

Competition Policy Review Panel

Brief of Cameco Corporation

January 11, 2008

Synopsis:

Cameco Corporation submits there are three key reasons why Canada's current Non-Resident Ownership Policy (NROP) for first uranium production should remain as is:

First, and most important, is the issue of reciprocity. Due to the strategic nature of uranium, most major uranium producing nations have equal or more onerous restrictions on foreign investment. Unless Cameco and other Canadian uranium companies are offered equal access, Canada's NROP should remain in place.

Second, Cameco submits that state ownership of commercial uranium and other stages of the nuclear fuel cycle poses an unfair restriction on Cameco or any Canadian company from expanding into those markets.

Third, while there are valid reasons based in the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) to support introduction of the changes to the NROP, actions by the six states that now have uranium enrichment facilities have unfairly prevented Cameco from developing competing domestic facilities.

Overview:

The Competition Policy Review Panel has been asked to review "Canada's sectoral restriction on foreign direct investment and the competition and investment regimes of other jurisdictions to assess reciprocity between their rules and those in Canada."

The NROP restricts foreign ownership of uranium properties to no more than 49%, unless it can be clearly demonstrated that Canadian partners cannot be found for a project. Cameco and other uranium producers in Canada are subject to the foreign ownership requirements of the Investment Canada Act.

In the case of uranium production, the restriction was introduced in 1978 in an attempt to ensure Canada's reserves are maximized and to prevent distribution of fissionable nuclear materials to potentially hostile countries under the NPT.

As well, the then Canadian government insisted sales of uranium products by a Canadian company must be on commercial terms so that full profit potential accrues to Canada. This was the stated Canadian government position at the time, not only in this sector but other sensitive sectors as well and remains the government's position.

There is an expectation of a global nuclear energy renaissance in the wake of soaring oil prices and greenhouse gas emissions from conventional coal-driven power plants. The investment community expects that demand for uranium will continue to grow along with demand for nuclear energy, particularly in developing countries such as China and India. The global nuclear energy industry operates about 440 reactors in 30 countries. Cameco expects to see a net increase of 90 reactors by 2016, somewhat higher than the London-based World Nuclear Association estimates. Based on this growth, an estimated increase in new production of 500 million pounds of uranium, roughly an increase of 25% is required.

In March 2007, RBC Capital Markets Research stated that uranium remained in a bull market. Uranium spot prices hit US\$138/lb in June, 2007. An average price of US\$100/lb is forecast by RBC for 2008. RBC also predicted that a supply gap would exist until after 2013 when ex-military (nuclear material) stockpiles are depleted. The long-term price is now about \$95 per pound. The spot price in 2000 was \$7 per pound.

Canada is clearly a key player in the international uranium markets. It has the world's third largest reserves after Australia and Kazakhstan.

It is currently the world's largest producer and exporter of uranium, producing over 13,000 tonnes annually worth about C\$800 million a year. Exports of Canadian uranium are worth approximately C\$600 million per year, representing about 30% of annual global shipments (see Appendix 2 for Natural Uranium Exports). Canada's leading position is backed by 500 million pounds of proven and probable reserves and extensive as yet unexplored resources.

Cameco Corp., headquartered in Saskatoon, is the world's largest producer of uranium, producing about 20% of global supply. Cameco operates competitively and effectively under the NROP and continues to raise capital as needed.

1) Reciprocity:

Cameco operates in a highly competitive international arena where many of its competitors are sheltered by government-imposed ownership or control restrictions particularly in the processing sector which denies Cameco and Canada upgrading possibilities. France, Brazil and China allow no or very limited foreign investment. Others, like Russia, seeking to develop their own reserves impose a number of restrictions (a summary of those restrictions is set out in Section D). Indeed, most uranium producing/processing countries impose ownership restrictions that match or are more onerous than the restrictions imposed under Canada's NROP.

Cameco is a rarity in the global uranium industry. It is publicly traded and operates in a transparent atmosphere. State-owned enterprises (SOE's) in most restricted uranium producing countries do not. Furthermore, unfettered access by SOE's into this sector adds another risk of allowing control of a strategic energy reserve to fall to a country, not a company.

Many SOE's from large uranium consumption countries such as France, China and India are anxious to get access to Canada's uranium reserves but their governments have not offered

reciprocity, nor do they seem inclined to. In April 2005, China's National Development and Reform Commission (NDRC) issued a communiqué on cooperation with Canada inter alia on nuclear power development. The December 2007 white paper makes it clear that while foreign investment will be encouraged in this sector, there will be majority Chinese control.

