Hydro One Networks Inc.

Lambton to Longwood Transmission Upgrade Project

Application for Leave to Construct under section 92 of the *Ontario Energy Board Act, 1998*
Board File No. EB-2012-0082

Written Evidence of Chippewas of the Thames First Nation

Affidavit of Joe Miskokomon
Chief of Chippewas of the Thames First Nation

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B;

AND IN THE MATTER OF an application by Hydro One Networks Inc. for an order granting leave to construct to upgrade existing transmission line facilities.

AFFIDAVIT OF CHIEF JOE MISKOKOMON

I, **Joe Miskokomon**, Chief of the Chippewas of the Thames First Nation, **MAKE OATH AND SAY:**

1. I am a citizen and the duly elected Chief of the Chippewas of the Thames First Nation ("COTTFN"), and as such I have personal knowledge of the facts set out herein, except where the facts are stated to be based on information and belief, in which case I believe that the facts as stated are true.

2. I was first elected Chief of COTTFN in July 1995. I have since been re-elected for 5 non-consecutive terms. In my capacity as Chief of COTTFN I am involved in many Aboriginal rights initiatives to assert and protect COTTFN's Aboriginal and Treaty rights. I am authorized to speak for and on behalf of COTTFN and its members to express our concerns and to assert our rights and interests to government representatives and industry proponents.

3. I understand that Hydro One Networks Inc. ("Hydro One") has applied to the OEB for an order granting leave to construct to upgrade approximately 70 kilometres of existing 230 kV double circuit transmission lines between Lambton TS and Macksville Junction with a new higher capacity conductor and to replace existing insulators and associated hardware ("Project").

4. I am swearing this affidavit in support of COTTFN's assertion that Hydro One's Project triggers the Ontario Crown's duties to consult and accommodate COTTFN, to provide the OEB with our community's perspective on how the Project may adversely impact our constitutionally protected rights, and to explain why COTTFN takes the

position that we have not been adequately consulted and accommodated in respect of the Project.

5. For the reasons that I set out below, Hydro One's Lambton TS to Longwood TS transmission line ("Transmission Line") is currently infringing our Aboriginal and Treaty rights, and COTTFN is concerned that the Project has the potential to cause new and further adverse impacts on our Aboriginal and Treaty rights. COTTFN has not been adequately consulted or accommodated in respect of the Project.

Chippewa of the Thames First Nation's Aboriginal and Treaty Rights

6. In the context of Hydro One's proposed Project, COTTFN asserts that it has existing Aboriginal harvesting rights in its traditional territory, and that it has Aboriginal title to or at minimum an Aboriginal right to use the air space over the lands in its traditional territory. COTTFN also has an exclusive Treaty right to use and enjoy its reserve.

7. As a corollary of its rights COTTFN asserts that a part of any revenues generated from the transmission of electricity through its traditional territory should be shared with COTTFN members.

8. COTTFN is an Indian "Band" as defined by the *Indian Act*, R.S.C. 1985, c.I-5, as amended and our members are "aboriginal peoples of Canada" within the meaning of section 35 of the *Constitution Act, 1982*. Our reserve is located in southwestern Ontario west of the City of London in part of our traditional territory.

9. The Chippewas of the Thames are descendents from a part of the Anishinaabe Nation in southwestern Ontario (collectively referred to as Chippewa or Ojibwa). Our ancestors occupied southwestern Ontario and the Great Lakes long before Europeans settled the area. They migrated into and established communities in southwestern Ontario at the beginning of the 18th century. Our traditional territory,

which was inhabited by our ancestors, is depicted in a map which is attached to my affidavit as **Exhibit "A"**.

10. By the early 1800s our ancestors had established 4-6 territorial communities, each occupying distinct geographic areas that were associated with major watersheds and lakeshores. Two large communities occupied the shore of Lake St. Clair and the St. Clair River as well as the interior Thames River. The Chippewas of the Thames are descendents from the Thames River community. Another community, the Big Bear Creek Ojibwa, resided along the Sydenham River. Descendents of that community are now part of COTTFN.

11. Each Chippewa community had a home range or a defined area in which it would harvest resources. While fixed, permanent settlements (i.e. villages) did not exist, each community had several areas that it would seasonally occupy and central places that defined the heart or core of its territory or range. Each community had a sense of ownership over the resources in those areas. Attached to my affidavit as **Exhibit "B"** is a research paper prepared by Professor Neal Ferris, the Lawson Chair of Canadian Archaeology, Department of Anthropology/Museum of Ontario Archaeology, University of Western Ontario, in which Professor Ferris describes our ancestors' way of life and seasonal harvesting cycles. A map of the traditional areas of Chippewa communities in southwestern Ontario in the 1800s is located on page 3 of Exhibit "B".

12. Our ancestors survived off the land through several seasonal harvesting activities, including hunting (including migratory birds), fishing, trapping, gathering animals, plants, minerals, and oil, growing corn and harvesting maple sugar. Their harvesting activities exploited the full range of seasonally abundant resources in their territorial home ranges. Our ancestors also grew agricultural crops to supplement other food sources.

13. A critical element of our ancestors' way of life was mobility and ongoing access to seasonally abundant resources throughout their territorial home ranges.

Groups, families or individual Chippewas traveled between four to five settlement camps at different locales within each community's home range over the course of a year.

14. Our ancestors' seasonal harvesting cycles and the mobility required to access parts of our territory to harvest resources on a seasonal basis were an integral part of their way of life and worldview. At p. 8 of his research paper, Professor Ferris concludes that:

> For the Ojibwa, mobility and hunting were as much dimensions of self-identity as language and belief systems. Indeed, daily living was really identity experienced across and read into the landscape of mobility, and reinforced as distinct when compared with other, more settled Native and non-Native communities.

15. Our ancestors continued their seasonal harvesting cycles throughout the 19th century following the arrival and settlement of Europeans. Our ancestors did not abandon their sense of self that was intimately tied to their mobility and seasonal harvesting practices carried out across their territorial home range.

16. These activities continue to be integral to COTTFN's distinctive culture.

17. It is on the basis of our ancestors' occupation and use of our traditional territory prior and subsequent to the arrival of Europeans that we assert Aboriginal rights to all of our traditional harvesting activities in our traditional territory, and Aboriginal title over parts of our traditional territory that were never ceded or surrendered to the Crown. These Aboriginal rights are constitutionally protected under section 35 of the *Constitution Act, 1982*.

18. Beginning in 1818, the chiefs of the Chippewa communities residing in southwestern Ontario entered into nation-to-nation negotiations with the British Crown. The spirit and intent of the negotiations were to provide the Crown with much

needed land for settlement and agricultural purposes while protecting our ancestors' traditional way of life.

19. The Chippewa Chiefs of the day entered into an oral treaty with representatives of the British Crown in 1818. The terms of the oral treaty were set out (and modified without consent) by representatives of the British Crown in written "provisional" treaties in 1819 (Treaty No. 21), in 1820 (Treaty No. 280½), and a final treaty in 1822 (Treaty No. 25). Attached to my affidavit as **Exhibit "C", "D", "E", and "F"**, respectively, are copies of notes taken of the oral treaty concluded in 1818, Treaty No. 21, Treaty No. 208½, and Treaty No. 25.

20. The written text of Treaty No. 25 provides that our ancestors agreed to "surrender to His said late Majesty and His successors, without limitation, or reservation, all that parcel or tract of land lying on the northerly side of the River Thames, in the London and Western Districts of the Province aforesaid, containing about five hundred and eighty thousand acres, and hereinafter more particularly described". While there is no mention of reserves in the written text of Treaty No. 25, there is no dispute that the previous treaties reserved lands for each community and recognized our ancestors' exclusive rights to those unceded lands. A portion of the lands reserved under the treaties make up COTTFN's present-day reserve.

21. The text of Treaty No. 25 was written by representatives of the Crown having regard to European concepts of property law and ownership. These concepts were not known or understood by our ancestors that executed the Treaty. Our ancestors would not, therefore, have understood, negotiated, agreed to or interpreted the Treaty having regard to European concepts of property and ownership.

22. Our ancestors understood what was being negotiated and what they ultimately agreed to through the lenses of our worldview and our seasonal relationship with our lands, waters, and natural resources.

23. Professor Ferris concludes that the Big Bear Creek Ojibwa would have understood the surrender of land and reserves created by the treaties to preserve our harvesting rights throughout our traditional territory rather than limiting harvesting activities to the four corners of our reserves:

> ...Beyond the stretch of river where warm weather settlements could be found, the community would also have assumed the area would have captured seasonally important camps (i.e., sugaring camps), and fixed locales on the landscape of cultural significance such as burial grounds. In addition, the general area would have been viewed as a place encompassing various "improvements" to raw land, in the form of seasonally important resources, including maple stands, orchards, winter deer yards, sources of berries, nuts and medicinal plants, and supplies for manufacturing crafts, such as ash, hickory and other trees and grasses important for making baskets, mats, brooms, axe handles etc. In other words, while the British Crown translated the notion of "reserve" into a bounded parcel of land, it is important to keep in mind that the "place" of the Bear Creek Ojibwa reserve would have been a cultural concept in the minds of the Ojibwa encompassing everything in their territorial community of economic and social value to the community, regardless of whether fitting inside a boxed in parcel of land...
>
> ...Moreover, it is also important to keep in mind this "reserve" was for a community that, by name, travel and subsistence, thought of itself as the *Bear Creek* Ojibwa. In other words, the acreage that is at question as a result of the British translation of Ojibwa concepts into a reserve measurement, is itself an artifact of colonial translation, and should not be assumed to have been conceptually understood in the same way by this Ojibwa community. Extensive historic references cited by both the Federal government and the Chippewas of the Thames documentation refer to extensive land improvements along the Sydenham River, including corn fields, camp sites with the structural supports for residential dwellings, sugar camps, burial grounds, orchards, etc. Springer's survey notes from 1846 make extensive reference to these improvements, and note that they extend some 10 miles along the Sydenham River. Smith's earlier survey records also reference encountering many such camps. These very visible improvements up and down the Sydenham River would have conceptually been as much a part of the Bear Creek settlement, both actively in use and recognised as the landscape heritage of the community, regardless of whether or not falling within a defined parcel of land based on the core settlement area along

the river... [emphasis added]

24. Our ancestors retained harvesting rights over our traditional territory and Aboriginal title over parts of our traditional territory (subsurface resources which lay under our lands and the air space above our lands) despite having entered into treaties with the Crown. Aboriginal harvesting rights as well as Aboriginal title to lakes, rivers, lakebeds, riverbeds, minerals and oil below the depth of a plow, and the air above our traditional territory were not expressly discussed during the treaty-making process and the Chiefs of the day did not agree to surrender those rights.

25. While our ancestors that executed the treaties were mindful of the British Crown's desire to use the surrendered land for settlement and agricultural purposes, our oral history confirms that their intention in executing the treaties with the Crown, and the spirit of the treaties, was to preserve and protect our way of life. This involved preserving our rights to continue our seasonal harvesting cycles and the necessary ongoing right to access and use our traditional territory.

26. Our oral history of the treaty-making process is reflected in and confirmed by the negotiations leading up to the treaties and in the treaties themselves. In the negotiations leading to the treaties, there was no discussion of our ancestors ceding or surrendering our harvesting rights in our traditional territories or our title to parts of our traditional territory. Unlike the numbered treaties that the Crown executed with other Aboriginal groups, the Crown does not have a right to take up land in a way that would adversely impact or somehow diminish or limit the geographic extent of our harvesting rights.

27. Today, COTTFN has a reserve and a permanent community. In that sense, our way of life has changed in large part due to development and settlement of southwestern Ontario by Europeans, which has made it impossible for us to sustain ourselves entirely by harvesting natural resources in our territory. However, we continue to exercise our harvesting rights in our traditional territory and to pass on

these important traditions to our youth. We maintain a deep spiritual connection to the lands and waters in our territory, which remains our home and continues to shape who we are.

Hydro One's Transmission Line is infringing our Aboriginal and Treaty rights

28. Hydro One's Transmission Line is located on our traditional territory, and it is currently infringing our Aboriginal and Treaty rights. Hydro One's construction and operation of the Transmission Line constitutes an unauthorized taking up of our traditional territory, including the air space above the lands therein, by the Ontario Crown. Adverse impacts on our Aboriginal and Treaty rights caused by this unauthorized taking up include infringement of our harvesting activities and depriving us of meaningfully sharing in the wealth created by the commercial development of our traditional territory.

29. Hydro One's Transmission Line was built without the Crown having consulted and accommodated COTTFN. The Ontario Crown and/or Hydro One are not sharing the revenues generated by the transmission of electricity through our traditional territory with COTTFN despite the fact that the construction and operation of the Transmission Line constitutes an ongoing infringement of our Aboriginal and Treaty rights. No Impact Benefit Agreements ("IBA") or Resource Benefit Sharing Agreements ("RBS") have ever been negotiated between COTTFN and Hydro One/Ontario Crown with respect to the Transmission Line.

30. It is my understanding that an industry standard is now emerging for project proponents and/or the Crown to negotiate IBAs or RBSs with Aboriginal communities to compensate them for adverse impacts caused by transmission lines to their Aboriginal and Treaty rights.

The Ontario Crown owes COTTFN constitutional duties to consult and accommodate in respect of the Project

31. Hydro One's Project is located in COTTFN's traditional territory and has the potential to cause adverse impacts to our Aboriginal and Treaty rights in three important ways.

32. First, construction activities may affect our ability to harvest in our traditional territory. No Traditional Land Use Studies or Traditional Ecological Knowledge Studies have been carried out to determine the extent that construction activities may adversely impact our ability to harvest resources in our traditional territory.

33. Second, construction activities may disrupt burial grounds or otherwise impact important cultural sites located in our traditional territory. Hydro One stated in its response to our written interrogatory #3(7)(d) that it has not completed the required Stage 2 Archaeological Study for the Project. Ongoing consultation and accommodation with COTTFN is required to minimize or prevent adverse impacts to burial grounds and other important cultural sites.

34. Third, upgrades to the transmission line constitute a further and enhanced unauthorized taking up of air space above the lands in our traditional territory and infringement of our Aboriginal harvesting rights. We understand Hydro One will have the capacity to transmit an additional 500 MW of electricity on the Transmission Line following the upgrades. The effect of the OEB granting Hydro One leave to upgrade the lines without requiring the Ontario Crown to consult and accommodate COTTFN will be a further and enhanced taking up without compensation or sharing of revenue to accommodate the new and additional impacts to our Aboriginal and Treaty rights.

35. The Ontario Crown has not adequately consulted COTTFN about the potential of the Project to adversely impact our Aboriginal and Treaty rights. Our rights and interests have also not been accommodated by the Ontario Crown.

36. I understand that Hydro One has stated that it is carrying out the procedural aspects of the Ontario Crown's constitutional consultation and

accommodation duties. Hydro One has submitted to the OEB that the Project will not impact COTTFN's Aboriginal or Treaty rights.

37. There is no basis for Hydro One's assertion. Hydro One provided COTTFN with notices about the Project, and there have been some meetings and discussions between Hydro One and COTTFN about the Project. However, Hydro One has not adequately engaged or consulted COTTFN about the issues raised in my affidavit. There has been no discussion about, and a thorough and constitutionally required review has not been conducted to determine, whether the Project has the potential to adversely impact our Aboriginal and Treaty rights and what forms of accommodation are constitutionally required. In particular, Hydro One has not addressed our concerns about sharing the revenue generated by the transmission of up to an additional 500 MW of electricity through our traditional territory.

38. The Ontario Government expressly recognized that Aboriginal communities have an interest in economic benefits from new transmission projects crossing through our traditional territories. Attached as **Exhibit "G"** to my affidavit is the Government of Ontario's Long-Term Energy Plan. On page 49 of the Plan, Ontario states that:

> Ontario recognizes that Aboriginal communities have an interest in economic benefits from future transmission projects crossing through their traditional territories and that the nature of that interest may vary between communities.

Concerns that the Project will not promote Aboriginal participation in renewable generating projects in a manner consistent with the Ontario Government's policies

39. COTTFN is in the process of assessing the feasibility of developing a 10 MW solar power plant in our traditional territory. Hydro One's response to COTTFN's written interrogatories clarifies that the Project will not necessarily provide COTTFN with required access to transmission capacity to develop our solar project, and, more

generally, that the Project will not necessarily help the OPA satisfy Honourable Chris Bentley's April 15, 2012 directives.

40. In his April 15, 2012 letter to the OPA, Energy Minister Bentley stated that the Ontario Government is committed to "Reserving a minimum of 10 per cent of remaining capacity for projects with significant participation from local or Aboriginal communities". In offering contracts for small and large FIT projects, Energy Minister Bentley directed the Ontario Power Authority to allocate from available capacity "a minimum of 100 MW for projects with greater than or equal to 50 per cent community and Aboriginal equity participation". Energy Minister Bentley's April 15, 2012 letter is attached as **Exhibit "H"** to my affidavit.

41. Hydro One's response to COTTFN's written interrogatory #2(3) states Hydro One (and the OPA's) position that the Energy Minister's Directive is at a Provincial level and, therefore, it is unable to determine whether or what percent of existing or newly created transmission capacity enabled through the Project will be allocated to renewable energy generation projects with significant participation from Aboriginal communities.

42. COTTFN is concerned that, without the OEB's intervention, existing and new transmission capacity on the Transmission Line will not be reserved or allocated to renewable energy generating projects with significant participation from Aboriginal communities, including but not limited to COTTFN. If this occurs, our Aboriginal and Treaty rights will be impacted by the Project without enabling us to develop renewable energy projects in our traditional territory.

43. The allocation of existing and new transmission capacity on the Transmission Line to renewable energy generating projects with significant participation from Aboriginal communities should be done taking into account treaty rights and treaty peoples. Concretely this means that Aboriginal communities whose traditional territories are crossed by the Transmission Line, including COTTFN, should be given

priority access to existing and new transmission capacity on the Line to transmit electricity from current or planned renewable energy projects.

Closing

44. For the reasons set out above, the Project has the potential to cause adverse impacts on our Aboriginal and Treaty rights.

45. COTTFN has not been adequately consulted in respect of such potential adverse impacts on our rights and interests. We are constitutionally entitled to be consulted in a meaningful and respectful way that allows for appropriate and thorough review of the potential impacts of the Project on our Aboriginal and Treaty rights and other interests.

