Ten Years of Liberal Mismanagement of Ontario's Electricity System

A Layperson's Summary

On July 16, 2013, Parker Gallant, a retired banker who for about six years has written about Ontario electricity policies, wrote an article to mark the forthcoming tenth anniversary of the Liberal Party's tenure as government of Ontario. Mr. Gallant's article can be found at the following link:
http://www.freewco.blogspot.ca/2013/07/ontario-liberals-10-years-of.html

This article is of great importance for Ontario residents who want to understand what has been happening to electricity supply, demand and prices over the past decade and, perhaps more importantly, how they should weigh these developments as they contemplate forthcoming elections in the province. Shortly, there will be five by-elections in different parts of Ontario that may swing the balance of power in the legislature. It is also likely that there will be a general election in Ontario within the next two years.

Voters need to understand what the fuss is all about and how it affects them. Unfortunately, Mr. Gallant's article, as wonderfully insightful as it is, might be difficult to understand for the average citizen who does not follow electricity matters on a regular basis. The objective of this note is to offer a somewhat simplified version of the story people should know.

A Short History

The production, transportation, distribution and sale of electrical energy have been under government control in Ontario for over seventy years. Up until the late 1990s, most of the generation (i.e., production) of electrical energy was by conventional means such as hydropower (e.g., from dams), nuclear power, or fossil fuel power sources based on coal, oil or natural gas. This generation, and the long-distance transmission of the resulting power, was done by a single large Crown Corporation called Ontario Hydro. The local distribution and sale of power to end users (industry, commerce and residential users) was usually done by companies that are owned and operated by local municipalities.

In the late 1990s, the previous Conservative government began to prepare the way for the privatization of Ontario Hydro and for electricity policies based more on competitive market forces, rather than government ownership, control and operation. Ontario Hydro was broken up into different parts that might eventually be sold – a generation company (Ontario Power Generation, or OPG); a transmission company (Hydro One); and a company that manages the hourly power needs and also operates a trading and pricing system, buying power from neighbouring utilities and from private generators and selling surplus power to neighbouring utilities (the Independent Electricity System Operator, or IESO). OPG and Hydro One

are not only owned and run by the government; they are also utilities whose revenues, rates and profits are subject to review by the Ontario Energy Board, a government board largely at arms-length from the political arm of government. The government also created a company to hold the "stranded" debt of the former Ontario Hydro and to act as a funding arm when the utilities' revenues did not cover their costs (Ontario Electricity Financial Corporation, or OEFC). Finally, the Ontario Power Authority (OPA) was created to act as the government's policy execution body, the vehicle by which the Ontario Cabinet plays a large role in determining supply and prices.

Political opposition to privatization and increased reliance on markets prevented this from happening, and when the Liberal Party won the provincial election in 2003, it announced that it would reject this approach.

For simplicity's sake, I will henceforth refer to Ontario Power Generation as the generator, to Hydro One as the transmission company, to the Independent Electricity Systems Operator as the trading company, to Ontario Electricity Financial Corporation as the debt holding company, and to the Ontario Power Authority as the policy organization.

Throughout most of the post-war period, the central goals of Ontario electricity policy were to assure the security and reliability of electricity supply to provincial consumers and to keep electricity rates as low as possible consistent with this objective. The security and reliability of supply meant that Ontario electricity consumers in the different classes (residential, commercial and industrial) would not be exposed to the risks of brownouts and blackouts; this goal was particularly important as the province became heavily electrified and dependent upon modern computer systems that required no interruptions in electricity service for industry. The provincial government sought deliberately to keep Ontario electricity rates lower than those in other regions of North America as a way of enticing electricity-intensive industry to invest here and to expand employment.

The central thrust of electricity policy changed with the election of the Liberal government in 2003. From that time on, the government sought to place environmental objectives over economic ones. Specifically, the government decided to shut down Ontario's coal burning power plants because of its concerns about the effects of emissions from these plants on local air quality and on climate change. The government sought to implement an eight-part strategy:

- Increasing electricity generation from new and refurbished nuclear power plants
- Increasing electricity generation from large hydro-electric plants
- Providing above-market prices and preferential treatment for renewable electricity generation sources (solar, wind, biomass, small hydro and cogeneration) by new independent generation sources

- Requiring the transmission company to build new transmission lines to connect all the new electricity generation to the provincial electricity grid
- Increasing electricity rates for consumers, introducing time-of-use rates, and funding expensive conservation programs to force Ontario consumers to reduce their electricity usage
- Implementing a discount program for large industrial users funded by residential and commercial users to offset partially the adverse competitive effects of higher electricity rates
- Introducing a taxpayer subsidy of all electricity rates to slow the rate of rise in electricity prices
- Weakening the authority of government regulatory bodies such as the Ontario Energy Board and local government land use review boards to impede these environmentally driven initiatives.