The government of Stephen Harper pledged among its second set of five priorities to stand up for Canada internationally. This is an ideal opportunity for the Harper government to keep its promise.

Cameco submits the Canadian government should find an appropriate forum either through bilateral talks or multilaterally – to secure equal access to those now restricted foreign markets, not only for uranium mining but for the later stages of development such as enrichment or even nuclear energy construction.

Bilateral negotiations are customary in the nuclear sector given the strategic implications. Canada has negotiated or is negotiating bilateral arrangements with about 13 countries. None of these have called for elimination of ownership limitation.

Without reciprocity, and absent the NROP, Cameco would be at a significant commercial disadvantage. It makes no sense to dilute the foreign ownership requirements in the NROP making it easier for Cameco's competitors to acquire Canadian uranium properties. Meantime, absent reciprocity, Cameco would continue to face restrictions making it more difficult for Cameco to invest and to compete internationally.

Canada must capitalize on its advantages and not undermine its position by strengthening the ability of those countries which have exhausted their own reserves or who have less attractive reserves to seize and improve on a controlling position in world nuclear fuel supply by acquiring and controlling Canadian reserves. These are the same countries that frustrated Canada's GATT Tokyo Round efforts during negotiations between 1973 and 1979 to create a rules-based structure to enhance its ability to upgrade its natural resources.

2) State-controlled enterprises:

State controlled or operated enterprises in foreign countries of uranium mining, development, refinement and enrichment continues to be an obstacle to open and robust global competition. As an example, Russia limits ownership in uranium development to 49% and then only in partnership with a state-owned enterprise. China, through its complex SOEs, makes it virtually impossible for opportunities for direct foreign investment. Meanwhile, China is aggressively lobbying the Canadian government to develop and export Canadian uranium reserves.

The previous Canadian government under Paul Martin seemed to encourage China's involvement in the Canadian uranium and oilsands reserves. On January 20, 2005, Chinese Premier Wen Jiabao and Canada's then Prime Minister Paul Martin signed an admittedly vague pledge during a six-day visit to China with representatives of 250 Canadian companies to boost commercial ties with Canada's second-largest trading partner. Cameco did not participate, nor was asked to comment.

3) NPT and enrichment:

Finally, while the goals of the NPT are key to global nuclear security and continue to be an important supporting pillar for the NROP, Cameco submits that the current restrictions on establishing enrichment facilities that limits such activity to the so-called six services supplier enrichment states – France, Germany, the Netherlands, Russia, the U.K. and the U.S., have frustrated Cameco’s ability to compete in that value-added part of the nuclear fuel cycle. (Five other countries also enrich uranium but are not officially sanctioned. See appendix 3)

As an example of this, a consortium of companies called Louisiana Energy Services (LES) – three of whom are from these enrichment states - recently received a licence from the U.S. Nuclear Regulatory Agency for a full-cycle enrichment plant in New Mexico. Its feedstock will, in part, be uranium from Canada. LES plans to have operations commencing in 2008, reaching full capacity in 2013.

There are no valid security or non-proliferation reasons for keeping Canada and Cameco out of the value-added chain. Canada has impeccable non-proliferation credentials and Cameco is an experienced and responsible mining and uranium producer and should be allowed an opportunity to compete in the enrichment part of the nuclear fuel cycle.

A. About Cameco

Cameco, the world's largest uranium producer, currently accounts for approximately 20% of world production from its mines in Canada and the United States. It has a huge reserve base with its richest deposits, McArthur River and Cigar Lake, containing the energy equivalent of 17 billion barrels of oil – enough to fuel the U.S. nuclear industry for a decade.

Cameco is based in Saskatchewan. Cameco’s common shares are traded in Toronto under the symbol CCO and on the New York Stock Exchange under CCJ. Cameco was formed in 1988 from Eldorado Nuclear Limited and the provincial Crown Corporation, Saskatchewan Mining Development Corp.

Cameco is also a leading provider of processing services required to produce fuel for nuclear power plants, and generates 1,000 MW of electricity through a partnership in North America's largest nuclear generating station located in Ontario (see Appendix 3 for list of World Nuclear Reactors).

Among Cameco's assets:

- World's largest uranium producer with four operating mines in Canada and the U.S.
- Controlling ownership of the world's largest high-grade reserves and low-cost operations in northern Saskatchewan, Canada with ore grades up to 100 times the world average.
- Two additional mines being developed in Canada and Central Asia.
- More than 500 million pounds of proven and probable reserves, extensive resources, and premier exploration position.