46. Consultation must focus on accommodating our rights and interests. Appropriate accommodation in the circumstances of the Project involves economic compensation. COTTFN is entitled to share in the revenues generated by projects carried out on our traditional territory as a corollary of our Aboriginal and Treaty rights, and the potential for such projects to adversely affect our rights and interests. For this reason we are asking to be compensated on a go-forward basis for the transmission of electricity on the Transmission Line based on existing capacity and any new capacity that is added as a result of the Project.

SWORN before me in the City of)
Toronto this 19 day of July, 2012.)

Chief Joe Miskokomon

A Commissioner, etc.

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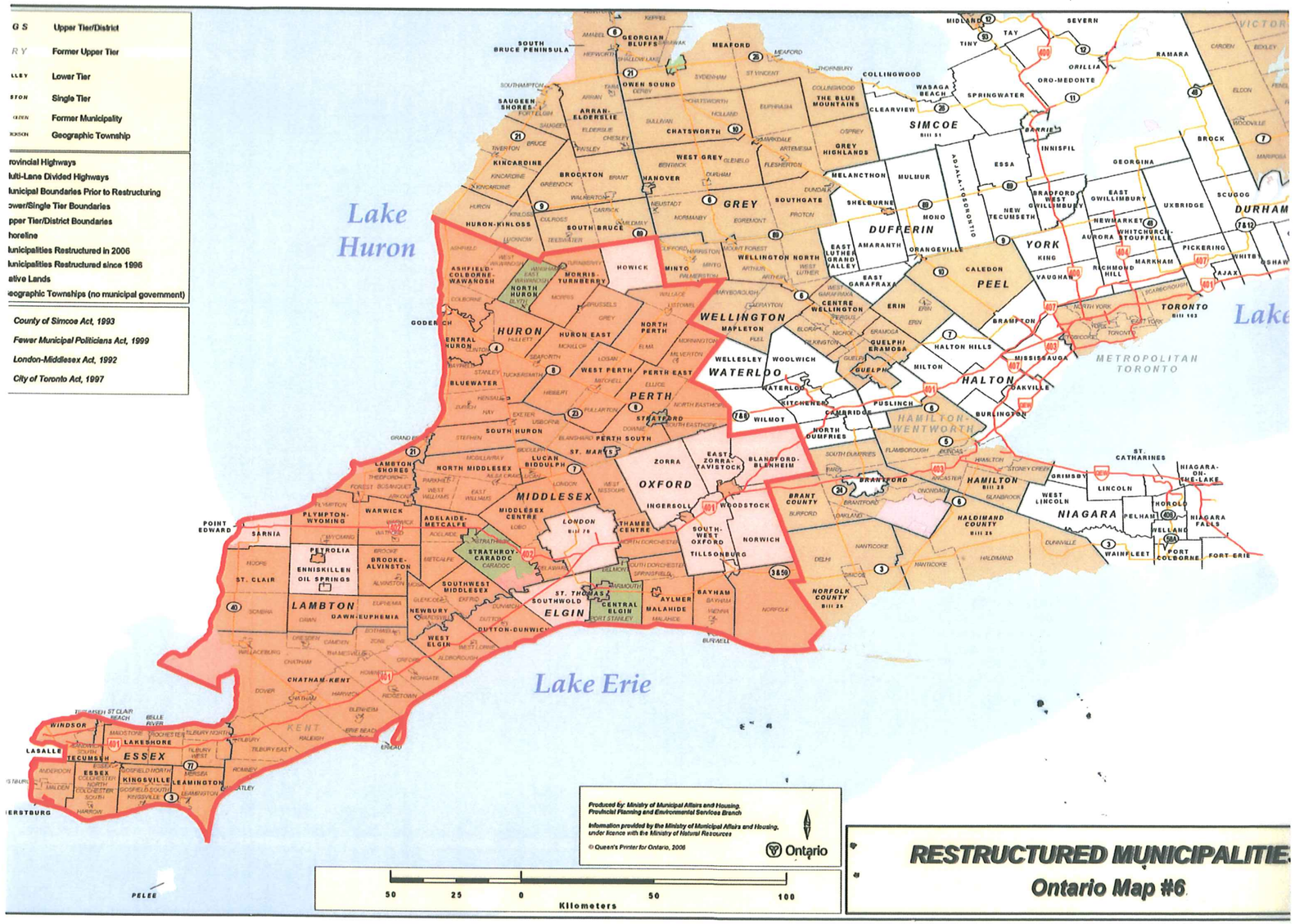
This is **EXHIBIT "A"** of the Affidavit of **CHIEF JOE MISKOKOMON** sworn before me this 14th day of July , 2012

A Commissioner etc.

Chippewas of the Thames - Big Bear Creek Land Claim Additions to Reserve Selection Area - Draft, April 2012



This is **EXHIBIT "B"** of the Affidavit of **CHIEF JOE MISKOKOMON** sworn before me this 11th day of July , 2012

A Commissioner etc.

A Consideration of the Location of Bear Creek Ojibwa Reserve, Sydenham River, Ontario

For: The Chippewa of the Thames First Nation

Prepared by: Dr. Neal Ferris
Lawson Chair of Canadian Archaeology
University of Western Ontario
Department of Anthropology/Museum of Ontario Archaeology

May 20, 2009

1.0 **INTRODUCTION**

This review considers the information compiled to date with respect to the Bear Creek reserve on the Sydenham River, which had been initially recognised in land surrender negotiations between the British Crown and the Chippewas of Bear Creek, but never surveyed or established. The legacy of this omission is the subject of the current claim by the Chippewas of the Thames. That First Nation filed a Big Bear Creek historical narrative (Claim No. 166-503) detailing the basis of their claim. The Federal government through INAC provided a report prepared by Alexandra Fensome in March of 2009 that focused on determining the present location of this reserve.

These two documents form the core of the materials considered for this review. In addition, I also considered additional historical and archaeological records known to me as a result of previous I had conducted on the archaeology and history of the Sydenham and Thames River Ojibwa communities. The additional information I bring to bear arise principally from previous works, notably Ferris 1989, 2009, and Ferris et al 1985. Generally these references will not be cited individually unless to substantiate a detailed fact. The reader is encouraged to review these materials, as well as the INAC and Chippewas of the Thames documentation, for further information.

I will briefly review the lifeways of the Bear Creek Ojibwa during the first few decades of the 19th century, specifically the seasonal round, subsistence and settlement patterns evident for this community. That data provides a broader context for understanding the views of the Bear Creek Ojibwa and what would have been the rationale behind individuals from that community pointing out the need for a reserve on the Sydenham River around 1820.

I will then consider the INAC determination of the reserve location, and point out where that is consistent and inconsistent with archaeological and historical data. I will then conclude by identifying possible alternative locations for this "reserve." These alternate locations are offered because they more accurately encompass most of the Bear Creek Ojibwa settlement around 1820, and conceptually are more consistent with what the Bear Creek community's sense of what was essential to be captured within such a reserved area.

Finally it should be noted that this is a brief review of the compiled primary and secondary documentation and known record for the area of the Bear Creek reserve on the Sydenham River. The intent of the report is simply to help the community and INAC officials consider the accuracy of the currently proposed reserve location against that known record, as well as consider whether viable alternatives have implications for their negotiation of a settlement. Should it be warranted, additional research, particularly in compiling soils data and historical surveyor records with respect to recorded vegetation patterns along this part of the river (i.e., identifying orchards, corn fields, maple stands, etc.), would assist in accurately determining the location of the ca. 1820 Bear Creek settlement. As well, archaeological inventory of existing landowner collections, as well as survey and excavation, could be conducted to locate the

village site Peter Jones visited in 1828, as well as to more thoroughly map the extent of land use along this stretch of the Sydenham River after 1820 by Ojibwa families, as well as along secondary drainages in the region. Such studies would be necessary if was determined essential to more thoroughly document the land use settlement of the Sydenham River by the Bear Creek Ojibwa in the 19th century beyond the level documented in the existing Chippewas of the Thames and INAC materials, and provided for here.

2.0 **BACKGROUND – THE SOUTHWESTERN ONTARIO OJIBWA**

By 1800 the various regional communities of Anishnabeg collectively referred to as Ojibwa or Chippewa had been resident in southwestern Ontario and adjacent parts of Michigan for a century, and variably would also have included more ancestral Anishnabeg connected to more ancient settlement of this region. The term "southwestern Ontario Ojibwa" is a misnomer, in that there was not just a single, generic Ojibwa presence in the region, and neither were these communities coincidentally restricted to contemporary state boundaries. In fact there were 4-6 territorial communities, each occupying distinct geographies associated with major drainages and lakeshore (Figure 1). And while there was a sense of ownership – the resources in a particular territory belonging to the community and representing a home range or defined extent of resource utilization – borders did not define autonomous or national boundaries, and were fluid. Concurrent with this notion of defined but open boundaries was that fixed, permanent settlements (i.e., villages) did not exist. Certainly central places existed for each group, and these locations helped define the "heart" of a territorial range. But the Ojibwa settlement pattern was much more complex than any single, fixed locale on the land.

Specifically, at 1800 these 4-6 Ojibwa territorial communities existed in differing forms (Ferris 1989; Figure 1). There were at least two large communities, one occupying the shore of Lake St. Clair and the St. Clair River, and another occupying the interior Thames River drainage – the Chippewas of the Thames. Smaller territorial groups included the Bear Creek Ojibwa, who resided at the time along the interior drainage of the Sydenham River. Population estimates for each group varied, but in general larger territorial community ranged between 150-300 individuals, while smaller groups – a kind of "sub" territorial group – ranged in population from 30-100 individuals, comprised of inter-related family or clan lineages. The basic family unit was the extended family (nuclear unit plus unmarried children, elderly parents or close relations), ranging anywhere from 5 to 15 individuals (Ferris 1989).

Ojibwa communities were extremely mobile seasonally, so full gatherings of a territorial community were restricted to a few occasions, such as during short term, intensive resource harvests, or for social, religious or political events. More often, the dictates of seasonal mobility meant the territorial group was extended across multiple settlements across a territory, either as warm-weather base camps of several families (sub-group?), or sugaring and winter hunting camps of one or a few families, or smaller and more informal hunting camps and overnight travel camps of one to a few individuals. It would be inaccurate to interpret this dispersed mobility as

wandering or nomadic, however. Movement was directed and related to an intimate personal and community knowledge of the resources and landscape within a home territory (Ferris 2009).

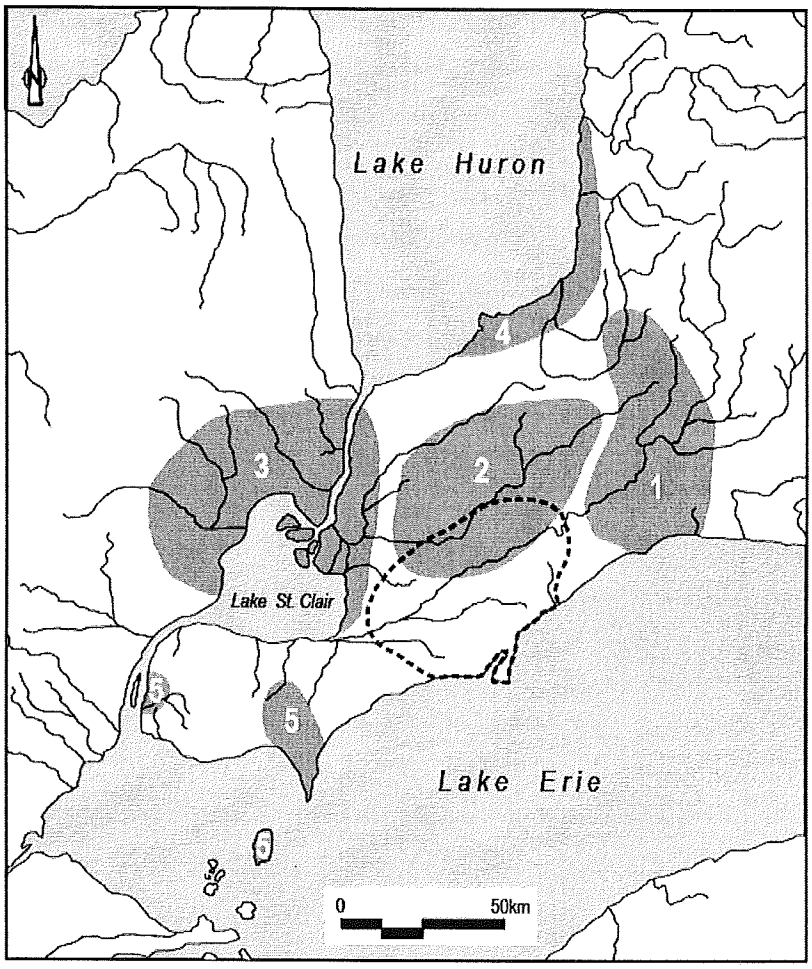


Figure 1: Southwestern Ontario Ojibwa Territorial Ranges around 1800. Note: Michigan communities are not defined on this map (taken from Ferris 2009).

2.1 **Background – The Bear Creek Ojibwa**

As noted above, territorial boundaries were not fixed and did change over time. For the Bear Creek Ojibwa, this is evident in the way in which they moved the core of their settlement area across their territorial space in the late 18th and early 19th centuries. Prior to late 1780s, it appears the core of this group's territorial home range was along the lower Thames River, although families and individuals would have travelled over the course of the year from Rondeau Bay and Lake Erie (notably for fish and migratory bird harvests in the spring) and up into the Sydenham drainage. By the late 1780s, however, increasing numbers of Euro-Canadian squatters began

settling along the lower Thames. As well, in 1792 the Moravian Delaware settled further along the river. Missionaries there noted Ojibwa traveling through the village on their way to the next river north, and also noted members of that community speaking of selling their land and leaving the Thames due to the numbers of non-Ojibwa peoples settling along the River (e.g., Sabathy-Judd 1999: 97). Once the heart of their settlement shifted to the Sydenham, this group regularly objected to encroachments, in the form of the Moravian Missionary Christian Denke in 1802 Ferris 2009), and Euro-Canadian squatters such as Job Hall in 1820 (Ferris et al 1985). Part of their response was to move away from non-Ojibwa groups, for example moving their core settlement area further upstream along the Sydenham around 1820.

The founding chief of the Bear Creek community was Kitchimaqua (Big Bear – thus Bear Creek), a signatory to a 1796 treaty (Curnoe 1996: 48; Denke 1991: 16). His son, Kitschi-Makongs (Great Lesser Bear, also known as Nabbawe), replaced Kitchimaqua and married the daughter of an Odawa chief (Onagan – Big Bowls) of the community that had just come from Sandusky Bay to re-settle at St. Anne's Island of the Walpole Island delta (Curnoe 1996: 74-75; Denke 1990: 8, 1991: 16, 1993: 7). Nabbawe was replaced prior to 1820 by Canotung (Joseph Kanotung), who signed land surrenders on behalf of the Bear Creek Ojibwa in the 1820s, and remained chief after that group relocated to the Thames Ojibwa reserve community in 1832 (Curnoe 1996: 18-19; P. Jones 1860, 1861).

The history of this community is intriguing and offers insight into how groups emerged as distinct territorial communities. It appears that, prior to their shift onto the Sydenham River, the Bear Creek Ojibwa had been a sub-group of the Chippewas of the Thames River – connected to that group but also distinct and large enough to maintain for itself a separate identity on the lower Thames. This separate identity was heightened when the group moved away from encroaching settlement and onto the Sydenham, to operate largely as an autonomous group. Nabbawe, the early 19th century Bear Creek Ojibwa chief, developed familial ties with the St. Anne's Odawa by Lake St. Clair, which provided access to the St. Clair fisheries for the Bear Creek group, and allowed those newly settled Odawa use of the upper Sydenham winter hunting grounds. Despite these connections, it was the Thames River Ojibwa at Muncey to which the Bear Creek community returned in the early 1830s, reflecting a deeper historic connection to that community than to the St. Clair group. However, Canotung and that group maintained a distinct identity within the larger Muncey group through the 19th century, in part contributing to community factionalism (e.g., Graham 1975; P. Jones 1861). This process of fissioning and fusing of distinct communities, and the ability to maintain greater than family and less than territorial community identity through the 19th century even when living in larger groups, speaks to the antiquity and significant strength and flexibility this social structure held for the Ojibwa and Aboriginal nations of the region.

Population estimates for the Bear Creek Ojibwa ranged from 80 to 150 people, depending on period after 1780. There is evidence that through the early 1820s the Bear Creek community expanded in size to have become a full territorial group (one 1815 population figure put the community at 172 people). By 1830 the Bear Creek Ojibwa are estimated at 102, and the

following year were recorded as 77 (Ferris 1989, Table 3.7), suggesting that some members had already begun to move prior to 1832; either east and south to the Thames or, perhaps for some of for those intermarried with Walpole Island Odawa, west.

2.2 Ojibwa Lifeways in the Early 19th century

Ojibwa subsistence in the early 19th century was diversified in order to exploit the full range of seasonally abundant resources available in the region. This also included the growing of agricultural crops as an augment to other food resources, not as a single staple. A critical element of this diversified subsistence was mobility, either by group, family or individuals, as activities and time of year warranted. Mobility was within the territorial community, or home range, though travel further afield for subsistence and social or economic reasons also occurred. Historic records provide numerous accounts of formal group mobility (e.g., moving to sugaring camps, winter hunting territories, long distance travel), and convey a sense of constant informal movement all year long (e.g., an individual or family passing by, social visits, a hunter trading a shank of deer meat).

In general, the Ojibwa traveled between four to five settlement camps at different locales within the community's home range over the course of a year (Figure 2; see also Ferris 1989: 171-183). Sugar camps were usually set up by late January by good stands of maple on or inland from waterways, and occupied by a number of families gathered together from more dispersed winter hunting camps. The people at a sugar camp likely would have comprised the majority of a sub-group within the territorial community. By early April sugar camps dispersed and individual families would make their way to spring fishing camps on the Great Lakes or major riverways. Some camps were made up of a few families, while others were clearly inter-territorial gathering places.

By the end of the spawning runs, territorial sub-groups moved to the interior along major river drainages to summer base camps. These locales, like sugar and fish camps, would have been re-settled regularly. These were arrived at between mid April and mid May, with most of the group present during the initial phase of clearing and preparing fields for planting. When cached on site in storage pits and not taken off-season as food, seed corn would have been left for the next spring's planting. Wigwams or apaquois (circular residences covered in reed mats or rolls of bark) were constructed, or standing frames repaired and re-covered. Smaller camps consisting of a single family were also known.

