

Joint Standing Committee on Treaties

Agreement between the Government of Australia and the Government of the Russian Federation on Cooperation in the Use of Nuclear Energy for Peaceful Purposes

Executive Summary

The Australian Uranium Association submits that the Agreement is in Australia's national interest.

Australia has 36% of the world's reasonably assured resources of uranium. Currently, Australia contributes 19% of the primary supply of the world's uranium.

Research undertaken for the Association indicates that, under a *Climate Action* scenario of moderate global policies to address climate change, Australia's GDP to 2030 could be \$14 billion to \$17 billion higher (in net present value terms) if we expanded our uranium industry to its potential.

Expanding our industry to its potential, in a *Climate Action* scenario, could raise Australia's share of the world's supply of uranium to 25%.

The national interest case for expanding to potential goes beyond the value of exports. As the research shows, such an expansion in line with global growth in nuclear energy demand could avoid between about 11 billion and 15 billion tonnes of greenhouse gases globally to 2030, compared to coal-fired power stations using existing technology. At a minimum, the exports of uranium in 2030 alone could avoid ten times the emissions abatement required to meet Australia's Kyoto target.

'Expanding our industry to its potential' means taking every opportunity to export Australian uranium to new markets as they become available, subject to robust non-proliferation measures and nuclear safeguards.

The Association submits that the non-proliferation safeguards that will govern the export of Australia's uranium to Russia are robust. From Australia's longstanding policy point of view, the key safeguards are those required by the Nuclear Non-Proliferation Treaty (NPT) and bilateral treaties governing the use of Australian uranium and technology.

Russia is an NPT signatory. The Agreement between Australia and Russia is very similar to the bi-lateral treaties that govern Australia's uranium exports to other countries, including nuclear weapons states.

The Association submits that the Committee is able to conclude that Russia will comply with its obligations under both the NPT and the Agreement; and that there are no reasons to conclude otherwise.

The Association also submits that the Committee can be confident that Australia's uranium will be used safely and responsibly in Russia's electricity generation industry.



Submission

Russia plans to significantly expand its nuclear power generating capacity over the next 10 to 20 years to reduce carbon emissions and to improve its energy security. Commensurate with this plan, Russia seeks to diversify sources of uranium to supplement its own limited resources.

This submission shows that it is in Australia's national interest to conclude this treaty with the Russian Federation, that the Russia Federation is a strong supporter of the nuclear non-proliferation regime, and that over the last 15 years or so it has partnered strongly with western nuclear industries to improve the safety, security and performance of its nuclear industry.

Australia's national interest

Australia is an exporting nation with a strong comparative advantage in minerals exploration, processing and export.

Australia's minerals exports account for over 16% of Australia's total exports.¹

The outlook for Australia's minerals exports remains very good, principally because of productivity and population growth in Asia.

Access Economics², in a recent report to the Minerals Council of Australia, said this about future demand for Australia's minerals commodities:

...very large increases in supply are required.

Or, in other words, the new industrial revolution sweeping the world is still in its infancy... this industrial revolution has enormous momentum behind it.

And, in turn, that is vital for Australia and Australians to understand. Although we are arguably the world's best supplier of industrial inputs to the developing nations of this world, our infrastructure was caught napping by the suddenness and by the pace of this global revolution.'

There is little doubt that expanding Australia's minerals exports is in Australia's national interest. Among those mineral resources, Australia has the world's prime uranium endowment. 36% of the world's low cost uranium resources are located in Australia. This is about the same share of uranium as Saudi Arabia has of the world's oil.

As in other minerals, Australia clearly has a strong comparative advantage in uranium. And as with other minerals, it is in our national interest to make the most of that advantage, subject to conditions.

The Agreement being considered by the Committee – and other agreements similar to it - is like the physical infrastructure that enables Australia to be 'the world's best supplier of industrial

¹ ABS 5368.0

² <u>www.minerals.org.au/ data/assets/pdf_file/0007/27358/AE-</u> <u>MCA_Global_commodity_demand_scenarios.pdf</u>



inputs'. It creates the conditions under which we can safely and securely realise the potential available in the comparative advantage we have in uranium.

