

Summary of CCNB Action Saint John Fundy Chapter Intervention-Part 1

The CCNB Action SJ Fundy Chapter's Intervention contains 2 parts. One is a scan of most of the aspects of the license to operate using NB Power's own form with special focus on seismic and safety issues. The other is a report called "The Potential Impacts of Climate Change and Seismicity in Relation to the Point Lepreau Nuclear Generating Station".

The license assessment deals with in depth and technical issues that are necessary to prove scientifically that the plant is not safe. The summary should make it easier for non-technical people to understand how serious this is. We conclude that due to the very serious risk to the public, the economy and the environment, Pt Lepreau Nuclear generating plant should be decommissioned now.

I am sure the CNSC were unprepared for the serious concerns when they first read the interventions from all of our coalition supporters. However, like the unexpected disaster at Fukushima with the tidal wave that followed, our concerns demand immediate action. However, rather than waiting 3 days to pour sea water on the reactors, we hope the big lesson learned will be to shut the hearings down by pumping seawater on them now.

Despite insane deadlines and inadequate funding, our intervention paints a detailed picture of the problems at Pt Lepreau. We used NB Power and the CNSC's own documents to show that there are serious holes in just about every aspect of this application to re- license. We were dismayed at the lack of studies, the unknowns and the confusion surrounding the correct data. Currently, to make matters worse, new information we obtained last week, points to very serious possible problems with the regulator. We believe we have uncovered only the tip of the iceberg as every time we read a document to do with Pt. Lepreau, have a meeting with those in charge, or go on a tour of the plant, our concerns only get worse. When CNSC President, Michael Binder said at the Day 1 hearings, "You know, listening to you, you're not calming our angst; in fact, you're compounding it", we were happy that the CNSC President felt the same as us.

We make the point in our intervention that the economics of Pt Lepreau have never made sense. In 2002 at the Public Utilities Board Hearings it was decided that refurbishing the plant was not in the public's interest. This is still the case in that the cost of power from Pt Lepreau would be at least 11 cents/kwh (cost at time of shut down) while we are currently paying 9.5 cents/kwh. As well, it has been shut down since 2008 and we have not had a power shortage. The cheaper power from Quebec is readily available and renders Pt Lepreau unnecessary. We have concluded that Pt Lepreau is too expensive and is not needed.

The money situation is bad but so are the management problems within NB Power. Now close to 5 billion dollars in debt, NB Power still allowed a major re-tube of it's core knowing the tubes were faulty. South Korea was doing the same refurbishment and stopped the installation of the tubes immediately when they found the same problem as NB Power. At Pt Lepreau however, the management allowed work to continue. We believe that a culture of mismanagement appears to exist within NB Power management which is not compatible with Nuclear Power Plants.

Sound science and up to date data are very important when we are dealing with lives, huge economies of scale and an entire biosphere. When billions are spent on a project, backing up your investment with quality assurance is a must. This was not the case with Pt Lepreau. An Environmental assessment wasn't done because they were only shut down for a "maintenance outage". It does not sound like a maintenance outage though when a senior CNSC member is on record reporting that so much work was done that it was almost considered to be in line with a new plant. Serious safety matters used old data from one of the first Environmental assessments in Canada.

Many important questions have not been asked around the issue of Pt Lepreau. One of the most obvious ones is, "is it safe to refurbish these old reactors?" This has never been seriously considered and if a proper EA had been done this question would have been answered. Right now, we know there are lawsuits surrounding the EA for the new reactors at Darlington. If there are that many concerns over new reactors that are known to be safer than the 1970's version, it just doesn't seem wise at all to try and run these old reactors for another 30 years past their life expectancy. The whole refurbishment is not being properly looked at. It is kind of like putting a new engine in old car that never worked great even when it was new.

Safety issues make up a major part of our intervention and we focus on earthquakes in light of the Fukushima accident. The complicated calculations are very important so we spent a great deal of time and effort to make sure we understood the limits and rules used to calculate earthquakes. We talked to NB Power about them. We talked to and have emails from the CNSC staff where we checked and double checked about them. Even in the supplemental information given by the CNSC staff to the commissioners after the day 1 hearings it quite clearly states that the limits are the same as what we understood them to be. We spent a lot of time preparing a major part of our intervention using these numbers. However, after receiving an email from John Adams (NRCAN), and talking with the CNSC staff and NB Power, we found out that the rules, are really not the rules. Regardless, we have confidence in our intervention. The CNSC staff has downplayed this situation as just a misunderstanding because they were trying to dumb down a complicated matter. We note that we received money from the Participant Funding Program to hire Ken Burk as one of our expert witnesses. Ken Burk is a seismologist that has done much of the work for NB Power since the seventies. Dumbing down should not be necessary. We are taking this matter very seriously because we feel it is a violation of the Nuclear

Safety and Control Act which states that the CNSC are required by law to disseminate objective scientific and regulatory information to the public.

