

AECL

The Future of Canada's Nuclear Crown Corp.

Atomic Energy of Canada Limited (AECL) is a federal Crown Corporation designated as the manager of Canada's national nuclear energy research and development program. AECL's flagship product is the CANDU 6 reactor. The CANDU series reactors are pressurized heavy water reactors initially designed in the late 1950s and 1960s in a partnership between AECL, Ontario Power Generation, GE Canada, and several private industry participants. The acronym "CANDU" stands for "Canada Deuterium Uranium", which is a reference to its deuterium-oxide (heavy water) moderator and use of natural uranium fuel. All of the nuclear reactors in Canada are CANDUs. The CANDU 6 is the sixth variant of the original CANDU design. AECL is also developing the Advanced CANDU Reactor (ACR-1000), which will be marketed over the next 20 years. The ACR-1000 is designed for a 2016 in-service date, and is currently undergoing a pre-licensing review in Canada.

There are currently 29 CANDU reactors in operation around the world: 18 in Canada (+2 under refurbishment), 2 in China, 4 in South Korea, 2 in India, 1 in Pakistan, 1 in Argentina and 1 in Romania. Despite the abundance of existing reactors, AECL has had difficulty selling CANDU reactors over the past few years with only 1 reactor currently under construction (in Romania). The last completed CANDU construction project was in China in 2002.

One of the main advantages of the CANDU design is its use of ceramic uranium-dioxide rods which do not require enrichment. The use of these rods eliminate costs associated with enrichment processing, although these savings are offset by the initial, one-time cost of the heavy water. The heavy water required for CANDUs is purchased, must be more than 99.75% pure and represents approximately 20% of the capital cost of each reactor. The next generation ACR-1000 reactor has mitigated this disadvantage by employing a smaller moderator size and by using light water as the coolant.

Since heavy water is less efficient in transferring energy from neutrons, CANDU reactor cores tend to be larger than light water reactors with the same power output. The larger containment structures can make CANDUs more expensive when compared to other designs. CANDU reactors can operate economically for up to 55 years. After about 25 years of operation, reactor core component replacement is required to add another 25 to 30 years of lifespan.



AECL's Darlington Nuclear Power Plant, Bowmanville, Ontario

In Canada, CANDU plants have become associated with massive construction cost overruns. For example, a number of construction delays caused by bureaucratic inefficiency led to the doubling of the projected costs of the Darlington station near Toronto, Ontario. Technical problems and redesigns added another billion dollars to the resulting \$14.4 billion construction price.

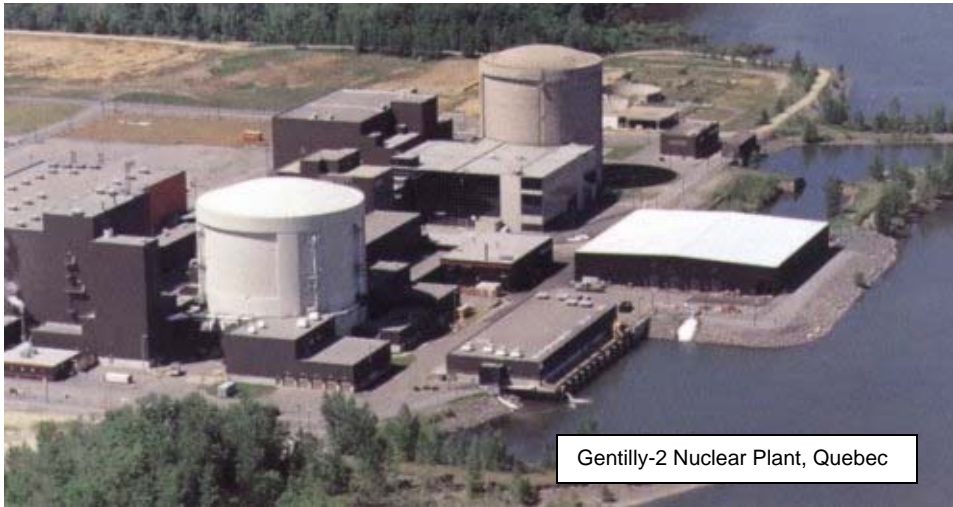
Cost overruns are not a rule, however. Five of AECL's CANDU 6 reactors installed in China at Qinshan 1 and 2, as well as units 2 – 4 at Wolsong in South Korea, were completed on schedule and on budget - an achievement attributed to tight control over scope and schedule.

