Oakville Power Plant Cancellation Costs

Special Report

October 2013

Office of the Auditor General of Ontario

Office of the Auditor General of Ontario

To the Honourable Speaker
of the Legislative Assembly

I am pleased to transmit my Special Report on the Oakville Power Plant Cancellation Costs, as requested by the Premier of Ontario under Section 17 of the *Auditor General Act*.

Bonnie Lysyk
Auditor General

October 2013

Ce document est également disponible en français.

ISBN 978-1-4606-2844-7 (Print)
ISBN 978-1-4606-2845-4 (PDF)

Cover photograph credits:
left: © iStockphoto.com/buzbuzzer
right: © iStockphoto.com/Rod MacPherson

Table of Contents

Special Report

Oakville Power Plant Cancellation Costs

1.0 Background

The need for a natural gas electricity generation plant in the Southwest Greater Toronto Area (Southwest GTA) was first identified by the Ontario Power Authority (OPA) in its 2007 Integrated Power System Plan (Plan). Developing the Plan is one of the OPA's key responsibilities as the province's long-term energy forecaster and planner.

In response to the Plan, the Minister of Energy and Infrastructure directed the OPA in August 2008 to competitively procure a combined-cycle gas generation facility in the Southwest GTA with a capacity of up to 850 megawatts (MWs), to begin operating no later than December 31, 2013.

Three bidders for the project proposed plants in Mississauga and one proposed a plant in Oakville. Knowing this, the Town of Oakville began taking measures in spring 2009 to stop the building of a power plant within its borders.

In September 2009, the OPA awarded a contract to TransCanada Energy Ltd. (TCE) to build a combined-cycle gas-generation facility in Oakville and to begin commercial operations by February 8, 2014, for a period of 20 years. The contract between the OPA and TCE was executed on October 9, 2009. However, continued opposition from the Town of Oakville prevented TCE from obtaining necessary permits and approvals to begin construction.

On October 7, 2010, the government announced the cancellation of the proposed Oakville plant. Soon after, negotiations began toward a settlement with TCE on a replacement project. In December 2012, the OPA announced that it had reached a deal with TCE to relocate the plant beside an existing Ontario Power Generation plant in Napanee.

On February 7, 2013, the Premier of Ontario wrote to the Auditor General requesting a review of the costs associated with the cancellation of the Oakville gas plant. On February 11, 2013, the Auditor General accepted the request under Section 17 of the *Auditor General Act*, which states that the Auditor General may undertake a special assignment requested by the Premier.

On February 28, 2013, the Premier announced that the Standing Committee on Justice Policy would convene "to look at the issue of document disclosure related to the relocation of the two gas plants in Mississauga and Oakville" (in July 2012, the Minister of Energy announced that a power plant that had started to be constructed in Mississauga would be relocated to Lambton). The Committee's mandate was expanded on March 5, 2013, to include questioning witnesses on the tendering, planning, commissioning, cancellation and relocation of the two plants.

On April 30, 2013, the Chief Executive Officer of the OPA testified to the Committee that the OPA estimated the cost of cancelling and relocating the Oakville gas plant to be $310 million and that cost estimates would continue to evolve.

A chronology of events relating to the Oakville plant from 2007 to 2013 is provided in Figure 1.

Figure 1: Chronology of Key Events Relating to the Oakville Power Plant Cancellation
Prepared by the Office of the Auditor General of Ontario

August 2007	The Ontario Power Authority (OPA) files its Integrated Power System Plan (IPSP) for 2008 to 2027 with the Ontario Energy Board. The IPSP highlights the need for new gas-fired electricity generation in the Southwest Greater Toronto Area (Southwest GTA).
August 2008	The Minister of Energy and Infrastructure directs the OPA to procure a gas-fired electricity generation facility in the Southwest GTA of up to 850 megawatts (MWs).
October 2008	The OPA starts the procurement process by releasing a Request for Qualifications (RFQ). The RFQ results in the shortlisting of four proponents, including TransCanada Energy Ltd (TCE). TCE is proposing to build its plant in the Town of Oakville.
March 2009	The OPA issues a Request for Proposals (RFP) to the four shortlisted proponents.
	The Town of Oakville begins taking measures to stop the building of a plant within its borders.
May 2009	The OPA told bidders that changes made to municipal zoning and regulations after January 2009 would not be considered in its evaluation of their proposals.
September 2009	The OPA announces TCE as the winning proponent of the RFP for the Southwest GTA 850-MW generation facility.
October 2009	The OPA and TCE sign the Southwest GTA Clean Energy Supply (CES) contract for the Oakville plant.
June 2010	TCE misses the milestone date under the CES contract for obtaining all pre-construction approvals and permits for the Oakville plant from the Town of Oakville.
October 2010	The Government announces the cancellation of the Oakville plant.
December 2010	The OPA and TCE execute a memorandum of understanding (MOU) to relocate the Oakville plant to the Kitchener-Waterloo-Cambridge (KWC) area.
March 2011	TCE provides project pricing and terms for the proposed KWC plant in the KWC area. The OPA makes a counter proposal to TCE.
April 2011	TCE rejects OPA's counter proposal. The Minister's Office asks the OPA to make a second counter proposal to TCE, which is also rejected. TCE provides written notice to the OPA and the Ministry of Energy of its intent to begin action to recover damages as a result of the termination of the Oakville plant contract.
June 2011	The OPA–TCE MOU for the KWC plant expires.
August 2011	The Province, the OPA and TCE enter into an arbitration agreement that establishes the framework for binding arbitration in the event a settlement cannot be reached.
August 2011–September 2012	Negotiations toward a settlement with TCE with respect to the cancelled Oakville plant continue.
September 2012	The Province, the OPA, Ontario Power Generation (OPG) and TCE enter into MOUs to relocate the Oakville plant to an existing OPG site in Napanee.
December 2012	The Province, the OPA, OPG and TCE sign the final agreements for relocating the Oakville plant to Napanee.
February 2013	The Premier requests the Auditor General to conduct a review of the cost of the cancelled Oakville gas plant.
	The Premier announces that the Standing Committee on Justice Policy will convene to conduct hearings on the cancellation of the Oakville gas plant, as well as the 2011 cancellation of a gas plant in Mississauga.

2.0 Review Objective and Scope

The objective of our review was to estimate the costs associated with the cancellation and relocation of the Oakville plant.

At the time of the Premier's request, our Office was working on a special assignment on the costs associated with the cancellation of the Mississauga gas plant, requested by the Standing Committee on Public Accounts on September 5, 2012. After accepting the Premier's request, the then Auditor General indicated to the OPA in March 2013 that our work on the Oakville plant would be very similar to the Mississauga work and would begin as soon as that report was completed. We tabled the Mississauga report on April 15, 2013, and it can be found at **www.auditor.on.ca**.

We consulted with many of the key players in the electricity sector for our review of the cancellation and relocation of the Oakville plant. The Appendix identifies them and outlines their roles.

We also:

- examined documents relating to the tendering of the Oakville plant between 2008 and 2009, agreements between TCE and the OPA, Ontario Power Generation (OPG) and the Ministry of Energy, and related supporting documentation;
- met with officials of the Town of Oakville to discuss the extent to which permitting issues would have delayed the construction of the Oakville plant;
- interviewed key personnel within the OPA, Infrastructure Ontario, the Ministry of Energy and OPG involved in the negotiation and settlement with TCE related to the cancelled Oakville plant;
- searched for any payments that the OPA or the Ministry of Energy made to TCE to determine if any were part of the cancellation costs;
- discussed the relocation of the proposed Oakville plant to Napanee with officials at Hydro One and the Independent Electricity System Operator to understand how this would affect the province's electricity system;
- discussed with the gas distributor in Napanee the impact of relocation on the plant's natural gas connection and management costs;
- met with a senior official of the Town of Greater Napanee regarding the approval process for the Napanee site; and
- visited the Napanee site and the existing OPG Lennox plant next to it to obtain an understanding of the services (such as water intake and discharge systems for cooling, storm water discharge, sewage system and so on) that these two plants may share.