After this initial period of intense activity at the camp, the community would begin to disperse, with a few residents remaining behind to fish, hunt, collect, maintain material culture or travel short distances (e.g., a day or two) to other settlements. Generally, the only members of the community that stayed at the camp through the summer were the elderly, and less regularly women and young children. As well, people would have returned to the summer base camp off and on over the rest of the season. By late September most of the base camp would have reunited to harvest the garden plots and perhaps begin fall hunting.

following year were recorded as 77 (Ferris 1989, Table 3.7), suggesting that some members had already begun to move prior to 1832; either east and south to the Thames or, perhaps for some of for those intermarried with Walpole Island Odawa, west.

2.2 Ojibwa Lifeways in the Early 19th century

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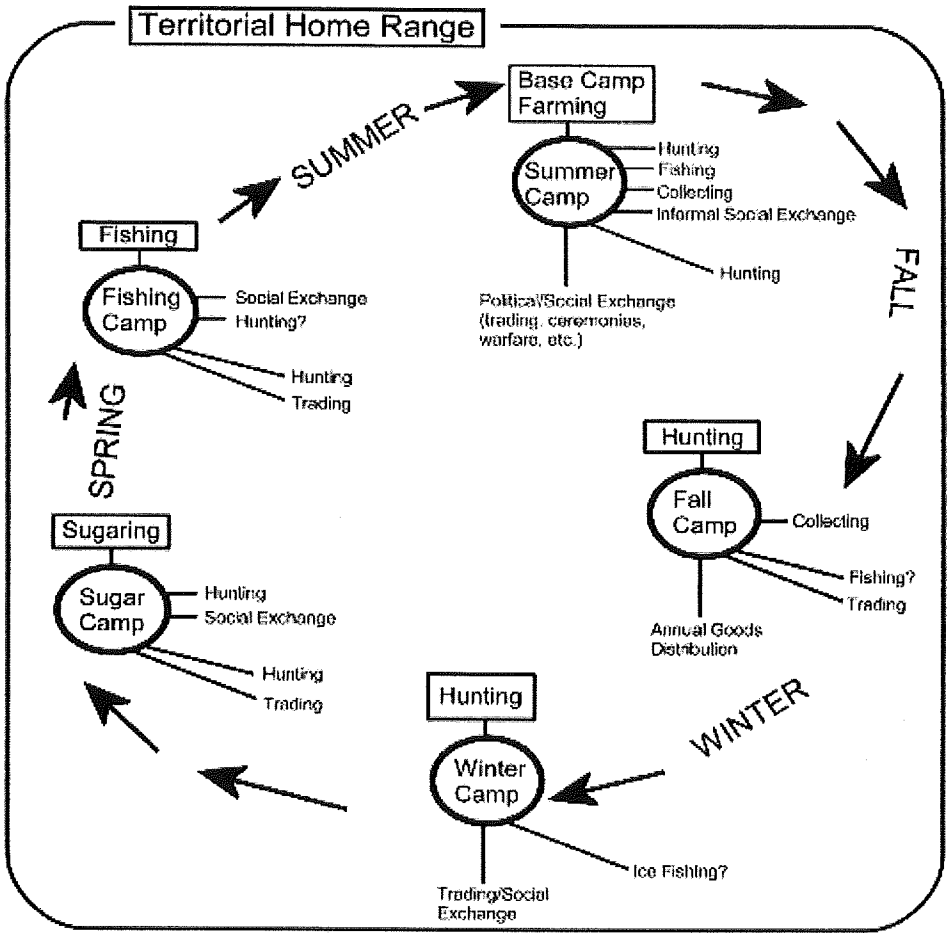

Figure 2: Schematic of the Seasonal Round Mobility Followed by the Ojibwa of Southwestern Ontario in the Early 19th Century, and the near and distant subsistence and social activities carried out at each camp.

From summer base camps or from smaller family hunting camps the Ojibwa conducted a late fall hunt in October-November. Then families would disperse into the interior to winter hunting areas, or travel further afield to over-winter with other groups. Winter camps were less locales that were returned to each year, and more general vicinities where access to game was relatively reliable. Depending on how hard a winter was or how available winter game was, families would remain in one area through the winter, re-locate their camp, or join up with other community winter camps. It was also the case that off-season camps could be visited, in part to recover cached food supplies. Lastly, short-term, temporary camps were used frequently throughout the year, particularly during periods of regular mobility (e.g., during the hunting season).

Subsistence strategies over the course of the seasonal round emphasized a maximization of all available resources. For this to be successful, the pattern of seasonal mobility practiced by the Ojibwa had to be intimately connected to detailed knowledge of the territorial landscape they resided in, and clearly informed by recursive, historically known, successful patterns of behavior - a quintessential characteristic of seasonally mobile procurers and foragers. While clearly flexible enough to adjust to seasonal vagaries, new technologies and lived experience, this way of ordering life was also resistant to change; in the Ojibwa example despite being surrounded by alternative Native and Euro-Canadian ways of living life.

Settlement patterns at seasonal camps varied based on duration of occupation, subsistence activity foci, group make-up, and weather. Residential dwellings were generally one to two family structures, such as apaquois/wigwams, or smaller, more temporary pole structures. A planked or hewn shanty was also used, but log cabins were not in use at the start of the 19th century. For locales that served as relatively "fixed" habitations from year to year (e.g., sugar camps, large fishing camps tied to recurring fish runs, and summer base camps), bark, mat or hide coverings were removed from dwellings, but the pole structures were left until revisited later in the season or the following year, often noted by European travelers as structural "skeletons abandoned" on the landscape.

The layout, structures, and nature of the settlement patterns at Bear Creek Ojibwa summer base camps is captured in writing by the missionary Denke, who traveled to the summer base camp known as Kitigen in 1801:

> About 2 o'clock we reached the Indian 'town'.... The settlement consists of seven houses of which two are built a short way down the river. They stand very irregularly and in a cluster so close together that only a small passage is between them. Two of them are from hewn, thin timber, the rest have a house like a framework of poles covered with bark. In the middle of the house, the fire is made. They do not have floor or plank beds but sit and lie on the ground. In such a house, 5 or 6 families often live together... They have no doors at their houses but an old hide or a piece of bark is hanging before the small opening instead. Under the roof, there are poles on which the fresh meat, intestines, etc. are dried.... Near the 'town', because the river makes a bend there, is a small 'bottom' where they make their plantations... Denke 1996: 4-6

This vivid image is reflected in the settlement patterns documented at the Bellamy site, located on the south side of the Sydenham River in Camden Twp, Kent County (Lot 7, Con 10), between Dawn Mills and the village of Florence. This camp site is on a sandy plateau overlooking a bend in the river, marked by extensive river flats and a small spring running in the river. Archaeological data confirmed that this was a summer base camp (either the historically recorded town of Kitigen, or a similar settlement to Kitigen), occupied sporadically between 1790 and the early 1830s. Excavations revealed discrete activity areas, storage/cache pits, hide smudging pits, and evidence of at least 2 wigwams.

Both archaeological data and historical descriptions suggest the Bellamy site was an Ojibwa summer base camp. These were multi-family occupations consisting of a specific sub-group of the territorial community, perhaps representing between a third and a sixth of the total territorial population. Assuming that single fire apaquois/wigwams were occupied by one or two families, and that average family size was around 6 or 10 individuals - as implied by the 1798 and 1799 counts of the Odawa residing at St. Anne's Island (MPHSC Vol 20: 564; 617-618; 641-642) - then it could be suggested that a minimal population at Bellamy ranged between 24 and 40, or two to four families.

But all indications are that a "population" estimate for a summer base camp is of limited use, given the very fluid and fluctuating nature of residents and visitors present at the camp in a given year. Bellamy was likely one of perhaps three or four similar camps established by the Bear Creek Ojibwa along the Sydenham during the summer. Likewise, residents at any of these camps may also have established smaller, individual family camps up or downstream.

The settlement-subsistence for the Bear Creek Ojibwa specifically, and southwestern Ontario Ojibwa generally, indicate that traditional livelihood, settlement, and social organization remained largely intact through the early 19th century, although material culture had changed. Traditional house forms were still being constructed with limited aid of items such as nails. Given this, it appears that European goods assisted in improving traditional methods of Ojibwa livelihood; however they do not appear to have altered settlement-subsistence. It is worth emphasizing here that this stands in contrast to the conventional assumptions that populate past anthropological and historical interpretations of Central Great Lakes Algonquian-speaking Anishnabeg from this time, especially around suggested changes to social organization, settlement, subsistence and material accumulation all being triggered by Aboriginal communities responding to European-induced fur trade realities.

So the Ojibwa archaeological history in the early 19th century reflects only latent, surficial changes to material life – a coherent balance of adaptive accommodation and innovation while maintaining historically known lifeways and sense of self. As with hunting-gathering communities elsewhere in place and time, the Ojibwa were clearly conservative to change beyond innovative adaptation, reluctant to abandon an historically constructed sense of self that came from the seasonal scheduling of livelihood and daily life across their territorial "home range", and not from fixed locales within it. For the Ojibwa, mobility and hunting were as much dimensions of self-identity as language and belief systems. Indeed, daily living was really identity experienced across and read into the landscape of mobility, and reinforced as distinct when compared with other, more settled Native and non-Native communities.

3.0 CONSIDERING THE LOCATION OF THE 1820 BEAR CREEK RESERVE

In reviewing the possibility of locations for this reserve, a number of working constraints to assumptions need to be taken into account:

1) Almost all historical references to the location of the reserve speak of a square or rectangular parcel of land (indeed, that is the basis of the current claim). However, given the mobility and use of a home range for the Ojibwa documented for the early 19th century, it is worth keeping in mind that, at the time the reserve location was first identified to the British, it would not have been conceived of as a square parcel of land extending from or around a stretch of riverfront. Rather, the location would have been a general concept of the core settlement area of the community, encompassing places such as seasonal camps returned to most years (most notably summer base camps or villages). Beyond the stretch of river where warm weather settlements could be found, the community would also have assumed the area would have captured seasonally important camps (i.e., sugaring camps), and fixed locales on the landscape of cultural significance such as burial grounds. In addition, the general area would have been viewed as a place encompassing various "improvements" to raw land, in the form of seasonally important resources, including maple stands, orchards, winter deer yards, sources of berries, nuts and medicinal plants, and supplies for manufacturing crafts, such as ash, hickory and other trees and grasses important for making baskets, mats, brooms, axe handles, etc. In other words, while the British Crown translated the notion of "reserve" into a bounded parcel of land, it is important to keep in mind that the "place" of the Bear Creek Ojibwa reserve would have been a cultural concept in the minds of the Ojibwa encompassing everything in their territorial community of economic and social value to the community, regardless of whether fitting inside a boxed in parcel of land.

2) Moreover, it is also important to keep in mind this "reserve" was for a community that, by name, travel and subsistence, thought of itself as the *Bear Creek* Ojibwa. In other words, the acreage that is at question as a result of the British translation of Ojibwa concepts into a reserve measurement, is itself an artifact of colonial translation, and should not be assumed to have been conceptually understood in the same way by this Ojibwa community. Extensive historic references cited by both the Federal government and Chippewas of the Thames documentation refer to extensive land improvements along the Sydenham River, including corn fields, camp sites with the structural supports for residential dwellings, sugar camps, burial grounds, orchards, etc. Springer's survey notes from 1846 make extensive reference to these improvements, and note that they extend some 10 miles along the Sydenham River. Smith's earlier survey records also reference encountering many such camps. These very visible improvements up and down the Sydenham River would have conceptually been as much a part of the Bear Creek settlement, both actively in use and recognised as the landscape heritage of the community, regardless of whether or not falling within a defined parcel of land based on the core settlement area along the river.

3) There are many references to the settlement/reserve being located by or above rapids on the river, or at the source of the Sydenham. The latter is generally accepted to be a misnomer historically, given the headwaters of the Sydenham are far to the north of any location currently under consideration, and likely more refers to a narrowing of the river, and a place where several similar sized creek channels enter the river (i.e., at canoe level, it would be difficult to distinguish which was the river channel and which were other creek mouths entering the river). In terms of determining a location for rapids, a number of locations have been referred to in historical sources. Most commonly it is assumed to be at Smith Mills (north of Shetland). Springer indicates this was the location of the rapids. He also notes that there are additional rapids to the east of Smith Mills. Other sources, including the Euphemia Township history written by Judge Eric Moorhouse (n.d.), assume the rapids are at the village of Florence. As well, depending on time of year, water level in the Sydenham will offer the appearance of fewer or greater number of rapids. In short, references to both rapids and the source of the river should be considered proximate landmarks.

3.1 Considering INAC's Estimate of Reserve Location

The document prepared by Alexandra Fensome for INAC (March 24, 2009) relies heavily on the 1846 Springer survey notes, which includes Springer's estimation of the reserve parcel location. This he calculated by how the reserve acreage would fit into lots and concessions within Euphemia Township, Lambton County. This calculation led Fensome to propose the parcel is located primarily north of the Sydenham River, north and east of Smith Mills, and entirely based on the lots Springer identified as fitting the reserve area (Fensome Maps 16, 17, 18 & 19). This location is problematic in light of other historical references, which would place the parcel more to the south and west, and reflects potentially faulty assumptions Springer made at the time he attempted to define the reserve.

Springer's logic for determining the reserve limit was to bring members of the Chippewa of the Thames community to the Sydenham River, to ask them to point out the boundary of the reserve. Springer had noted earlier that year that such a fixed point would be all he would need to figure out what part of the township the reserve would encompass. To determine a starting point he concluded, based on the information an interpreter passed on to him from the Chippewa of the Thames informants, that the corner of the reserve was located at the base of the falls (rapids) at Smith Mills, on the line between lots 27 and 28, in the middle of Concession 4. He was also given the impression that the reserve extended easterly from that location. He also determined that the river ran on a diagonal through lots and concessions in the township, and thus concluded that a block of land at right angles to the river would allow him to "fit" the reserve parcel into specific township lots.

Critical here is the fact that Springer did not survey the limit of the reserve with the Ojibwa informants that were there with him in the fall of 1845. Rather, he sought out a fixed point from which he could then calculate a spatial measurement of land by counting up an appropriate number of lots that would fit within the acreage he was told the reserve should

contain. In short, he was translating what was an entirely arbitrary number that arose through the treaty discussions of 1818-1820, and then "fitting" that acreage into Township lots that had been laid out subsequently and were not at all directly relevant to the Bear Creek Ojibwa reserve. This clearly was an exercise of approximation and convenience to service the task at hand, rather than to accurately confirm or ground truth either the actual reserve area or the Ojibwa informants' understanding of location.

Oddly enough, he initially calculated the lots necessary to make up a 2560 acre block of reserve (there was a great deal of confusion at the time as to whether the reserve was to contain 2560 acres or 5120 acres). He then noted that if it was determined that 5120 acres was the right size, it would then also include "...2/3 of the 3rd concession the 4th and 5th Concession and 2/3 of the 6th Concession from lot numbers 28 inclusive..." In effect, after establishing a corner for the reserve based on the fixed point he had established between lots 27 and 28 in the middle of Concession 4, he then simply doubled the size of the reserve by expanding the number of lots to be included to the north, east and west of the 2560 acre block he'd defined. But that meant the larger reserve parcel would no longer be fixed to the corner point used in the 2560 acres calculation. This illustrates the arbitrary nature of Springer's task and need to fit the acreage into an easily measurable form, rather than capturing accurately the actual location of the settlement or reserve as understood by the Ojibwa themselves. Nonetheless, it is clear from Fensome's report, notably Map 17, that she relied on and then replicated Springer's calculations. As such, this arbitrary parcel is currently informing INAC's understanding of the bounded area of the 5120 acres of land of the Bear Creek Reserve.

3.2 **Alternate Location Considerations**

3.2.1 Archaeological Considerations

Limited past archaeological research along the Sydenham River has identified numerous archaeological sites, encompassing over 11,000 years of human heritage in this region. Central to current considerations is that the Bellamy site falls within one stretch of the Sydenham River surveyors like Smith noted had been part of the Bear Creek Settlement. The location of Bellamy suggests some physical characteristics that would have been important to determining where to situate a summer base camp (i.e., define the heart of the home range settlement). Notably, the site was on a high plateau in close proximity to the river, drinking water, and access to extensive river flats for planting corn (as noted by the Moravian Missionary Christian Denke, river flats would have been used by both camp residents, and other Ojibwa living elsewhere along the river).

Other archaeological sites along the river in this area are known more for pre-contact materials, though it is worth noting that Ojibwa sites of the late 18th and early 19th century period are very difficult to identify based on survey findings, because distinctive material culture from that period is not extensive, and continued use of traditional subsistence means that the most dominant material remains from these sites (animal bones and fire cracked rock from cooking

food) are indistinguishable from those left by pre-contact settlement. In other words, with extensive ancient archaeological remains present along the river, Ojibwa components are likely masked by these earlier deposits.

Archaeological clues as to additional site locations include isolated artifacts associated with the late 18th and early 19th centuries discovered with otherwise pre-contact materials. This includes a pre 1810 spall gunflint came from a site near Dawn Mills west of the Bellamy site (and the Dawn Mills area is noted as being the westerly end of the Bear Creek settlement area). As well, a number of early 19th century artifacts have been found during surveys of archaeological sites on the east side of the Sydenham River south of Florence, in an area historical reports indicate (Con 13 &14, Lots 9-11, Camden Twp) encompassed a number of improvements associated with the Bear Creek settlement (Figure 3). This area also encompasses the mouth of Donkey Creek – which is interpreted as a corruption of "Denke" and is likely the location of the Christian Denke mission site from 1804-1806. Notably, after Denke left, his cabin was re-settled by Siskoba, a Bear Creek member (Ferris 2009).

3.2.2 Historical Records Considerations

Historic accounts vary as to the location of the reserve, and also tend to confuse the location of the "reserve" (a bounded area of land created in the act of negotiating a land surrender), and the location where the Bear Creek Ojibwa "settlement" was along the river – a physical reality of place and homeland presumably captured within the reserve boundary.

Some accounts refer to the reserve location being 4 miles upstream from the rapids. If the rapids referred to were at Smith Mills, which are located east and north of the Florence and the village of Shetland (Figure 3), and are repeatedly assumed to be "the" rapids being referred to in connection with the reserve, this would put the reserve well north of the general sense where the Ojibwa settlement was (i.e., encompassing the town of Alviston in Brooke Twp, and straddling the northeasterly stretch of the Sydenham drainage along the Lambton-Middlesex County border). Thus, it is reasonable to assume that historic references to the reserve being 4 miles upstream from "rapids" may not consistently refer to Smith Mills. For example, Moorhouse's Euphemia Twp history assumes upstream of rapids is references to rapids in the village of Florence (n.d.: 6).