Australia's uranium potential

Australia' uranium potential – the extent of our comparative advantage – was recently examined by Deloitte in a research project commissioned by the Association.

The research, *Outlook for the Uranium Industry: evaluating the economic impact of the Australian uranium industry to 2030*,³ examines the potential for Australia's uranium export growth under two scenarios for global climate change policies. A copy is attached.

In the context of the Committee's deliberations, the research indicates the extent of Australia's uranium potential.

The two scenarios, together with two potential Australian uranium policy outcomes, are shown in the diagram below:

REGULATION REFORM: Uranium mining allowed in South Australia, the Northern Territory, Western Australia and Queensland

REGULATION REFORM IN A	REGULATION REFORM IN A
CLIMATE ACTION WORLD	CLIMATE CRISIS WORLD
960 (1,000MWe) nuclear power reactors	1,634 (1,000MWe) nuclear power reactors
Australia accounts for 25% global demand by 2030	Australia accounts for 30% global demand by 2030
(37,000t U3O8 from SA, NT, Qld and WA)	76,000t U3O8 from SA, NT, Qld and WA)
Climate Action world: US\$50 CO2 price	Climate Crisis world: US\$100 CO2 price
CONSTRAINED SUPPLY IN A	CONSTRAINED SUPPLY IN A
CLIMATE ACTION WORLD	CLIMATE CRISIS WORLD
960 (1,000MWe) nuclear power reactors	1,634 (1,000MWe) nuclear power reactors
Australia accounts for 19% global demand by 2030	Australia accounts for 24% global demand by 2030
(28,500t U3O8 from SA and NT only)	61,250t U3O8 from SA and NT only)
CONSTRAINED SUPPLY: Uranium mining allowed in South	

CONSTRAINED SUPPLY: Uranium mining allowed in Sc Australia and the Northern Territory only

Source: Deloitte Economics

The *Climate Action* scenario – the more likely one - envisages stabilising carbon concentrations in the atmosphere at 550 parts per million by 2050. Under this scenario, around 960 nuclear reactors would be operating world wide by 2030. This projection is consistent with the IPCC's projections for the uptake of nuclear power generation under a global US\$50 carbon price.

³ Australian Uranium Association, April 2008



Under this scenario, the carbon price is US\$50 per tonne and the long term uranium contract price is US\$100/lb in 2030 (compared to about US\$90 in early 2008).

Under this scenario, Australia's GDP in net present value terms to 2030 would be between \$14 billion and \$17 billion higher than otherwise; and Consumption \$12 billion to \$15 billion higher, depending on whether mining was allowed in Western Australia and Queensland in addition to South Australia and the Northern Territory.

Under the less likely *Climate Crisis* scenario, the economic benefits would be substantially larger. The full results for that scenario are shown in the report.

While the figures are impressive, Australia's uranium industry will continue to be a middleranking export industry ranking with, for example, pharmaceuticals and computer exports.

That uranium will be a middle-ranking industry in export value is not a reason for concluding that expansion is not in our national interest. Australia's prosperity depends partly on our many middle-ranking industries being successful exporters. This is especially so of those industries that can grow in response to changing patterns of demand, bearing in mind that changing patterns of demand could also lead to a decline in some Australian exports.

The increment that Australian uranium exports to Russia will add to Australia's overall exports will almost certainly be small. That is not the significant point. The significant point is that the world's demand for Australia's uranium will grow into the future and that treaties such as the Russia treaty are the infrastructure necessary to facilitate the Australian supply response to that demand.

Being able to respond to that demand on as many fronts as possible, subject to safeguards arrangements, will enable Australia to realise the economic potential that the Deloitte report illustrates.

In any case, the significance of our uranium exports goes beyond their export value.

The Deloitte research found that, even under the moderate outlook, Australia would export enough uranium for nuclear power generation plants to avoid between about 11 billion to 15 billion tonnes of carbon dioxide to 2030, compared to coal fired power stations using existing technology.