The OPA retained an accounting firm to perform specified procedures on the costs submitted by TCE to the OPA for reimbursement. We reviewed the firm's report to assess the support obtained for the amounts reimbursed.

During our review, the Standing Committee on Justice Policy was holding hearings on the cancellation of the Mississauga and Oakville gas plants. We reviewed the testimony of witnesses and relevant information submitted to the Standing Committee during the course of our review.

3.0 Summary

We estimate that the decision to cancel the Oakville power plant and build a new plant in Napanee may cost the public $675 million (see Figure 2), with $40 million being paid by taxpayers and $635 million being paid by electricity ratepayers. However, this cost may increase by up to about $140 million because of a possible increase in the tolls relating to the delivery of gas, as discussed below.

About two-thirds of the net costs we have estimated have yet to be incurred, and all of the savings are estimated to be realized in the future. Making assumptions about future events and their effects involves considerable uncertainty. Accordingly, readers should be cautioned that while our estimates differ from estimates previously announced by the Ontario Power Authority (OPA), they will also likely differ from the actual costs and savings that will be known only in the future. Much of the difference between our estimate and the OPA's estimate of $310 million stems from different assumptions being made about the start dates of the Oakville and Napanee plants and different discount rates being used for valuing future payments in present-day dollars.

Under the contractual arrangements between TransCanada Energy Ltd. (TCE) and the OPA to build the Napanee plant, the OPA took on the financial risk for gas delivery. TCE was previously responsible for this under the Oakville agreement. Under

Figure 2: Summary of Oakville Power Plant Cancellation Costs

Prepared by the Office of the Auditor General of Ontario

	$ Million[1]
Costs Incurred (Section 4.3.1)	
Payments reimbursing TCE for:	
• TCE's initial purchase of gas turbines for the Oakville plant and modifications, totalling $36 million, made to them	210
• TCE's sunk costs related to the Oakville plant	40
Legal and professional fees	3
Estimated Future Costs (Section 4.3.2)	
Gas delivery and management services for Napanee plant	577
Gas and hydro connections for Napanee plant	43
Additional gas for less efficient turbines	35
Transmission system upgrades	81
Line losses for the distance power has to travel from Napanee	32
Replacement power beginning in 2017	91
Subtotal—Costs Incurred plus Estimated Future Costs	**1,112**
Estimated Future Savings	
Lower price negotiated for power from Napanee plant[2]	(275)
No payments to TCE until 2017	(162)
Total—(Costs Incurred plus Estimated Future Costs) minus Estimated Future Savings	**$675**
Impact of Potential Toll Increase	**up to $140**

1. All amounts are in present-day dollars.
2. The price negotiated results in a benefit to TCE. TCE would have paid $445 million in costs under the Oakville agreement that the OPA is now paying for under the Napanee agreement. However, the lower price negotiated for power from the Napanee plant amounts to savings of only $275 million. The difference of $170 million is a benefit to TCE.

the Napanee agreement, a section of the pipeline route owned by TransCanada PipeLines Limited (TCPL), the owner of TCE, effectively must be used to transport gas to Napanee. There is currently no pipeline path that would be a practical alternative to this route. This section does not currently have the capacity to transport the amount of gas needed to service the Napanee plant. Accordingly, TCPL will need to make additional capital investments and recover these costs through increased toll charges, which get passed on to electricity ratepayers. After we raised the issue of tolls with the OPA, it contacted TCE, who indicated on September 18, 2013, that it would be willing to explore alternative gas delivery arrangements to minimize the cost of gas delivery to the Napanee plant.

In September 2013, gas distributors, who currently rely on this section of TCPL's pipeline, agreed on a tolling framework that would allow TCPL to recover the cost of its additional investments. Under this framework, tolls could increase by up to 50% of the existing rates in the first three years. While any increase would need approval of the National Energy Board, if a 50% increase to existing rates is ultimately approved and the rate remains at this level over the 20-year term of the contract for the Napanee plant, the cost of gas delivery could increase by about $140 million from our estimate of $577 million.

3.1 DECISIONS IMPACTING THE COST TO THE PUBLIC

The following decisions impacted the cost to the public:

- **The OPA told bidders that municipal opposition to a power plant would not be considered in its evaluation of their proposals**—As the OPA was aware, the Town of Oakville was very actively and publicly opposed to a power plant within its borders. Of the four developers the OPA had short-listed in March 2009 to build a power plant for the Southwest Greater Toronto Area (Southwest GTA), only one, TCE, was proposing a plant in Oakville. Two months after issuing a Request for Proposals to the four developers, the OPA told them that it would consider only the municipal requirements in place in January 2009 when evaluating proposals. The OPA informed us that it did not want the actions taken by municipalities that knew a power plant might be built within their borders to affect the proponents' submissions. In September 2009, with Oakville already having put a bylaw in place delaying the establishment of a power plant in the Town, the OPA awarded the contract to TCE. The OPA informed us, however, that throughout the procurement and contracting process for the Oakville plant, including prior to awarding the contract to TCE in September 2009, it had provided the Government with off ramps not to proceed.
- **The Premier's Office committed to compensating TCE for the financial value of its contract for the Oakville plant, even though events occurred that we believe could have enabled termination of the contract at a much lower cost**—The contract for the Oakville plant contained protection to relieve both TCE and the OPA of any financial obligations if events beyond their control (*force majeure* events) caused the plant's commercial operation date of February 8, 2014, to be delayed for more than 24 months. Therefore, given Oakville's strong opposition to the plant, it may well have been possible for the OPA to wait it out, with no penalty and at no cost. TCE filed notices of *force majeure* in December 2009 and March 2010, signaling its recognition that the measures the Town of Oakville were taking required it to get an extension to complete the plant. TCE also sought the help of the Premier's Office to deal with these municipal roadblocks. By October 2010, TCE had five appeals pending with the Ontario Municipal Board and four outstanding legal proceedings in Ontario divisional court. We understand the Premier's Office gave TCE assurances at a meeting at this time that if the government cancelled the plant, TCE would be kept whole (that is, the profit stream it was anticipating from the Oakville plant would be preserved). Two days after this meeting between the Premier's Office and TCE, the cancellation was announced and the OPA confirmed that TCE was entitled to reasonable damages, including the anticipated financial value of the original contract. The Town of Oakville's Mayor has since testified he would have taken the outstanding legal proceedings to the Supreme Court of Canada.
- **The Premier's Office assured TCE it would be compensated for the financial value of the contract for the Oakville plant instead of relying on protections in the OPA/TCE contract that could have minimized any damages paid to TCE as a result of cancelling the plant**—The OPA could have invoked a clause in the contract that made it liable for reimbursing TCE for lost profits only in the event of a "discriminatory action," and argued that the cancellation of the plant would not have met the contract's definition of such an action (the definition specified that a discriminatory action affecting TCE had to be taken by the Legislative Assembly of Ontario through legislation or similar measures). In early 2010, the OPA did explore the ramifications of terminating the contract and obtained a legal opinion confirming that cancellation would not meet the definition of

a discriminatory action. The opinion also said that, if enforceable, the clause in the contract would limit the OPA's liability.