AECL derives its revenues from the construction of new CANDU reactors as well as the refurbishment and maintenance of its existing reactors. Much of the value of AECL going forward, however, is derived from future construction contracts for CANDU reactors. In June 2006, the Ontario Government announced that it is seeking to

construct two new nuclear reactors and is currently evaluating bids and proposals from several parties, including AECL, AREVA and Westinghouse. The decision will likely be made in 2008 and will greatly increase the value of AECL if CANDU technology is chosen. Until the decision is made, however, AECL's main revenue source will be from plant refurbishments.

In 2005, AECL obtained two major project contracts: the Point Lepreau refurbishment project in New Brunswick and the Bruce 1 and 2 refurbishment project in Ontario. AECL is the general contractor and project manager for Point Lepreau and a major subcontractor in the retubing of Bruce 1 and 2.

In June 2006, AECL was awarded a significant contract for the retubing of the Wolsong 1 CANDU reactor in South Korea. An additional Canadian refurbishment project at Bruce 3 may be authorized this year, with another two anticipated in 2007/2008 – Gently-2 in Quebec, and Embalse in Argentina – where pe-refurbishment work is already under way.



Gently-2 Nuclear Plant, Quebec

CANDU 6 Costs

Candu reactors have varying costs depending on the country in which they are built, the access to local labour, the availability of components and other factors. Recent sales suggest a base price between one and two billion dollars per reactor. On November 26, 1996, AECL signed a \$4 billion contract for the sale of two CANDU 6 reactors to China. AECL later signed a \$1 billion commercial contract to complete the Cernavoda Unit #2 in Romania in May 2001.

Although CANDU reactors are expensive, Ontario would enjoy a number of added benefits by choosing CANDU technology. Jacques Lamarre, CEO of SNC Lavalin, has stated that the contract for two new reactors in Ontario will translate into roughly 58,000 man-years of work. Most of the parts used in CANDU reactors are built in Mississauga, Ontario. The contract, according to Lamarre, has an **estimated value of \$2 billion** and would translate into a substantial number of new jobs for local Ontario companies.¹ To overcome the Energy Minister of Ontario, Dwight Duncan's concerns about price overruns, AECL has agreed to guarantee the cost of the construction of its reactors if its technology is chosen by Ontario.² Judging from past transactions and Lamarre's comments, a price of \$1.0 billion per reactor seems conservative but reasonable.

CANDU Capacity

When evaluating nuclear power plants, the *average lifetime capacity factor* is the single most important measure of reactor performance and is widely used as a comparison metric within the nuclear industry. According to AECL, the CANDU 6 fleet ranks well ahead of its international competition with an average lifetime capacity factor of 86%. In comparison, the average lifetime capacity factor for the 103 nuclear plants operating in the US is 75%.³

CANDU reactors' superior capacity factor can be attributed to their ability to be refueled while operational. Traditional boiling water reactors, however, often require lengthy shutdowns in order to refuel. Although this problem has been improved in the 3rd generation reactors being offered today, it still remains a weakness for AECL's competition. AECL claims that its late-model reactors (CANDU 6) can perform better on average than competing designs, but those calculations omit the Pickering CANDUs and all reactors undergoing refurbishment.

¹ The Mississauga News - Our firms CANDU anything; Tops in technology Ontario's hunger for nuke power helps drive growth; CANDU attitude drives Canada's nuclear industry and creates jobs. Jan Dean, Jun 27, 2006

² The Walrus Magazine – Will CANDU Do? Paul Webster, September 2006.