At a minimum, the exports of uranium in 2030 alone could avoid ten times the emissions abatement required to meet Australia's Kyoto target. Put another way, the abatement potential of our uranium exports to 2030 would be the equivalent of Australia being carbon free for 15 to 20 years.

This potential – the economic potential and the abatement potential – will be realised if Australia takes every opportunity to expand into new markets, as any other export industry would do in response to changes in global patterns of demand.

The treaties under which Australia's exports take place are a key piece of infrastructure that will allow that to happen.



Russia's electricity generation needs

Australia's uranium export potential is a good fit with Russia's electricity generation needs. Those needs explain the Agreement between Australia and Russia.

Russia is planning for a much expanded role for nuclear energy, at least doubling output by 2020. Russia has much smaller known reserves of uranium than Australia and is seeking to diversify its sources as an energy security measure.

That outlook is driven by a number of factors including rapidly rising demand for electricity and the approach of the end of the design life of about a quarter of its electricity generating plants in western Russia.⁴

Russia currently has about 40 new nuclear power generation plants under construction, planned or proposed.

Treaty arrangements for supplying Australian uranium

The announcement by the Prime Minister of an International Commission on Nuclear Non-Proliferation and Disarmament is consistent with the role Australia has played in the regulation of the world's nuclear industry over a long period.

Australia was a member of the preparatory commission which established the International Atomic Energy Agency in 1957. In more recent years, the stringency of Australian safeguards against diversion of uranium for military purposes has been internationally recognised.

Since the advent of the Nuclear Non-Proliferation Treaty (NPT) in 1970, Australia has been a significant international influence in ensuring that uranium has been used only for peaceful purposes.

In the last 15 years, Australia has led the way in adoption of the Additional Protocol (AP). It continues to press for the comprehensive safeguards plus the AP to be accepted as the current safeguards standard and again took the lead in making the AP a condition of supply to non-nuclear weapons states.

Implementation of an AP gives the IAEA greater powers and enables it to ensure not only nondiversion of nuclear material to military programs (or for purposes unspecified), but that a state has no undeclared nuclear material or activities in the countries concerned.

The policy put into place in 1977, and enjoying strong bipartisan support since, is that Australia's uranium exports should be subject to international safeguards arrangements under the NPT and also subject to more stringent and enduring safeguards under bilateral treaties negotiated with customer countries.

The record shows that, since the implementation of this policy, all exported Australian uranium has remained in peaceful use⁵. There is no evidence that Australian uranium exported under

⁴ For a fuller explanation of the role of nuclear power for electricity generation in Russia, see *Nuclear Power in Russia* <u>www.world-nuclear.org/info/inf45.html</u>



bi-lateral treaties of the kind that is being made with Russia have allowed leakage from civil to military applications.

Australia's nuclear safeguards policy is summarised in the box below.

Australian nuclear safeguards policy⁶

Item 1. Selected countries

- a) Non-nuclear weapons states must be party to the NPT and must accept full-scope IAEA safeguards, i.e. safeguards must apply to all their nuclear-related activities and nuclear material; states. They must have ratified the Additional Protocol to their safeguards agreement with the IAEA
- b) Weapons states to give assurance of peaceful use; facilities storing, using or processing AONM⁷ must be subject to the NWS' safeguards agreement with the IAEA.

Item 2. Bilateral agreements⁸ are required

- a) IAEA to monitor compliance with IAEA safeguards requirements
- b) Fallback safeguards, that is, if NPT ceases to apply or IAEA cannot perform its safeguards functions, safeguards conforming with IAEA standards will apply
- c) Prior consent to transfer material or technology to another country
- d) Prior consent to enrich above 20% U-235
- e) Prior consent to reprocess
- f) Control over storage of nuclear material
- g) Adequate physical security

Item 3. Nuclear materials covered by the agreement (AONM) will be subject to prior consent, may be made only within Australia's network of bilateral safeguards agreements and will be subject to IAEA safeguards.

Item 4. Commercial contracts to be subject to conditions of bilateral agreements.

Item 5. Australia will participate in international efforts to strengthen safeguards.

