the Department of Industry, Tourism and Resources and ASNO.

Australia currently has uranium supply contracts with Belgium, Canada, Finland, France, Germany, Japan, the Republic of Korea, Spain, Sweden, the UK, and the US, and also Taiwan.

Of these, Australia's main customers are currently the US, France, Japan and the Republic of Korea. These countries are expected to continue to be Australia's main uranium export markets given that all intend to maintain or expand their nuclear power industries.

The Nuclear Transfer Agreement, once in force, will open a new market for Australian uranium. However, no uranium can be sold until the safeguards agreements are ratified by both countries and detailed administrative arrangements are in place.

The stakeholders with respect to the Nuclear Transfer Agreements are Australia's uranium producers: BHP-Billiton (Olympic Dam Mine), Energy Resources Australia (Ranger Mine), Heathgate Resources (Beverley Mine), plus any other mines given approval to operate.

China currently meets its own uranium needs but will need to start importing uranium over the medium term if it is to meet its expanding nuclear energy requirements. With Australia holding over 35% of the world's low-cost uranium reserves, it is well placed to take advantage of increasing demand for uranium over the medium term.

The impact of the introduction of China into Australia's network of bilateral safeguards partners is a potential increase in demand for Australian uranium over the medium term. However, whether this demand results in expanded mine production will be based on commercial decisions by mining companies and, approvals by relevant State, Territory and Federal governments.

At this stage, it is premature to assess the potential value and volume of China's demand for Australian uranium before any contractual negotiations commence between Australian producers and Chinese utilities. However, as an upper-limit projection, it is reasonable to surmise that for reasons of diversity of supply, China would not seek to source more than about one third of its uranium requirements from any one supplier country.

5. CONSULTATION

The only non-Government stakeholder organisations with respect to the Nuclear Transfer Agreement are Australian uranium producers. Consideration of negotiating a safeguards agreement with China was initiated by Australian uranium producers following their approach to the Australian Government in 2004, ergo, these key stakeholders have been consulted from the outset.

Key Australian Government agencies (DFAT, ASNO, PM&C, AGD, Defence, DITR, DEST, ANSTO) participated in the negotiations and in inter-departmental committee meetings.

States and Territories were consulted through the Standing Committee on Treaties at its meeting on 17 May 2006. No opposition to the Agreement has been expressed by any State, Territory, or Federal Government organisations.

6. CONCLUSION AND RECOMMENDED OPTION

The benefit to Australia of concluding the Nuclear Transfer Agreement is expanding the market for Australia's uranium exports (in 2005 worth \$573M) while also consolidating Australia's position as a secure supplier of energy resources. This is consistent with the growing trade and economic relationship between Australia and China. Further, Australian uranium exports will contribute to China's diversification from fossil fuels with concomitant environmental benefits.

The Nuclear Cooperation Agreement has the benefit of setting a framework for collaborative research projects between Australia and China in peaceful applications of nuclear equipment and technology. This framework does not differ significantly in scope from provisions that would otherwise be contained in a single, combined nuclear transfer/cooperation agreement; such provisions have been included in some of Australia's other bilateral safeguards agreements.

The Government has concluded that the two agreements fully meet all Australia's long-standing policy requirements that safeguards conditions are in place to ensure that any nuclear material, material, equipment or technology transferred between Australia and China will be used solely for peaceful, non-military purposes.

It is recommended that Australia ratify the Nuclear Transfer Agreement and Nuclear Cooperation Agreement.

7. IMPLEMENTATION AND REVIEW

No new legislation or regulations are required to give effect to the terms of the two Agreements. However, it will be necessary to promulgate regulations pursuant to the *Nuclear Non-Proliferation (Safeguards) Act 1987* to add the Agreements to the list of “prescribed agreements” under the Act. Similar action is also required under the *Australian Radiation Protection and Nuclear Safety Act 1998*. No legislative or regulatory changes will be required to the existing roles of the Commonwealth or the States and Territories as a consequence of implementing the Agreements.

Once the Nuclear Transfer Agreement is ratified, implementation (i.e. exports of uranium to China) cannot occur until the designated authorities – the Australian Safeguards and Non-Proliferation Office (ASNO) and the China Atomic Energy Authority (CAEA) – have: (a) established an Administrative Arrangement (AA) detailing the safeguards and accounting requirements; and (b) established, pursuant to Annex B of the Agreement, a list of eligible facilities. These can be concluded prior to ratification of the Agreement. Once these requirements have been met, as with all of Australia’s bilateral safeguards agreements, ASNO will have overall responsibility for the Agreement’s implementation, i.e. administering and accounting for all uranium exports.

An AA will also apply to any transferred material, equipment, components or technology under the Nuclear Cooperation Agreement. Another requirement under the Nuclear Cooperation Agreement is that a written specific instrument be concluded between respective cooperating authorities before any collaborative projects can commence. In Australia, the designated authorities under the Nuclear Cooperation Agreement are ASNO and ANSTO.

The regulated parties with respect to the Nuclear Transfer Agreement are the three operating uranium producers. These companies currently have long-term mineral export permits (MEPs) issued by the Minister for Industry, Tourism and Resources (or the Minister’s delegate) pursuant to the *Customs (Prohibited Exports) Regulations 1958*. This is administered by the Uranium Industry Section of the Department of Industry, Tourism and Resources. Additional MEPs, or amendments to existing MEPs, to allow for exports directly to China cannot be issued until the requirements outlined above, in the first paragraph of this section, are completed, and ASNO has provided advice to the Minister (or the Minister’s delegate as the case may be) that it is satisfied that all necessary safeguards requirements are addressed. Furthermore, the three mining companies each have Permits for Possession of Nuclear Material issued by the Minister for Foreign Affairs pursuant to the *Nuclear Non-Proliferation (Safeguards) Act 1987*. These permits are administered by ASNO. No modification of these Permits will be required before commencing exports to China.

Under the Permits for Possession of Nuclear Material (administered by ASNO) and the Mineral Export Permits (administered by DITR) there are various administrative and reporting requirements that must be fulfilled by the mining companies. It is unlikely that these requirements will differ significantly from what is currently required for exports to other countries within Australia’s bilateral safeguards network.

Mechanisms for review of the Agreements and the Administrative Arrangements are provided for in the terms of the Agreements. Specifically, the Agreements provide for consultation on matters arising from the interpretation or implementation of the Agreements. A robust dispute mechanism is included in each agreement. Similar provisions are found in Australia's other bilateral safeguards agreements and such consultations typically occur every few years. Furthermore, ASNO officials visit bilateral counterparts annually to reconcile nuclear material transfer reports in detail.

Contact details

Nuclear Accountancy and Control Section
Australian Safeguards and Non-Proliferation Office

Department of Foreign Affairs and Trade