



Oral presentation

Submission from Ole Hendrickson

In the Matter of

Ontario Power Generation Inc.

Application to renew the Power
Reactor Operating licence for the
Darlington Nuclear Generating Station

Commission Public Hearing
Part 2

November 2-5, 2015

Exposé oral

Mémoire de Ole Hendrickson

À l'égard de

Ontario Power Generation Inc.

Demande concernant le renouvellement
du permis d'exploitation pour la centrale
nucléaire de Darlington

Audience publique de la Commission
Partie 2

2-5 novembre 2015

September 28, 2015

Secretariat, Canadian Nuclear Safety Commission
280 Slater St., P.O. Box 1046
Ottawa, ON K1P 5S9
Email: interventions@cnscccsn.gc.ca

Re: Relicensing hearing for the Darlington Nuclear Generating Station

Dear Commissioners:

I have intervened at many CNSC hearings, mostly on behalf of the Concerned Citizens of Renfrew County (CCRC), addressing the two nuclear facilities in the County of Renfrew (the Canadian Nuclear Laboratories, formerly the Chalk River Laboratories of AECL; and SRB Technologies (Canada) Inc. in Pembroke). CCRC is focused on issues related to radioactive pollutants, health and safety.

I have been persuaded to submit this intervention (on my own behalf) for the relicensing hearing for the Darlington Nuclear Generating Station by a combination of two things:

- the 13-year licence term proposed by Ontario Power Generation (OPG); and
- the statement on the CNSC's website for the hearing that this licence term "would allow adequate time to complete the proposed refurbishment of all Darlington units."

I will base some of my arguments on the uncertain economics of refurbishment, while explaining that economics cannot be separated from the health, safety and environmental mandate of the CNSC.

Refurbishment is a complex, expensive, risky and time-consuming process. It is a fact that refurbishment of CANDU reactors at the Bruce and Point Lepreau facilities has involved years of delay and billions of dollars in cost over-runs. It is also true that workers carrying out refurbishment activities at the Bruce facility suffered high exposures to alpha radiation in 2009.

Ontario ratepayers – right across the province - are also suffering: from high electricity costs associated in part with past spending on nuclear power. The most visible indication of this has been the "debt retirement charge" on residential bills (targeted for removal January 1, 2016) and on commercial bills (estimated removal in 2018).

According to the Ontario Ministry of Finance (<http://www.fin.gov.on.ca/en/tax/drc/>), the debt retirement charge resulted from \$19.4 billion in unfunded liabilities, or "stranded debt", associated with the restructuring of Ontario Hydro in 1999. Of the \$38.1 billion spent by Ontario Hydro to build generating and transmission infrastructure, less than half (\$18.7 billion) could be recovered as "assets" at the time of the 1999 restructuring, leaving ratepayers "on the hook" for the remainder.

A very significant portion of Ontario Hydro's \$38.1 billion expenditure - \$14.4 billion – was associated with Darlington reactor construction, which ended in 1993. Now, OPG is proposing complete refurbishment of the Darlington reactors. This is currently estimated to cost \$12.9 billion, but this figure increases whenever costs are reviewed – and work has not even started yet.

There are other options for providing Ontario's electricity. Particularly attractive (and likely much cheaper) would be hydropower imports from Quebec. But the nuclear lobby is strong. It argues that

money spent on refurbishment creates jobs, and contracts for businesses. The subtext is that as long as you happen to have one of those jobs, or contracts, you shouldn't care how much money is spent (and ratepayers be damned!).

So why is this an issue for the CNSC and the proposed 13-year licence term?

Section 9 of the *Nuclear Safety and Control Act* requires the CNSC to prevent "unreasonable risk" to the health and safety of persons associated with development, production and use of nuclear energy. Can this be done without regular public hearings? Many members of the public would say "No" – and Commissioners will hear from them, in significant numbers.

If a licensee such as OPG embarks upon a complex, expensive, risky, and time-consuming process with huge implications for electricity costs (and ultimately, the health of Ontario's economy), Canada's nuclear regulator should provide more – not fewer – opportunities for citizens to review and comment on the licensee's performance.

If OPG is allowed to proceed with refurbishment – which will be largely a political decision – it will be under tremendous pressure to hold down costs, and to keep as close to its proposed schedule as possible. This is especially true given the history of cost over-runs and time delays with previous CANDU refurbishment projects.

Cutting costs can mean cutting corners. Speed creates risks, as any driver knows. Pressures to cut costs and work rapidly increase health and safety risks to both workers and the public. The Darlington reactors are located very close to Canada's major population center, and consequences of an accident could be grave. The CNSC, and the public, must be especially vigilant during a refurbishment project.

CNSC's "Refurbishment and Life Extension" website says that during project execution "a team of on-site CNSC inspectors is present throughout the project, to verify safety and compliance with the licence." It adds, "The CNSC reports publicly on the results of its inspections." Frequent public hearings are the best means for the CNSC to report publicly on health- and safety-related aspects of refurbishment.

The "Refurbishment and Life Extension" website also notes that during the project execution phase, large amounts of [highly radioactive] nuclear waste will be generated. Management of nuclear waste is probably the most controversial environmental issue dealt with by the CSNC. The public has a right to know how refurbishment wastes are being managed. Again, frequent public hearings are the best means for the CNSC to report on this and other environment-related aspects of refurbishment.

Given these considerations, for the CNSC to suggest that the entire Darlington refurbishment process can be carried out without a single formal public hearing (by means of a 13-year licence) is completely unacceptable. Five years is the maximum acceptable licence term for the Darlington facility.

Ole Hendrickson