Item 6. Australia recognises the need for constant review of standards and procedures.

⁵ See the annual reports made by the Director of Safeguards and the Director General, Australian Safeguards and Non-Proliferation Office

⁶ Uranium – Australia's Decision, Nuclear Safeguards, Background Paper (1977); a paper accompanying a speech by The Prime Minister the Rt Hon Malcolm Fraser, 24 May 1977.

⁷ Australian Obligated Nuclear Material

⁸ Bilateral safeguards agreements serve as a mechanism for applying IAEA safeguards and various supplementary conditions. These requirements ensure AONM is appropriately accounted for as it moves through the nuclear fuel cycle, is used only for peaceful purposes in accordance with the applicable agreements, and does not in any way enhance or contribute to a military process. In this context, military process/program means nuclear weapons, any nuclear explosive device, military nuclear reactors, depleted uranium munitions and tritium production for nuclear weapons.



The agreement being considered by the Standing Committee gives reassurance that longstanding Australian concerns regarding non-proliferation and the arrangements set up to address these concerns will be implemented in Russia and the integrity of Australia's network of bilateral safeguards agreements will be maintained.

In particular, we note, with reference to Australia's safeguards policy set out above, that:

- Item 1(a): The Russian Duma ratified the Additional Protocol in September 2007
- Item 1(b): The treaty requires Russia, as a weapons state, to give assurances as to peaceful use (Articles II and VII)
- Item 2(a): The IAEA is to ensure compliance in accordance with Russia's safeguards requirements (Article VII)
- Item 2(b): There are fall back safeguards (Article VIII)
- Item 2(c): The prior consent of Australia is required before transfer of nuclear material to another country (Article X)
- Item 2(d): The prior consent of Australia is required before nuclear material can be enriched above 20% uranium 235 (Article X)
- Item 2(e): The prior consent of Australia is required before nuclear material can be reprocessed (Article X)
- Item 2(f): Control over storage of nuclear material (Article 1, via the definition of nuclear material)
- Item 2(g): Adequate physical security (Article XIII).

In short, the proposed treaty fits the requirements of Australian policy and can credibly assure that Australian uranium is used only for its intended peaceful purposes - power generation.

This bilateral treaty will replace the '1990 agreement' and complement 20 other such agreements covering 39 countries.

The international treaty system

International, multilateral and bilateral treaties and conventions have been the formal bedrock of international relations for centuries.

Since 1945 many international conventions have been drawn up and administered by the United Nations.

Such treaties can take a long time to enter into force; indeed, some have failed to achieve this status. The 1969 Vienna Convention on the Law of Treaties codified the international rule that once a state has signed a treaty it is required to act in a manner not inconsistent with the provisions of the treaty pending its entry into force.

Treaties are based on good faith and a general expectation that the norms of international law will be adhered to. In some instances - and this is true for nearly all treaties related to arms control and disarmament - treaties are underpinned by verification arrangements.

Most treaties have provision for withdrawal and history shows this provision is exercised rarely. The withdrawal by the DPRK from the NPT in 2003 was rare event.



On a number of limited occasions, states have been found to be in non-compliance with their treaty commitments; such as Libya (2003) and the DPRK (1992), both in relation to the NPT.

The Soviet Union signed a range of international treaties, including some arms control instruments. The Russian Federation has assumed these obligations and in turn has signed many other treaties covering economics, arms control, security and safety issues. These are set out later.

Russia is a significant power which supports the international rule of law. There is no hard evidence that Russia has deliberately or consistently violated its international treaty obligations. Russia understands that stability in the world order, especially with regard to arms control and security, is as much in its interests as for other states.

Experience over the last 50 years shows that while Russia will be robust in defence of its sovereign interests, once it has accepted a negotiated outcome it can be expected to fulfill those new obligations.

Furthermore, in the case of the Australia-Russia bilateral safeguards agreement, Russia has no reason not to comply.

Russia is a nuclear weapon state, it has large resources of weapons-grade uranium and a complete military nuclear fuel cycle.