³ Nuclear Energy Institute

The Advanced CANDU Reactor (“ACR”)

Efforts by AECL to promote its ACR concept outside Ontario have not shown progress thus far. In January 2005, the US utility Dominion terminated an agreement to seek a US licence for the 1000MWe version of the ACR and instead decided to support GE technology. Soon afterwards, officials in China, where two CANDU 6 units already exist, announced that more CANDUs will not be built during China’s current nuclear development planning phase.⁴ Proposed innovations within the ACR design include a 50% reduction in the use of heavy water within the reactor, the introduction of new alloys aimed at alleviating fuel tube and pressure system deterioration associated with earlier CANDUs, and the use of enriched fuel, which will have to be imported due to Canada’s lack of enrichment facilities.⁵ AECL claims that the Advanced CANDU is designed for a 95% capacity factor, 9% higher than AECL’s CANDU 6 design.

Value of the Service Business and New Ontario Reactor Builds

AECL’s current refurbishment projects are Bruce units 1 and 2, Point Lepreau and Wolsong 1. The Bruce refurbishments plus Point Lepreau represent \$1.2 billion and 11.5 years of work. Assumptions for future projects are \$100 million per year of project work at 9.8% EBITDA margin and a discount rate of 4.50%. This assumes that AECL’s WACC is essentially the same as the government, though slightly higher. The current yield on 10-year government bonds is 4.17%. A discounted cash flow model yields a value of \$543 million based on anticipated refurbishment projects to 2023.

Our estimate for the construction start on the two planned reactors in Ontario is in 2009. Assuming a 6.5 year construction period, which is consistent with the recent construction at Qinshan in China, the reactors will be commissioned in 2015. Based on a \$2 billion contract, EBITDA margin of 9.8%, and a WACC of 4.5% this represents a value of \$161 million. Using a certainty factor of 75%, this represents a value of \$121 million.

Value of AECL overall

Value of the refurbishment business plus the possible two reactor builds in Ontario is \$665 million. AECL also has some significant intangible assets like the CANDU 6 and ACR technologies. It is difficult to place a value on these technologies because they could be worth nothing if no new reactors are built. If building contracts do go through however, the ACR technology could potentially be extremely valuable, although the process would take years to complete. With that in mind, we believe that AECL is worth approximately \$1 billion. After adding cash and cash equivalents of \$110 million and accounts receivable of \$360 million, **\$1.5 billion seems a reasonable final price.**

AECL’s realizable value in its other assets is less certain, like the heavy water inventory that is currently on AECL’s books at a value of \$300 million. There is also uncertainty surrounding a large decommissioning liability recorded on the balance sheet at \$2.85 billion. This liability is associated with decommissioning CANDU reactors in Canada. In the case of AECL being privatized, this liability would likely be placed in a separate entity since it is larger than the combined intrinsic value of AECL’s other businesses.

Potential Suitors for AECL if Privatized

Team CANDU

Team CANDU is a partnership between AECL and private sector partners. Each of the partners takes on its share of project risk to deliver new CANDU power plants on a turnkey, fixed price basis. Team CANDU consists of Babcock & Wilcox Canada, GE Canada, Hitachi Canada and SNC-Lavalin Nuclear. All of these companies have significant experience in constructing nuclear power projects and could be potential buyers individually or as a consortium. One issue facing this potential consortium is that GE and Hitachi – the two largest players – have competing nuclear technologies. The acquisition of AECL’s CANDU technology could potentially cannibalize their current technologies and complicate their future sales strategies.

