Ontario's Stranded Nuclear Debt: A Cautionary Tale

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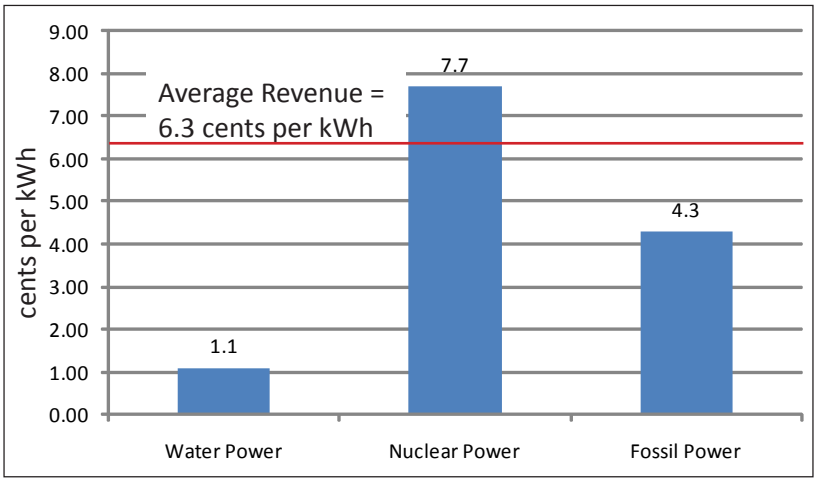
Introduction

As Figure 1 indicates Ontario Hydro's average revenue from the sale of electricity in 1998 (6.3 cents per kWh) was *less* than its cost of producing nuclear electricity (7.7 cents per kWh), but greater than its cost of water power (1.1 cents per kWh) and fossil power (4.3 cents per kWh). In other words, Ontario Hydro's profits from its water and fossil power generating stations subsidized the operating losses of its nuclear reactors.

Figure 1: Ontario Hydro's Average Revenue and Cost of Electricity Generation in 1998[1]



As a result of the cost overruns and the poor performance of its nuclear reactors, Ontario Hydro was broken up into five companies in 1999. All of its generation assets were transferred to Ontario Power Generation (OPG). However, in order to keep OPG solvent, $19.4 billion of Ontario Hydro's debt or unfunded liabilities associated with electricity generation facilities was transferred to the Ontario Electricity Financial Corporation (an agency of the Government of Ontario) as "stranded debt" or "unfunded liability".[2] More than three-quarters of the stranded debt was with respect to Ontario Hydro's financially unsustainable nuclear liabilities.[3]

Ontario's electricity consumers and taxpayers are required to pay-off the defunct Ontario Hydro's stranded debt because all of its borrowings were guaranteed by the Government of Ontario. As a consequence, the Ontario Electricity Financial Corporation (OEFC) collects revenues from the following sources to help pay off the stranded debt.

- A debt retirement charge of 0.7 cents per kWh, which is levied on all Ontario electricity consumers.
- All of the provincial income tax payments from OPG, Hydro One and Ontario's municipal electric utilities (e.g., Toronto Hydro).
- All of the dividend payments from OPG and Hydro One to their sole shareholder, the Government of Ontario.[4]

Stranded Debt Elimination Forecasts

In each year, starting in March 2000, the OEFC has provided forecasts of when the stranded debt will be eliminated.

- In 2000 the OEFC forecast that the debt would be eliminated in "a reasonable time".[5]
- In 2001 the OEFC forecast that the debt would be eliminated "in the years ranging from 2010 to 2017."[6]
- In 2002 and 2003 the OEFC forecast that the debt would likely be eliminated in 2012.[7]
- In 2004, 2005, 2006 and 2007 the OEFC forecast

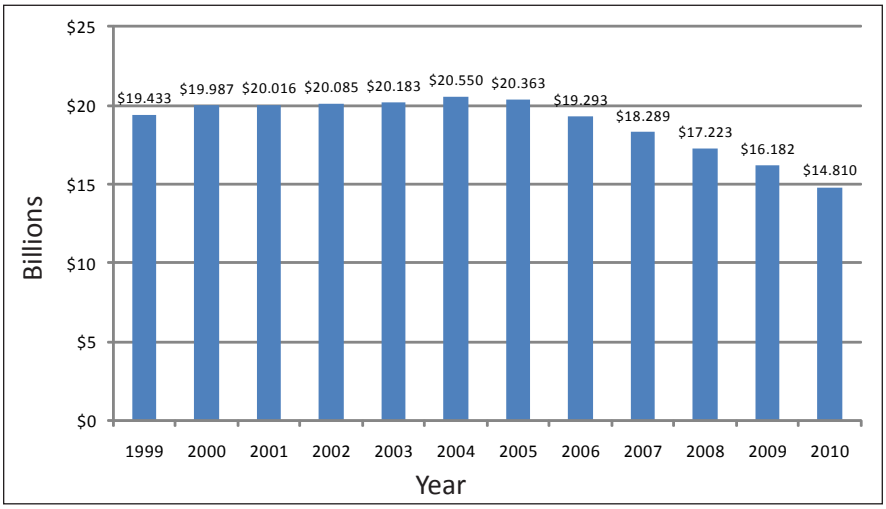
that the debt would likely be eliminated between 2012 and 2020.[8]