It does not need Australian uranium for its weapons program and it has no reason to bring down international opprobrium by failing to comply with its obligations under the bilateral treaty with Australia.

On the contrary, Russia has every reason to comply. It is seeking to expand its nuclear energy program significantly and to diversify its uranium sources for reasons of energy security and supply.

There is no evidence to support a conclusion that the agreement subject to the Committee's deliberations will not be complied with; and, on the basis of vast experience with the international treaty system, every reason to conclude that it will be adhered to.

Non-proliferation treaties and related instruments to which Russia is a signatory

Russia is an active participant in support of nuclear non-proliferation.

The treaty on the Non-Proliferation of Nuclear Weapons (NPT) entered into force in 1970. The NPT aims to prevent the spread of nuclear weapons and weapons technology, to foster the peaceful uses of nuclear energy, and to further the goal of disarmament.

The Treaty establishes a safeguards system under the responsibility of the IAEA, which also plays a central role under the Treaty in areas of technology transfer for peaceful purposes.

Russia is a depository government for the treaty, not only a party. It is one of three countries which have 'senior status' in regard to the Treaty, having taken the lead in setting it up. The UK and the USA are the others.

Russia's safeguards agreement with the IAEA has been in force since 1985.



On 14 September 2007, the Russia State Duma approved the ratification of the Additional Protocol.

Russia has also ratified the Comprehensive Test ban Treaty.

It is a member of the Zangger Committee which publishes a "trigger list" of items that would "trigger" a requirement for safeguards; and governing the export of those items to non-nuclear weapons states not party to the NPT. It is also a member of the Nuclear Suppliers Group (NSG) which implements guidelines related to nuclear-related exports.

Nuclear safety and security conventions and treaties to which Russia is a signatory

Russia has a strong treaty commitment to nuclear safety.

The Convention on Nuclear Safety entered into force in 1996. Its aim is to legally commit participating states operating land-based nuclear power plants to maintain a high level of safety by setting international benchmarks to which states would subscribe. Each Contracting Party is required to report on the measures it has taken to meet its obligations under the Convention. Russia has accepted the Convention.

The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management entered into force in 2001 and applies to spent fuel and radioactive waste resulting from civilian nuclear reactors and applications. It also applies to planned and controlled releases into the environment of liquid or gaseous radioactive materials from regulated nuclear facilities. Russia ratified the Convention in 2006.

The Convention on Early Notification of a Nuclear Accident was adopted in 1986. This Convention establishes a notification system for nuclear accidents which have the potential for international transboundary release and that could be of radiological safety significance for another State. Reporting is mandatory for any nuclear accident or serious incident. Russia has ratified it and it has been in force since 1987.

The Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency is another treaty to which Russia is a party. This 1986 Convention sets out an international framework for co-operation among states and with the IAEA to facilitate prompt assistance and support in the event of nuclear accidents or radiological emergencies. Russia has ratified it and it has been in force since 1987.

The Convention on the Physical Protection of Nuclear Material (CPPNM) dates from 1980. It is an international, legally binding undertaking in the area of physical protection of nuclear material. Russia ratified it in 1987. The convention was tightened in 2005. Russia was a strong advocate for strengthening the CPPNM and supported its amendment in 2005.⁹

The Vienna Convention on Civil Liability for Nuclear Damage dates from 1963. It was substantially upgraded in 1997 as the outcome of an IAEA endeavour to establish a comprehensive liability regime. The amended Vienna Convention establishes an operator's

⁹ The amendment proposed to extend the remit of the CPPNM to cover domestic use, storage and transport. It also proposed to criminalise acts of sabotage against nuclear facilities and trafficking in nuclear materials. Further, it proposed the integration of the Fundamental Objectives and Principles of Physical Protection which were developed by a legal and technical expert group and endorsed by the IAEA Board of Governors in 2001.



liability at not less than 300 million Special Drawing Rights (about EUR 360 million) and entered into force in 2003. The Convention on Supplementary Compensation for Nuclear Damage was adopted in 1997. The conventions were ratified by Russia in 2005.