There are also references to the Bear Creek settlement at one time being located south of Florence along the river. This area likely represents a previous concentration of Ojibwa settlement along the Sydenham River, extending from Dawn Mills to the village of Florence (Figure 3). This encompasses the Bellamy site, as well as the location of the Christian Denke mission site at the mouth of Donkey Creek, and was mostly located in the Camden Township in Kent County. It is also in this area (across from the mouth of Donkey Creek) that one of the first Euro-Canadian squatters settled along this stretch of the Sydenham. Job Hall was confronted by Bear Creek members in 1820, and told to leave or risk having his crops and livestock taken as rent. As such it may be that the settlement which informed the location of the reserve should

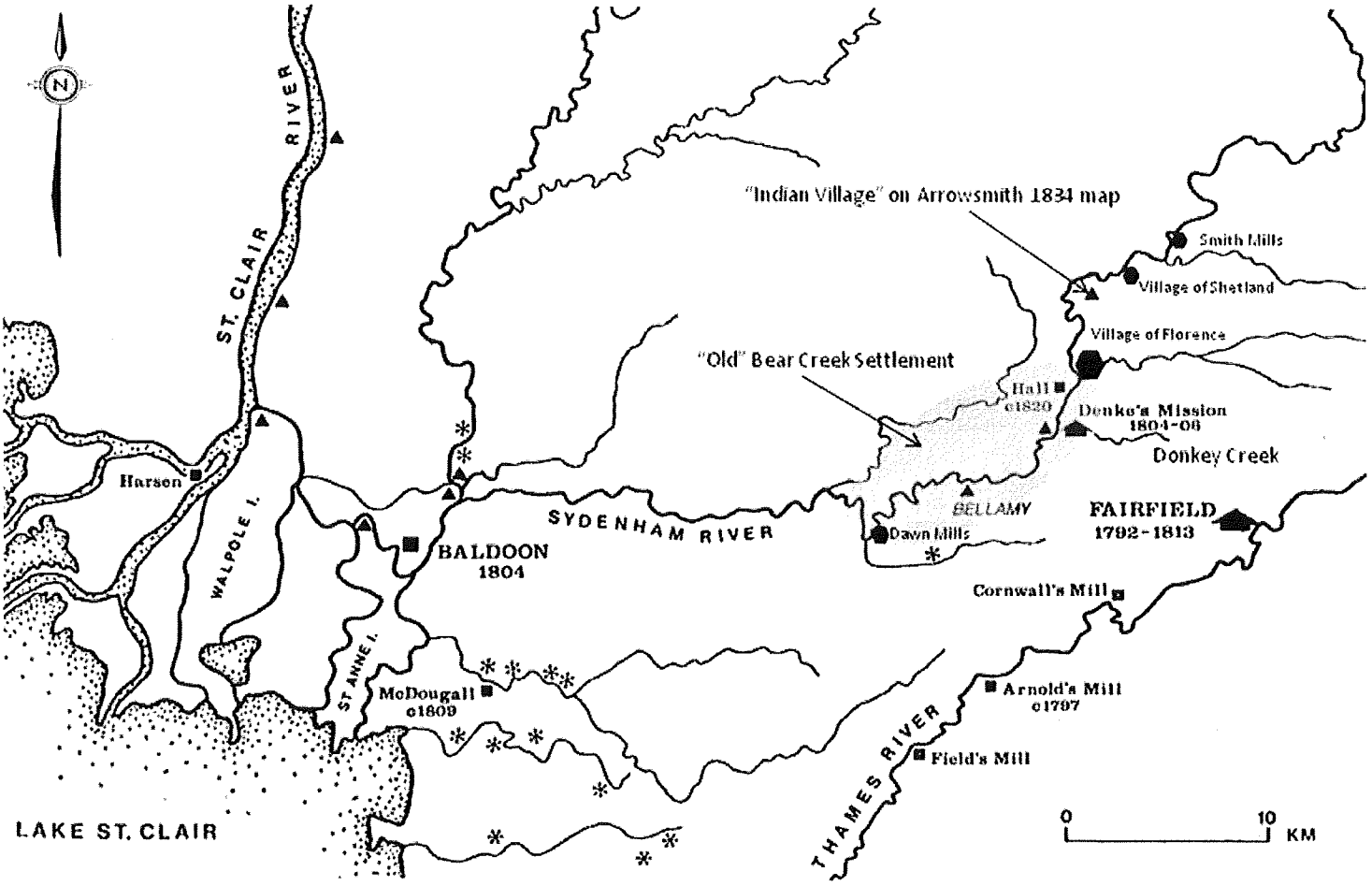

Figure 3: Locations Identified along the Sydenham River in the area of the Bear Creek Ojibwa Settlement.

be assumed to exist along the Sydenham River immediately south of Florence and extending towards Dawn Mills.

However, historic evidence would preclude this stretch of river as the 1820 "settlement" or reserve area, and it appears that, while this portion of the river south of Florence was still in use by Bear Creek Ojibwa families after 1820 (as evidenced by some of the material recovered at the Bellamy site), it is likely that the heart of Ojibwa settlement had moved further north along the river by that time. Notably this stretch of settlement area is referred to as the "old" settlement in the 1820s and 1840s (Figure 3). Moreover, the informants who spoke to Springer, and other Chippewas of the Thames members, tended to characterise the reserve as located

"north of the settlement" by a few miles, either to take advantage of maple stands, or to be removed from Euro-Canadian squatters such as Hall.

Given this, all indications are that the Ojibwa settlement around 1820 had moved north of the town of Florence. In the late 1820s, Peter Jones and a Mr. Harris visited the Bear Creek Ojibwa in consecutive years (1828 and 1829). Jones noted that the settlement was "east" of the old Denke mission site, and that he met with the community and Kanotung in 1828 (Jones 1860). Harris reports the settlement consisted of 10 wigwams and huts, which would suggest by this time the settlement was the singular main warm weather village for the Bear Creek community (Harris 1830). As well, a number of maps of the region published between the late 1820s and early 1830s (e.g., Arrowsmith 1834; Herbert 1838) depict the location of an "Indian village" north of Florence. The Arrowhead map, which includes data recorded in 1827, depicts the village as being along the south side of the Sydenham River at a big bend, approximately four miles north of Florence (likely on lot 24 or 25, Con 1 of Euphemia Twp; See Figure 3). One registered archaeological site is located in immediate proximity to this area (AeHm-4), represented by multiple periods of pre-contact materials and a very limited 19th century sampling of material. It is also worth noting that it was not common for Native settlements to be noted on general map of the region from this era, which suggests this was indeed the main Bear Creek settlement at this time.

Additional historical evidence that points to the area immediately north of Florence as the location of the Bear Creek settlement at the time the reserve was created is found in the Chippewas of Bear Creek narrative. Various references note that when Indian Agent Clench travelled to the Bear Creek Ojibwa to meet with them to confirm that they would relocate to the Thames River, the meeting was held at the home of a Euro-Canadian, Mr. Johnston, who was reported to reside 2 miles north of Florence. It is reasonable to assume this meeting place was also in the Bear Creek territory. Additionally, in the Moorhouse local history he suggests the Bear Creek reserve was located around lot 24 and 25 Concession 1 (in other words in the same location as depicted on the Arrowsmith map), or across the river in the township of Dawn. He notes that local artifact collections had been made from the area. He also recalls that a family member had previously remembered a time when Ojibwa crossed the river at his farm, located on Lot 24, concession 1 (Moorhouse n.d.: 7).

The implication of this oral history – that Ojibwa families continued to live along the Sydenham River long after the official movement the Chippewas of the Thames – is also evident in the 1871 manuscript census. In the 1871 Camden Township, Kent County personal census (Schedule 2, page 96, family 383) an Ojibwa family is recorded along the Sydenham, in the area of the "old" Bear Creek settlement. All adult males were listed as hunters. Two to three married couples, two with a child, a widowed woman listed as 40 years old (mother?) and a widowed 80 year old (grandmother?), along with two unmarried young men (total = 11) all resided in a single hut or shanty.

Oral testimony from John French and Noah Fox in the 1890s, detailed in the Chippewas of the Thames Narrative (pages 95-96), further affirms the Arrowsmith and Moorhouse evidence that the big bend of the Sydenham River around lots 24 and 25, Con. 1, Euphemia Twp. was the approximate location of the principal Bear Creek settlement. John French notes that the reserve extended either side of the river, while Noah Fox claimed the reserve was in Dawn Township or on the line between Dawn and Euphemia. Importantly, he also noted apple orchards in the area, and that there were rapids by the townline, as well as big rapids about 4 miles from the townline. Noah Fox's testimony is particularly instructive, since it implies that a rapids did exist by the settlement where the river cross the township line, and that another, bigger rapid was upstream four miles. A calculation of the distance between the township line where it crosses the river by Lot 24&25 Con. 1, and Smith Mills, confirms that these latter rapids are the "big rapids" Noah Fox referred to.

3.3 Reconciling Springer with the Alternate Historical and Archaeological Data

In the absence of Springer's 1840s calculations, historical evidence would strongly point to a placement of the Bear Creek Ojibwa settlement south and west along the Sydenham River between Florence and Shetland, and centered around the large bend in the river and village location somewhere on or around Lots 24 &25, Con. 1 Euphemia Township. It also is reasonable to assume the settlement extended to either side of the river, and into both Euphemia and Dawn Townships. It is worth noting as well that, archaeologically, this area encompasses one of the largest areas of extensive river flats on the upper Sydenham, and would have been ideally suited for summer base camps. The land also encompasses maple stands, various creek valleys, and would have provided numerous cold weather hunting areas. And remaining south of Smith Mills would have meant better seasonal and incidental fishing opportunities.

If this then is the heart of the Bear Creek community settlement at the time the treaty was being negotiated, why does it fall entirely outside of the parcel generated by the Springer calculations? There may have been many reasons for this discrepancy. The informants may have been brought to the Smith Mills rapids and assumed these were the rapids by the settlement, which would put the Springer estimate four miles north of where it should have been. It may also be that the use of a translator allowed for a degree of mis-communication to enter into the discussion between Springer and the informants. As well, it was certainly the case that Springer's exercise was more arbitrary than precise, which may have afforded a degree of inaccuracy into precise location.

Regardless, given this, it is clear the Chippewas of the Thames and INAC may wish to consider alternate reserve boundaries that more accurately capture Bear Creek Ojibwa settlement. These options Are laid out in a series of figures using INAC's Map 18 to show their relationship to the parcel of land originally identified in the INAC report:

Option 1:

An alternate boundary for the Bear Creek reserve could be based around lots 24 and 25, Concession 1 in Euphemia Twp. While defining a bounded acreage of land would be arbitrary, the parcel would need to encompass both sides of the river, likely extending mostly south from the lots in question. This would encompass a land mass that included area in both Dawn and Euphemia Township, and extend south to the area around the mouth of Donkey Creek. While this would not encompass all of the "old" settlement still in use during the 1820s (i.e., as indicated by continued settlement at the Bellamy site during this time), it would capture part of this important historic region.

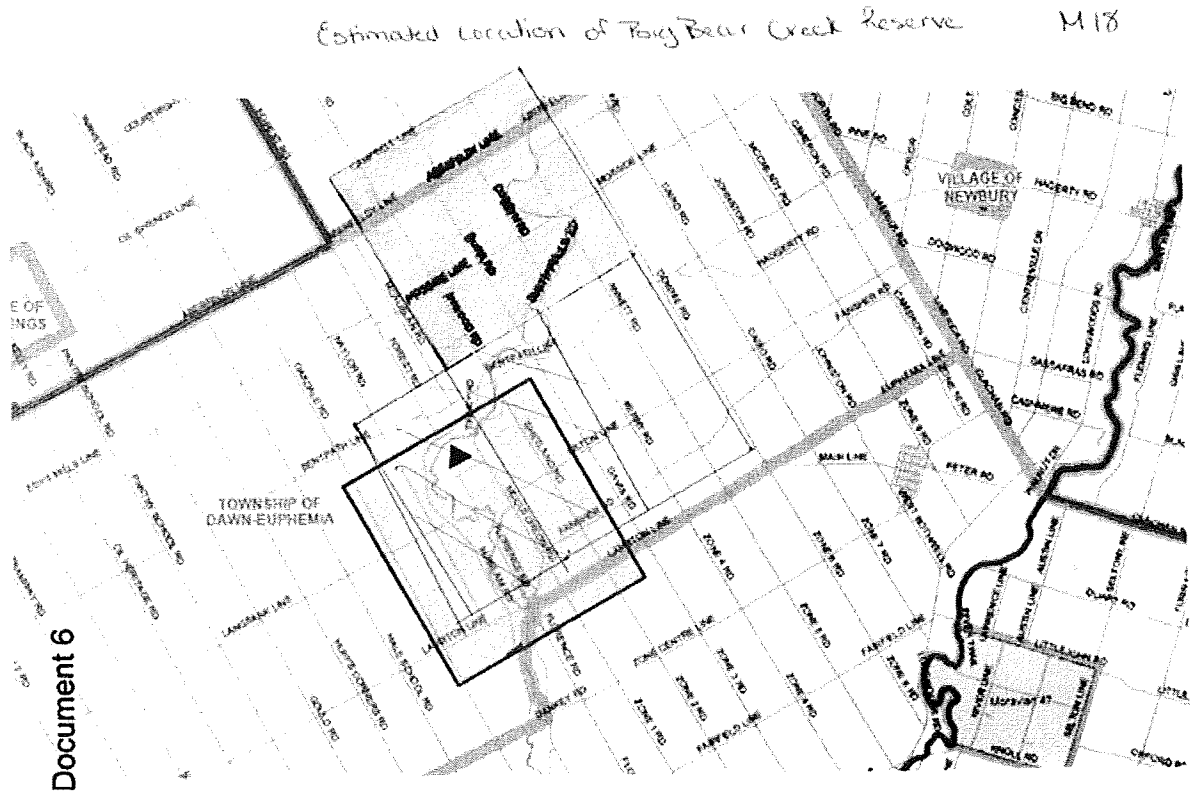

Figure 4a: Depicting the Location of the Reserve Parcel if Based at Lot 24/25 location of Ojibwa Village. Size of reserve parcel and location approximate.

Option 2:

An alternate definition of the reserve area can also arise from the assumption that the location Springer identified (i.e., a point at Smith Falls between lots 28 & 27, midway through Concession 4), and possibly confirmed by the Chippewas of the Thames community that accompanied him, was an accurate property corner. However, to encompass the heart of the

1820 settlement, it would also be necessary to assume that the 5120 acres of reserve land in question was to the south and west of the corner point, NOT to the east and north. In which case, flipping the parcel on INAC Map 18 to the south and west, but continuing to anchor it to the fixed point of the lot line as the north-east limit of the reserve, would encompass the entirety of the 1820 historically noted areas of Ojibwa settlement along both the Euphemia and Dawn Twp portions of the Sydenham River and north of Florence. This would not encompass any of the old settlement, but would encompass all the area later Ojibwa informants identified as related to the settlement (orchards, occupations on both sides of the river), and encompass areas that would certainly have been important for farming, cold weather hunting and sugaring, as well as a significant stretch of the river.

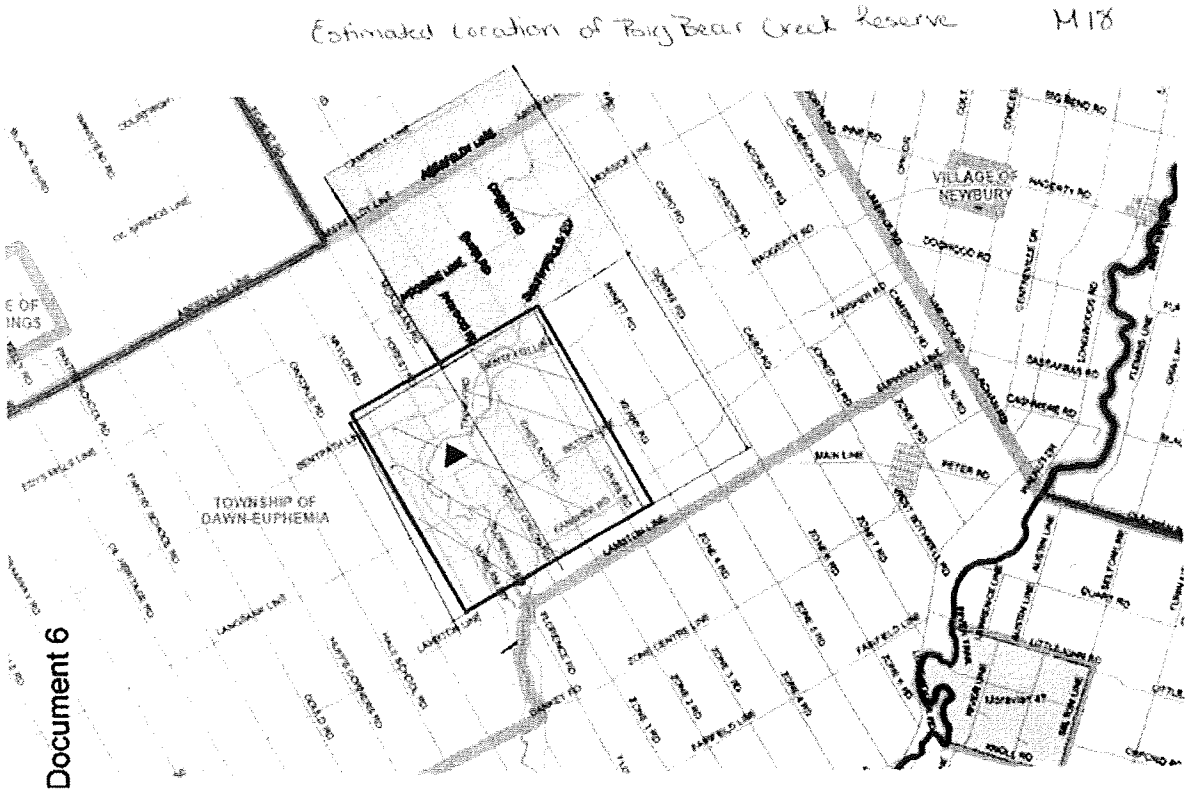

Figure 4b: Depicting the Location of the Reserve Parcel if based on the Springer Fixed Point, Lot 28/27 Lot line, Halfway through Concession 4, at Smith Mills. Size of reserve parcel and location approximate.