B. Canadian Restrictions on Ownership of Uranium Processing and Enrichment

Cameco operates under a ministerial directive concerning NROP from 1987. Essentially, the Canadian government currently has no restriction of foreign ownership in uranium exploration. However, that changes dramatically with the production of U₃₀₈ (concentrates). Under the existing NROP, the government requires that projects involving U₃₀₈ be majority Canadian-owned or Canadian-controlled as outlined in the *Investment Canada Act*. Generally, a project is Canadian-owned or Canadian-controlled if at least 51% of voting rights are held in Canadian hands. The Act allows for exceptions if there is no Canadian interest. In the early 1990s two projects in northern Saskatchewan, the McClean Lake and Midwest projects were approved despite a majority foreign ownership because there was no major Canadian interest.

Most major uranium producing countries, according to the Canadian Competition Policy review, impose either investment restrictions or restrictions on foreign involvement in some or all of the processes in the nuclear fuel cycle.

There are a number of reasons why governments restrict ownership and control in uranium and nuclear industries, many of which deal with 1970 Non-Nuclear Proliferation Treaty, signed by 189 countries including Canada.

The argument being made for a dilution of foreign ownership is based on improving domestic competition and allowing Canadian companies broader access to foreign capital. Cameco has successfully fulfilled its capital requirements operating under NROP.

Cameco firmly believes that such changes must be made by all foreign uranium producers on a reciprocal basis. There should be no unilateral unraveling or dilution of control. Unilaterally liberalizing or eliminating Canadian foreign ownership rules will give foreign producers access to Canadian uranium resources while continuing to fetter Cameco's ability to access foreign uranium resources and, more importantly, its ability to expand its further processing activities.

C. WTO-NAFTA obligations

Canada's foreign ownership restrictions are grandfathered in NAFTA, as was the NROP in the 1988 Canada-USA Free Trade Agreement (CUSTA). The United States, in its analysis of the NAFTA Energy Chapter recognizes that Canada's foreign ownership restrictions have been grandfathered under the Agreement. There are no agreements in the WTO package relating to investment per se but there has been no liberalization within the context of the General Agreement on Trade in Services (GATS)

Canada can maintain the current NROP restrictions on the basis of the grandfathering. Canada can also liberalize the NROP to allow more foreign investment. However, it is important to note that if Canada liberalizes the NROP it cannot rely on the grandfathering to revert to the previous foreign ownership restrictions in the future. Amendments to grandfathered provisions may be amended but once they are amended they cannot be changed back.

A number of countries have requested that Canada abandon or ease the NROP. For example, in September 2007, Japan requested that Canada abandon the NROP. China's National Development and Reform Commission (NDRC) is encouraging greater Chinese involvement and ownership of natural resources around the world, and the Brazilian mining and resource processing conglomerate CVRD, which recently acquired Inco, have also requested that Canada abandon the NROP.

D. Major uranium mining/nuclear industry ownership restrictions around the World

Other uranium producing/processing countries (see Appendix 1) maintain ownership restrictions or implement specific policies that limit Cameco's access to their uranium reserves:

Brazil – Brazil prohibits foreign ownership in uranium production, it is a state-owned monopoly. Brazil has an enrichment plant, but is a signatory to the NPT.

China – China prohibits foreign ownership of uranium lands, it is a state-owned monopoly, but is attempting to expand into foreign production, including in Australia. (France's Areva is also looking to contract with China while aggressively trying to expand its own access to uranium reserves; China remains opaque about its position on foreign ownership in its nuclear industry.)

Czech Republic – Czech uranium mining which once provided 2500 tU/yr is declining and the last underground mine - Dolni Rozinka - operated by state-controlled Diamo, was due to close in 2003, but its life has been extended due to rising uranium prices. Closure would reduce production from 378 tU in 2005 to a few tonnes per year from the former ISL operation at Straz. In 2007, Uran Ltd made an offer to take over the Rozna mine and develop it, but this was rejected by the government in favour of local plans.

France – Areva SA, the world's largest nuclear reactor builder, is 93.4% owned by the French government. Although France has largely depleted its own uranium resources, it is aggressively trying to expand its sourcing into other countries, including Canada. It has aggressively petitioned the Canadian government to end the NROP. The immediate pressure relates to

Kiggavik deposit in Nunavut, for which Cameco would not oppose an exemption to the current rules. However, the French government has not offered any indication that it is prepared to end its own foreign ownership restrictions.