SNC-Lavalin: Within Team CANDU, SNC-Lavalin provides “balance of plant” engineering, procurement and construction services; i.e. they engineer most infrastructure outside of the reactor. SNC engages in turnkey engineering, procurement and construction services on different types of power generation assets, as well as servicing and maintenance. SNC has a market capitalization of \$4.8 billion and cash and short term investments of \$1.05 billion. SNC’s size would indicate that they would potentially be part of a consortium rather than buying 100% of AECL by themselves. On the other hand, if only a portion of AECL is privatized,

⁴ Nuclear Engineering International – Designs on Ontario. Paul Webster

⁵ Nuclear Engineering International – Designs on Ontario. Paul Webster

SNC may be able to purchase it alone. SNC's CEO, Jacques Lamarre has said in an interview that the partnership structure of Team CANDU might also be the basis of a bid to purchase AECL. We consider SNC-Lavalin to be the party most likely to be interested in purchasing AECL.

Babcock & Wilcox Canada: B&W has designed and manufactured nuclear power equipment for more than 40 years, providing nuclear heat exchangers, nuclear plant services and more than 200 nuclear steam generators to customers around the world. Its products include nuclear steam generators, replacement nuclear steam generators, and nuclear heat exchangers. Its services include steam generator diagnostics, maintenance and repair, steam generator cleaning, steam generator modifications, engineered products and services, parts and components, and plant modifications, upgrades and repairs.

B&W is a fully-owned subsidiary of the heavy construction company MacDermott International. MacDermott has market capitalization of \$5.6 billion and had \$960 million in cash and short term investments as of Sept 30, 2006. Because of its size, MacDermott would be unable to buy AECL outright.

GE Canada: GE's role within the Team CANDU partnership is limited to supplying parts for the reactors, including turbines, generators and piping. GE Canada is a subsidiary of GE. GE has significant operations in nuclear operations ranging from fuel manufacturing to reactor construction. GE has its own proprietary boiling water reactor (BWR) technology which competes on a global scale with AECL's CANDU technology.

On November 13, 2006, GE and Hitachi, Ltd. signed a letter of intent to negotiate the formation of a global alliance to combine their new nuclear power plant and services businesses with the goal of strengthening their existing operations, accelerating the development of new products and services, and positioning their alliance for growth in the nuclear energy industry." The transaction will take the form a cross-shareholding arrangement under which Hitachi will take a 40% holding in GE's existing nuclear business and GE will take an approximately 20% holding in Hitachi's existing nuclear business. The parties anticipate that the transaction will be completed in the first half of 2007.

GE has market capitalization of \$371 billion and has \$13.7 billion in cash and short term investments as of Sept 30, 2006. GE certainly has the financial capability to buy AECL outright, but has its own light water technology that it seeks to promote. It is unlikely they would be interested in the heavy water proprietary technology or the ACR technology of AECL.

Hitachi Canada: Hitachi Canada is a subsidiary of the Japanese industrial conglomerate Hitachi Ltd. Hitachi Canada's role in team CANDU is similar to GE and B&W's role: supplying parts, turbines etc. for the CANDU reactors. The parent company, now in a nuclear alliance with GE, has its own competing nuclear reactor technology based on light water BWR technology. Hitachi's international nuclear services range from service and maintenance to turnkey plant construction. Hitachi has market capitalization of \$20 billion and \$6.9 billion in cash and short term investments as of Sept 30, 2006. Hitachi also has the financial capacity to buy AECL outright, although like GE, has its own light water technology that it seeks to promote. It is unclear if they would be interested in the heavy water proprietary technology of AECL.

Bruce Power

The major players in the Bruce Power partnership consist of Cameco, Transcanada Corp and OMERS. Bruce power operates 2 nuclear generating stations with a combined 8 CANDU reactors. Bruce power may seek to grow its nuclear operations and diversify its operations by buying AECL. The partners are all well funded large companies.

Cameco Corporation: Cameco is an integrated uranium producer with operations in mining, enrichment, and ownership of nuclear power assets at Bruce power. They may wish to add CANDU technology to their portfolio of nuclear services and theoretically cross-sell CANDU reactors along with their other nuclear services. This makes Cameco a logical bidder for AECL. However, Cameco only has \$470 million in cash, and would not be able to purchase AECL outright. Further, they have no experience in heavy construction, and may view AECL's operations as being too far from their traditional lines of business. Cameco's balance sheet is healthy with very little debt, and a debt raise may be possible to raise funds for a purchase of AECL.