There is a newer seismic hazard analysis report, commissioned by the Attorney General of Canada and used by the CNSC already for an unrelated project that was not used to assess seismic risks at Pt Lepreau. In this document, the hazards at Pt Lepreau are larger than currently designed for. Instead, an even older document from 1984 is being used minus the worst case scenario. We have learned that the Fukushima earthquake was much larger than planned for. We believe those in charge of Pt Lepreau have not learned any lessons and that deliberately omitting worst case scenarios and using an out of date by a quarter century study to justify their seismic readiness is very dangerous.

Another very serious concern came out of the same email conversation from John Adams. It was regarding a technical report that NB Power had to do on the possibility of increased seismic hazard in light of the Fukushima accident. We feel there are many problems in this report. The methods used in this report did not follow the recommended guidelines. Very important information was left out of the report. We do not understand from the information in the report how the conclusion that there was no increase in seismic hazard could have possibly been made. We think that perhaps the CNSC staff approved this report, and that they only checked it against the proper data after the email to John Adams. In a separate letter from John Adams he also comments that he is not qualified to comment on another document concerning this, which would indicate that although we believe this report to be accepted by the CNSC that there is still a part of it yet to be reviewed.

We have serious issues with the main safety study that was done for the refurbishment, the probabilistic safety analysis (PSA). This study measures the whole plant safety, like a grading system with a pass or fail. Because they had old data from the first environmental assessment, hurricanes and flooding were not a concern to them. As well, seismic hazards weren't included (they were allowed to exclude external risks in a footnote written in fine print) The International Atomic Energy Agency (IAEA) noted recently that regulatory improvements are necessary for Canada <http://www.iaea.org/newscenter/pressreleases/2009/prn200909.html> in many areas where safety is an issue. The seismic hazard was worked out using another method outside of the PSA calculation. That PSA # is essentially meaningless because it is missing seismic hazards which are a big part of safety. We find it hard to understand how plant safety can be measured when key climate change, seismic and flooding data is missing.

There are other serious design flaws dealing with safety that apply to all Candu reactors called generic action items. Many have not been solved including the positive void coefficient which was responsible for the Chernobyl accident and Canada's first nuclear accident, an NRX reactor remarkably similar in design to the Candu. Although other countries will not even allow reactors with such serious design flaws to operate, Canada does. We believe that in this time of climate change, earthquakes and terrorism, reactors with design flaws that could cause mass devastation should not be licensed.

Point Lepreau has a known history of feeder pipes cracking for various reasons. Early refurbishment was the immediate answer to this problem but although the pipes are now new, the problem of stress cracks, pipe embrittlement and the resulting catastrophic accident if more than one breaks have not been solved or even completely understood. We believe that no licensing body anywhere should have confidence in the safety of crucial equipment that have a history of unforeseen breaks.

Advertising Canada has been clear with the nuclear industry that they are not to misrepresent nuclear power as non-emitting. On top of the fossil fuel burned in the nuclear fuel cycle, many other radioactive elements are continually emitted from nuclear power plants. As a matter of fact, NB Power should not be representing nuclear power as green. Using tritium as an example, compared to other types of reactors, Candu reactors emit especially high amounts. The safe limit in Canada for tritium in drinking water is 7,000 Bq/L. The USA's limit is 740 Bq/L. In Europe the limit is 100 Bq/L. Again this seems to be the rules fitting the reactor not the reactor fitting the rules. Nuclear is not Green. It leaves a legacy of waste behind forever and emits a host of mutating and cancer causing agents that permeate all living organisms for a very long time.

The final thing we are asking for is that these hearings to be cancelled. NB Power should not get an operating license. We believe that the Nuclear Safety and Control Act has been violated and intend to ask under the rules of procedure for the hearings for a decision from the commission as to whether the act has been broken.