India – India prohibits foreign ownership of uranium properties. In December 2006, the U.S. Congress passed legislation to permit nuclear trade with India. In July 2007, a USA-India Nuclear Cooperation Agreement was finalized, opening the way for India's participation in international commerce in nuclear fuel and equipment. The final wording is under consideration by India's parliament, which will need to put most of the country's nuclear power reactors under IAEA safeguards. The USA called it "the symbolic centerpiece of our new global strategic partnership with India". It would allow India to reprocess U.S.-origin and other foreign-sourced nuclear fuel at a new national plant under International Atomic Energy Agency (IAEA) safeguards. Whether this bilateral relationship will open India to U.S. investment in uranium production remains to be seen.

Kazakhstan – Kazatomprom is the national atomic company set up in 1997 and owned by the government. It controls all uranium exploration and mining and other nuclear-related activities, including imports and exports of all nuclear materials. It is mandatory but the actual limits on foreign ownership seem to be subject to negotiation on a case-by-case basis, and may be subject to change by the government after they have been negotiated. Kazatomprom, an entity owned by the state, established in 1997, is apparently trying to encourage more foreign investment. Kazakhstan is leveraging its resources to acquire access to complementary technologies. The Japanese are sharing reactor technology and Cameco is being asked to share uranium conversion technology and build a plant in Kazakhstan.

Namibia – Namibia is anxious to expand its uranium production in a bid to meet expected electricity demand and has thus far not imposed foreign ownership restrictions, but for the time being has issued a moratorium on prospecting licenses.

Niger – Niger has no formal ownership restrictions but maintains a strong “Nigerisation” policy designed to encourage local employment and the use of professional expertise.

Pakistan – Pakistan is not a signatory to the Nuclear Non-Proliferation Treaty. Due to its weapons program, it is excluded from trade in nuclear plant or materials, which hinders its development of civil nuclear energy. Pakistan, however, has enrichment facilities.

Russia – The uranium sector in Russia is strongly under government control. Foreign ownership of up to 49% was recently allowed after years of being closed and efforts are being made to encourage foreign investment. Russia hopes to have up and running by 2008 the Uranium Mining Company (UGRK). It was founded by state-run nuclear fuel producer TVEL and uranium trader Techsnabexport to develop uranium deposits inside and outside Russia. In November 2006, Cameco negotiated a joint exploration agreement with the Russian state-owned enterprise, Rosatom, that allows it to explore for and develop uranium deposits in Russia. However, Cameco will be limited to a 49% stake. In 2007 the Government of Canada noted that Russia declared uranium mining to be a strategic sector in the national interest

South Africa – In 2007 the Government of Canada noted that South Africa declared uranium mining to be a strategic sector in the national interest. Though it is believed to hold 7% of the world's uranium deposits, South Africa's uranium production has been declining. Faced with domestic energy shortages, the South African government earlier this year proposed expanding uranium mining and processing throughout the country and constructing new nuclear power plants. Under the policy, South Africa, which gave up its nuclear weapons program in the 1990s, would only grant mining rights to foreign companies if there is enough uranium to meet local power demands. Prior to the new policy, Uranium One Ltd., of Canada, opened a new mine in South Africa.

Ukraine – Ukraine does not report uranium production or resources due to state secrecy laws, but announced plans to increase its uranium production by 800% by 2030. Ukraine allows direct foreign investment. Star Uranium Corp. and United Carina Resources Corp., both of Canada, have applied for exploration licenses in Ukraine.

Ukrainian uranium production companies report to the Ministry of Machine Building, Military-Industrial Complex, and Conversion. Exploration and resource estimation and development are governed by the State owned Geologic Enterprise "Kirovgeology", which reports to the State Committee of Geology and Utilization of Mineral Resources ("Derzhkomgeologyi Ukrainy").

United States – The United States imposes no restrictions on ownership of uranium production lands and facilities but prohibitions exist at later stages in the nuclear fuel cycle. Specifically, the U.S. restricts ownership of enrichment facilities, by controlling access to technology. USEC is 100% U.S. owned and has exclusive rights to downblend Russian HEU at its Portsmouth, Ohio facility.

On June 23, 2006, the U.S. Nuclear Regulatory Commission issued its first license for a new major commercial nuclear facility in thirty years. Urenco Ltd, a Netherlands-based energy firm, was awarded the licence through its U.S.-incorporated consortium, Louisiana Energy Services (LES). LES, a consortium of U.S. and European energy companies, intends to use centrifuge technology developed by Urenco and used for more than 30 years in the United Kingdom, the Netherlands and Germany. LES plans to have operations commencing in 2008, reaching full capacity in 2013. It is expected to use uranium from Saskatchewan.