Transcanada Corporation: Transcanada owns and operates over 41,000 km of natural gas pipeline infrastructure in Canada. They also build, own and operate power plants, with a current focus on natural gas infrastructure. They may wish to purchase AECL as a way of diversifying a greater amount of their operations away from natural gas. Transcanada has a market capitalization of \$19.1 billion and \$350 million in cash.

Transcanada would likely have the financial ability to purchase AECL with a debt financing, but since it is on the fringe of their traditional business would be unlikely to go for it alone.

OMERS: OMERS invests in the infrastructure through Borealis Infrastructure. By 2010, Borealis Infrastructure aims to have as much as \$10 billion under management on behalf of major Canadian and international investors, including OMERS. At December 31, 2005, OMERS had invested \$3.7 billion in infrastructure, an increase of \$1.4 billion over the prior year. They increased their asset mix exposure to infrastructure in 2005 from 3.5% to 5.7%. OMERS' long-term goal is to have 15% asset weighting towards infrastructure. With \$40 billion in assets, OMERS is one of the largest pension funds in Canada and a huge financial power. They would have the power to buy all of AECL if they wished. This doesn't seem likely however as pension funds often prefer to spread risks among partners. They could definitely seek to buy a stake in AECL, however, to help increase their infrastructure related assets.

The Areva Group

The Areva Group is the largest nuclear group in the world conducting downstream uranium mining as well as plant construction. Areva has constructed over 100 plants worldwide and has expressed interest in buying AECL in the past. The Group is majority owned by the French state and has a large financial capability with a market capitalization just shy of 21.6 billion euros (\$33.0 billion CAD) and only 2.0 billion euros in debt (\$3.0 billion CAD). Areva also has 1.3 billion Euros in cash (\$2.0 billion CAD). Areva has a number of technologies in its portfolio and it is conceivable that it would be interested in adding CANDU's heavy water technology to its own portfolio of light boiling water and light pressurized water technologies. If Areva were to buy AECL, they would most likely do it independently. Still, Areva's competing technology makes it is uncertain what direction they would take with AECL. They may simply wish to eliminate a direct competitor.

