

RESPONSE TO REPORT ON

PRELIMINARY ECONOMIC AND FINANCIAL IMPACT ANALYSIS OF A PROPOSED NUCLEAR POWER GENERATION FACILITY IN THE PEACE COUNTRY OF NORTHERN ALBERTA

Prepared by CAUSE (Citizens Advocating Use of Sustainable Energy) Calgary September 6-2008

The Golder Associates Limited Report prepared for Bruce Power, and issued in July 2008, analyses the amount of economic and financial impact that the revenue generated during construction and operation of the proposed nuclear reactor would have on the local region as well as the impact provincially and federally. Commissioned by Bruce Power, the Report specifically considers the proposal to construct four large first-of-their-kind nuclear reactors at a cost of 12 billion dollars, generating an additional 4000 megawatts of electrical power. Secondly, it looks at the impact of revenue generation during operations over the 60 year projected reactor lifetime. The Report estimates the increase in the Gross Domestic Product, increase in labour income and the direct, indirect and induced impact on employment. Notably the Report does not consider a broad range of negative economic and employment costs that will accompany the development of nuclear power in Alberta.

The report's main focus is the potential revenue generated by the project, which is really the money that is going to spent in Alberta by Bruce Power to both build and operate the proposed nuclear reactor. Where the analysis falls short is in not recognizing the costs of the proposed project to taxpayers, locally, provincially and federally. Moreover, the estimated lifetime of reactor operation is unrealistic given the reality of the CANDU's past performance in Eastern Canada. Finally, there is no consideration of significant real costs of the project, both in heavy costs to taxpayers at all levels of government. Nor does the employment analysis consider jobs lost in other industries as a result of the negative impact of nuclear on tourism and agriculture.

First of all the \$12 billion capital cost of the reactors will most surely be much higher than estimated by the Report, based on the history of nuclear reactor construction in this country ,and secondly on the fact that what is being proposed is a brand new and untested design. Cost overruns are inevitable. CANDU reactors have a history of exorbitant cost overruns. The last nuclear reactor built in Canada at Darlington in 1993 ended up costing 14 billion dollars, being 250% over budget. Giving the project to a nuclear company such as AREVA does not solve the problem. Third generation reactors being built by AREVA in Finland are already experiencing huge cost overruns of their own.

When Energy Alberta Corporation (the precursor to Bruce Power) announced the plan to develop nuclear power in Alberta, CEO Wayne Heneuset made it clear that the reason the project made financial sense to a private investor is that they had been provided a guaranteed construction cost from AECL. What that means is that the inevitable cost overruns will be picked up by AECL, a crown corporation funded by the federal government. These taxpayer costs have not been taken into account in Golder's report. Neither has the millions of dollars in annual subsidies provided by the federal government to AECL including the cost of designing the ACR-1000 reactor.

So is going to an outside contractor like AREVA the answer? It should be noted that in the case of Finland: “AREVA is seeking to claim some of the additional costs from the investor, the Finnish utility TVO.” As well “financing for the Finnish EPR has benefitted from State support in the shape of a Euro 570 million loan.” The higher capital cost in Finland is also expected to translate into higher electrical costs for the consumer. Nuclear power simply doesn’t make economic sense without heavy government subsidies, not in Canada, nor elsewhere in the world.

Neither taken into consideration in the economic analysis is the first-of-a-kind costs in solving the problems that will inevitably arise with building these new third generation reactors, including the costs incurred by the federally funded Nuclear Safety Commission associated with first environmental assessment, licensing and construction of these new reactors. Without a doubt there will also be provincial costs including government staff associated with the process involved in the project being considered and in dealing with political fallout associated with nuclear development.

In terms of the impact of revenue generated over 60 years, existing CANDUs have only lasted some 20 years compared to the 35 year touted life. Even if the new CANDUS last longer because of the fact a pressure tube refurbishment is built into the design, you can be sure the actual lifetime of the reactors will be much less than the advertised 60 years.

The study also omits some important considerations since it does not purport to “capture environmental and social effects that are not easily expressed in economic terms”. Difficult or not, this analysis is critical and needs to be done. What about the increased impact on health and the associated medical costs? What about the higher rate of inflation, and increase in property taxes? What about the rise in infrastructure costs to the local government? Calgary can attest to the fact that these costs can be higher than the new property tax revenue generated from an increase in population.

Neither does the model claim to take into account the fact that “a large project can represent a large shock to particularly small economies such as that of the region, which in turn can strain limited human resources, cause changes in prices, and make economic impacts difficult to predict.” Valid points and these impacts should have been explored further for the Report to have credibility,.

The Report also recognizes that the economic impact on local workers and businesses depends on to what degree the project labour and materials and services are imported from outside the region. This local participation is by no means a given, and will significantly affect any economic benefits to the region. Similarly, the Report recognizes that the provincial impact depends on the “extent they (services and materials) are purchased in the province.” This analysis could and should have been done, but no attempt has been made. As a result all revenue generated is implied as benefiting the local and provincial regions while clearly that will not be the case. The new reactor is of a modular construction. In all likelihood, this will be done in Ontario where the expertise resides.

Neither does the Report consider the loss of jobs in tourism and agriculture. The area will no longer be attractive as a recreational site. Who will want to buy the food produced in the vicinity

of a nuclear reactor when radioactive emissions are given off regularly, and tritium contaminates the water?

The “downstream impacts on the electricity transmission system ...are excluded from the analysis.” One question that needs to be asked is “who pays for the new transmission lines that will be needed?” Another hidden taxpayers’ cost. Here is what Enmax has to say about current plan to build more transmission lines from Calgary to Alberta: “large transmission lines may not be the best choice. Alberta consumers deserve a comprehensive public evaluation of all viable options to meet their need for reliable power...” Enmax is looking at smaller sources of electrical generation such as solar and wind as viable options that won’t require the province to spend money on new transmission.

Another assumption the Report makes is that “the Project would not impact other producers of electricity in Alberta.” This is clearly a false assumption since there is already 10,000 megawatts of generation planned for Alberta which will already lead to surplus production in 10 years time if not sooner. While this kind of competition for electrical customers could positively impact on the consumer, it may put some producers of electricity out of business. Alberta Energy Corp (AEC), Bruce Power’s precursor, admitted that even the then smaller project planned (2000 megawatts of nuclear power) was not needed by the province, and would be purchased by a new customer. AEC hinted at a “mystery buyer” that as mysteriously disappeared. Bruce Power needs to explain who exactly will be buying the electricity generated from these new nuclear plants since the additional electricity is clearly not needed by Albertans.

Although Golder emphasizes that this is only a preliminary Report, this analysis of the financial and economic impact of nuclear on Alberta is most notable for what it excludes—the significant social, environmental ,economic and employment costs of nuclear development , not only to northern Alberta, but to taxpayers locally, provincially, and across Canada. And that doesn’t even take into consideration the economic devastation that would result in the case of a nuclear accident or terrorist attack and the whole unsolved and costly problem of nuclear waste storage and decommissioning.