Uzbekistan – Navoi Mining & Metallurgy Combinat (NMMC) is part of the Uzbekistani state holding company Kyzylkumredmetzoloto. Before 1992, all uranium mined and milled in Uzbekistan was shipped to Russia. Since 1992, all Uzbekistani uranium production is exported to the U.S.A. and other countries, through Nukem Inc. A total of 100,000 tU had been produced as of the end of 2002.¹

In September 2006, a Japan-Uzbek intergovernmental agreement was aimed at financing Uzbek uranium development and in October 2007, Itochu Corporation agreed with NMMC to develop technology to mine and mill the black shales, particularly the Rudnoye deposit, and to take about 300 tU/yr from 2007. A 50-50 joint venture is envisaged.²

¹ World Nuclear Organization, November 2007

² Ibid.

The Uzbekistani State Committee for Safety in Industry and Mining (Gosgortekhnadzor) supervises ministries engaged in mining. The Nuclear Regulations Inspectorate under Gosgortekhnadzor has responsibility for the control and supervision of the research reactors and all nuclear and radioactive materials (including spent fuel) in Uzbekistan.³

E. The Non-Proliferation Treaty of 1970

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) is fundamental to Canada's nuclear disarmament and nuclear non-proliferation policy.

The 1970 NPT is the only international treaty in which the five Nuclear-Weapon States (NWS) – the United States, Russia, the United Kingdom, France and China – commit politically and legally to nuclear disarmament. It also is the only international treaty that prohibits the proliferation of nuclear weapons.

The NPT, which has been ratified by 189 countries, is one of the most broadly supported treaties in history. Only Israel, India and Pakistan are important and relevant countries yet to sign on. In 2003, the Democratic People's Republic of Korea became the first country to invoke its right under Article X to withdraw from it. Every five years, the 189 governments that have ratified the treaty meet at a Review Conference to assess and improve treaty action.

From a commercial perspective, however, the NPT also effectively restricts uranium enrichment to what is called the six services supplier enrichment states – France, Germany, the Netherlands, Russia, the U.K. and the U.S. Uranium enrichment is a key value-added part of the fuel cycle.

There are also new uranium enrichment proposals, none of which include Canada. The International Atomic Energy Agency (IAEA) and Russia, and in connection with the U.S.-led Global Nuclear Energy Partnership (GNEP), want to establish international uranium enrichment centres.

The first of these is the Angarsk IUEC in Siberia. The French Atomic Energy Commission has proposed that the new Georges Besse II plant in France be open to international partnerships on a similar basis, and a further proposal seems likely for South Africa.

The main issue, however, is technology transfer and the host countries' and equity holders' access to the actual technology. Urenco (owned by three governments – the U.K., the Netherlands, and Germany) and Russia have made it plain that if their technology is used in such centres it will not be accessible either to hosts or other equity holders. Canada signed on to the GNEP on November 30, 2007.

It is important to note that Canada is seriously disadvantaged with restrictions on its ability to participate in the full extension of the fuel cycle. Some might argue the non-proliferation argument is actually a smokescreen in an attempt to restrict involvement in this lucrative value-added development.

³ World Nuclear Organization, November 2007

F. Conclusion

While the market for uranium enrichment and production continues to improve globally, and very significant additional expansion is forecast, Canadian uranium producers such as Cameco face significant obstacles in upgrading their resources and in expanding beyond Canadian borders.

Major competitors such as France, China, Russia, India and Brazil impose a variety of foreign ownership restrictions while pressing for special exemptions from Canadian foreign ownership restrictions.

The Energy Policy Division of Canada's Electrical Resources Branch of Natural Resources Canada has concluded:

“With the lack of an open market and investment restrictions in a number of key countries, the nuclear industry is hardly a level playing field for Canadian companies. They have been rebuffed in marketing, circumscribed in investing in uranium exploration and development, and precluded from pursuing vertical integration opportunities in other countries.”⁴

Consequently, the existence of foreign ownership restrictions in other markets limits Cameco's ability to acquire foreign uranium reserves and to compete in the Canadian and global markets.

Canada, a country rich in uranium resources, risks being marginalized while some relatively uranium-poor countries, such as China, stand to assume a controlling position in world nuclear fuel supply as long as they have access to uranium.

Canada should actively pursue bilateral or multilateral access to uranium reserves in countries that currently restrict foreign access, especially those who wish to access Canada's. Canada should also pursue the ability to engage in value-added fuel manufacturing domestically.. The Canadian government should also petition more aggressively during G-8 talks and at other forums to include Canada as one of the enrichment server states.