Alex Harbin
Research Analyst
alex.harbin@tollcross.ca
416 365-1960

Appendix I – DCF Valuation

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Service Revenues																	
Bruce 1	\$ 100.0	\$ 100.0	\$ 25.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bruce 2	\$ 100.0	\$ 100.0	\$ 75.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Point Lepreau	\$ 100.0	\$ 100.0	\$ 75.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wolsong 1	\$ 100.0	\$ 100.0	\$ 100.0	\$ 50.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bruce 3	\$ 75.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ 25.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Embalse	\$ 75.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ 75.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Gentilly 2	\$ 25.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ 75.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pickering 6	\$ -	\$ -	\$ -	\$ -	\$ 25.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ 75.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pickering 5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ 25.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bruce 6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ 25.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bruce 5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ 25.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bruce 4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100.0	\$ 100.0	\$ 100.0	\$ 75.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pickering 8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pickering 7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ 25.0	\$ -	\$ -	\$ -	\$ -	\$ -
Bruce 7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ 25.0	\$ -	\$ -	\$ -
Bruce 8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ 75.0	\$ -	\$ -
Darlington 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ 25.0	\$ -
Darlington 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ -
Darlington 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75.0	\$ 100.0	\$ 100.0	\$ -
Darlington 4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25.0	\$ 100.0	\$ 100.0	\$ 100.0	\$ 25.0
Total Revenue	\$ 575.0	\$ 700.0	\$ 575.0	\$ 350.0	\$ 200.0	\$ 225.0	\$ 400.0	\$ 725.0	\$ 675.0	\$ 575.0	\$ 525.0	\$ 375.0	\$ 425.0	\$ 425.0	\$ 375.0	\$ 225.0	\$ 25.0
Est. EBITDA	\$ 56.6	\$ 68.9	\$ 56.6	\$ 34.4	\$ 19.7	\$ 22.1	\$ 39.4	\$ 71.3	\$ 66.4	\$ 56.6	\$ 51.7	\$ 36.9	\$ 41.8	\$ 41.8	\$ 36.9	\$ 22.1	\$ 2.5
Discounted EBITDA	\$ 56.6	\$ 65.9	\$ 51.8	\$ 30.2	\$ 16.5	\$ 17.8	\$ 30.2	\$ 52.4	\$ 46.7	\$ 38.1	\$ 33.3	\$ 22.7	\$ 24.7	\$ 23.6	\$ 19.9	\$ 11.4	\$ 1.2
Value of Discounted Flows																	
Revenue from Ontario Candu																	
Est. EBITDA	\$ -	\$ -	\$ 310.0	\$ 310.0	\$ 310.0	\$ 310.0	\$ 310.0	\$ 310.0	\$ 155.0								
Discounted EBITDA	\$ -	\$ -	\$ 30.5	\$ 30.5	\$ 30.5	\$ 30.5	\$ 30.5	\$ 30.5	\$ 15.3								
Value of Discounted Flows	\$ 161.3	\$ -	\$ 27.9	\$ 26.7	\$ 25.6	\$ 24.5	\$ 23.4	\$ 22.4	\$ 10.7								
Risk Factor	75%																
Value of Potential Reactor																	
Value of Potential Reactor																	

Value of Bruce 1+2 and Point Lepreau 1200
 Value of an individual refurbishment project 400
 Number of total years for refurbishment 11.5
 Value per year 104,34783
 EBITDA Margin 9.8%
 Discount Rate 4.5%

Value of Discounted Flows \$ 543.1

Value of Potential Reactor \$ 121.0



Appendix II – Statistics on nuclear reactors in the USA (Source: Nuclear Energy Institute)