- **The Province and the OPA agreed to an arbitration framework (for determining damages to be paid to TCE if no settlement was reached) that favoured TCE and waived the protections the OPA had under the Oakville contract**—Although TCE understood that in return for being kept whole, it was to lay low and not start litigation against the Government, it did threaten litigation in April 2011. This was after months of negotiations between the OPA and TCE failed to agree on a replacement project for the Oakville plant. The Province, the OPA and TCE agreed to go to arbitration to determine the damages TCE would be paid if negotiations failed. The arbitration framework waived the provisions in the Oakville contract that protected the OPA's interests. That is, in determining the amount of damages, the arbitrator was explicitly disallowed from considering the possibility that TCE would not have been able to overcome Oakville's opposition to the plant (the *force majeure* provisions) and that the OPA's cancellation of the plant was not a discriminatory action and therefore should exempt it from including lost profits in the determination of damages. This arbitration framework clearly favoured TCE and gave it the upper hand in the negotiations for a project to replace the Oakville plant.
- **The Minister of Energy agreed to locate the new plant TCE is to build in Napanee**—The OPA informed us that it was the Minister of Energy who told it to contract with TCE to build a new plant in Napanee. According to the OPA, Napanee was not the OPA's first choice for the new plant because the relocation to Napanee would result in higher costs to deliver gas from the Sarnia area to Napanee and to transmit the electricity to the Southwest GTA, where the need for power exists. The Minister said in 2010 after the plant was cancelled that it would not be relocated in the GTA. Negotiations to have TCE build in the OPA's preferred location of Kitchener-Waterloo-Cambridge, where there was also a need of a local power supply, were unsuccessful. As noted earlier, TCE's parent company, TCPL, will be one of the transporters of gas to Napanee. TCPL's pipeline would not have been required for a plant in Oakville or Kitchener-Waterloo-Cambridge. The additional tolls that TCPL may receive approval for to recover its costs of adding necessary capacity to its pipeline could significantly increase the gas delivery and management cost from the $577 million noted in Figure 2.

3.2 BENEFITS TO TCE

As mentioned, one of the key decisions that impacted the cost to the public of cancelling the Oakville plant was committing to keep TCE whole. We believe that the settlement with TCE will not only keep TCE whole but may make it better than whole. Figure 3 lists the estimated benefits to TCE of approximately $225 million from the settlement negotiated for the Napanee plant. All of these benefits to TCE and its parent company, plus additional unquantifiable benefits, will likely result in TCE earning a higher rate of return for the Napanee plant than it would have for the Oakville plant, although it will begin earning this return later.

ONTARIO POWER AUTHORITY RESPONSE

The OPA respects the Auditor General's report. Although the OPA's and the Auditor General's cost estimates are different, we continue to support our assumptions, as this difference, as set out in the report, is for the most part attributable to the assumptions used to calculate future costs. The report identifies that two-thirds of the costs and 100% of the savings associated with

Figure 3: Benefits to TCE from the Cancellation and Relocation Settlement

Source of data: Ontario Power Authority

Benefit	Estimated Value ($ million)
Reduction in TCE's construction and operating costs for Napanee plant is greater than reduction in price TCE will receive for Napanee plant's power	
The OPA has taken on a number of costs for the Napanee plant that TCE would have assumed under the contract for the Oakville plant (gas turbines, gas delivery and management, and gas and hydro connections). This reduces TCE's costs for constructing and operating the Napanee plant by $445 million. In recognition of this, the OPA negotiated a 12% reduction in the price to be paid for electricity generated by the Napanee plant, worth $275 million over 20 years (see Figure 2, Estimated Future Savings). The $170-million difference is a benefit to TCE.	170
Cost of Napanee plant site is less than cost of Oakville plant site	
TCE expected to pay about $56 million for the site of the Oakville plant. The cost of the site for the Napanee plant is only $1.1 million. The difference of about $55 million is a benefit to TCE.	55
However, under the contract for the Napanee plant, TCE will, if necessary, be responsible for up to $18.25 million in capital costs related to the site.	(up to 18.25)
Some needed infrastructure already built and available to TCE at Napanee site	
Under the Napanee plant contract, TCE has the right to share certain infrastructure, such as water intake and discharge systems for cooling, storm water discharge, and a sewage system, already in place at OPG's existing Lennox Generating Station (located next to the Napanee plant site). Building this infrastructure at the Oakville plant would likely have cost TCE more than the $5.6 million, plus incremental costs, it will be paying OPG for the sharing arrangement.	Unknown

the Oakville relocation will occur in the future. As such, the net costs of relocation cannot be definitively identified, particularly since the events on which the assumptions for the Oakville plant are based will never take place.

Specifically, the Auditor General and the OPA used different rates to put future costs and savings in today's dollars, as well as different in-service dates for the plants. The Auditor General's approach lowers the savings associated with having the Napanee plant up and running later than when the Oakville plant would have been in service.

Estimating the cost of relocating the plant during the settlement negotiations was complicated by the short time period the OPA and Infrastructure Ontario had to negotiate a deal—12 days (we note that it typically takes 12 to 18 months to develop estimates when competitively procuring a gas plant). Nevertheless, when the relocation deal was announced, the Memorandum of Understanding (MOU) with TCE was clear that there would be costs in addition to the $40 million in sunk costs incurred for the Oakville plant.

In its review of the MOU, which provided an outline for the subsequent Napanee contract, a third party, Deloitte, found that selected financial elements and outcomes were consistent with the original contract and that, overall, the deal was commercially reasonable. The additional ratepayer costs for the Napanee plant are largely associated with the location. These costs include accelerating replacement transmission in the Southwest GTA and the higher cost of delivering gas to Napanee, which is further from the gas storage hub near Sarnia. The Auditor General also identified $162 million in savings relating to starting the contract payments for the Napanee plant later.

As noted in the report, bidders on the Southwest GTA project were told that only municipal requirements already in place were to be considered in evaluating proposals. Bidders were to be responsible for identifying sites and obtaining all necessary permits and approvals. With a process already under way, the OPA felt that locating a power plant in the Southwest GTA was valuable from both a system and a ratepayer perspective and as such wanted to be fair to proponents, maintain a healthy roster of bidders and be able to affirm the integrity of the process.

Since 2003, 21 gas-fired power plants have been contracted in Ontario, with 19 currently in service. The OPA and the Independent Electricity System Operator recently submitted recommendations to the provincial government on how to improve the planning and siting for large electricity infrastructure.

4.0 Detailed Observations

4.1 OVERVIEW OF OAKVILLE PROJECT BEFORE CANCELLATION

4.1.1 The Procurement Process and Early Opposition to the Plant

The OPA, as part of its long-term electricity planning, provided the following reasons for locating a natural gas plant in the Southwest GTA:

- Under the Government's commitment to eliminate coal-fired electricity generation in Ontario by 2014, the Southwest GTA's Lakeview coal plant was closed in 2005, removing 1,150 megawatts (MWs) of supply from Ontario's total available power supply.
- At the same time, the peak demand for electricity in the Southwest GTA was growing at a rate that was more than double the average rate of peak-demand growth for the province as a whole.
- The new plant could defer having to significantly upgrade the Western GTA's transmission system to bring in needed power from further away.
- The new plant would increase the province's overall gas-fired electricity generation, supporting the Government's plan to increase the use of wind and solar power (gas-fired electricity can be turned on and off quickly to back up these other, intermittent sources).

In fall 2008, the OPA set in motion the procurement of an 850 MW gas-fired electricity generation plant in the Southwest GTA by publicly announcing the project and issuing a Request for Qualifications (RFQ). An RFQ process is used to eliminate unqualified developers, ensuring that only those with the financial and technical expertise to complete project requirements are considered.