In the meantime, however, there is no commercial or investment reason from Cameco's perspective why the NROP should be altered. Therefore, Cameco requests that the Panel recommend that the current NROP foreign ownership restrictions be maintained.

⁴ Undated Briefing Note, “Non Resident Ownership Policy in the Uranium Mining Sector, NRCan

Appendix 1

Major Producers of Natural Uranium Globally

Canada produces the largest share of uranium from mines (25% of world supply from mines), followed by Australia (19%) and Kazakhstan (13%).⁵

Production from mines (tonnes U)⁶

Country	2002	2003	2004	2005	2006
Canada	11 604	10 457	11 597	11 628	9862
Australia	6854	7572	8982	9516	7593
Kazakhstan	2800	3300	3719	4357	5279
Niger	3075	3143	3282	3093	3434
Russia (est)	2900	3150	3200	3431	3262
Namibia	2333	2036	3038	3147	3067
Uzbekistan	1860	1598	2016	2300	2260
USA	919	779	878	1039	1672
Ukraine (est)	800	800	800	800	800
China (est)	730	750	750	750	750
South Africa	824	758	755	674	534
Czech Repub.	465	452	412	408	359
India (est)	230	230	230	230	177
Brazil	270	310	300	110	190
Romania (est)	90	90	90	90	90
Germany	212	150	150	77	50
Pakistan (est)	38	45	45	45	45
France	20	0	7	7	5
Total world	36 063	35 613	40 251	41 702	39 429

⁵ Australian Uranium Association, Nuclear Issues Briefing Paper 41, July 2007

⁶ World Nuclear Association Website, Information Papers, World Uranium Mining, Updated July 2007.

Primary Production

The uranium production industry is international in scope with a small number of companies operating in relatively few countries. In 2005, eight producers provided approximately 80% of the estimated world production of 108 million pounds U₃₀₈.

2005 World Production

Producer million pounds U₃₀₈

Cameco	21
Cogema	13
Energy Resources of Australia Ltd.	13
WMC Resources Ltd.	10
KazAtomprom (Kazakhstan)	8
Priargunsky Industrial Mining and Chemical Enterprise (Russia)	8
Rossing Uranium Limited	8
NAVOI Mining Metallurgical Kombinat (Uzbekistan)	6
Others	21
TOTAL	108

Secondary Production

Secondary sources are a common feature in commodity markets, but they assume a particular importance with uranium. Since 1985, western world uranium production has been less than western world utility uranium consumption. The resulting shortfall has been covered by a number of secondary sources.

Excess inventories held by utilities, producers, other fuel cycle participants and governments (including Russian government inventories) have been and continue to be a significant source of supply; but availability is declining. Recycled products include reprocessed uranium, mixed oxide fuel and re-enriched tails material. Some utilities use reprocessed uranium and plutonium derived from used reactor fuel as a source of supply.

In recent years, another source of supply has been the use of extra Russian enrichment capacity to re-enrich depleted uranium tailings from European enrichers. Finally, highly enriched uranium derived from the dismantling of Russian nuclear weapons has become a significant source of supply. A limited amount of uranium from the U.S. weapons program has been introduced into the market but is not expected to become a significant supply source.

With the exception of recycled material, secondary supplies are finite and will be depleted over the next few years. The key exception, Russian HEU, will continue to supply annual quantities to the western market for many years.

Supply of Uranium

The following table gives some idea of our present knowledge of uranium resources. It can be seen that Australia has a substantial part of the world's low-cost uranium, followed by Kazakhstan and Canada.

Known Recoverable Resources of Uranium⁷ Tonnes U % of world

Australia	1,143,000	24%
Kazakhstan	816,000	17%
Canada	444,000	9%
USA	342,000	7%
South Africa	341,000	7%
Namibia	282,000	6%
Brazil	279,000	6%
Niger	225,000	5%
Russian Fed.	172,000	4%
Uzbekistan	116,000	2%
Ukraine	90,000	2%
Jordan	79,000	2%
India	67,000	1%
China	60,000	1%
Other	287,000	6%
World total	4,743,000	

⁷ Uranium Information Centre Ltd, Supply of Uranium, Briefing Paper #75, March 2007

Appendix 2

Canadian Import and Export Data

Canadian Exports of Natural Uranium⁸ (Canadian Dollars)