- In 2008 and 2009 the OEFC forecast that the debt will likely be eliminated between 2014 and 2018.[9]
- In 2010 the OEFC forecast that the debt will likely be eliminated between 2015 and 2018.[10]

Actual Values of the Stranded Debt: 1999 to 2010

As Figure 2 reveals, the actual value of the stranded debt rose steadily between 1999 and 2004 due to the continuing poor performance and cost overruns (e.g., Pickering re-starts) of Ontario's nuclear reactors, as well as former Premier Ernie Eves November 11, 2002 decision to freeze the wholesale price of electricity at 4.3 cents per kWh (specifically, the price freeze added $918 million to the stranded debt in 2003 and 2004.[11]) On April 1, 2004 the price freeze was eliminated and the stranded debt began to decline. As a result, the stranded debt in 2010 was 24% lower than its opening value in 1999, but still had an outstanding balance of close to $15 billion.

Figure 2: Ontario's Stranded Debt[12]



Stranded Debt Payments

Between April 1, 1999 and March 31, 2010, Ontario's electricity consumers and taxpayers have made annual payments totaling $19.603 billion to service and pay down the stranded debt. In other words, the total debt payments made by Ontario's consumers and taxpayers since 1999 have now exceeded the original value of the stranded debt ($19.433 billion) — and we still owe $14.81 billion.

Protecting Ontario's Consumers and Taxpayers from Additional Debt

OPG is now proposing to re-build the reactors at its Darlington Nuclear Station. According to OPG, the Darlington Re-Build will have a capital cost of $8.5 to $14 billion.[14] However, OPG's estimate is problematic for two reasons:

First, every nuclear project in Ontario's history has gone vastly over budget. On average, the real costs of Ontario's nuclear projects have been 2.5 times greater than the original cost estimates.[15] Therefore, if history repeats itself, the real cost of the Darlington Re-Build will be $21 to $35 billion.

Second, OPG is hoping that Ontario's taxpayers will guarantee the repayment of 100% of its borrowings for this high-risk nuclear project.[16]

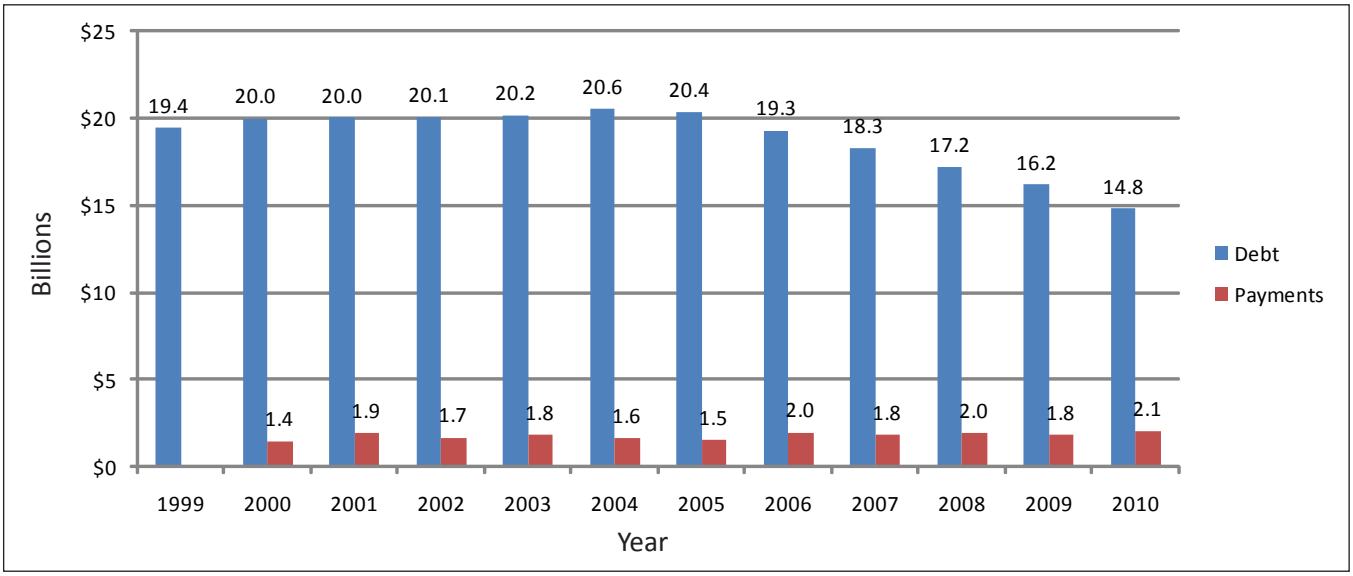
To put OPG's request in context, it is important to note that the Ontario Power Authority has signed more than 1,000 contracts for electricity from solar, wind, biomass, water and natural gas-fired generating stations that are owned by individuals, farmers, co-ops, First Nations Communities and private companies and none of these contracts contain promises by the Government of Ontario to repay the debts of these electricity generating projects. In addition, none of these contacts permit the electricity generator to pass their capital cost overruns on to Ontario's electricity consumers or taxpayers.