On January 16, 2009, the OPA announced that it had shortlisted four developers to advance to the next step of the procurement process, the Request for Proposals (RFP). The RFP, with specified evaluation criteria, was issued on March 13, 2009, with a due date of July 8, 2009.

TransCanada Energy Ltd. (TCE), one of the shortlisted developers, was in partnership with Ontario Power Generation (OPG). The partners were pursuing the development of a gas-fired plant on an existing OPG site on Kipling Avenue in Etobicoke. While TCE was completing the RFP, another site in Oakville owned by the Ford Motor Company of Canada (Ford) became available. When TCE decided to use the latter site in the RFP because of its easy access to the supply of gas, OPG pulled out of the partnership because it did not own the Oakville site and because of uncertainty regarding the site's zoning. TCE was the only firm proposing a site in Oakville; the three others proposed plant sites in Mississauga.

Through spring 2009, the Town of Oakville began taking measures to stop the building of a plant within its borders. Figure 4 describes some of the measures taken and other events with potential to delay the project, and their aftermath.

Figure 4: Measures and Events with Potential to Delay Oakville Project
Source of data: Town of Oakville, Ontario Municipal Board, Ontario Power Authority

Date	Measure/Event	Description	Project-related Aftermath
March 2009	Amendment to official plan of Town of Oakville, passed by Oakville Town Council	No power facility of more than 10-MW capacity can be constructed until its impact is studied and determined	• May 2009—TCE and Ford appeal to Ontario Municipal Board (OMB) • December 2009—OMB strikes down amendment
March 2009	Interim control bylaw, passed by Oakville Town Council	Construction of any power facility of more than 10-MW capacity is suspended for a year so necessary planning work and study can take place (can be extended for an additional year)	• May 2009—TCE and Ford appeal to OMB • December 2009—OMB upholds bylaw • December 2009—Town of Oakville denies TCE's site-plan application on basis of bylaw • March 2010—Town of Oakville extends bylaw to March 31, 2011
February 2010	Health Protection Air Quality Bylaw, passed by Town of Oakville	Facilities emitting harmful fine particulate matter (<2.5 microns) would be subject to an approval process involving a health-impact assessment*	• June 2010—TCE appeals to Ontario divisional court • December 2010—TCE withdraws the appeal (after the plant was cancelled)
June 2010	Release of report of Air Quality Task Force (established by Province in September 2009)	Recommendation 4—All applications for provincial Certificates of Approval for new industrial activities that will increase polluting emissions within the Oakville-Clarkson airshed must be considered in light of the airshed's current capacity	• August 2010—Oakville Town Council asks Premier to impose moratorium on further development of Oakville plant until its emission-related health risks are addressed
September 2010	Three more bylaws, passed by Oakville Town Council	Proposed power generation facilities must be assessed according to specific criteria	• October 2010—Cancellation of Oakville plant announced; the bylaws remain in force

* Officials from the Town of Oakville informed us that the Oakville plant may not have been able to meet the requirement of this bylaw.

In May 2009, the OPA specified to the four proponents that, in working on their RFP submissions, they need consider only those municipal requirements for their proposed sites that were in place on January 16, 2009, when the four proponents made the project short list. The OPA told us that it did this out of fairness to the proponents, not wanting municipal actions to affect the proponents' submissions and not wanting its procurement process to intervene in site selection. The OPA wanted to put the onus on developers to obtain the necessary permits and approvals. However, the measures the Town of Oakville took to prevent a plant were more extensive than Mississauga's, and this would make it more difficult for TCE to obtain the necessary permits and approvals.

In September 2009, the OPA announced that it had accepted TCE's bid to build the Southwest GTA power plant in Oakville. The project contract was signed in October 2009.

4.1.2 The Contract and Continuing Opposition to the Plant

Under the October 2009 contract, TCE was responsible for designing and constructing a gas-fired plant with a generating capacity of 900 MWs. This included obtaining the necessary permits and approvals. The plant was to be complete and begin generating power by February 8, 2014, at which time the OPA would begin paying TCE a monthly amount for the 20-year life of the contract. This amount, called the Net Revenue Requirement (NRR), a standard component of the OPA's natural-gas power contracts, is intended to enable a developer to recover its building and operating costs plus earn a reasonable rate of return, or profit. It is expressed as an amount per MW per month. Under the TCE contract, the amount was $17,277/MW/month. For a 900-MW plant, that equates to about $186 million a year, or about $2.7 billion (present-value dollars) over the 20-year life of the contract.

The contract included *force majeure* provisions in case of extraordinary events occurring beyond the control of the contracting parties. Such events would obligate the OPA to push back the date when the plant would have to be operational. If such events were to delay the operation date of the plant for more than 24 months, the OPA could terminate the contract without costs or payments of any kind. Therefore, in the OPA's view, there was a viable mechanism for the province to have cancelled the contract if TCE was unable to obtain the necessary permits and approvals to build the plant in Oakville.

The contract also had a clause stipulating that only in the event of the Government taking discriminatory action that affected TCE (that is, through legislation or similar measures) would the OPA be liable for reimbursing TCE for lost profits. In February 2010, the OPA obtained a legal opinion that cancellation would not meet the definition of discriminatory action and that the clause, if enforceable, "would severely limit the amounts for which OPA would be liable."

As Figure 4 shows, events beyond the control of TCE and the OPA did occur. As a result of the interim control bylaw that had been passed by the Town of Oakville in March 2009, TCE could not secure the necessary permits and approvals to proceed with construction. TCE filed two notices of *force majeure*—one on December 17, 2009, after the Ontario Municipal Board upheld the interim control bylaw, and another on March 15, 2010, after the Town of Oakville rejected a land severance application regarding the plant site. TCE filed these notices to protect itself from penalties if it was unable to meet the contract's milestone dates because of this opposition. In both, TCE said that it could not determine the impact that opposition to the plant would have on the plant's scheduled completion date of February 8, 2014, and that it would provide this information when it could.

In addition to filing these notices, TCE also sought the help of the Premier's Office beginning in December 2009. One option was for the Government to use its legislative powers to override the Town of Oakville's opposition and authorize construction to go ahead. The Government was pursuing this option in the case of a 393-MW gas-fired plant planned for the Township of King in York Region. The Township had passed an interim control bylaw in January 2010 to prohibit power generation facilities in certain parts of the Township and was working on amendments to the official plan that would have prohibited the plant. In July 2010, the Government passed a regulation that exempted the plant's site from the changes to the official plan. The Government's reason was that York Region's electricity supply was insufficient to meet reliability standards and the region's demand in the near future, which was forecast to grow by three times the provincial average. In the Government's view, with the situation being less urgent in Oakville, similar government action could be seen as interfering in the Town's local planning, and, according to documents we reviewed, the Premier's Office did not want to do this. Instead, the Premier's Office's discussions focused on alternative sites for the plant that TCE suggested, including other sites in northern Oakville, Halton Hills and Nanticoke.

In fall 2010, staff at the Premier's Office met with officials from TCE. According to documents the Ministry of the Attorney General submitted to the Standing Committee on Justice Policy, TCE left the meeting with the understanding that, if the government cancelled the plant, TCE would be kept whole. In return, TCE would have to lay low and not start litigation against the Government.