Option 3:

Finally, an alternative more consistent with an Ojibwa lifeways along the Sydenham River in 1820 would be to eschew defining a parcel of land, and allocating the 5120 acres in a linear

fashion along both sides of the Sydenham, running south from the Lot 24&25 location. This would encompass more if not most of the river frontage within which Bear Creek settlement (old or "new") existed, including all summer base camps, some sugaring camps near the river, and, presumably, burial grounds. This would not, however, encompass all lands that would have had resource importance to the community, and with its emphasis on the Sydenham River, would not accurately reflect land use patterns that occurred away from the river along creek valleys.

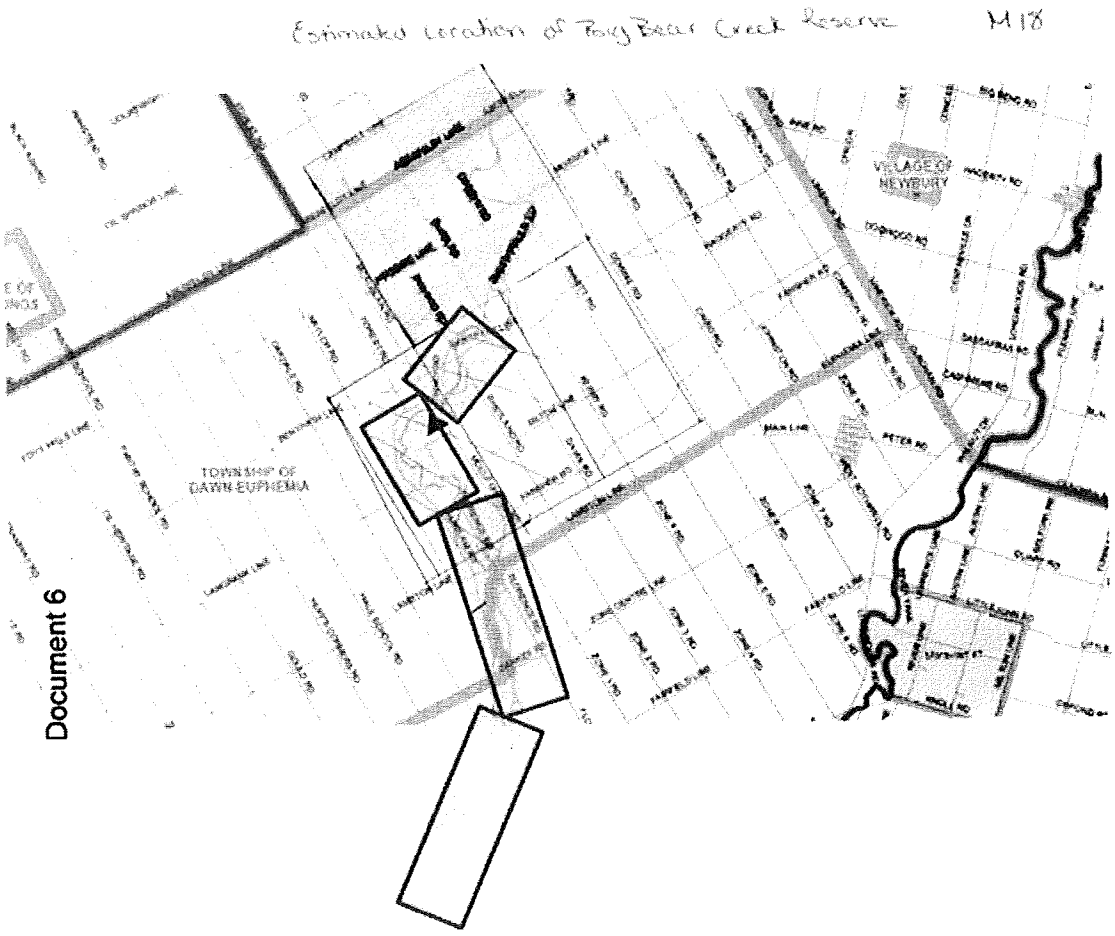

Figure 4c: Depicting Location of Reserve Parcel if based on Following the Sydenham River through the entire Bear Creek Ojibwa settlement to Dawn Mills. Size of reserve parcel and location approximate.

4.0 **CONCLUSIONS**

The issue of whether or not the Springer calculations were accurate, and therefore is the current parcel proposed by INAC is accurate, is of limited concern *if*, in the land claims process,

the value of the land in question does not vary depending on where this arbitrary boundary is placed along the region of the Sydenham River. It is also not a concern *if* accuracy of confirming the location is not an issue for the Chippewas of the Thames. How critical both of these qualifiers are, should be determined, however.

As well, it is worth considering what the Bear Creek Ojibwa were trying to accomplish in retaining a reserve on the Sydenham River. Clearly, the history of this community was in part a continual response to Euro-Canadian encroachment while retaining an autonomous sense of identity. As such, it is telling that the community did not choose to simply relocate to Walpole Island or the Thames River when provisional treaty negotiations began in the late 1810's. Rather, they sought to retain and secure a territorial homeland to continue living as they had done. When they did relocate a decade after the surrender, they were already challenging the lack of a surveyed reserve on the Sydenham River, and clearly while community members may have relocated to the Thames, they had every intention to continue living and subsisting along the Sydenham for at least part of the year, if not all of it. Individual families clearly chose to stay along the Sydenham through the 19th century, and the Bear Creek Ojibwa continually sought to secure their own land base in order to retain their distinct autonomous identity into the 20th century.

This underscores how significant the reserve was to the community. And as Springer notes, this was a place where settlement, hunting, sugaring and care for the ancestors at various burial grounds occurred. Therefore, as recognition of the cultural significance of this place to the identity of the descendants at the Chippewas of the Thames today, albeit within the confines of the agreed to basis for negotiation of settlement, there is some real value and merit for considering a parcel of land that while proximate of both actual location and conception of "reserve" in the minds of those who negotiated the surrender, still is as close an approximation of where the Bear Creek settlement actually was in 1820 as can be determined today.

5.0 **REFERENCES**

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This is **EXHIBIT "C"** of the Affidavit of **CHIEF JOE MISKOKOMON** sworn before me this 19th day of July , 2012

A Commissioner etc.

October 16, 1818

Minutes of a Council held at Amherstberg the 16th Oct 1818, between John Askin Esq Superintendent of Indian Affairs and the following Chippewa Chiefs and Leaders of Chenaille Ecarte, Rivers St. Clair, Sable, Thames and Bear Creek vizt.
Annemukaine, Negig, Porkonaise, Souskonay, Osawserb, Kitcheanaquat, Kaybayyaxx, Sigay, Poneseuah, Waywaynosh, Mokatey, Rigigo, Konewahbay, Mestukemaybeg, Kayask, Kayyaskkonse, Wahsayquam, Naubonie, Shaganosh and Chawme Speaks;

J.B. Cadot
Interpreter

Lieut. Col. Trans Coml Tresy

After the Superintendent of Indian Affairs had informed the above mentioned Chiefs that he had received Instructions from the Deputy Supert. General of Indian Affairs, signifying that it was the wish of their Great Father's Representative Sir Peregrine Maitland Lieutenant Governor of this Province to purchase all the Lands belonging to them the Chippewas lying North of the River Thames, xx the River au Sables and a Sketch of the Territory required being shown to them. They were desired to state on what terms they would dispose of said Tract.

Their Answer after mature deliberation was as follows -

Father We the Chippewas have always been obedient Children and never refused anything our Great father has required of us. We are therefore willing to sell our Lands, but wish to make the following reserves -

1st four miles square at some distance below the rapids of the River St. Clair.

2nd One mile in front of four deep bordering on said River and adjoining to the Reserve.

3rd Two miles at Kettle Point Lake Huron

4th Two miles square at the River au Sable

5th Two Miles square at Bears Creek, also a Reserve for Tomago and his Band up at the Thames which he will point out when he arrives. And we trust that the reserves now made by us will be augmented at the time the purchase is finally concluded. Should our great Father's Representative see that they are insufficient for the whole of our

Nation now living on this side of the Waters to plant Corn and hunt so that we may not be poor and miserable like our Brethren on the American side, who have sold all their Lands and have not made sufficient Reserves for their men, Women and Children to plant corn. -

Father You will inform our Great Father's Representatives that at our wish he himself set the valuation on the Tract required, but that the payment is to be made annually for 80 years, half in hard money and half in clouthing -

The Payment for our Lands is to be separate and distinct from the Presents our Great Father the King gives us yearly for our loyalty and past services, but out of our yearly payments our Nation is to be furnished with a blacksmith and Husbandman to be stationed near the reserves, the former to mend our Axes and Traps and repair our Guns, the latter to instruct us in the art of husbandry.

This is **EXHIBIT "D"** of the Affidavit of **CHIEF JOE MISKOKOMON** sworn before me this 19th day of July, 2012

A Commissioner etc.

of His Majesty, does hereby promise and agree to pay to the said Nation of Indians inhabiting as above mentioned, yearly, and every year, forever, the said sum of seven hundred and forty pounds currency in goods at the Montreal price, which sum the said Chiefs and Principal People, parties hereunto, acknowledge as a full consideration for the lands hereby sold and conveyed to His Majesty.

In Witness Whereof, the parties have hereunto set their hands and seals on the day first above mentioned in the Township of Hope, Smith's Creek.

Signed, sealed and delivered in the presence of	W. Claus, *Depy. Supt. Gen. I. A., on behalf of the Crown,*	[L.S.]
J. Givins, *S. I. A.,*	Buckquaquet, (totem)	[L.S.]
Wm. Hands, Sen., *Clerk Ind. Dept.*	Pishikinse, (totem)	[L.S.]
Wm. Gruet, *Interpreter, Ind. Dept.*	Pantosh, (totem)	[L.S.]
	Cahgahkishinse, (totem)	[L.S.]
	Cahgagewin, (totem)	[L.S.]
	Pininse, (totem)	[L.S.]

The manner in which the yearly payment was to have been made to you, for the lands which you had ceded to the Crown on the fifth day of November, 1818, not having been sufficiently explicit and defined in the Provisional Agreement: In order to obviate any difficulty or misconstruction which might hereafter arise I have called you together for the purpose of explaining to you the manner in which it is intended that the payment shall be made and in order that you may subscribe your names on the back of the Provisional Agreement as acquiescing and approving of the same as follows, viz.:—Every man, woman and child to receive to the amount of ten dollars in goods at the Montreal prices, so long as such man, woman or child shall live, but such annuity to cease and be discontinued to be paid in right of any individual who may have died between the respective periods of payment, and the several individuals then living, only, shall be considered as entitled to receive the yearly payment of ten dollars in goods as above stated.

No. 21.

Articles of Provisional Agreement entered into on the ninth day of March, one thousand eight hundred and nineteen, between John Aiken, Esquire, on behalf of His Majesty of the one part, and Tommago, Weyawawenind, Nawbowe, Maytoyzewon, Sawgawswy, Moquammiss, Tekummegawsay, Paymokawnawwassegay, Quoikkegick, Pawbetang and Wahwejawtin, Principal Men of the Chippewa Nation of Indians inhabiting the tract of land hereinafter described, of the other part. Witnesseth: that for and in consideration of the yearly sum of six hundred pounds Province currency, one-half in specie and the other in goods at the Montreal price, to be well and truly paid yearly and every year by His said Majesty to the said Chippewa Nation inhabiting and claiming the said tract of land which may be otherwise known as follows, viz.: Commencing on the northerly side of the River Thames at the south-west angle of the Township of London; thence along the western boundary line of the Township of London in a course twenty-one degrees thirty minutes west twelve miles, to the north-west angle of the said township; then on a course about south sixty-two degrees thirty minutes west forty-eight miles more or less, until it intersects a line on a course produced north two miles from the north-east angle of the Shawanoe Township; then south two miles to the north-east angle of the said Shawanoe Township; then along the eastern boundary line of the said township twelve miles and a-half, more or less, to the northern boundary line of the Township of Chatham; then east twenty-four miles, more or less, to the River Thames; then along the water's edge of the River Thames against the stream to the place of beginning, reserving a tract of land (colored red) on the plan accompanying this description situate on the northerly side of the River Thames nearly opposite to the northerly angle of the Township of Southwold and south-west angle of the Delaware Township, containing fifteen thousand three hundred and

sixty acres; also reserving two miles square distant about four miles above the rapids near the source of Big Bear Creek, where the Indians have their improvements, and nearly parallel to the Moravian Village containing five thousand one hundred and twenty acres, leaving five hundred and fifty-two thousand one hundred and ninety acres, more or less, for the contents of the purchase. And the said Tommago, Weyawwonind, Nawbowe, Maytoyzewon, Sawgawsway, Moquammiss, Tekummegawsay, Paymekawnawwassegay, Quoik-kegick, Pawbetang and Wahwejawtin as well for themselves as for the Chippewa Nation inhabiting and claiming the said tract of land as above described, do freely, fully and voluntarily surrender and convey the same to His Majesty without reservation or limitation in perpetuity. And the said John Aiken, Esquire, on behalf of His Majesty, does hereby promise and agree to pay to the said Nation of Indians inhabiting as aforementioned yearly, and every year, for ever, the said sum of six hundred pounds Province currency, one half in specie, and the other half in goods at the Montreal price, which sum the said Chiefs and Principal People, parties hereunto, acknowledge as a full consideration for the lands hereby sold and conveyed to His Majesty.

In Witness Whereof, the parties have hereunto set their hands and seals on the day first above mentioned in the Township of Malden.

Signed, sealed and delivered in the presence of:
Theop. Hunt, *Capt., 70th Regt.*
H. H. Willson, *Lieut. Royal Eng.*
R. Runasade, *Surg., Indian Dept.*
J. Browne, *Ens. 70th Regt.*
Geo. Ironside,
Geo. F. Rapp, *Int'r., Indian Dept.*
J. Bte. Cadotte, *Int'r.*

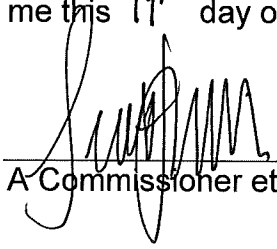
John Aiken,
on behalf of the Crown. [L.S.]
Tommago, (totem) [L.S.]
Weyawwenind, (totem) [L.S.]
Nawbowe, (totem) [L.S.]
Maytoyzewon, (totem) [L.S.]
Sagawsway, (totem) [L.S.]
Moquammiss, (totem) [L.S.]
Tekummegawsay, (totem) [L.S.]
Paymekawnawwassegay, (totem) [L.S.]
Quoikkegick, (totem) [L.S.]
Pawbetang, (totem) [L.S.]
Waywejaytin, (totem) [L.S.]
Kaynotang, (totem) [L.S.]

No. 22.

This Indenture, made the twenty-eighth day of February, in the year of Our Lord one thousand eight hundred and twenty, between Acheton, Newoiquequah, Woiqueshequome, Paushetawnouquitohe and Wabakagige, the Principal Chiefs, Warriors and people of the Mississagua Nation of Indians of the one part, and His Majesty George the Third, by the Grace of God of the United Kingdom of Great Britain and Ireland, King, Defender of the Faith, of the other part, Witnesseth: that for and in consideration of the sum of twenty shillings of lawful money of the Province of Upper Canada by His said Majesty to the said Acheton, Newoiquequah, Woiqueshequome, Paushetawnouquitohe and Wabakagige in hand well and truly paid at or before the sealing and delivery of these presents, the receipts whereof the said Acheton, Newoiquiquah, Woiqueshequome, Paushetawnouquitohe, Wabakagige, do hereby acknowledge, and of and from the same and every part thereof do acquit, release and discharge His said Majesty, His heirs and successors for ever by these presents.

They the said Acheton, Newoiquequah, Woiqueshequome, Paushetawnouquitohe and Wabakagige, have and each of them hath granted, bargained, sold, released, surrendered, and forever yielded up, and by these presents do and each of them doth grant, bargain, sell, release, surrender, and forever yield up unto His said Majesty, His heirs and successors, all that parcel or tract of land situate, being and

This is **EXHIBIT "E"** of the Affidavit of **CHIEF JOE MISKOKOMON** sworn before me this 19th day of July, 2012



A Commissioner etc.

That no Indian was present or voted at such council or meeting who was not an habitual resident on the reserve of the said Band of Indians or interested in the land mentioned in the said release or surrender.

That he is a Chief of the said Band of Indians, and entitled to vote at the said meeting or council.

Sworn before me by the said James C. Phipps and James Nongahbow, deponents, at the Town of Sault Ste. Marie, in the District of Algoma, this 19th day of March, A.D. 1890, having been first read over and interpreted to the said James Nongahbow, who is an Indian, and seemed perfectly to understand the same, and made his mark thereto in my presence.

WALTER McCREA,
Judge D. A.

JAMES C. PHIPPS,
his
JAMES x NONGAHBOW.
mark.

Recorded 22nd May, 1890,
Lib. 133, Folio 26.

L. A. CATELLIER,
Dep. Registrar-General of Canada.

No. 280½.

ARTICLES OF PROVISIONAL AGREEMENT entered into on the ninth day of May, in the year of Our Lord one thousand eight hundred and twenty, between George Ironside, Superintendent of Indian Affairs, on behalf of His Majesty, of the one part, and Tummago, Metwechewin, Sagawsonac, Maquamiss, Tekumagwsie, Pemeknawassigne, Quoukkyick, Pawbetang, Wawjattin, Pemuseh, Lagetch and Canotang, Chiefs and Principal Men of the Chippawa Nation of Indians inhabiting and claiming the tract of land hereinafter described, of the other: Witnesseth, that for and in consideration of the yearly sum of ten dollars in goods at the Montreal price, to be paid by His said Majesty to every man, woman and child of the said Chippawa Nation of Indians inhabiting and claiming the said tract, so long as such man, woman and child shall live, but such annuity to cease and be discontinued to be paid in right of any individual who may have died between the respective periods of payment, and the several individuals then living only shall be considered as entitled to receive the yearly payment of ten dollars in goods as above stated, which tract may be known as follows, viz:—Commencing on the northerly side of the River Thames, at the south-west angle of the Township of London. Thence along the western boundary line of the Township of London in a course north twenty-one degrees thirty minutes west twelve miles to the north-west angle of the said township. Thence on a course about south sixty-two degrees thirty-minutes west forty-eight miles more or less, until it intersects a line on a course produced north two miles from the north-east angle of the Shawanese Township; then south two miles to the north-east angle of the said Shawanese Township; then along the eastern boundary line of the said township twelve miles and half, more or less, to the northern boundary line of the Township of Chatham; then east twenty-four miles, more or less, to the River Thames; then along the water's edge of the River Thames against the stream to the place of beginning. Reserving a tract of land coloured red on the plan accompanying this description, situate on the northerly side of the River Thames, nearly opposite the northerly angle of the Township of Southwold and south-west angle of the Delaware Township containing fifteen thousand three hundred and sixty acres. Also reserving two miles square, distant four miles above the rapids, which are near the source of Big Bear Creek, nearly parallel to the Moravian village, leaving five hun-

dred and fifty-two thousand one hundred and ninety acres for the contents of the purchase. And the said Tummago, Metwichewa, Sagawsowi, Maquamiss, Teckumagawsic, Pemikaoawassigai, Quekkyick, Parobitang, Waweatick, Nestagouch, Pemeoch, Sagotch, as well for themselves as for the Chippawa Nation inhabiting and claiming the said tract of land as above described, do hereby fully, freely and voluntarily surrender and convey the same to His Majesty, without reservation or limitation, in perpetuity; and the said George Ironside, Superintendent of Indian Affairs, does hereby, on behalf of His Majesty, promise and agree to pay yearly to every man, woman and child of the said Chippawa Nation of Indians inhabiting and claiming the said tract of land above described, the sum of ten dollars in goods at the Montreal price, so long as such man, woman and child shall live, but such annuity to cease and be discontinued to be paid in right of any individual who may have died between the respective periods of payment, and the several individuals then living only shall be considered as entitled to receive the yearly payment of ten dollars in goods, as above stated, which sum the said Chiefs and Principal People, parties hereunto, acknowledge as a full remuneration for the lands hereby sold and conveyed to His Majesty.