Therefore to protect Ontario's consumers and taxpayers from potential problems associated with the proposed Darlington Re-Build Project, the Government of Ontario must tell OPG that:

- It will not guarantee the repayment of the Darlington Re-Build Project's debts; and
- It will not allow any cost overruns associated with the Darlington Re-Build Project to be passed on to Ontario's consumers or taxpayers.

To proceed with the Darlington Re-Build and meet the above criteria, OPG must find a third party (e.g., Areva, Atomic Energy of Canada, Bruce Power, General Electric) that will agree to re-build Darlington pursuant to an all-in fixed-price contract.

Figure 3: Annual Payments to Service and Pay Down the Stranded Debt and Outstanding Balalnce[13]



Nuclear is one of the most expensive ways to keep the lights on in Ontario. Fortunately, the province has numerous more affordable and reliable options for meeting its electricity needs and none of these alternatives includes the risk that Ontario's electricity consumers or taxpayers will be responsible for paying-off additional stranded debt.

Lessons learned

No nuclear project in Ontario's history has ever been completed on time or on budget. Currently, retrofit projects at the Point LePreau Nuclear Station in New Brunswick and the Bruce Power Station in Ontario are running years behind schedule and billions of dollars over budget. Ontario ratepayers and taxpayers, who are still facing a mountain of debt from previous nuclear projects, deserve no less than a firm guarantee that they will not be left once again with a vast pile of stranded debt from a Darlington Rebuild Project, particularly when less risky and more financially viable alternatives are readily available to meet our power needs.

Approximate Costs of Ontario's Electricity Resource Options[17]

Energy Efficiency	Combined Heat and Power	Water Power Imports from Quebec	Darlington Re-Build
2.3 to 4.6 cents per kWh	5.7 to 6.0 cents per kWh	6.5 cents per kWh	19 to 37 cents per kWh

Endnotes

1 Ontario Hydro, *Final Annual Report January 1998 – March 1999*, pp. 66 & 67.

2 Ontario Electricity Financial Corporation, *Annual Report April 1, 1999 to March 31, 2000*, pp. 7 & 8.

3 The remainder of the stranded debt, $4.286 billion, was with respect to non-utility generation contracts. Ibid., p. 21.

4 Ibid., p. 28.

5 Ibid., p. 28.

6 OEFC, *Annual Report 2001*, p. 29.

7 OEFC, *Annual Report 2002*, p. 29 and *Annual Report 2003*, p. 25.

8 OEFC, *Annual Report 2004*, p. 25; *Annual Report 2005*, p. 26; *Annual Report 2006*, p. 26; *Annual Report 2007*, p. 20.

9 OEFC, *Annual Report 2008*, p. 20; *Annual Report 2009*, p. 20.

10 OEFC, *Annual Report 2010*, p. 5.

11 OEFC, *Annual Report 2004*, pp. 17 & 25.

12 OEFC, *Annual Report April 1, 1999 to March 31, 2000*, p. 22; *Annual Report 2002*, p. 21; *Annual Report 2003*, p. 16; *Annual Report 2004*, p. 16; *Annual Report 2005*, p. 16; *Annual Report 2006*, p. 16; *Annual Report 2007*, p. 11; *Annual Report 2008*, p. 11; *Annual Report 2009*, p. 11; *Annual Report 2010*, p. 11.

13 OEFC, *Annual Report April 1, 1999 to March 31, 2000*, p. 22; *Annual Report 2002*, p. 22; *Annual Report 2003*, p. 17; *Annual Report 2004*, p. 17; *Annual Report 2005*, p. 17; *Annual Report 2006*, p. 17; *Annual Report 2007*, p. 12; *Annual Report 2008*, p. 12; *Annual Report 2009*, p. 12; *Annual Report 2010*, p. 12.

14 Ontario Energy Board Docket No. EB-2010-0008, Exhibit JT1.2.

15 Ontario Clean Air Alliance Research Inc., *The Darlington Re-Build Consumer Protection Plan*, (September, 2010), p. 5.

16 Ontario Energy Board Docket No. EB-2010-0008, Transcript Volume 13, p. 56; and OPG, *2011/2012 Regulated Facilities Payment Amounts Stakeholder Information Session 1*, (March 29, 2010), p. 18.

17 *The Darlington Re-Build Consumer Protection Plan*, p. 3.

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