Exchanges with Russia intended to improve the performance of the Russian nuclear power generation industry.¹⁰

World Association of Nuclear Operators. Established in 1989, WANO plays a key role in improving the performance of the world's nuclear power generation industry.

WANO has four major programs: peer reviews; operating experience; technical support and exchange; and professional and technical development.

WANO peer reviews are the main proactive way of sharing experience and expertise. Russia is a key beneficiary. The operating experience program is enhanced with the distribution to members of reports of significant events.

One of WANO's first objectives was for operating staff from every nuclear plant in the former Soviet Union to visit plants in the West for technical exchange, and for personnel from the West to visit every plant in the former Soviet Union. This was accomplished in the first two years of WANO's existence. A great deal of ongoing plant-to-plant cooperation (twinning) grew out of these original exchange visits. The peer review program also grew out of these.

In April 2005, the WANO governing board established the goal to conduct a peer review at each nuclear unit at least once every six years. It encourages each station to host an outside review at least every three years.

In 2007, WANO conducted over 40 peer reviews, one of which was in Russia. These reviews all involve follow-up reviews to examine the implementation of the original recommendations.

US/Russia Cooperation. The US Nuclear Regulatory Commission is working with Russia (and Ukraine) to improve the regulatory management structure in both countries.

The USA has provided funding to Russia through a number of other initiatives over the past decade. Since the early 1990s, efforts have focused on protection, control, and accounting of nuclear materials. This began in 1992 as the Government-to-Government Program, part of the Department of Defense Cooperative Threat Reduction (CTR) initiative. In 1994, DOE launched a separate, parallel effort. In 1997 these programs were consolidated into the Material Protection, Control & Accounting (MPC&A) Program.

The Nuclear Cities Initiative (NCI), established by a US-Russian agreement in 1998, aims to promote military conversion projects in Russia's Nuclear Cities. It rests on cooperation between the US National Nuclear Security Administration and Russia's Nuclear Energy Ministry (Minatom).

In addition, some Russian institutes and other organisations have close links with similar US bodies through the Joint Coordinating Committee for Environmental Restoration and Waste Management (JCCEM) set up in 1990. This was based on a Memorandum of Co-operation

¹⁰ Most of the information in this part of the submission is drawn from material on the World Nuclear Association's website, <u>www.world-nuclear.org</u>

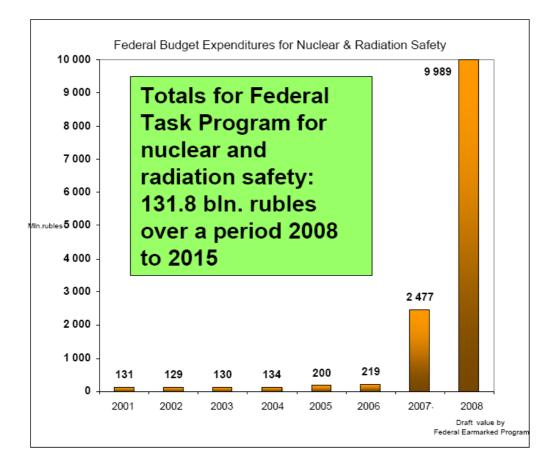


between the US DOE and Minatom. Its purpose is to co-ordinate collaborative projects between Russian academic and governmental laboratories and the US National Laboratories on nuclear waste management and disposition.

The DOE also co-operates with the Russian Academy of Sciences through the Joint Coordinating Committee on Science and Technology Cooperation (JCC).

After the 1986 Chernobyl accident, a national nuclear safety committee was established in Russia. The State Committee for Nuclear and Radiation Safety - Gosatomnadzor (GAN) succeeded this in 1992 - reporting direct to the President. It is responsible for licensing, regulation and operational safety of all facilities, for safety in transport of nuclear materials, and for nuclear materials accounting. Its inspections can result in legal charges against operators. In 2004 GAN was renamed the Federal Technological and Atomic Supervisory Service: Rostechnadzor.

Russia is significantly increasing its Federal budget expenditures on nuclear and radiation safety, as the table below in indicates.



