

Calgary Chamber of Commerce

Question: Has AECL ever built a steam facility without government subsidy? That is, can a nuclear facility be funded solely with private sector funds?

Answer: A federal Crown Corporation, AECL is a fully integrated nuclear technology and services company providing services to nuclear utilities worldwide. AECL is responsible for managing the Canadian nuclear platform both responsibly and cost-effectively, through the management of two corporate divisions: the CANDU Reactor Division (our commercial operations) and Research and Technology Operations (our national nuclear laboratory located at Chalk River, Ontario). Although government funding supports both of these divisions, export sales from the commercial operations have contributed positively over the years to a favorable balance of trade for Canada.

Yes, a nuclear facility could be funded solely with private sector funds, but AECL works effectively with its federal shareholder to be the best nuclear products and services company on behalf of all Canadians.

Question: How do you justify an extremely expensive and passé technology to a right-wing province moving into renewable energy which is sustainable and won't increase national debt.

Answer: Nuclear energy is clean, safe, reliable, affordable and sustainable. Nuclear power plants generate electricity without releasing materials that cause smog, acid rain or global warming. Today, more than 400 nuclear power plants around the world are providing electricity and helping to limit air pollution. Having said that, nuclear energy is one part of the solution to meeting Canada's energy needs. Nuclear is complimentary to wind, solar and other renewable energy sources, and can be used when the sun isn't shining or the wind isn't blowing.

Question: Are environmental groups who are now anti-fossil fuels going to have to make a choice and jump on a bandwagon that they have fought for so long?

Answer: At AECL we welcome the opportunity to share the benefits of nuclear energy. If you know of any individual or group who would like to learn more about nuclear energy, please encourage them to contact the AECL Speaker's Bureau at moorebg@aecl.ca.

Question: I understand that fabrication of pressure vessels is a potential bottleneck for construction of new nuclear plants. Will this be a problem for building new CANDU reactors?

Answer: The CANDU reactor design is comprised of smaller fuel channels, as opposed to the one large pressure vessel used in other nuclear reactor designs. Therefore the bottleneck that has been created by the availability of suppliers of the steel forgings used in the pressure vessels is not a concern to AECL in building the new Advanced CANDU Reactor (ACR-1000).

Question: Has the medical isotopes shortage been resolved?

Answer: AECL's NRU reactor at Chalk River, Ontario supplies 50% of the world's medical isotope supply for use in medical treatment and radiation therapy. In the past few months, AECL has ramped up isotope production at the NRU to above normal levels, and has been able to help alleviate the global medical isotope shortfall due to the extended outage of a reactor in Europe.

Question: Who owns AECL?

Answer: Established in 1952, AECL is a federal Crown Corporation whose shareholder is the Government of Canada.

Question: With the development of a new provincial land use framework, watershed management is a hot topic in this province. How does nuclear power compare with other energy generation technologies when it comes to water usage?

Answer: A nuclear power plant will use about 5% more water than a coal or gas-fired power plant of equivalent size. In absolute terms a single 1000 MWe nuclear power plant using either an evaporative cooling tower or a man-made cooling pond to minimize water consumption would use a total of about 1 cubic metre/second of water - a relatively small amount. The large reduction in green house gas emissions in comparison to a fossil fuel plant (around 5,000,000 tons/year reduction vs to 1000 MWe gas-fired plant) more than compensates for this very small additional water requirement

Question: What will nuclear power mean to water conservations efforts in the province?

Answer: Any nuclear power plant in Alberta would use either an evaporative cooling tower or a man-made cooling pond to reduce water consumption to an absolute minimum in order to support Alberta's water conservation efforts.

Question: Could you discuss the linkages in Canada between uranium production in Sask and a burgeoning nuclear industry?

Answer: The Saskatchewan government is reviewing option to expand its nuclear industry beyond uranium mining and into additional value-add businesses such as uranium conversion, nuclear fuel fabrication and nuclear power generation. The worldwide nuclear renaissance makes this a good time for Saskatchewan to expand its industry and thereby creating jobs and wealth in that province.

Question: Would Alberta be better served by a large northern nuclear plant or new hydro projects?

Answer: Alberta has few options for hydroelectric development and must rely on fossil fuels or nuclear for reliable base load generation. Wind power is not a base load option since it only generates power when the wind is blowing, we believe that nuclear power offers the best zero-emission and economic source of base load power for Alberta.

Question: R&D is occurring to recycle nuclear by-products. Do you have an idea of the timeframe ?

Answer: Recycle of used nuclear fuel is undertaken now in countries like France and Japan. Canada has not yet recycled its used nuclear as it is not yet economic to do so because the

CANDU natural uranium fuel is relatively low cost. Canada is retaining the option to recycle its used nuclear fuel in the future should it become economic to do so.

Question: What do you think is the key to the public discussion of nuclear in AB?

Answer: The key to any discussion of nuclear power in Alberta is information and education. The Alberta public has little knowledge of nuclear energy and is therefore likely to be wary. Bruce Power Alberta is communicating extensively with residents in the Peace River area about its plans to build a nuclear power plant there. The release by the Alberta govt of the Expert Panel Report on Nuclear Power in Alberta in the near future will create an opportunity for all members of the Alberta public to participate in the discussion and learn more about nuclear power to assist them in making an informed decision.

Question: What is AECL strategy to add value to our rich uranium resource? Is Canada an exporter of the mined resource?

Answer: Canada currently exports most of its mined uranium. AECL is working with the Saskatchewan government in exploring the best commercial options for adding value to uranium before it is exported. AECL strongly supports this initiative by the Saskatchewan Government.