4.2 CANCELLATION AND SETTLEMENT NEGOTIATIONS

4.2.1 Initial Negotiation Terms

On October 7, 2010, the Minister of Energy announced the cancellation of the proposed Oakville power plant. The same day, the OPA sent a letter to TCE regarding the cancellation. The OPA informed us, however, that it had not been involved in the discussions between the Premier's Office and TCE, and had not been consulted when the Premier's Office made its commitment to keep TCE whole. The OPA first confirmed with the Premier's Office this commitment had in fact been made. The OPA then specified the following in its October 7th letter:

- The OPA would not be proceeding with the original contract.
- TCE was to cease all further work and activities in connection with the Oakville plant.
- TCE was entitled to reasonable damages, including the anticipated financial value of the original contract.

The OPA informed us that, if it had been consulted, it would have advised the Premier's Office against making the keeping-whole commitment to TCE because the OPA's contract with TCE had provisions protecting the OPA from such a liability. One of these was the stipulation that either party could terminate the contract without cost if *force majeure* caused the plant's commercial operation date to be delayed by more than 24 months. Figure 4 outlines the measures and events that may well have resulted in such a delay. Further to this, the Mayor of the Town of Oakville testified to the Standing Committee on Justice Policy on March 19, 2013, that he would have taken the Town's opposition to the plant's construction all the way to the Supreme Court of Canada. So simply waiting it out may have enabled the OPA to walk away from the contract at a potentially lesser cost. The second provision was the clause that invoked liability for lost profits only in the case of specifically defined discriminatory actions (that is, action taken by the Government through legislation or similar means). According to the OPA, the cancellation of the plant was not one of these. Therefore, unless TCE was successful in challenging this section of the contract in the courts, the OPA would likely not have been responsible for the financial value of the contract, including lost profits.

According to documents that the Ministry of the Attorney General submitted to the Standing Committee on Justice Policy, TCE interpreted the Premier's Office commitment to keep it whole to mean that it would be offered a project replacing the Oakville plant that would reflect the financial value of that plant's contract, including lost profits. The Government set the following requirements for the OPA's negotiations with TCE:

- The financial value of the final settlement could not exceed $1.2 billion (TCE had estimated the capital cost of the Oakville plant to be $1.2 billion).
- The site of the replacement plant had to be accepted by the local community.
- The replacement plant's per-unit cost of power must be close to that of similar facilities in Ontario with a similar capacity.

4.2.2 Replacement Plant Proposals and Counter Proposals

Working within the above noted requirements, the OPA identified the Kitchener-Waterloo-Cambridge (KWC) area as the ideal location for a replacement plant. The area needed new power generation for system reliability and, as was the case in the Southwest GTA, supplying that power locally would defer the need for major upgrades to transmission lines to bring in the power from further away.

On December 21, 2010, TCE and the OPA executed a memorandum of understanding for the potential development of a "peaker" power plant in the KWC area. A peaker plant generally runs only when demand for electricity is at a peak (that is, about 5% of the time or less). It therefore does not need to be as efficient as a plant like the proposed

Oakville plant, which was expected to run between 20% and 30% of the time. Accordingly, the potential plant envisioned for the KWC area was to be a simple-cycle gas-fired plant with a capacity of up to 450 MWs (in simple-cycle generation, a single power cycle turns a gas turbine by the heat produced from natural-gas combustion, with no recovery of the excess heat to turn a second steam turbine).

After months of discussions, TCE proposed to build a simple-cycle, 515-MW peaker plant in KWC, with the OPA paying an NRR of $16,900/MW/month (slightly lower than the NRR in the Oakville plant contract of $17,277/MW/month) once the plant was operating. The OPA disagreed with the approach TCE used for arriving at this NRR and believed it was overly generous to TCE. The OPA's counter proposal was for a much lower NRR of $12,500/MW/month. TCE rejected the counter proposal on April 6, 2011, and expressed its concerns to staff in the Premier's Office and the Energy Minister's Office.

The Minister's Office directed the OPA to make a second counter proposal. On April 21, 2011, the OPA increased the NRR to $14,922/MW/month. TCE also rejected this counter proposal.

In June 2011, the memorandum of understanding for a replacement plant in the KWC area expired, with the parties at a stalemate. At the time of our review, the OPA was in the process of developing a solution to meet power needs in the KWC area.

4.2.3 Threatened Litigation and Arbitration

Upon receiving the OPA's first counter proposal on March 28, 2011, of a $12,500/MW/month NRR, TCE threatened litigation. On April 19, 2011, two days before receiving the second counter-proposal, TCE's lawyers wrote to the OPA and the Ministry of Energy that they had been engaged "to commence the formal legal process of identifying the appropriate mechanisms to determine the reasonable damages, including the anticipated value of the [Oakville] Contract and an appropriate mechanism for transferring that value from the OPA and the Province of Ontario to TCE." The following week, TCE gave written notice to the Ministry of the Attorney General of its intent to start an action against the Province under the *Proceedings Against the Crown Act* to recover damages from the cancellation of the Oakville contract.

Facing this risk of litigation, the Government asked the Chief Executive Officer (CEO) of Infrastructure Ontario in June 2011 to find alternative projects acceptable to both sides. In case this was not successful, the CEO was also asked to establish a framework for arbitrating the amount of damages to be paid to TCE.

On August 5, 2011, the Province, the OPA and TCE entered into an arbitration agreement that laid out the framework for the arbitration. As with the Premier's Office's commitment to TCE the year before, the framework waived the clause in the Oakville plant contract that gave the OPA a defensible claim of not owing TCE lost profits (that is, the clause stating that only if the Government took discriminatory action through legislation or similar means would the OPA be liable for damages such as loss of profits, with the OPA's cancellation of the plant not meeting the definition of discriminatory). An arbitrator, agreed to by all parties, was also not to consider the possibility that TCE would not have been able to obtain the necessary approvals to construct and operate the Oakville plant. Thus, all of the provisions in the Oakville plant contract that gave the OPA opportunity to minimize damages were explicitly removed from the arbitration framework. This put TCE into a considerably advantageous position in the determination of damages through this arbitration process.

4.2.4 Relocation Settlement

On September 12, 2012 (the date that the OPA and TCE were required to submit settlement offers to an arbitrator), the parties agreed to one more attempt to agree on another plant. Negotiations focused on the location of the new plant, the amounts to reimburse TCE (for sunk costs and the turbines bought for the Oakville plant), provisions to be made if the new plant did not proceed, and who would be responsible for gas and electricity service and connection costs for the new plant.

On September 24, 2012, the Minister of Energy announced that the OPA had reached an agreement in principle with TCE. TCE would build and operate a new 900-MW gas-fired generation facility on the site of OPG's Lennox Generating Station in Napanee. The OPA informed us that the Minister of Energy told the OPA to locate the new plant in Napanee. The OPA did not think that Napanee was the optimal location because it would result in higher costs to deliver gas from the Sarnia area to Napanee and to transmit the electricity to the Southwest GTA, where the power is needed. Two memoranda of understanding were signed in which the Government, the OPA, OPG and TCE committed to negotiate the new contracts in good faith. Other commitments included the reimbursement of TCE's sunk and gas-turbine costs, and settling on the plant's exact location.

On December 13, 2012, the Treasury Board and Management Board of Cabinet approved reimbursing TCE for up to $40 million in sunk costs (subject to verification). They also approved a break fee of $50 million that the Province would pay TCE if the Napanee plant did not go ahead. The parties would then use the framework laid out in the arbitration agreement to settle on any additional damages.