Source: Petr Shchedrovitsky, Deputy Director, ATOMENERGOPROM, presentation, World Nuclear Association, London, 6 September 2007.



Other initiatives.

Other initiatives involving Russia include:

- Finland is cooperating with Russia on nuclear fire safety.
- Under the auspices of WANO and the EU Technical Assistance program, seven major west European utilities have focused efforts on assisting ten particular plants in eastern Europe, including in Russia: RWE (Germany) with Balakovo, Tractabel (Belgium) with Kalinin, EdF (France) with Kola, Magnox Electric (UK) with Leningrad, British Energy (UK) with Smolensk. In addition NERSA (France) assists Beloyarsk (Russia).
- At the level of utility-to-utility cooperation, many reactors in the west have 'twinned' with nuclear plants in Russia.
- The European Bank for Reconstruction and Development (EBRD) administers three funds for nuclear safety on behalf of the G24 countries and the EU for which EUR 1.5 billion has been pledged to date: the Nuclear Safety Account (NSA), one of whose first projects financed safety upgrades for Russia's Leningrad, Novovoronezh and Kola plants; the International Decommissioning Support Funds (IDSFs) for Bulgaria, Lithuania and the Slovak Republic; and the Chernobyl Shelter Fund (CSF). The EBRD provides technical, financial, legal and administrative services.
- The Nuclear Safety Assistance Coordination Centre database lists Western aid totalling almost US\$1 billion to more than 700 safety-related projects in former Eastern Bloc countries.

Russian nuclear weapons as a source of fuel

Since 1987, the United States and countries of the former USSR have signed a series of disarmament treaties to reduce the nuclear arsenals of the signatory countries by approximately 80 percent. Uranium has been displacing about 10,600 tonnes of uranium oxide per year from mines, which represents about 13% of the world's reactor requirements.

Commitments by the US and Russia to convert nuclear weapons into fuel for electricity production is known as the Megatons to Megawatts program.

Surplus weapons-grade highly-enriched uranium resulting from the various disarmament agreements led in 1993 to an agreement between the US and Russian governments. Under this agreement, Russia is to convert 500 tonnes of highly-enriched uranium (HEU) from warheads and military stockpiles (equivalent to around 20,000 bombs) to low-enriched uranium to be bought by the USA for use in civil nuclear reactors.

In 1994, a US\$12 billion implementing contract was signed between the US Enrichment Corporation (now USEC Inc) and Russia's Technabexport (Tenex) as executive agents for the US and Russian governments. USEC is purchasing a minimum of 500 tonnes of weaponsgrade HEU over 20 years, at a rate of up to 30 tonnes per year from 1999. The HEU is blended down in Russia and USEC sells it to its utility customers as fuel.

In September 2005 this program reached its halfway point of 250 tonnes HEU, producing some 7500 tonnes low-enriched uranium (LEU). By March 2008, a total of 325 tonnes had produced some 9700 tonnes of low-enriched fuel, for which Tenex in Russia had received over US\$ 5.1



billion under a market-based pricing formula. USEC claimed the elimination of 13,000 nuclear warheads.

Conclusions

The Association invites the Committee to draw the following conclusions:

- Australia has a comparative advantage in uranium that can be used to Australia's economic benefit and to the benefit of the world's efforts to address climate change
- Russia has a need for increased uranium imports to address rising demand for electricity and for energy security purposes
- Australia's policy on uranium exports and the agreements made in accordance with that policy have ensured Australian uranium is used only for peaceful purposes
- The Agreement with Russia is made in accordance with that policy and is very similar to the agreements that have made that policy successful
- There is every reason to consider the Agreement will be adhered to
- Russia is an active global participant in support of nuclear non-proliferation
- Russia has a strong treaty commitment to nuclear safety
- There is a history of cooperation between the Russian nuclear power industry and the nuclear power industries of other countries intended to improve the safety and performance of the Russian industry.

On the basis of those conclusions, the Association considers that the Committee should find that it is in the national interest of Australia to conclude the Agreement with Russia.