



## Beyond Nuclear Backgrounder

# A Synopsis of Nuclear Power Development in Alberta, Canada, 2007-2008

Atomic Energy of Canada Limited (AECL) signed an agreement in mid-2007 with an Edmonton, Alberta-based private businessman who, without any nuclear experience, headed the newly-formed Energy Alberta Corporation. Energy Alberta Corporation initiated an application to build two 1100 megawatt CANDU ACR-1000 reactors in Alberta. The ACR-1000 is AECL's new reactor concept whose design approval process has been abandoned in the United States and the United Kingdom. The original business plan was to build as many as 13 ACR-1000 pressurized water reactors in Alberta. Energy Alberta sold its partnership with AECL to Ontario-based Bruce Power in December 2007. Bruce Power is Canada's first private nuclear power company and owns eight CANDU nuclear power plants with six units currently operational.

The initial proposed new reactor construction sites focused on Peace River and Whitecourt, Alberta. Bruce Power is now focused on a site in Peace River. Bruce Power has acknowledged that it is also putting bids out to international corporations for nuclear reactor designs including General Electric-Hitachi's Advanced Boiling Water Reactor and Westinghouse-Toshiba's AP-1000 Pressurized Water Reactor.

In March 2008, the French government-owned (85%) AREVA nuclear corporation announced a \$10 billion proposal to compete for attention to develop the first nuclear power plants in Alberta using its newly designed and still unproven 1600 megawatt European Pressurized Reactor and known in North America as the Evolutionary Power Reactor (EPR), a modified design of France's first generation pressurized water reactors. AREVA's siting effort is currently focused on White Court.

See <http://energy-tv.com/videos/view/416/>

AREVA has two EPRs currently under construction in Olkiluoto, Finland and Flamanville, France where controversy at both sites rages over mounting cost overruns and significant construction delays as a result of ongoing safety and quality control violations.

AREVA also announced on June 20, 2008 that the corporation's investment in Saskatchewan's uranium mining industry makes the province a leading candidate for expanded nuclear power development there as well.

While both AREVA and Bruce Power refuse to comment, the nuclear generated electricity is widely believed to be destined for transmission to Fort McMurray to extract the thick bitumen from the environmentally devastating "tar sands" project and process it into more manageable light oil. Additionally, the nuclear power generated heat in the form of steam is being contemplated to directly extract bitumen from the tar sands, now the second largest known oil reserve on Earth next to Saudi Arabia.

The petroleum product along with the massive amount of nuclear generated electricity would also in large part be exported to provide energy to the United States through expanded pipelines and transmission corridors. The Alberta tar sands currently

constitute 18% of all of Canada's CO2 emissions, a figure that is expected to reach 25% within the next 12 years.

Contrary to the "clean air" claims of the nuclear industry, if commenced, the project would exacerbate the environmental devastation from tar sands development with a polluting Canadian nuclear powered fossil fuel industry. Similarly, Saudi Arabia has announced plans to develop its own nuclear industry to power and expand a petroleum export industry.

### **Role of Beyond Nuclear at the Nuclear Policy Research Institute**

Beyond Nuclear is opposed to the operation and expansion of a nuclear power industry globally because of:

- 1) increasingly unfavorable economics of nuclear power development and the dire need for a 21<sup>st</sup> Century carbon free-nuclear free energy policy focused on more viable rapid climate change solutions through renewable energy and efficiency and conservation;
- 2) increasing environmental and safety risks associated with aging and deteriorating reactors and unproven new designs;
- 3) corporate cost and production margins in new and old reactors alike versus public health and safety margins;
- 4) growing environmental concerns with all aspects of the nuclear fuel chain from uranium mining to long-term nuclear waste management;
- 5) security concerns arising out of malicious attacks on nuclear reactors that would produce mass casualties and extensive economic dislocation and;
- 6) proliferation of nuclear weapons materials through the spread of commercial nuclear power and uranium enrichment technologies.

At the invitation of local government leaders, educators and citizen activists, Beyond Nuclear efforts to date center on public education and mobilization events in the cities of Calgary and Edmonton and the communities of White Court and Blue Ridge in Woodland County, Alberta.

Paul Gunter who is the director of the Reactor Oversight Project with Beyond Nuclear presented on the nuclear power controversy at the Parkland Institute's 2007 Annual Fall Conference "From Crisis to Hope" at the University of Alberta in Edmonton.

<http://www.ualberta.ca/PARKLAND/conference/2007/Speakers.htm>

Paul also presented in 2007 on the nuclear issue through separate invitations from Citizens Advocating Use of Sustainable Energy (CAUSE) in Calgary and the Tipping Point Project in White Court, Alberta.

Most recently, Paul was invited by the Woodland County Administration in April 2008 to debate Dr. Duane Pendergast, formerly with the AECL and current chair of the Alberta Branch of the Canadian Nuclear Society, on the pros and cons and technical issues of

nuclear power in White Court and Blue Ridge. On a separate occasion, the county government also sponsored a debate on the environmental issues associated with nuclear power between Dr. Patrick Moore, spokesperson for the nuclear industry-funded Citizens for Affordable and Safe Energy coalition and nuclear power critic Dr. Gordon Edwards with Canadian Coalition for Nuclear Responsibility. DVD copies of both debates are available upon request.

Paul has also participated in a public rally and lobby day in Edmonton that was organized by the Sierra Club Prairie Chapter and the Peace River Environmental Society to meet with provincial energy and environmental officials and various political party leaders on the future of Canadian energy policy.

Beyond Nuclear has also reached out to Jack Layton, leader of the New Democratic Party, and his wife Olivia Chow, a member of parliament for the NDP, for political support in opposing the Alberta nuclear push.

#### **Samples of Beyond Nuclear news items from The Nuclear-Free Alberta Campaign:**

[Edmonton Journal](http://www.canada.com/edmontonjournal/news/story.html?id=c1264ca9-5e25-4fb9-ac29-774a6ce8c602&k=70587) "Nuclear power proposal makes Alberta a U.S. energy colony, says critic" <http://www.canada.com/edmontonjournal/news/story.html?id=c1264ca9-5e25-4fb9-ac29-774a6ce8c602&k=70587>

[You Tube](http://www.youtube.com/watch?v=JAOZpMMa_Uo), "Rally for a Nuke Free Alberta," Edmonton, Alberta public rally, November 20, 2007.

[http://www.youtube.com/watch?v=JAOZpMMa\\_Uo](http://www.youtube.com/watch?v=JAOZpMMa_Uo)

#### **Beyond Nuclear at NPRI**

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