As noted in Figure 5, final agreements were executed on December 14, 2012, including the Clean Energy Supply Contract (Contract) for the new Napanee plant. Key provisions of these agreements include the following:

- The OPA and the Province will reimburse TCE for all sunk costs associated with the cancelled Oakville plant and the cost of the gas turbines TCE purchased and modified for use in a peaker plant.
- TCE will buy the OPG-owned plant site in Napanee for $1.1 million, the site's independently appraised fair market value. Under the contract for the Napanee plant, TCE may also be responsible for up to $18.25 million in capital costs related to the site, if required. TCE will further pay OPG a one-time payment of $5.6 million to use certain of the infrastructure (such as discharge systems for cooling and a sewage system) of OPG's Lennox Generating Station, located next to the new plant site. TCE will also pay OPG any additional costs that OPG incurs solely as a result of the infrastructure-sharing arrangement.
- The OPA will be responsible for the costs of gas delivery, gas management, connecting the plant to a gas source and connecting the plant to the Province's electricity grid. (All of these costs were to be paid by TCE under the contract for the Oakville plant. Also, TCE's owner, TransCanada Pipelines, owned by TransCanada Corporation, will now be providing some of the gas delivery and management services that the OPA will be paying for in Napanee. The services it will be providing account for about 50% of the total cost of gas delivery and management.) TCE must submit a Gas Management Plan (Plan) that a committee of four members (two from TCE and two from the OPA) must unanimously approve. In the Plan submitted at the time of our review, there were significant uncertainties regarding the cost that the OPA may incur for gas delivery and management services. We discuss this further in Section 4.3.2.
- The new plant's commercial operation date is targeted for no later than December 31, 2018, and the plant is to operate for 20 years.
- Once the plant is operational, the OPA will pay TCE an NRR of $15,200/MW/month. The NRR under the Oakville-plant contract was $17,277/MW/month. The OPA will pay TCE this lower monthly amount in exchange for what it already paid for gas turbines and the costs it will incur for gas delivery and management, connecting the plant to a gas source, and connecting the plant to the province's electricity grid. Having these items paid for by the OPA means TCE does not need to have these costs recouped from its NRR, thus reducing the NRR. The OPA will incur these additional costs above the NRR.

Figure 5: Agreements Executed on December 14, 2012

Source of data: Ontario Power Authority

		Parties Executing Agreement			
Agreement	**Description**	**TCE**	**OPA**	**Province**	**OPG**
New contract for the Napanee plant	New Clean Energy Supply Contract for the plant in Napanee, with revised contractual obligations*.	X	X		
Reimbursement Agreement	Agreement to reimburse TCE's sunk costs with respect to the cancelled Oakville plant and the cost of the gas turbines.	X	X	X	
Arbitration Agreement	Agreement to refer the parties to binding arbitration (i.e., a proceeding in which an impartial adjudicator resolves the dispute and the resolution is final and binding) in the event that the Napanee plant does not go ahead as planned.	X	X	X	
Security Agreement	Agreement granting the OPA a security interest in the gas turbines until the date that the Napanee plant is in operation.	X	X		
Lennox Generating Station Lands	Agreement identifying the terms of the purchase of OPG's site by TCE for the Napanee plant.	X			X
Shared Site Agreement	Agreement to allow TCE to share certain infrastructure (such as water intake and discharge systems for cooling, storm water discharge, sewage system, etc.) already in place at OPG's Lennox Generating Station.	X			X

* Under the new contract for the Napanee plant, the OPA is responsible for the costs associated with gas delivery and management services. TCE must submit a gas management plan that a committee of four members (two from TCE and two from the OPA) must unanimously approve. If the committee is unable to agree on the plan, the matter goes to binding arbitration.

4.3 COSTS OF OAKVILLE PLANT CANCELLATION AND NAPANEE PLANT SETTLEMENT

As shown in Figure 2, we estimate the cost of cancelling the Oakville plant and settling with TCE on the Napanee plant to be $675 million.

In our work for our April 2013 special report on the costs of cancelling the Mississauga power plant, we noted that well over half the total costs had already been incurred, with the plant about 30% constructed when it was cancelled. With the Oakville plant, in contrast, about two-thirds of the costs of cancellation, as well as any savings, have yet to be incurred. There is considerable uncertainty when dealing with future events, and cost and savings estimates are based considerably on judgment. The CEO of the OPA also acknowledged this in his testimony to the Standing Committee on Justice Policy on April 30, 2013, stating that the OPA's cancellation cost estimate of $310 million will continue to evolve as more information becomes available and assumptions and planning scenarios are further developed. Figure 6 shows that the differences between the OPA's estimate and our estimate result from different assumptions being made with respect to discount rates, the date the Oakville plant would have begun operating, and the date the Napanee plant will begin operating. In the following sections, we break down the costs associated with our estimate; also, we provide more detailed discussion of the differences in the OPA's assumptions and our assumptions in Sections 4.3.2 and 4.3.3.

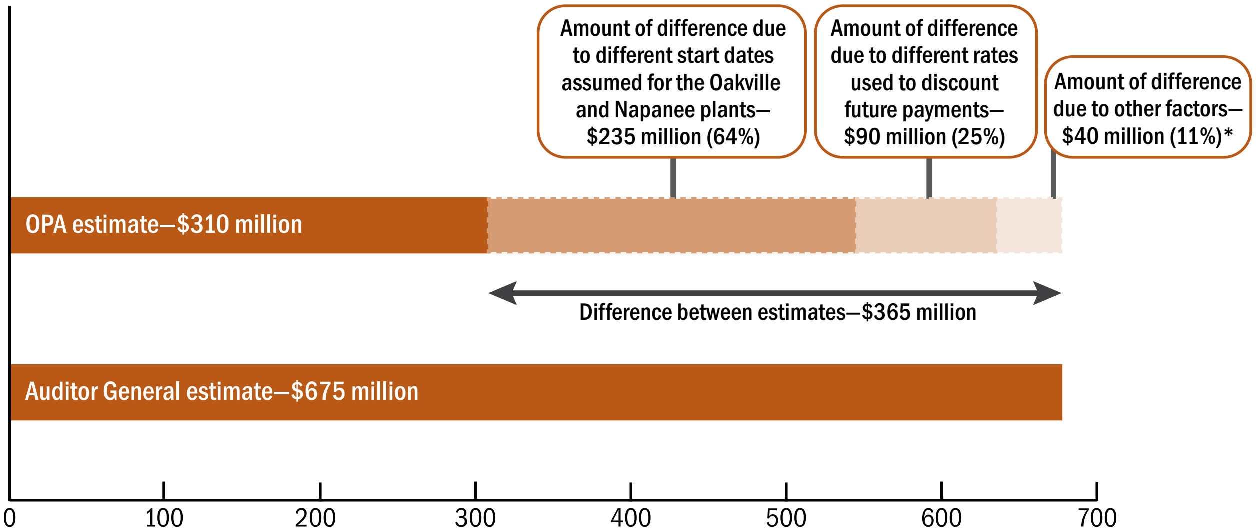
4.3.1 Costs Incurred

Cash Payment to TCE for Gas Turbines—$210 Million

Under one of the December 2012 settlement agreements, the OPA paid TCE $210 million to cover gas turbine costs. We asked the OPA for a copy of the purchase agreement to help verify these costs, but the OPA told us that TCE was not able to share it with us because it contained commercially sensitive information of the turbine manufacturer.

Figure 6: Differences Between the OPA's and Our Estimates of Oakville Plant Cancellation Costs

Prepared by the Office of the Auditor General of Ontario



* The OPA's estimate of $310 million includes a savings of about $50 million for not having to buy replacement power between 2033 (its assumed end date of the Oakville plant) and 2038 (its assumed end date for the Napanee plant). The $50-million savings is offset by costs of about $10 million. We believe there is too much uncertainty around Ontario's power needs 20–25 years from now to include this amount as a future ratepayer savings.