	2002	2003	2004	2005	2006
United Kingdom (U.K.)	68,491,057	99,702,752	181,509,03	281,157,874	761,348,875
	326,433,81	181,379,50	256,289,23		
<u>United States (U.S.)</u>	7	9	8	549,674,002	517,857,748
	183,415,79	259,216,53	164,903,65		
France (incl. Monaco, French Antilles)	6	4	3	282,465,940	265,117,625
Netherlands	3,989,773	42,035,249	52,092,280	158,939,919	207,828,633
Germany	11,293,110	31,061,715	25,842,154	162,345,283	69,127,212
Korea, South	10,520,104	11,540,426	16,746,508	23,533,052	45,857,789
Japan	17,878,523	16,571,894	21,729,895	36,092,925	27,126,795
Argentina	--	996,596	--	2,449,300	11,805,563
Austria	--	200	200	--	200
Taiwan (Taipei)	--	--	858,920	--	--
Dominica	--	--	4,040	--	--
	622,022,18	642,504,87	719,975,92	1,496,658,29	1,906,070,44
TOTAL (ALL COUNTRIES)	0	5	1	5	0

Source of data: Statistics Canada
Report Date: 27-Nov-2007

Canadian Imports of Natural Uranium⁹ (Canadian Dollars)

	2002	2003	2004	2005	2006
Australia	41,020,857	43,463,029	81,387,236	145,501,08	142,038,80
				2	7
					126,482,77
Namibia	17,534,088	15,905,354	38,661,776	55,399,229	7
<u>United States (U.S.)</u>	36,379,204	36,539,657	12,751,712	24,545,440	55,972,583
Brazil	8,760,804	8,437,216	13,878,663	23,686,727	31,453,128
South Africa	15,135,300	12,586,593	14,979,351	13,849,213	13,591,364
Czech Republic	14,653,523	9,286,796	8,738,226	8,428,980	11,134,791
Kazakhstan	6,140,589	7,326,453	17,875,481	12,595,890	10,689,319
Re-Imports (Canada)	471	416	--	--	88,322
Germany	--	--	16	--	16,154
United Kingdom (U.K.)	835,321	--	16,909	--	6,273
Uzbekistan	6,852,789	4,558,742	30,981,912	56,085,491	--
France (incl. Monaco, French Antilles)	--	119,235	--	154,928	--
Korea, South	--	--	1,774,817	--	--
Russia	14,791,082	4,334	8,069	--	--
Switzerland	575	30	--	--	--
	162,104,60	138,227,85	221,054,16	340,246,98	391,473,51
TOTAL (ALL COUNTRIES)	3	5	8	0	8

Source of data: Statistics Canada
Report Date: 27-Nov-2007

⁸ HS 284410 - NATURAL URANIUM AND ITS COMPOUNDS (INCL ALLOYS, DISPERSIONS, CERAMIC PRODUCTS ETC.)

⁹ Ibid

Appendix 3 World Nuclear Reactors

World Nuclear Reactors (Cameco estimate, March 2007)¹⁰

	Nuclear Electricity 2005 ² (%)	Operating 2007	Outlook to 2016			GWe Change
			New	Shutdown	Operating 2016	
Argentina	7	2	2	0	4	1.6
Brazil	3	2	1	0	3	1.3
Canada	15	18	3	1	20	2.2
Mexico	5	2	0	0	2	0.0
USA	19	103	6	0	109	6.0
Americas Total		127	12	1	138	11.1
China	2	9	24	0	33	20.4
India	3	16	15	0	31	7.0
Iran	0	0	2	0	2	1.9
Japan	29	55	5	1	59	5.9
Korea (South)	45	20	8	0	28	9.2
Pakistan	3	2	2	0	4	0.6
Taiwan	20	6	2	0	8	2.6
Turkey	0	0	1	0	1	1.0
Asia Total		108	59	1	166	48.5
Belgium	56	7	0	0	7	0.0
Czech Republic	31	6	0	0	6	0.0
Finland	33	4	1	0	5	1.6
France	79	59	1	1	59	1.6
Germany	31	17	0	0	17	0.0
Hungary	37	4	0	0	4	0.0
Lithuania	70	1	1	1	1	0.4
Netherlands	4	1	0	0	1	0.0
Romania	9	1	3	0	4	1.3
Slovakia	56	5	2	1	6	0.4
Spain	20	8	0	0	8	0.0
Slovenia	42	1	0	0	1	0.0
Sweden	45	10	0	0	10	0.0
Switzerland	32	5	0	0	5	0.0
UK	20	19	0	4	15	-1.4
Europe Total		148	8	7	149	3.9
Russia	16	31	9	0	40	7.6
Armenia	43	1	0	1	0	0.0
Bulgaria	44	2	2	0	4	1.9
Ukraine	49	15	3	0	18	2.9
Russia and Eastern Europe Total		49	14	1	62	12.4
South Africa	6	2	7	0	9	1.9
World Total		434	100	10	524	77.8

Estimated by Cameco, March 2007. Based on public announcements made prior to March 2007

¹⁰ Cameco Financial Review 2006

Uranium Enriching Countries

The following countries have Uranium Enrichment Facilities:

China, France, U.S., Brazil, India, Iran, Japan, Netherlands, Pakistan, U.K. and Russia.¹¹ Russia is the world's largest uranium enricher

¹¹ World Information Service on Energy, <http://www.wise-uranium.org/efac.html>.