In Witness Whereof, the parties have hereunto set their hands and seals on the day first above mentioned, at Amherstburgh, in the Township of Malden, Western District, and Province of Upper Canada.

George Ironside,
S. I. Affs on b h lf of the Crown.

Signed, sealed and delivered in presence of:

J. P. Hawkins,
Lieut.-Col. Commanding,
J. Reed,
Capt. 68th Lt. Infy. Regt.,
J. Portock,
Lieut. Royal Engineers,
Thomas Black,
Ensign, 68th Regt.,
R. Richardson,
Surgeon, Ind. Dept.,
Wm. Hands, Jun.,
Clerk, Ind. Dept.,
George Rapp,
Interpreter, Ind. Dept.,
J. B. Caslette,
Interpreter, Ind. Dept.,

Tumago,
Metwetchwin,
Sagawsonai,
Maquamaniss,
Teoumagawsic,
Quokyick,
Pemicunacsassugai,
Pawbetang,
Wawcattin,
Pemusch,
Sagetch,
Canotuing.

A true copy,
J. B. Clench,
I. D.

This is **EXHIBIT "F"** of the Affidavit of **CHIEF JOE MISKOKOMON** sworn before me this 14th day of July , 2012

A Commissioner etc.

TAWANIWAY, his x mark.	[L.S.]
ABRAM his x mark. MARKLE,	[L.S.]
MOSES his x mark. LEWIS,	[L.S.]
FRANCIS his x mark. MARKLE,	[L.S.]
JOHN his x mark. HILL,	[L.S.]

No. 25.

THIS INDENTURE, made the eighth day of July, in the year of Our Lord one thousand eight hundred and twenty-two, between Tummago, Metwichewin, Sagawsouai, Maquamiss, Tecumagawsie, Pemekunawassigai, Quekijick, Pawbetang, Wawiattin, Pemuseh, Sagetch, and Canotung, the chiefs and principal men of the Chippewa Nation of Indians, inhabiting and claiming the tract of land hereinafter mentioned and described, of the first part, His Majesty George the Fourth, by the Grace of God of the United Kingdom of Great Britain and Ireland, King, Defender of the Faith, of the second part, and the Honorable William Claus, of the Town of Niagara, in the District of Niagara, Deputy Superintendent General of Indian Affairs in the Province of Upper Canada, of the third part.

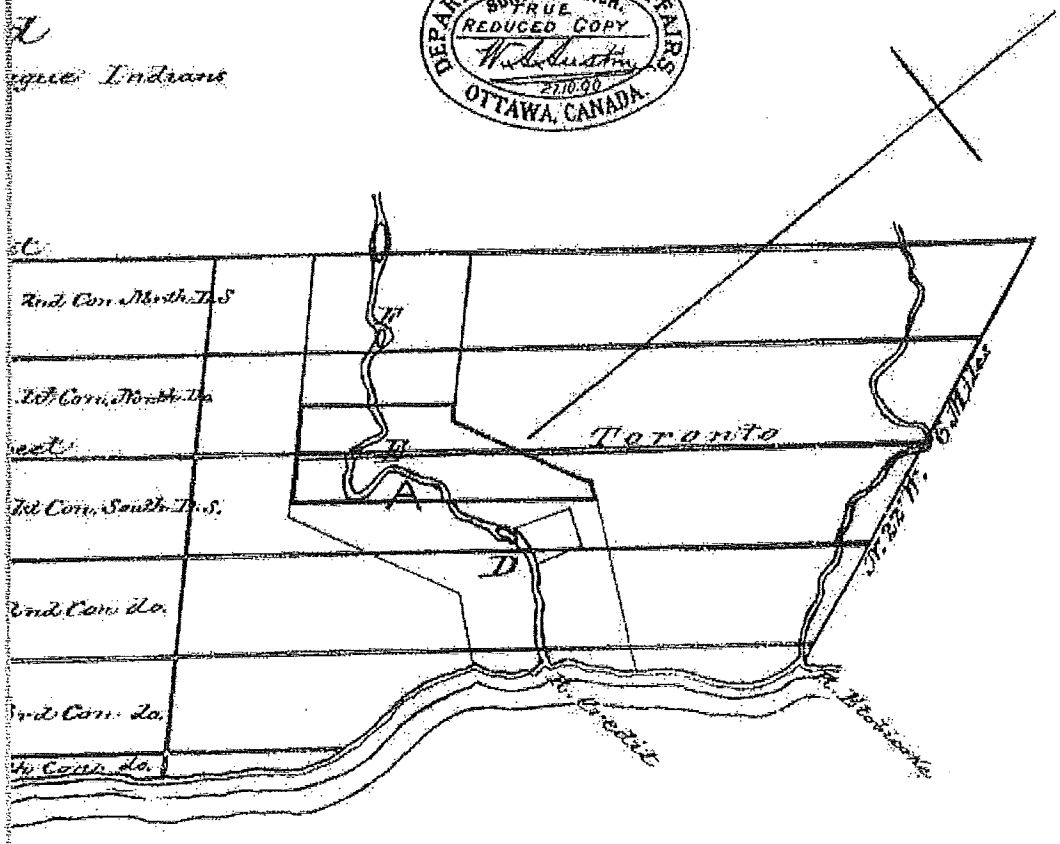
Whereas by a certain provisional agreement entered into the ninth day of May, in the year of Our Lord one thousand eight hundred and twenty, between George Ironside, Superintendent of Indian Affairs on behalf of His late Majesty King George the Third of blessed memory, of the one part, and the said Tummago, Metwichewin, Sagawsouai, Maquamiss, Tekumagawsie, Pemekunawassigai, Quekijick, Pawbotang, Wawiattin, Pemuseh, Sagetch, and Canotung, of the other part, it was agreed that in consideration of an annuity of two pounds and ten shillings of lawful money of Upper Canada to be paid in merchandise at the Montreal price, to each man, woman, and child of the said Chippewa Nation of Indians, then inhabiting and claiming the said tract of land, and who shall be living at the respective times appointed for the delivery of the said merchandise, during their respective lives, and to their posterity for ever, provided the number of annuitants should not at any time exceed two hundred and forty, being the number of persons then composing the said Nation, claiming and inhabiting the said tract of land, they the said Tummago, Metwichewin, Sagawsouai, Maquamiss, Tekumagawsie, Pemekunawassigai, Quekijick, Pawbotang, Wawiattin, Pemuseh, Sagetch, and Canotung, should surrender to His said late Majesty and His successors, without limitation, or reservation, all that parcel or tract of land lying on the northerly side of the River Thames, in the London and Western Districts of the Province aforesaid, containing about five hundred and eighty thousand acres, and hereinafter more particularly described.

NOW THIS INDENTURE WITNESSETH, that in pursuance of the said agreement, and as well in consideration of the said annuity of two pounds and ten shilling to be paid in merchandise at the Montreal prices to each of the men, women and children of the said Chippewa Nation of Indians who at the date of the said agreement were

see No. 13 page 32

L

...gues Indians



O N T A R I O

Surveyor Gen.ls. Office
York 8. Dec.r 1870
(Sd) Thos. Ridout
Surv. General

...es

...on the River Credit and
...bounded by a yellow border...

...Acres
...81.00
...including flats in the 2nd Con. S.D.S. 112.0
...2d - Do - - Do - - - Do - - 14.20
Total - - - 109.20 acres

...

...

Surveyor Gens. office
York 22nd Jany. 1820

inhabiting and claiming the said tract of land hereinafter described and intended to be hereby surrendered to His said Majesty and to their posterity as aforesaid, as of the sum of ten shillings of lawful money of the Province aforesaid, in hand well and truly paid to the said Tummago, Metwichewin, Sagawsouai, Maquamiss, Tecumagawsie, Pemekunawassigai, Quekijick, Pawbetang, Wawiattin, Pemuseh, Sagotch and Canotung at or before the sealing and delivery of these presents, the receipt whereof, they the said Tummago, Metwichewin, Sagawsouai, Maquamiss, Tecumagawsie, Pemekunawassigai, Quekijick, Pawbetang, Wawiattin, Pemuseh, Sagotch and Canotung, do hereby acknowledge, and thereof and therefrom, and of and from the same and every part thereof, do acquit, release and forever discharge His said Majesty, His heirs and successors by these presents. They the said Tummago, Metwichewin, Sagawsouai, Maquamiss, Tecumagawsie, Pemekunawa-sigai, Quekijick, Pawbetang, Wawiattin, Pemuseh, Sagotch and Canotung, have and each of them hath granted, bargained, sold, released, surrendered and forever yielded up, and by these presents do, and each of them doth grant, bargain, sell, release, surrender and forever yield up unto His said Majesty, His heirs and successors, all that parcel or tract of land situate, lying and being on the northerly side of the River Thames, in the London and Western Districts of the said Province, containing by admeasurement five hundred and eighty thousand acres, more or less, and designated by a yellow border on the plan delineated on the margin of these presents, which said parcel or tract of land is butted and bounded, or may be otherwise known as follows, that is to say: Commencing on the northerly side of the River Thames at the south-west angle of the Township of London; thence along the western boundary line of the Township of London on a course north twenty-one degrees thirty minutes west twelve miles to the north-west angle of the said township; thence on a course about south fifty-eight degrees west forty-eight miles, more or less, until it intersects a line on a course produced north two miles from the north-east angle of the Shawanese Township, now the Township of Sombra; then south two miles to the north-east angle of the said township; then along the eastern boundary line of the said township twelve miles and a-half, more or less, to the northern boundary line of the Township of Chatham; then east sixteen miles, more or less, to the River Thames; thence following the water's edge of the said River Thames against the stream to the place of beginning. Together with all the woods and waters thereon lying and being and all and singular the rights, privileges, easements, benefits and appurtenances thereto belonging, and the reversion and reversions, remainder and remainders, and all the estate, right, title, interest, trust, use, claim and demand whatsoever of them the said Tummago, Metwichewin, Sagawsouai, Maquamiss, Tecumagawsie, Pemekunawassigai, Quekijick, Pawbetang, Wawiattin, Pemuseh, Sagotch and Canotung, and of the said Chippewa Nation of Indians, inhabiting and claiming the said tract of land as aforesaid, to have and to hold the said parcel or tract of land, hereditaments and premises hereby surrendered and yielded up, or intended so to be, with their and every of their rights, members and appurtenances unto His said Majesty, His heirs and successors for ever. And the said William Claus, Deputy Superintendent General of Indian Affairs, as aforesaid, on behalf of Our said Lord the King, His heirs and successors, doth hereby for himself and His Successors in the said office covenant, promise and agree to and with the said Tummago, Metwichewin, Sagawsouai, Maquamiss, Tecumagawsie, Pemekunawassigai, Quekijick, Pawbetang, Wawiattin, Pemuseh, Sagotch and Canotung, and their posterity, that he, the said William Claus, and his successors in the said office, shall and will well and truly pay, or cause to be paid, unto each man, woman and child of the said Chippewa Nation who, at the time of entering into the said agreement, inhabited and claimed the said tract of land, and their posterity for ever, an annuity of two pounds and ten shillings lawful money of Upper Canada, in goods and merchandise at the Montreal price, provided always that the number of persons entitled to receive the same shall in no case exceed two hundred and forty persons —that being the number of persons claiming and inhabiting the said tract at the time of concluding the provisional agreement hereinbefore mentioned.

IN WITNESS WHEREOF, the parties to these presents have hereunto set their hands and seals the day and year first above written.

Signed, sealed and delivered in the presence of us,
THOMAS VILETT, *Capt. and Bt. Major, 76th Regt., Commanding,*
CHARLES ÉLIOT, *Lieut. 70th Regt,*
WILLIAM HANDS, Senior, *Clk. Indian Dept.*
GEO. F. RAPP, *I. I. Dept.*

TUMMAGO,	(totem)	[L.S.]
METWETCHEWIN,	(totem)	[L.S.]
SAGAWSONAI,	(totem)	[L.S.]
MAQUAMISS,	(totem)	[L.S.]
TECUMAGASAIE,	(totem)	[L.S.]
PEMEKUMAWASSIGAI,	(totem)	[L.S.]
QUEKLHCK,	(totem)	[L.S.]
PAWBETANG,	(totem)	[L.S.]
WAWIATTIN,	(totem)	[L.S.]
PEMUSEH,	(totem)	[L.S.]
SAGETCH,	(totem)	[L.S.]
CANOTUNG,	(totem)	[L.S.]

No. 26.

P. MAITLAND.

PROVINCE OF UPPER CANADA.

GEORGE the Fourth, by the Grace of God, of the United Kingdom of Great Britain and Ireland, King, Defender of the Faith.

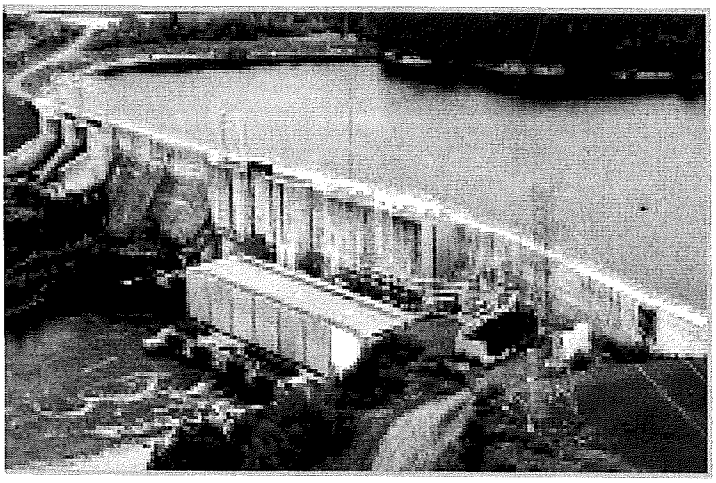
To all whom these presents shall come,—GREETING:

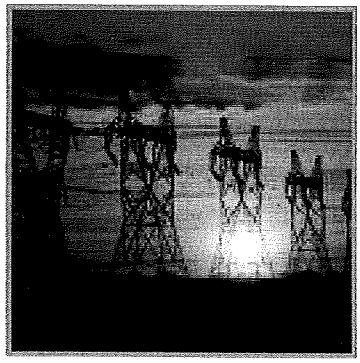
Know Ye that We, of our special grace, certain knowledge and mere motion, have given and granted, and by these presents do give and grant into the Honorable William Claus, of the Town of Niagara, in the County of Lincoln, in the District of Niagara, as colonel commanding the flank companies stationed from Niagara to Queenstown, his heirs and assigns forever, all that parcel or tract of land situate in the Township of Innisfil, in the County of Simcoe, in the Home District, in our said Province, containing by admeasurement nine hundred acres, be the same more or less being the north halves of Lots Nos. Sixteen, Eighteen, Nineteen and Twenty-one, and the south halves of Lots Nos. Fourteen, Sixteen, Eighteen, Nineteen and Twenty-one in the Fourth Concession of the said Township, together with all the woods and waters thereon lying and being, under the reservations, limitations and conditions hereinafter expressed, which said nine hundred acres are butted and bounded, or may be otherwise known as follows, that is to say: Commencing where a post has been planted at the north-east angle of each of the said north half lots respectively; then south seventy-three degrees thirty minutes west thirty chains, more or less, to where a post has been planted at the north-west angle of each of the said half lots; then south nine degrees thirty minutes east thirty-three chains thirty-three links and a-half, more or less, to the centre of the said concession; then north seventy-three degrees thirty minutes east thirty chains, more or less, to the eastern limit of each of the said half lots; then north nine degrees thirty minutes west thirty-three chains thirty-three links and a-half more or less to the place of beginning in each of the said half lots. Also, commencing where a post has been planted at the south-west angle of each of the said south half lots respectively; then north seventy-three degrees thirty minutes east thirty chains, more or less, to where a post has been planted at the south-east angle of each of the said half lots; then north nine degrees thirty minutes west thirty-three chains thirty three links and a-half, more or less, to the centre of the said concession; then south seventy-three degrees thirty minutes west thirty chains, more or less, to the western limit of each of the said half lots; then south nine degrees thirty minutes east thirty-three chains thirty-three links and a-half, more or less, to the place of beginning in each of the said half lots. To have and to hold the said parcel or tract of land hereby given and granted to him the said the Honorable William Claus, his heirs and assigns for ever; saving, nevertheless, to

This is **EXHIBIT "G"** of the Affidavit of **CHIEF JOE MISKOKOMON** sworn before me this 19th day of July , 2012

A Commissioner etc.

Ontario's Long-Term Energy Plan





Building Our Clean Energy Future

Ontario

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foreword

Maintaining a clean, modern and reliable electricity system for all Ontarians is this government's number one energy priority. Ontario families, businesses and the economy rely on the efficiency, dependability and environmental sustainability of electric power. We have to keep the lights on in Ontario homes, schools, hospitals and businesses and power everything from the coffee-maker to the CT scanner. We also need a clean system that won't threaten the health of current and future generations.