We were able to determine from the documentation we reviewed that about $36 million of the $210 million the OPA paid covered costs incurred while the OPA and TCE were negotiating having TCE build a peaker plant in the KWC area (see Section 4.2.2). At that point, the turbines slated for the Oakville plant had not been fully built as their manufacturing can take a number of years. The prospect of the turbines now being used in a peaker plant instead of in the Oakville plant led the OPA to ask that they be configured with a faster start capability to serve the need of the KWC area. We identified two costs that were therefore incurred:

- The supplier of the turbines charged $15 million in penalties for having to suspend manufacturing between October and December 2010 while the decision to locate a potential peaker plant in the KWC area was pending.
- Once the memorandum of understanding was signed in December 2010 to proceed with negotiations for a potential peaker plant in the KWC area, the supplier carried out the modifications needed for the faster start capability. Costs associated with the modifications totalled $21 million.

The peaker plant proposals all eventually fell through, but TCE had already incurred these expenses as well as the purchase cost of the turbines. OPA was required to reimburse TCE for these costs under the settlement agreement.

Cash Payment to TCE for Sunk Costs—$40 Million

The OPA paid TCE a total of $40 million to cover TCE's sunk costs. These related to engineering and design work, permitting, employee costs, legal fees and other carrying costs related to the development of the Oakville plant, none of which can be reused for the Napanee plant.

The support provided for OPA's payments to TCE for the gas turbines and sunk costs was subject to specified procedures by an independent auditor hired by the OPA, who confirmed that the amounts the OPA reimbursed TCE for had indeed been incurred by TCE. TCE also provided the OPA with a certificate confirming this information.

Legal and Other Professional Fees—$3 Million

About $3 million in external legal and other professional fees were incurred, mostly by the OPA and OPG, over the two years that negotiations relating to the Oakville plant cancellation took place. Not included in this amount is the not insignificant cost of government and government-agency resources between October 2010 and December 2012. These included the involvement of the OPA, Infrastructure Ontario, OPG, the Ministry of Energy, the Ministry of the Attorney General and the Office of the Premier.

4.3.2 Estimated Future Costs

Gas Delivery and Management (Using the Toll Rates as of July 2013)—$577 Million

Most of the natural gas supplied to southwestern Ontario comes from Sarnia. Under the contract for the Oakville plant, TCE would have had to pay for piping the gas from Sarnia. Under the contract for the Napanee plant, the OPA took on this cost, and it will be far higher, mainly because the gas will be delivered over a much greater distance. We asked the OPA why it assumed the full cost of gas delivery—that is, our estimate of $577 million versus only the difference between our estimate and the $225-million estimated cost of gas delivery and management for the Oakville plant. The OPA told us that one of the reasons it will be paying a lower NRR for the Napanee plant's power is to offset its assumption of this cost.

The $577 million we estimated for gas delivery and management costs is in present-value dollars—that is, the amount that the OPA will pay in the future, discounted to reflect its current value (current or present value is less than or equal to future value because today's dollars can earn a return over time). We used a 4% discount rate in calculating present value, and we assumed that the 20-year period over which gas will flow to the plant will begin fall 2017.

The OPA's estimate for gas delivery and management costs is $406 million (present value). The difference between our estimate and the OPA's estimate lies mainly in the discount rates used and the plant's assumed start date. We believe our discount rate of 4% fairly reflects the interest-rate environment at the time the final agreements for relocating the Oakville plant to Napanee were reached (for example, the nominal long-term Government of Canada benchmark bond yield as of January 2, 2013, was 2.42%) and also approximates the province's cost of long-term borrowing at this time (3.49% as of January 2, 2013). The OPA used a rate of 6%, giving as its rationale the uncertainty around these rates over the 20-year term of the contract. We note in response, however, that the bond yield actually declined over the last six years from 4.5% to the January 2, 2013, yield of 2.42% and is forecast to remain around this level for some time.

The difference in discount rates accounts for about two-thirds of the $171-million difference between the OPA's estimate of $406 million and ours (that is, the OPA's use of a higher discount rate reduces the estimate of costs by about $114 million). The remaining difference arises mainly from the OPA's assumption that the plant will not begin operating any sooner than its contracted start date of December 2018. The start date we used in our calculations reflects not only our discussions with the local gas distributor and OPG, but also a project timeline for the Napanee Generating Station publicly announced by TCE that indicated that completion is expected in fall 2017.

Under the Oakville contract, TCE would have been paying an unrelated company, Union Gas, for gas management and delivery services. Under the Napanee contract, the OPA will be paying not just Union Gas, but also TransCanada PipeLines (TCPL), for these services. TransCanada Corporation owns TCPL, which owns TCE. Thus, the TransCanada group of companies stands to benefit from the Napanee plant, especially if the OPA pays higher tolls to enable TCPL to recover the cost of having to expand its pipeline capacity, as discussed below.

Potential Increase in Gas Delivery and Management Costs

In April 2013, TCE provided a draft Gas Management Plan (Plan) that the OPA will have to approve before TCE can enter into any gas service agreements with transporters. The draft Plan assumes that TCPL will be one of the transporters of gas to the Napanee plant. The draft Plan also points out that TCPL currently does not have sufficient pipeline capacity to transport the amount of gas that will be needed to service the Napanee plant in the proposed route. Accordingly, TCPL will be required to build new transportation facilities and will recover its costs through toll fees it will charge for the pipeline use. In September 2013, gas distributors, who currently rely on this section of TCPL's pipeline, agreed on a tolling framework that would allow TCPL to recover the cost of its additional investments. Under this framework, tolls could increase by up to 50% of the existing rates in the first three years. Any increase would need approval of the National Energy Board. If these rates are ultimately approved and remain at this level over the 20-year term of the contract for the Napanee plant, the cost of gas delivery could increase by about $140 million from our estimate of $577 million. The OPA maintains that there are other options available to manage this financial risk, and in this regard TCE, in a letter dated September 18, 2013, agreed to work with the OPA to look at alternative gas supply arrangements. However, these have not yet been fully explored.

Also, given that the contract for the Napanee plant does assume the use of TCPL's pipeline and with it the additional capacity investments, the use of an alternative route will require the contract to be amended. We note further that Union Gas, which is also being paid for providing a portion of the gas delivery and management services, could also seek approval to increase its toll rates. Any approved increases in its rates in the future will also increase gas delivery and management costs.

Because it is not certain how this matter will be resolved, we have not included the risk of this significant cost escalation in our estimate.

Gas and Transmission Connections—$43 Million

Gas connections (connecting the plant to pipelines) and transmission connections (connecting the plant to a switchyard, whose lines are then connected to transmission lines) were the responsibility of TCE under the Oakville plant contract. Under the contract for the Napanee plant, they are the responsibility of the OPA.

The gas connection costs are not expected to be significant because the plant site already has the infrastructure for handling a new 900-MW plant. The gas distributor confirmed to us that major upfront capital investments won't be needed to connect the plant to existing pipelines.

We used the OPA's estimate of $37 million (present value) for the transmission-connection cost component, but we used 4% for the present-value discount rate to arrive at our estimate of $43 million (as discussed, the OPA used 6%). Hydro One completed a feasibility study in June 2013 that estimated the cost of connecting the lines running through the switchyard to transmission lines to be about $7 million. At the time of our review, TCE was still working on estimating the cost of connecting the plant's generating units to the switchyard. It expected to have an estimate sometime in 2014. In the meantime, we have estimated it at $36 million, bringing the total to $43 million.