Appendix 4

The Non-Proliferation Treaty

The NPT has three main pillars, extracted directly from the Treaty. These are:

- Non-proliferation;
- Disarmament; and
- Peaceful uses of nuclear energy.

First Pillar: Non-Proliferation

Non-nuclear-weapon states (NNWS) agree not to import, build or otherwise acquire nuclear weapons or other nuclear explosive devices. NWS are obliged not to transfer nuclear weapons or explosive devices to NNWS. Any group of states is permitted to establish nuclear-weapon-free zones in their respective territories.

Second Pillar: Disarmament

States Party to the Treaty commit to general and complete nuclear disarmament. All parties are obliged to negotiate, in good faith, effective ways to end the nuclear arms race as soon as possible. It also commits them to nuclear disarmament, and to a treaty on general and complete disarmament under strict, effective international control. This is the world's only legally binding obligation on NWS, to reduce and ultimately eliminate their nuclear weapons. At the 2000 NPT Review Conference, "State Parties to the Treaty" agreed on 13 "practical steps" to meet their disarmament commitments.

Third Pillar: Peaceful uses

All parties to the Treaty agree to full exchanges of equipment, materials and scientific and technological information for peaceful uses of nuclear energy, and to promote them by co-operating with other states or international organizations.

NNWS parties must accept International Atomic Energy Agency (IAEA) safeguards as a condition for peaceful nuclear co-operation. The IAEA uses safeguard activities to verify that states honour their commitments not to use nuclear programmes for nuclear weapons. IAEA safeguards are "based on an assessment of the correctness and completeness of the State's declarations [to the Agency] concerning nuclear material and nuclear-related activities." The NPT encourages international co-operation for peaceful uses of nuclear energy, from medical diagnostics and treatments to power production.

Canada's NPT Policy

Canada has a long-held policy objective of supporting non-proliferation, reduction and elimination of nuclear weapons and other weapons of mass destruction.

Canada's approach to nuclear disarmament is based on the view that the most workable way forward is by a continuous step-by-step process to reduce and eliminate nuclear weapons, steadily advocating national, bilateral and multilateral measures.

Canada pursues this policy in all arenas. These range from support for regional measures such as Nuclear Weapons Free Zones and practical assistance by the G-8 for disposing of weapons-grade fissile material from dismantled warheads, to strengthening the Nuclear Non-Proliferation Treaty (NPT) (explained above), and negotiating a ban on materials used in nuclear weapons in the Conference on Disarmament (CD).

Canada has worked strenuously to promote and reinforce multilateral efforts that, directly or indirectly, contribute to constraining the proliferation of nuclear weapons and work to reduce existing arsenals. These include:

- effective implementation of the NPT;
- entry into force of the Comprehensive Nuclear Test Ban Treaty, which prohibits all nuclear test explosions;
- advocating negotiation of a Fissile Material Cut-off Treaty to prohibit the production of nuclear material used in nuclear weapons; and
- participation in informal non-proliferation arrangements such as the Proliferation Security Initiative (PSI), which aims to prevent the international transport of weapons of mass destruction.

Furthermore Canada continues to call for and support efforts by nuclear weapon states (NWS) to reduce their arsenals of nuclear weapons by:

- fully implementing bilateral agreements such as START I and the Moscow Treaty;
- ratifying and implementing START II;
- negotiation of START III by the U.S.A. and the Russian Federation, coupled with other NWS committing politically to not increase their inventories;
- encouraging discussions designed to further negotiations among the five NWS after negotiations open on START III;
- undertaking other confidence-building measures, including de-alerting and verification of nuclear warhead;
- destruction and de-mating;
- continuing reductions in fissile material stockpiles;
- continue to encourage the reduction of inventories of tactical nuclear weapons, and further steps to curtail and eliminate their operational deployment;
- reinforcing nuclear disarmament measures with additional actions, such as reductions in delivery systems; and
- programmes to ensure that weapons-grade fissile materials from dismantled nuclear warheads are kept physically secure and disposed.