<u>The Litany of Extraordinary Costs Incurred</u>

The article by Parker Gallant does not describe all of the costs that have been incurred by the government of Ontario and the electricity organizations that it has operated since 2003. Rather, it represents a list of some extraordinary costs most of which were unnecessary if judged from the perspective of traditional Ontario electricity policy goals. The main points are summarized here:

1) The Policy Organization that Did Nothing

   The OPA was initially established to set up a long-term plan (i.e. the "integrated power system plan" or IPSP) for electricity supply in Ontario. Instead, the government has rejected every plan and chosen to govern through a series of Ministerial directives controlling every aspect of electricity. At a cost of $75 million per year, the policy organization has failed in its task; it has cost $750 million over 10 years.

2) The Hydro-Electric White Elephants

   The Minister of Energy ordered the generator to build "Big Becky", the new tunnel under Niagara Falls. The cost of this project so far has been $1.6 billion ($600 million over the original budget) for an increase in hydro capacity of only 140 megawatts (MW) or a capital cost of $11.5 million per MW. The normal cost for new hydro generation should be about one tenth of that.

   The Minister also directed the policy organization to negotiate a contract with the generator for the upper and lower Mattagami hydro projects. These projects will cost $2.6 billion but add marginal power to the Ontario grid and will do so primarily in the spring months when power demand is at its

lowest. As power cannot be stored, this means the generator will either "spill" the water or sell it to neighbouring U.S. states at a loss.

3) The Mysterious Never-Ending Ontario Hydro Debt

Responsibility for servicing and managing the "legacy" debt of Ontario Hydro, which totaled $20.9 billion in 1999, was given to the Ontario Electricity Financial Corporation (OEFC).

To retire the debt, the government established a long-term plan wherein the burden of debt repayment would be borne partly through dedicated revenues from the electricity sector companies – Ontario Power Generation (OPG), Hydro One, and Municipal Electrical Utilities – and partly by electricity consumers directly. (Bear in mind that all the revenues from the electricity sector companies come from electricity consumers, so electricity consumers pay all the costs, one way or the other.).

As of April 1, 1999, the present value of these two revenue streams was estimated at $13.1 billion. The estimated balance remaining on the original $20.9 billion stranded debt, amounting to $7.8 billion, was called the "residual stranded debt" and the *Electricity Act* provided for a new Debt Retirement Charge (DRC) to be paid by electricity consumers until the residual stranded debt was retired.

The debt retirement charge has been collected from ratepayers since May 1, 2002. The rate of the charge was established at 0.7 cents per kWh of electricity and remains the same today. Currently, the OEFC collects more than $900 million a year in DRC revenues from ratepayers. As of March 31, 2011, ratepayers had paid approximately $8.7 billion in DRC revenues, enough to have totally covered the original stranded debt of $7.8 billion as calculated in 1999.

However, the government refuses to eliminate the debt retirement charge, allegedly because not all of the legacy debt has been paid. The OEFC stated in its 2010 Annual Report that "residual stranded debt will likely be retired between 2015 and 2018". For two years, the government has refused to issue the OEFC financial statements, while collecting $1.8 billion more from ratepayers through the DRC.

4) The Extraordinary Cost of Wind and Solar Power Generation and Transmission

The operating company is responsible for planning and purchasing power from wind and solar energy in Ontario. Ontario is the largest producer of wind energy in Canada, with current generation capacity of over 1200 MW. According to IESO's projections, installed wind capacity will peak at over

3000 MW in 2015 and over 4500 MW in 2020. Wind farms (i.e. groupings of wind mills) are located primarily in southern Ontario, but there a number of plants planned in northern Ontario. The actual production of wind energy represents 3% of Ontario's current generation.

Wind and solar energy are currently not competitive with electrical energy produced from conventional sources like coal, oil, natural gas, hydro or nuclear. Because of this, the government of Ontario has implemented a subsidy program in the form of the Feed-in-Tariff FIT), or an above-market rate that the trading company must pay to wind power producers. The current FIT rate for on-shore wind projects is 13.5 cents per kWh, four times the cost of conventional energy and this is guaranteed for 20 years. The rate set for solar energy was 80 cents per kWh, 30 times the cost of conventional energy and fixed for twenty years!

That is just the beginning. Wind and solar energy are "intermittent" energy sources meaning that they produce only when the wind blows or the suns shines respectively. To provide assured power to meet Ontario's ongoing electricity demand, the province has required the generator to build and operate natural gas plants to back up the renewables supply. The rate for idling gas plants is $15 per MW per month. With approximately 7000 MW currently installed and another 1200 contracted for, that will cost ratepayers upwards of $1 billion annually, or $20 billion over 20 years.

The fact that wind and solar plants produce electricity intermittently has given rise to other serious problems. Since 2008, Ontario has actually had more electricity generating capacity than the province demands. This is due to two sets of factors. The first is the growth in generating capacity at nuclear and hydro power plants since 2000. The second is the sharp drop in electricity demand due to the recession, the flight of industry from the province and conservation (due largely to higher electricity rates). This surplus is projected to last until at least 2018.

Over 80% of the time that wind and solar plants produce electricity, it is not needed in the province. Because the Liberal government gave these sources preferential rights of access to the grid, when they produce other (cheaper) sources of generation must be cut back. This particularly affects nuclear power plants, which are called upon to "steam off" power. The costs of this have not been published, but Parker Gallant estimates them to be about $100 million per year, or $2 billion over 20 years.