Ontarians deserve balanced, responsible long-term energy planning for electricity to ensure that Ontario has clean air, reliable energy and a strong economy for our children and grandchildren. This report represents an update to the McGuinty government's long-term energy plan and outlines how we are helping families and businesses with increasing electricity costs.

Prior to 2003, Ontario's electricity system was weakening and unreliable. Our reliance on coal meant that our electricity sources were polluting and dirty. Between 1995 and 2003, the electricity system lost 1,800 megawatts (MW) of power — the equivalent of Niagara Falls running dry. A brief deregulated pricing experiment in 2002 resulted in sharply increased prices, prompting the government of the time to freeze consumer prices. Energy infrastructure was crumbling, a shortage of supply caused risks of brownouts.

Worst of all, Ontario relied heavily on five air-polluting coal plants. This wasn't just polluting our air, it was polluting our lungs. Doctors, nurses and researchers stated categorically that coal generation was having an impact on health increasing the incidence of various respiratory illnesses. A 2005 study prepared for the government found that the average annual health-related damages due to coal could top $3 billion. For the sake of our well-being, and our children's well-being, we had to put a stop to coal.

Over the past seven years, the McGuinty government has made tremendous progress after inheriting a system with reduced supply and little planning for the future. Today, our system is cleaner, more modern, more reliable and we plan ahead.

The McGuinty government has made electricity cleaner: we are on track to eliminate coal by 2014, the single largest climate change initiative in North America in that timeframe. We have already reduced the use of coal by 70 per cent. Last year our greenhouse gas emissions from the electricity sector reached the lowest they have been in 45 years. In 2009, more than 80 per cent of our generation came from emissions-free sources like wind, water, solar, biogas and nuclear.

Conservation efforts have been working — many Ontario families and businesses are becoming very active energy conservers. Through various programs, Ontarians have conserved more than 1,700 MW of electricity since 2005 — the equivalent of more than half a million homes being taken off the grid.

Today we have enough electricity to power our homes, businesses, schools and hospitals. Our government has increased Ontario's energy capacity by adding over 20 per cent (more than 8,000 MW) of new supply to the system – enough to power two million homes. Investments in Ontario are transforming the electricity system and have helped to make Ontario a leading jurisdiction in North America for renewable and reliable energy. And since 2007, we've used a formal 20-year planning process to help us forecast and meet the province's electricity needs.

Ontario's electricity system is more reliable. Investments in new generation and upgrades to 5,000 kilometres of our transmission and distribution lines — about the width of Canada from coast to coast — have ensured that our electricity system is able to manage peak and sudden swings in demand and supply availability.

We are moving toward a modern, smart electricity system that will help consumers have greater control over their energy usage — even when they're not at home. A smart grid can isolate outages allowing for faster or even automated repair. This will improve overall reliability for all electricity consumers and make it easier for consumers to produce their own power.

As part of the Open Ontario plan, the McGuinty government is moving Ontario from dirty coal dependency to a clean, modern and reliable energy economy that creates jobs. Energy is one of the engines of our economy and employs more than 95,000 Ontarians. Recent investments to modernize the system are helping to create and support jobs and opportunities for people and communities across the province. Ontario's landmark Green Energy and Green Economy Act, 2009 is projected over three years to support over 50,000 direct and indirect jobs in smart grid and transmission and distribution upgrades, renewable energy and conservation.

We've accomplished a great deal in the past seven years, but there is more to do. Ontario has sufficient electricity supply — but we will require more clean power for the future. As Ontario's energy infrastructure ages, we will need to rebuild or create another 15,000 MW of generating capacity over the next 20 years. We will also need to continue to upgrade and update transmission and distribution lines.

While we are proud of our collective efforts so far, we must continue to develop cleaner forms of electricity and foster a conservation-oriented culture. We need to have a balanced low-carbon supply mix to meet energy needs cleanly and reliably — Ontario will be ready for when North America moves to greenhouse gas regulation. We also need to maximize the electricity assets we have and ensure that those assets continue to provide clean, reliable supply.

The necessary, unavoidable investments that Ontario has been making in our electricity system are paid by ratepayers. The cost to bring our system back up to date and build a clean energy economy is having an impact on household and business bills.

We are all paying for previous decades of neglect. In Ontario, in order to have clean air, reliable generation and modernized transmission, residential prices over the next 20 years are expected to increase by about 3.5 per cent per year.

Increases to electricity bills are not easy for Ontario families and businesses. Even though Ontarians are committed to clean air, every increase takes a bite out of take-home income, and that is difficult for families during lean times. To help with rising costs, the McGuinty government has created a number of tax credits for families and seniors to help manage electricity increases. But we need to do more.

In this Plan, and the government's 2010 Economic Outlook and Fiscal Review we have taken steps to ensure that we help families and businesses with electricity costs while investment in clean energy continues. On November 18, 2010, the McGuinty government introduced the Ontario Clean Energy Benefit.

If passed, the Ontario Clean Energy Benefit will give Ontario families, farms and small businesses a 10 per cent benefit on their bills for five years. That would be 10 per cent off your electricity bill every month, effective January 1, 2011.

The proposed Clean Energy Benefit will help families, hard-working small business owners and Ontario farms. The McGuinty government is doing this to help those who are feeling the pinch of the rising cost of living and especially, rising electricity prices. Every little bit helps during lean economic times.

This balanced and responsible Plan sets out Ontario's expected electricity needs and the most efficient ways to meet them.

The Honourable Brad Duguid
Minister of Energy

overview

Ontario Electricity 1906–2003

On October 11, 1910, when Adam Beck lit up a Kitchener street sign that read "For the People," the town went wild, and the electrification of Ontario began. It was the first major project of the Hydro-Electric Power Commission of Ontario, created in 1906 as the world's first publicly owned electric utility. Beck, a municipal and provincial politician, believed that it was essential to the province's economic development that electricity be available to every Ontarian.

The Queenston-Chippawa power station at Niagara (renamed Sir Adam Beck I in 1950) helped Ontario meet the growing demand for electricity during the postwar economic boom. But despite continued expansion, it had become increasingly clear that hydropower alone would not be able to keep up with the province's demand.

As a result, Ontario began to diversify its supply mix in the 1950s, adding new sources of power, including six coal-fired generating stations built near areas where demand was highest. Between the early 1970s and the early 1990s, nuclear power was also added at three generating facilities. In the meantime, in 1974, the Hydro-Electric Power Commission was recognized as a crown corporation and renamed Ontario Hydro.

This trio of electricity sources — hydro, coal and nuclear — would support Ontario's economic prosperity into the 1990s. By then, much of the province's electricity infrastructure was aging and in need of replacement or refurbishment. The system had become unreliable, and there was widespread concern about whether supply would be able to meet projected demand.

Between 1996 and 2003, Ontario's generation capacity fell by six per cent — the equivalent of Niagara Falls running dry, while electricity demand grew by 8.5 per cent. Investments to build new supply and the upkeep of lines were modest. Investments in upgrades to transmission and distribution were less than half of current levels. There were no provincially funded conservation programs.

In 1998, Ontario passed legislation that authorized the establishment of a market in electricity. In April 1999, Ontario Hydro was re-organized into five successor entities. The move to break up Ontario Hydro and partially privatize the electricity system saddled Ontario with a stranded debt of over $20 billion.

A brief market-deregulation scheme saw electricity prices spike an average of over 30 per cent in just seven months. The government of the day was forced to cap prices for residential and small business owners — an unsustainable policy. The cap just masked the underlying problem of rising cost pressures in an electricity system in need of renewal and additional supply.

Ontario was also heavily reliant on coal-fired generation. About 25 per cent of electricity generation came from polluting coal-fired plants. In addition, Ontario imported coal power from neighbouring American states. Ontario, a province with ample power resources, had become a net importer of power.

Ontario Electricity Accomplishments 2003-2010

After taking office in 2003, the Ontario government faced a number of challenges including: a shortfall in supply, a system reliant on dirty coal-fired generation, a lack of conservation programs, an unsustainable pricing regime and little long-term planning.

The shortfall in supply was restored with investments of over $10 billion to keep the lights on in the province's homes and businesses. Since 2003, about 8,400 megawatts (MW) of new cleaner power have come on line — over 20 per cent of current capacity. That's enough electricity to power cities the size of Ottawa and Toronto. Ontario completed the return to service of Pickering A Unit 1 and enabled hydro and other renewable projects. The province also invested $7 billion to improve some 5,000 kilometres of transmission and distribution lines — the equivalent of the distance between Toronto and Whitehorse, Yukon.

Ontario's power has become cleaner by shutting down coal-fired generation and investing in renewables. In 2005, the government permanently shut-down the Lakeview coal-fired plant in Mississauga — the equivalent of taking 500,000 cars off the road. The province is on track to phase out coal-fired electricity by 2014, the largest climate change initiative of its kind in North America.

Currently, Ontario is Canada's solar and wind power leader, and home to the four largest operating wind and solar farms in the country. The province is developing a smart electricity grid that will help integrate the thousands of megawatts of new renewable power from these projects and others.

Public conservation programs were reintroduced to Ontario in 2005 to encourage and provide incentives for families, businesses and industry to consume less energy. Conservation is now a cornerstone of long-term electricity planning, recognizing that all Ontarians — for generations to come — will benefit from cleaner air and a lower carbon footprint.

In 2004, the government introduced a stable pricing regime that better reflected the true cost of electricity in Ontario. As a result, in 2005 the Ontario Energy Board (OEB) released a Regulated Price Plan, which brought predictability to electricity prices for residential and small business consumers. The OEB updates rates and adjusts prices every six months to reflect the costs of supply for that period.

Ontario has also taken steps to lower the stranded debt left by the previous government. Since 2003, Ontario has decreased the stranded debt by $5.7 billion.

In 2004, the government established the Ontario Power Authority (OPA) as the province's long-term energy planner. That set into motion a planning process that would ensure that Ontario's energy infrastructure would continue to be modernized. In 2007, the OPA prepared a 20-year energy plan (formally known as the Integrated Power System Plan or IPSP). The 2007 Plan focused on creating a sustainable energy supply, targeted to improving current natural gas and renewable assets at a sustainable and realistic cost. The government has made significant progress on the items outlined in the 2007 Plan.

2007 Plan Goal / Target	Accomplishments
Ensure adequate supply	Invested over $10-billion to bring about 8,400 MW of new supply online — enough capacity to meet the annual requirements of 2 million households.
Double the amount of renewable supply (to 15,700 MW by 2025)	More than 1,500 MW of clean, renewable energy online since 2003, enough power for more than 400,000 homes.
Reduce demand by 6,300 MW by 2025.	More than 1,700 MW of conservation (reduction in demand) since 2005, equivalent to more than 500,000 homes being taken off the grid.
Replace coal in the earliest practical time frame	Phasing out coal-fired generation by 2014 Four units closed in 2010, ahead of schedule.
Strengthen the transmission system	Over $7 billion in investments since 2003 — upgrades to more than 5,000 kilometres of wires Moved forward on transmission projects to enable additional renewables; import potential; and refurbished nuclear generation
Ensure stable energy prices for Ontarians	The Regulated Price Plan introduced in 2005 has provided predictability Electricity prices have increased on average by about 4.5 percent per year over the past seven years Introduced energy tax credits to help residential and small business consumers with electricity costs

In 2009, the government introduced the groundbreaking Green Energy and Green Economy Act, 2009 (GEA). The GEA is sparking growth in clean and renewable sources of energy such as wind, solar, hydro, and bioenergy. A series of conservation measures in the GEA are providing incentives to lower energy use. In its first three years, the GEA will help create 50,000 clean energy jobs across the province. A clean-energy manufacturing base has been growing in the province and creating jobs for Ontarians.

Ontario's Energy Future 2010-2030

The priorities that the government sets and the investments the government makes today are laying the groundwork for an Ontario of tomorrow that will feature a modern, clean and globally competitive economy; healthy, vibrant and liveable communities; and an exceptional quality of life for all Ontarians. The government has a responsibility to ensure a clean, modern and reliable system for the health and well-being of Ontario families and businesses.

By 2030, Ontario's population is expected to rise about 28 per cent — a gain of almost 3.7 million people. Ontario's population will become more urbanized with population growth taking place in primarily urban areas. The Greater Toronto Area (GTA) population will increase by almost 38 per cent over the same period.

The overall composition of the economy will evolve as high-tech and service industries grow and manufacturers change how they do business to keep pace with technological advances and global competition. The output of large industrial customers, which accounts for about 20 per cent of electricity demand, is expected to grow moderately.

Getting around will be easier for all Ontarians. Improved regional and local transit systems that form integrated transportation networks will make it easy to travel, both within and between urban centres. There will be more electric cars on the road — Ontario's goal is that by 2020, about one in every 20 vehicles on the road will be electric.

All of this means that Ontario needs a more modern energy system and a diverse supply mix. Clean, reliable energy is the fuel that will power Ontario's future economic prosperity. Ontario must take steps today to ensure that the right kind of energy will continue to be there for us tomorrow.

Ontario is building a culture of conservation and as a result, it is expected that the province's demand for energy will grow only moderately over the next 20 years. Increased demand in the long term will be due to the rising population, industrial growth and increased use of electrical appliances and vehicles.

The Smart House of the Future

A smarter electricity grid will enable Smart Houses in the future by using technologies that have built-in intelligence. With Smart Grid infrastructure, homes will be able to use power when it is least expensive, charge electric vehicles, generate their own power via solar panels or other generation – and all of this can be controlled by the owner online, or by smart phone.

The Plan

Since the 2007 Plan, developments in technology, trends in demographics, changes in the economy and the advancements of the renewable energy sector (the success of the Feed-in-Tariff program) mean that Ontario needs an updated plan. This updated long-term energy plan will help to ensure that Ontario can meet the needs of an evolving economy and shifting electricity demands, while providing affordable electricity.

Currently, Ontario's electricity system has a capacity of approximately 35,000 MW of power. The OPA forecasts that more than 15,000 MW will need to be renewed, replaced or added by 2030. Because of capacity brought online in recent years, Ontario has some flexibility moving forward. The challenge is in choosing the right mix of generation sources and the necessary level of investment to modernize Ontario's energy infrastructure to meet future needs.

Through initiatives already underway, the province will be able to reliably meet electricity demand through 2015. Ontario needs to plan now for improving the power supply capacity to meet the province's electricity needs beyond 2015. Ontario must plan in advance because:

- Insufficient investment between 1995 and 2003 left an aging supply network and little new generation
- Additional clean generation will be needed to ensure a coal-free supply mix after 2014
- Nuclear generators will need to go offline while they are being modernized
- The population is projected to grow.

To meet these needs Ontario will need a diverse supply mix. Each type of generation has a role in meeting overall system needs. Ontario requires the right combination of assets to ensure a balanced supply mix that is reliable, modern, clean and cost-effective. Ontario will also, first and foremost, make the best use of its existing assets to upgrade, expand or convert facilities.

As part of a reliable network, the system needs both small and large generators. Nuclear power will continue to reliably supply about 50 per cent of the province's electricity needs. It does not emit air pollutants or emissions during production. Hydroelectric power is expanding to include increased capacity from the Niagara Tunnel project and the Lower Mattagami project — producing clean energy by tapping into a renewable and free fuel source. Natural gas-fired plants have the flexibility to respond when demand is high — acting as peak source or cushion for the electricity system. Natural gas is the cleanest of the fossil fuels, emitting less than half of the carbon dioxide emitted by coal.

Ontario is also planning for future energy generation that will focus on efficient, localized generation from smaller, cleaner sources of electricity rather than exclusively from large, centralized power plants transmitting power over long distances. This strategy is known as "distributed generation". Distributed generation also opens up opportunities for smaller power producers, allowing individuals, Aboriginal communities and small co-operatives or partnerships to become generators.

Renewable energy—wind, solar, hydro, and bioenergy — is an important part of the supply mix. Once the initial investment is made in equipment and infrastructure, fuel cost and greenhouse gas emissions are zero or very low. Renewable energy makes it possible to generate electricity in urban and rural areas where it was not feasible before.

In developing this report, the government heard from over 2,500 Ontarians (individuals, energy organizations, community representatives, and First Nation and Métis leaders and groups). Their views have helped to inform this report. In addition, the Ontario Power Authority (OPA), Hydro One, Ontario Power Generation (OPG), the Ontario Energy Board (OEB) and the Independent Electricity System Operator (IESO) contributed information and advice.

Ontario's Long-Term Energy Plan will help guide the province as it continues to build a clean, modern, and reliable electricity system for Ontario families now and well into the future. It will ensure Ontario continues to be a North American leader for clean energy jobs and technology and becomes coal-free by 2014. Key features of the plan include:

- Demand will grow moderately (about 15 per cent) between 2010 and 2030.
- Ontario will be coal-free by 2014. Eliminating coal-fired generation from Ontario's supply mix will account for the majority of the government's greenhouse gas reduction target by 2014. Two units at the Thunder Bay coal plant will be converted to gas and Atikokan will be converted to biomass. Two additional units at Nanticoke will be shut down in 2011.
- The government is committed to clean, reliable nuclear power remaining at approximately 50 per cent of the province's electricity supply. To do so, units at the Darlington and Bruce sites will need to be modernized and the province will need two new nuclear units at Darlington. Investing in refurbishment and extending the life of the Pickering B station until 2020 will provide good value for Ontarians.
- Ontario will continue to grow its hydroelectric capacity with a target of 9,000 MW. This will be achieved through new facilities and through significant investments to maximize the use of Ontario's existing facilities.
- Ontario's target for clean, renewable energy from wind, solar and bioenergy is 10,700 MW by 2018 (excluding hydroelectric) – accommodated through transmission expansion and maximizing the use of the existing system. Ontario will continue to grow the clean energy economy through the continuation of FIT and microFIT programs.
- Natural gas generation for peak needs will be of value where it can address local and system reliability issues. Natural gas will support the increase in renewable sources over time and supplement the modernization of nuclear generators.
- Combined Heat and Power is an energy-efficient source of power and the OPA will develop a standard offer program for projects under 20 MW.
- Ontario will proceed with five priority transmission projects needed immediately for reliability, renewable energy growth, and changing demand. Future Plans will identify more projects as they are needed.
- Ontario is a leader in conservation and the government will continue to increase and broaden its targets to 7,100 MW and reduce overall demand by 28 terawatt-hours (TWh) by 2030.
- Over the next 20 years, estimated capital investments totalling $87 billion will help ensure that Ontario has a clean, modern and reliable electricity system.
- Measures outlined in this Plan will help create and sustain jobs and investments in Ontario's growing clean energy economy.
- Residential bills are expected to rise by 3.5 per cent per year over the next 20 years. Industrial prices are expected to rise by 2.7 per cent per year over the next 20 years.
- The government is proposing an Ontario Clean Energy Benefit to give Ontario families, farms and small businesses a 10 per cent benefit on their electricity bills for five years.