Reactor Name	Capacity Factor (%)				Capacity (MW)	2005 Generation (bkWh)
	2003	2004	2005	2003-2005 Lifetime		
Arkansas Nuclear One 1	92	92.4	78.3	87.6	72.6	836
Arkansas Nuclear One 2	90.4	98.6	91	93.3	81.6	998
Beaver Valley 1	83.2	92.6	101.4	92.4	66.7	821
Beaver Valley 2	91.2	100.2	92.9	94.8	80.8	821
Braidwood 1	97.2	94.8	99.6	97.2	80	1,178
Braidwood 2	96.3	100.8	94.3	97.2	86.6	1,152
Browns Ferry 2	85.5	99.6	89.9	91.7	58.6	1,118
Browns Ferry 3	95.6	88.9	93.8	92.8	47.8	1,114
Brunswick 1	100.8	86.1	94.4	93.8	68.2	938
Brunswick 2	98.9	98.1	86	94.4	66.3	900
Byron 1	94.2	101.5	94.2	96.6	82.3	1,164
Byron 2	101.1	96.4	95.7	97.7	87.1	1,136
Callaway 1	97.4	78.4	77	84.3	86.3	1,190
Calvert Cliffs 1	101.8	91.5	99.5	97.6	75.6	873
Calvert Cliffs 2	81.9	99.9	93.9	91.9	78.2	862
Catawba 1	82.7	97.9	92.8	91.1	82	1,129
Catawba 2	94.2	89.1	102.1	95.1	83.9	1,129
Clinton 1	96.8	87.5	94.3	92.9	66.3	1,052
Columbia Generating Station 2	78.5	91.1	83.2	84.3	68.9	1,131
Comanche Peak 1	101.4	89.5	91.5	94.1	82.4	1,150
Comanche Peak 2	82.5	99.2	91.6	91.1	85.4	1,150
Cooper 1	67.8	92.9	88.5	83.1	69.1	760
Crystal River 3	89.6	99.2	86.5	91.8	68.2	838
Davis Besse 1	-0.9	74.6	93.6	55.8	62.2	873
Diablo Canyon 1	100.7	75.6	87.3	87.8	81.9	1,087
Diablo Canyon 2	80.9	84	99.2	88	85	1,087
Donald C. Cook 1	73.8	99	90.5	87.8	64.3	1,016
Donald C. Cook 2	75.4	83.9	99.8	86.4	61.7	1,077
Dresden 2	90.2	77.6	86.8	84.9	62	867
Dresden 3	93.5	84.5	92.6	90.2	59.8	867
Duane Arnold 1	81	99.8	89.2	90	70.6	581
Edwin I. Hatch 1	95.3	90.3	91.1	92.3	75.5	876
Edwin I. Hatch 2	90	97	87	91.3	74.2	883
Fermi 2	83.4	86.6	90	86.7	72.5	1,111
Fort Calhoun 1	84	97.3	69.5	83.6	74.6	478
Ginna 1	88.6	98.6	91.7	93	81.1	498
Grand Gulf 1	98.5	91.7	90.9	93.7	83.8	1,266
H.B. Robinson 2	103.5	92.1	92.8	96.1	75.3	710
Harris 1	91.8	88.7	100.6	93.7	85.5	900
Hope Creek 1	79	65.4	82.6	75.7	81.6	1,061
Indian Point 2	99.1	87.5	99	95.2	65.8	1,020
Indian Point 3	88.2	100.5	89.5	92.7	61.5	1,025
James A. Fitzpatrick 1	96.4	87.1	94.5	92.6	70.9	852
Joseph M. Farley 1	90.5	85.9	99.3	91.9	80.1	851
Joseph M. Farley 2	100	89	84.1	91.1	84.1	860
Kewaunee 1	88.1	78.8	62.6	76.5	80	556
LaSalle 1	92.4	92.2	100.2	94.9	66.9	1,118
LaSalle 2	91	101	90.7	94.2	68.6	1,120
Limerick 1	100.9	95.1	99.2	98.4	83.4	1,134
Limerick 2	94.4	99.2	91.2	94.9	90.7	1,134
McGuire 1	102.9	85.3	93.1	93.7	75.1	1,100
McGuire 2	93.7	103.4	88.7	95.3	82.1	1,100
Millstone 2	80.3	97.8	88.2	88.8	61.7	882
Millstone 3	100.8	88.3	86.4	91.9	69.4	1,155
Monticello 1	91.8	100.7	89.3	94	79.6	572
Nine Mile Point 1	80.4	91.7	84.6	85.6	69.1	621
Nine Mile Point 2	95.5	86.3	99.7	93.8	76.7	1,135
North Anna 1	80.5	91.3	95.1	89	77.5	924
North Anna 2	90.4	91.7	87.7	89.9	81.7	910
Oconee 1	70.8	97.7	90.7	86.4	75.4	846
Oconee 2	102.1	76.3	89.9	89.4	77.5	846
Oconee 3	85.2	77.2	97.7	86.7	76.9	846
Oyster Creek 1	96.9	89.3	99.1	95.1	65.6	619
Palisades	91.6	79.3	97.5	89.5	62.5	778
Palo Verde 1	97.2	84.6	62.7	81.5	75	1,314
Palo Verde 2	72.2	92.4	81.9	82.1	78.6	1,314
Palo Verde 3	87.5	75	83.9	82.1	82.3	1,247
Peach Bottom 2	95.4	90.6	98.2	94.7	68	1,112
Peach Bottom 3	91.3	102.1	90.6	94.7	69.1	1,112
Perry 1	79	94.3	70.7	81.3	75.7	1,235
Pilgrim 1	83	98.7	91.3	91	63.2	685
Point Beach 1	96.8	80.7	81.2	86.2	78.1	512
Point Beach 2	82.5	97.1	71.8	83.8	81.6	514
Prairie Island 1	100.5	78.5	98.6	92.6	84.4	523
Prairie Island 2	92.7	101.6	84	92.8	87.2	522
Quad Cities 1	89.9	85.4	82.7	86	69.6	867
Quad Cities 2	92	81.1	92.7	88.6	67.6	867
River Bend 1	89.2	87.3	92.3	89.6	78.8	966
Salem 1	93.5	72	92	85.8	60.6	1,174
Salem 2	81.9	88.4	89.8	86.7	61.7	1,130
San Onofre 2	103.6	85.7	95.3	94.9	79.9	1,070
San Onofre 3	90.9	73.6	100.1	88.2	81.4	1,080
Seabrook 1	91.3	99.9	88.5	93.3	84	1,220
Sequoyah 1	72.9	92	100	88.3	65	1,150
Sequoyah 2	83.6	95.6	90.4	89.9	68.5	1,127
South Texas Project 1	60.6	98.5	88	82.4	76.7	1,280
South Texas Project 2	79.3	91.6	88.5	86.5	78.7	1,280
St. Lucie 1	102.1	85.8	82.8	90.2	80.6	839
St. Lucie 2	80.1	92	85.5	85.9	85.3	839
Surry 1	76.4	92	96.4	88.3	71.6	799
Surry 2	78.6	100.5	92.6	90.6	71.5	799
Susquehanna 1	96.3	80.3	94.6	90.4	78.8	1,135
Susquehanna 2	86.5	100	88.7	91.7	84.3	1,140
Three Mile Island 1	90	102.2	98.1	96.8	68.6	786
Turkey Point 3	89.7	77.7	95.5	87.6	70.6	693
Turkey Point 4	91.6	99.9	69.8	87.1	72.7	693
V.C. Summer 1	86.9	97.2	88.3	90.8	79.2	966
Vermont Yankee 1	100.3	86.8	91.9	93	81.9	506
Vogtle 1	93.3	100.4	91.4	95	89	1,152
Vogtle 2	96.7	90.8	85.4	91	89	1,149
Waterford 3	88.9	101.1	77.6	89.2	85.4	1,158
Watts Bar 1	87.1	100.1	89.7	92.3	91.1	1,121
Wolf Creek 1	87.1	98.9	86.4	90.8	84.6	1,166
Average Lifetime Capacity Factor				75.3%		