This affects the generator 's operating revenue, as the surplus of power lowers the wholesale price of free market electricity in Ontario for hydro and coal generated electricity. The generator has been selling this power at low prices (2.4 and 2.6 cents a kWh) and since 2003 has seen its revenues fall by

almost $2 billion per year. The cost of this to Ontario taxpayers, as the owners of the generator, will be between $15 billion and $20 billion.

Often, it is not possible for existing conventional generation plants to be cut back and other markets must be found for the surplus electricity produced by wind and solar plants. In these cases, the trading company has had to sell surplus power to neighbouring provinces and states. This is usually done at depressed prices as low as 2 cents per kWh; in some cases, the trading company has had to pay others to take the power. The cost of this is about $500 million annually.

The wind and solar energy sources are widely dispersed, often a long way from urban centres that need the energy. The transmission company has had to build significantly more transmission lines to connect these sources to the grid. In fact, the capital cost of new transmission capacity to transport the renewable energy is somewhere between $1.3 billion and $1.7 billion annually, according to the Fraser Institute.

What does this mean in total? Based on analysis done by the Ontario Auditor General (AGO), the renewable energy sources are already costing Ontario households over $2.2 billion annually. The AGO also estimated that by 2014 about $2.7 billion will be attributable to renewable energy contracts. Taking the renewable-related grid spending to be worth $1.3 billion annually, the foregoing considerations add up to $4 billion in annual costs to Ontario households. This does not include the reduction in value of the taxpayer-owned generator.

5) "Smart" Meters? - Dumb and Dumber

The Liberal government believes in the same principle as gas station owners on long weekends – when your customers need energy the most, raise the price! To allow the local distribution companies in each city to do this, the trading company introduced "smart" meters that would allow the distribution companies to know when electricity is being used in each residence. Then, the utilities could introduce "time of use" prices so that rates go up when people need the electricity the most. The cost of installing these meters across Ontario was $1.5 billion.

The entire transmission grid will also be made "smart" (i.e. computerized) as well to allow the trading company to pay renewable energy generators when their production is not needed. This will cost about $1.5 billion.

6) Make the Taxpayer Pay – the HST and the "Ontario Clean Energy Benefit"

As part of the harmonization of the federal GST and the provincial sales tax (PST) into the HST, the application of the tax was broadened to include

electricity, which raised electricity bills by 8%. The cost to ratepayers is about $1.2 billion annually, but this will grow as electricity rates rise. The cost to ratepayers over 20 years will be about $24 billion.

The continuous rise in electricity prices caused some concern in the Liberal government, so it decided to switch a portion of the costs from ratepayers to taxpayers. It launched the "Ontario Clean Energy Benefit", under which the government (i.e. provincial taxpayers) would give ratepayers a 10% rebate on their electricity bills. The cost is $1.5 billion annually for the years 2011 through 2014, or $6 billion in total.

7) Pass the Bucket

The effect of Liberal electricity policy has been to raise electricity rates for all classes of customers. In most cases, they have doubled. Further, rates will increase significantly more over the next eight years. The large industrial plants in Ontario, concerned about the effects of these higher costs on their competitiveness, have cut operations; this has cost the province an estimated 300,000 manufacturing jobs. In response to a lobbying campaign by industry, the Liberal government authorized a change in the allocation of costs among consumer groups so that about $200 million per year in costs were diverted from industry to residences and commercial users. The cost of this to residential and commercial users, if continued, would be $2 billion over 20 years.

8) The Cancelled Natural Gas Plants

In the months leading up to the 2011 provincial election, the Liberal government cancelled the construction of two natural gas plants that were already partially completed in ridings where the construction had become controversial. The cancellations were not based on the judgments that the plants were not needed nor that alternate sites would be lower in cost or local impacts. The two ridings subsequently elected Liberal MLAs. The cost of the cancellations has been the subject of considerable debate in the legislature and the Auditor General will produce a report on this in late August, 2013. The current estimate of the cost is $585 million. It is likely that the cost will be closer to $1 billion.

Conclusion

The massive costs incurred by the Liberals were allegedly to reduce pollution. The options chosen, however, were not subjected to benefit-cost analysis. Subsequent studies by the Fraser Institute showed that the same emissions reduction benefits could have been achieved at one tenth of the cost. In fact, it could be argued that, as Ontario has had substantial electricity generation surpluses for years, the additional renewable energy sources were not needed at all.

While spending billions of dollars on new “green” generation, the Liberals have ignored the real electricity infrastructure problems. A recent example of this was the blackout experienced by hundreds of thousands of people living in the greater Toronto area as a result of floods. Those floods caused the Manby transformer station to flood and the grid in the southwestern GTA to collapse, causing the outage. The weakness of the Manby station has been known for years; it was one of the reasons why the generator decided initially to build the gas plants in Mississauga and Oakville.

It is time for governments to stop using electricity as a political football in Ontario. The costs are just too high.