Additional Gas for Less Efficient Turbines—$35 Million

The proposed Oakville plant's turbines were modified in late 2010 and early 2011 to have a faster start capability, with the expectation that they would be used in a peaker plant in the KWC area (see Section 4.3.1). However, this capability is not needed in the Napanee plant. In fact, the turbines are now less efficient because more gas is consumed. We estimated that the additional gas for these less efficient turbines will result in about $35 million (present value) in higher costs over the 20-year life of the Napanee plant.

Therefore, all told, the modification of the turbines for a faster start capability, which ultimately was not needed, may result in additional costs of about $70 million over the contract term—$36 million for the cost of the modifications as discussed in Section 4.3.1 and an additional $35 million over the term of the contract.

Transmission System Upgrades—$81 Million

When the Oakville project was still being planned, the OPA anticipated that new investments in the Western GTA's transmission system would be needed in around 2029 to relieve the stress of the load growth from the increased demand for power. Hydro One had estimated the cost of these new investments at between $250 million and $270 million.

When the Minister of Energy announced the cancellation of the Oakville plant, he said that meeting local demand for power would instead be met through "transmission solutions." These solutions involve moving up some planned work on the transmission system by 10 years. Our estimate of the cost of doing this is about $81 million (present value).

The OPA's position is that Napanee is not an optimal location for a power plant. Specifically, its planning flexibility will be reduced because the power that the Napanee plant will produce will use up transmission capacity in the eastern hydro corridor that the OPA would rather be kept free for other sources of electricity, such as imports, nuclear power and power from the existing Lennox Generating Station.

Line Losses for the Distance Power Has to Travel From Napanee—$32 Million

As a result of relocating the Oakville plant to Napanee, power will have to travel a considerable distance through transmission lines. Some energy will be lost along the way, mostly as heat. The OPA has estimated the cost of these line losses will be $32 million over the 20-year life of the Napanee plant.

This estimate is based on several assumptions relating to, among other things, future growth in the demand for electricity in the Southwest GTA, the load factor in the lines (heavily loaded circuits lose more energy than lightly loaded ones), and future developments in generation and transmission systems. The cost could therefore well be higher or lower. Overall, however, we concluded that this estimate is reasonable.

Replacement Power, 2017—$91 Million

The OPA's position on the province's power supply needs has changed since 2007, when its Integrated Power System Plan identified a need for a gas-fired plant in the Southwest GTA. With the current surplus power capacity in the province, the OPA contends that the power the Oakville plant would have produced will not be needed until 2017. At that point, it will have to buy replacement power until the Napanee plant is in service.

As noted earlier (see Section 4.3.2), we believe that the Napanee plant will likely be in service by fall 2017. Therefore, the OPA should need to buy only about nine months of replacement power. Our estimate of this cost is about $91 million.

The OPA's estimate of this cost is much higher ($215 million) because it used the contracted in-service date of December 2018 for the Napanee plant.

4.3.3 Estimated Future Savings

Lower Price Negotiated for Power From Napanee Plant—$275 Million

As discussed earlier, the OPA has taken on a number of costs for the Napanee plant that TCE would have assumed under the contract for the Oakville plant (gas turbines, gas delivery and management costs, and gas and hydro connection costs). As a result, TCE's overall cost of building and operating the Napanee plant has been reduced. It follows that TCE's "net revenue requirements" (NRR, or the revenue TCE needs to receive to pay for the new plant and earn a reasonable rate of return) will be that much less than they were for the Oakville plant. Accordingly, the OPA was able to negotiate the NRR for the Napanee plant down 12%, to $15,200/MW/month from $17,277/MW/month. We calculated that this reduction is worth about $275 million (present value) over the 20-year life of the Napanee plant and recognize that it partially offsets the costs associated with cancelling and relocating the Oakville plant.

However, the costs that the OPA has taken on that TCE would have incurred had the plant remained in Oakville amount to about $445 million: $210 million for the turbines, $225 million for gas delivery services from Sarnia to Oakville, and about $10 million for gas and hydro connections. The $275-million NRR reduction falls far short of recovering these costs. The difference of about $170 million is a significant benefit to TCE and may result in TCE earning a higher rate of return for the Napanee plant than it would have for the Oakville plant, although it will begin earning this return later.

TCE may also earn a higher return because of the difference in the purchase prices of the Oakville and Napanee plant sites: TCE expected to pay about $56 million for the site of the Oakville plant while the cost of the Napanee site is only $1.1 million (however, under the contract for the Napanee plant, TCE would also be responsible for up to $18.25 million in capital costs related to the site, if required). In addition, TCE is expected to benefit from the right to share certain infrastructure, such as water intake and discharge systems for cooling, storm water discharge, and a sewage system, already in place at OPG's existing Lennox Generating Station (located next to the Napanee plant site). Building this infrastructure at the Oakville plant would likely have cost TCE more than the $5.6 million, plus incremental costs, it will pay OPG for the sharing arrangement.

No Payments to TCE Until 2017—$162 Million

If the Oakville plant had been built by its targeted February 2014 completion date, the OPA would have then begun paying TCE the agreed-upon NRR of $17,277/MW/month. The OPA contends that, with the cancellation, with the province's surplus power for the near term, and with a contracted completion date of December 31, 2018, for the Napanee plant, about five years of NRR payments have been deferred. The OPA estimates the savings resulting from the deferral of NRR payments to be about $539 million (present value).

This estimate hinges on if the Oakville plant had been completed by the contract date. At the time of the plant's cancellation in October 2010, TCE had five appeals pending with the Ontario Municipal Board and four outstanding legal proceedings in Ontario divisional court, all stemming from planning regulations the Town of Oakville was using to oppose the plant. These actions were keeping TCE from securing necessary permits and approvals to begin construction. The Town of Oakville obtained a legal opinion that noted that the proceedings "would likely not have been resolved until some point in 2012, at the earliest," even if the Mayor did not take it to the Supreme Court of Canada as he testified he would. Accordingly, we assumed that plant construction could have begun in mid-2012. Given that plant construction takes about 40 months, the earliest the Oakville plant could have been completed would have been the end of 2015.

As for when the deferral period will be over and NRR payments to TCE will begin, we have already noted that TCE has publicly projected the plant's completion for fall 2017. We further noted in Section 4.3.2 that the local gas distributor and OPG, the province's largest electricity generator with experience in the construction of power plants, both indicated that the plant could reasonably be expected to be up and running by fall 2017.

For the above reasons, we based our estimate of the savings from deferred NRR payments on a completion date for the Oakville plant of December 2015 and a start date for the Napanee plant of October 2017 (a period of 21 months, substantially less than the period of about five years between the two plants' contracted completion dates). Our estimate of these savings is about $162 million (present value). Furthermore, we note that if we were to accept the OPA's assumption that the Napanee plant is not completed until the contracted December 2018 date, our estimate of the net cost of cancellation and relocation would be about $50 million higher. This is because the cost associated with additional replacement power more than offsets the additional savings from the deferral of NRR payments.

Appendix—Selected Key Roles of Entities in Ontario's Electricity Sector

SECTOR CO-ORDINATION, OVERSIGHT, AND REGULATION

- Ministry of Energy: sets overall policy in response to the Government's legislative framework
- Ontario Power Authority: prepares overall plan and procures power supply at the Minister's direction
- Ontario Energy Board: sets and regulates some electricity prices and performs other regulatory activities

ELECTRICITY SUPPLY

Generated by:

- Ontario Power Generation
- Private companies (e.g., Bruce Power)

Transmitted through:

- Transmission lines operated mainly by Hydro One

Distributed by:

- Hydro One
- 74 local utility companies (e.g., Toronto Hydro)

ELECTRICITY SYSTEM/MARKET

Managed and operated by:

- Independent Electricity System Operator