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Toll Cross Securities Inc.

Royal Trust Tower, Suite 3120
 P.O. Box 138
 77 King Street West
 Toronto, Ontario M5K 1H1

Telephone: (416) 365-1960
 Facsimile: (416) 365-1962
 Email: toronto@tollcross.ca
 Website: www.tollcross.ca

Institutional Sales

David Franklin.....david.franklin@tollcross.ca
 Rodger Gray.....rodger.gray@tollcross.ca
 Wayne Hansen.....wayne.hansen@tollcross.ca
 James Massie.....james.massie@tollcross.ca

Institutional Trading

Tom George.....tom.george@tollcross.ca
 Rick Pierog.....rick.pierog@tollcross.ca
 Chris Stuchberry –Trading Support.....chris.stuchberry@tollcross.ca

Institutional Equity Research

Guy Gordon – Special Situations.....guy.gordon@tollcross.ca
 Alex Harbin – Associate Analyst.....alex.harbin@tollcross.ca
 David Baker – Associate Analyst.....david.baker@tollcross.ca

Investment Banking

Marc Bouchard – Communications/Technology.....marc.bouchard@tollcross.ca
 Tom Hope – Communications/Technology.....tom.hope@tollcross.ca
 Marc Johnson – Associate.....marc.johnson@tollcross.ca
 Don Njegovan – Associate.....don.njegovan@tollcross.ca

Private Client Group

Andrew Beach.....andrew.beach@tollcross.ca
 Rodger Gray.....rodger.gray@tollcross.ca