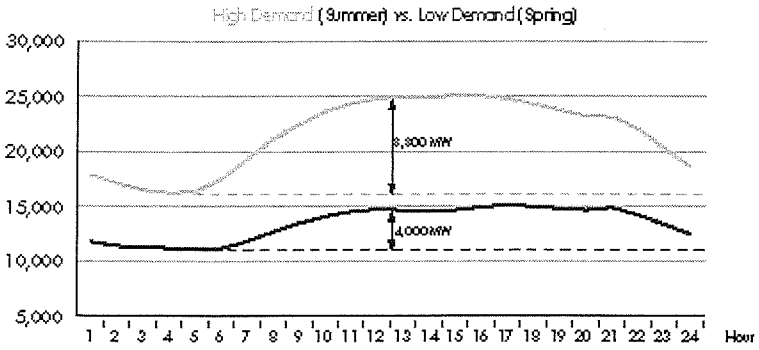
This plan will help ensure that Ontario is able to meet its electricity needs until 2030 and build a modern, clean, reliable system that will provide energy to Ontario homes and businesses for generations to come.

1 demand – an updated forecast

A forecast of the demand for electricity establishes the context for long-term planning — it predicts the amount of electricity Ontario will need.

System planning requires a complex forecast of the total amount of electricity that will be used over the course of a year, as well as the amount required to meet peak demand. The next step is to match these requirements with available generation and transmission capacity. Demand fluctuates with the time of day, weather, time of year and the structure of the economy. Ontario's demand can fluctuate between 11,000 MW on an early Sunday morning in spring to 25,000 MW on a hot Thursday afternoon in summer.

FIGURE 1: ONTARIO ELECTRICITY DEMAND COMPARISON



Unlike other forms of energy, electricity cannot be easily stored. Ontario's electricity system must be able to produce and move enough electricity to meet the changing demand for it instantaneously — all day and all night, every day and every night.

Ontario is part of an interconnected grid consisting of thousands of generators linked by tens of thousands of kilometres of transmission lines, crossing international, provincial and regional borders. The interconnected nature of the grid, supported by mandatory reliability standards, helps to ensure a stable power supply even when major components fail or when demand exceeds what can be met with domestic resources. Trade in electricity takes place over this interconnected system — for instance, between Ontario, Quebec and the U.S. — on a daily basis. In 2003, Ontario was a net importer and much of this imported supply came from U.S. coal power, which increased prices and reduced Ontario's air quality. Ontario is now a net exporter of electricity.

Electricity demand in Ontario has declined since reaching a peak in 2005. For the next 10 years, demand is expected to recover from the recent recession and then stay relatively flat as conservation efforts and an evolving economy change Ontario's energy needs.

Accomplishments

Ontario families and businesses have participated in conserving energy through various government conservation programs and shifting the demand away from peak hours.

- Ontario's conservation initiatives have been successful. Since 2005, Ontarians have saved enough energy to meet the combined electricity demand of Mississauga and Windsor.
- peaksaver®, a residential and small business electricity demand reduction program that temporarily powers down central air conditioning systems, has conserved enough to power a community the size of Thunder Bay.

Future Needs

Demand is recovering slowly in 2010 after the global economic recession. Future demand will depend on a number of factors including: the speed of Ontario's economic recovery, population and household growth, greater use of electronics in appliances and home entertainment systems, the pace of the recovery of large, energy-intensive industry and the composition of the economy (e.g. a shift to more high-tech and service jobs). Demand will also be impacted by the success of conservation efforts, as well as the potential electrification of public transit and the number of electric vehicles on the road. Weather can also have a pronounced effect.

To account for generation maintenance, extreme weather or significant changes in the amount of electricity the province needs, it is important to have electricity capacity in reserve.

The Plan

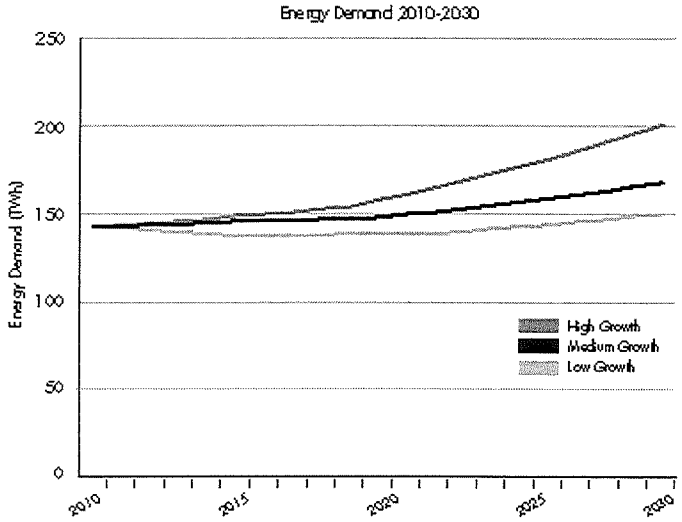
Based on OPA analysis, this Plan outlines three potential scenarios (net of conservation) for electricity demand:

1. Low growth (yellow) assumes that Ontario's manufacturing and industrial sectors continue to grow modestly in accordance with the current trend. Some of the recent decline in consumption is due to conservation, some to restructuring in the various industrial sectors, and some due to the recession. This forecast assumes a lower rate of population growth than in the other two scenarios. It further assumes that only 13 per cent of people use electricity for heating and that small appliance use accounts for 30 per cent of growth.

2. Medium growth (brown) represents moderate growth in the industrial sector and in population. This scenario assumes continued growth in the residential, commercial and transportation sectors. This forecast assumes that there is a consistent move towards high-tech and service industries and somewhat higher provincial population growth than the low growth scenario. This scenario is consistent with the current government goal for electric vehicles: five per cent by 2020.

3. High growth (orange), or aggressive electrification, assumes that there is a significant increase in electric transportation — both public and private. It assumes that there is aggressive North American greenhouse gas regulation, faster population growth than the low growth scenario, significant industrial change and that by 2030 about 12 per cent of vehicles on the road are electric.

FIGURE 2: RANGE OF ENERGY DEMAND FORECAST



The three scenarios do not differ significantly until 2018, allowing time to adjust as the Long-Term Energy Plan will be updated every three years. For planning purposes, the government is using the medium growth line to predict future electricity needs. The medium growth scenario balances the expected growth in residential and commercial sectors, with modest, post-recession growth in the industrial sector. The addition of 1.1 million households and the expected increase in the use of entertainment electronics, and small appliances will increase residential electricity demand. The addition of 132 million square metres of commercial space and the associated use of air-conditioning, lighting and ventilation will increase electricity demand in the commercial sector.

Based on the medium growth scenario, Ontario's demand will grow moderately (15 per cent) between 2010 and 2030, based on the projected increase in population and conservation as well as shifts in industrial and commercial needs. As a result, for planning purposes, the system should be prepared to provide 146 TWh of generation in 2015 rising to 165 TWh in 2030.

Ontario is also planning to create sufficient flexibility in the system to accommodate the higher growth scenario.

2 supply

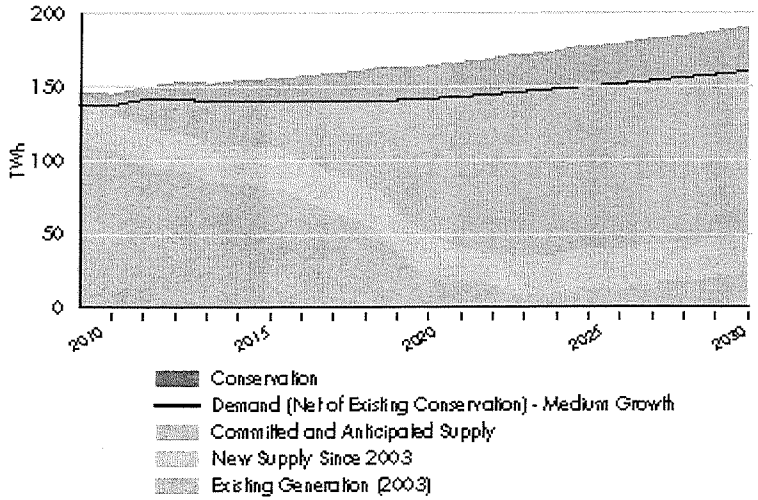
With a long-term demand forecast in place, Ontario must determine the most effective way to meet that demand so that there is no gap in supply. Ontario needs a balanced, cost-effective supply mix that supports the economy, is modern, can adapt to future changes and provides clean, reliable electricity to Ontario families and businesses for generations to come.

A clean, reliable energy system relies on a balance of resources. Good system planning includes a sustainable supply mix that meets the demands of the public. It also means continually looking for efficiencies and emphasizing the best use of current resources. Ontario's supply mix includes:

- Conservation: As the best and first resource, it reduces consumption and therefore demand on the system. By avoiding the need to build new generation, all consumers benefit through cost savings.
- Baseload power: Generation sources, such as nuclear and hydro stations, designed to continuously operate (Niagara Falls, for example). Baseload power is the foundation of a stable, secure supply mix.
- Variable or intermittent power: Generation sources that produce power only during certain times such as wind and solar projects. These are important contributors to a cleaner supply mix.
- Intermediate and peak power: Generation sources designed to ramp up and down as demand changes throughout the day such as natural gas and hydro generation with some storage capability. These function as a cushion to the system to ensure reliability when demand is highest.

This supply mix balances reliability, cost and environmental performance.

FIGURE 3: FORECAST SUPPLY AND DEMAND (2010-2030)

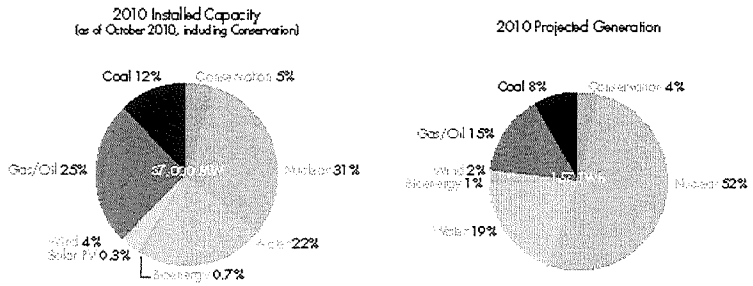


Energy Storage can help to balance the electricity grid by storing off-peak generation and using it during peak hours. This helps to reliably incorporate more renewable generation into the grid. Energy storage is an important part of the move to a Smart Grid. Ontario will continue to investigate the potential for new storage technologies. There are a number of issues that impact the development of energy storage:

- The capital costs for large-scale electricity storage are high largely due to high engineering and construction costs.
- Research is underway on flywheel storage, plug-in vehicle storage, various forms of thermal storage as well as other storage options.
- There are growing opportunities for small storage projects, particularly as battery technology improves.
- Ontario has a pumped storage facility in the Sir Adam Beck Pumping Generating Station at Niagara Falls. OPG is currently studying the possible expansion of the reservoir to allow for further storage at the station.

The capacity of the system is necessarily larger than what is actually generated. It is critical to have more capacity than generation to be able to manage normal equipment maintenance and shutdowns, unprecedented peak demands or an unexpected shutdown of an electricity generator. Generation, or the amount of electricity Ontario produces, is measured in terawatt hours (TWh or billion kWh). The capacity of the system, or what it is able to generate, is measured in megawatts (MW).

FIGURE 4:
CONTRAST BETWEEN GENERATION AND INSTALLED CAPACITY



Selecting a supply mix and investment in supply is a matter of choices and trade-offs. A variety of power supply sources — some designed for baseload requirements, some designed for meeting peak requirements — is superior to relying heavily on only one source. For this long-term plan the government has considered environmental, economic, health, social and cost implications to come up with the best possible supply mix.

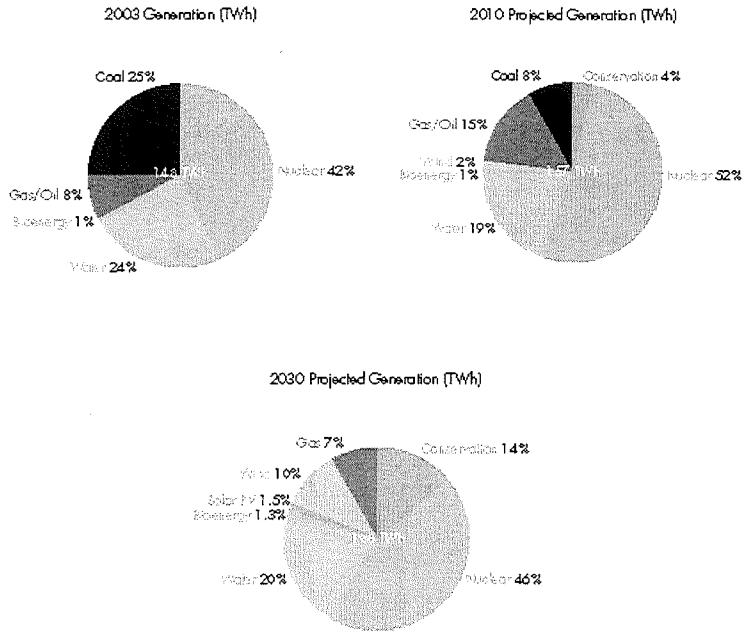
This improved supply mix will be cleaner, sustainable, modern and reliable. It phases out coal-fired generation at a faster pace, it modernizes Ontario's nuclear fleet, it includes more renewables, it maximizes hydroelectric power over the near term, and it advances Ontario's conservation goals.

By 2030, Ontario will have completely eliminated coal as a generation source and will have also increased wind, solar and bioenergy from less than one per cent of generation capacity in 2003 to almost 13 per cent. To ensure reliability, the strategic use of natural gas will be required to complement renewable generation. Nuclear will continue to supply about 50 per cent of Ontario's electricity needs.

The following chapter will include a review of the various components of Ontario's electricity supply:

- Coal
- Nuclear
- Renewables: Hydroelectric
- Renewables: Wind, Solar and Bioenergy
- Natural gas
- Combined Heat and Power (CHP)

FIGURE 5: BUILDING A CLEANER ELECTRICITY SYSTEM



Coal Free

The Ontario government is committed to improving the health of Ontarians and fighting climate change. Coal-fired plants have been the single largest source of greenhouse gas emissions in the province and among the largest emitters of smog-causing pollutants. Ontario's reliance on coal-fired generation shot up 127 per cent from 1995-2003, significantly polluting the province's air. During that period Ontario also relied on importing coal-fired power from the United States. An Ontario study found the health and environmental costs of coal at $3 billion annually ("Cost Benefit Analysis: Replacing Ontario's Coal-Fired Electricity Generation," April 2005).

Since 2003, the government has reduced the use of dirty coal-fired plants by 70 per cent. Eliminating coal-fired electricity generation will account for the majority of Ontario's greenhouse gas reduction target by 2014 — the equivalent of taking 7 million cars off the road.

In addition, Ontario Power Generation (OPG) is required to meet strict government-mandated greenhouse gas emission targets, including ensuring that between 2011 and 2014 annual emissions are two-thirds lower than 2003 levels.

Ontario is the only jurisdiction in North America that is phasing out coal-fired generation. The government has committed to eliminating coal-fired generation by 2014 and is introducing clean and reliable sources of energy in its place. Until then, coal and natural gas plants will continue to provide power in peak-demand periods to maintain the reliability of the system.

Accomplishments

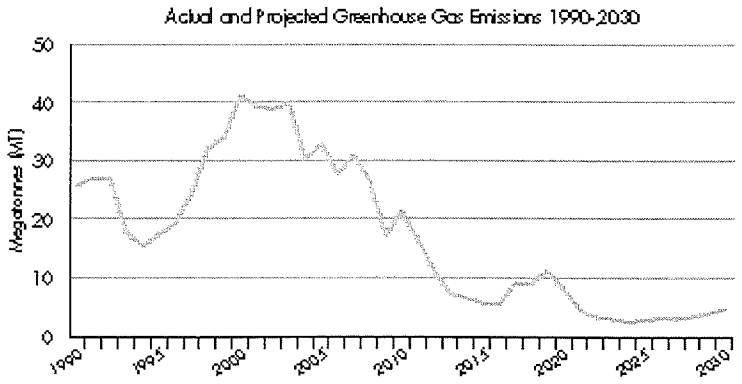
The government of Ontario has shut down eight coal units since 2003 (3,000 MW) and will close the remaining units by 2014 or earlier.

- Lakeview (Mississauga) – four units closed April, 2005
- Nanticoke – two units closed October, 2010
- Lambton – two units closed October, 2010

After the closure of four coal units on October 1, 2010, coal-fired generation makes up only 13 per cent of Ontario's electricity capacity.

Ontario's electricity sector emissions will decrease dramatically to only five megatonnes post-2020 as a result of becoming coal-free. Between 2015 and 2019, extensive nuclear refurbishments will take place and Ontario will rely on its natural gas-fired stations to maintain reliable electricity supply.

FIGURE 6:
REDUCING EMISSIONS IN ONTARIO'S ELECTRICITY SECTOR



The Plan

Coal-fired plants will cease to burn coal in 2014. Ontario will shut down two additional units at Nanticoke Generating Station before the end of 2011.

The government recognizes the potential benefits of continuing to use Ontario's existing electricity-generating assets and sites. Coal-fired plants could be converted to use alternative fuels, such as natural gas. Similar to coal, biomass and/or natural gas can provide electricity on demand for peak periods.

In line with the Growth Plan for Northern Ontario and future needs of the Ring of Fire, the province is replacing coal at Atikokan and Thunder Bay and re-powering these facilities with cleaner fuel sources.

Converting the Atikokan Generating Station to biomass by 2013 will create up to 200 construction jobs and help protect jobs at the plant. It will also support jobs in Ontario related to the production of wood pellets and sustain other jobs in the forestry sector. The project is expected to take up to three years to complete. Once converted, the plant is expected to generate 150 million kilowatt-hours of renewable power, enough to power 15,000 homes each year.

At the Thunder Bay Generating Station, two units will be converted to natural gas in a similar timeframe. The Thunder Bay plant is needed not only for local supply to the city of Thunder Bay, but for system reliability in northwestern Ontario, particularly during periods of low hydroelectric generation and until the proposed enhancement to the East-West tie enters operation. The government will work with suppliers on the planning process to convert the Thunder Bay units.

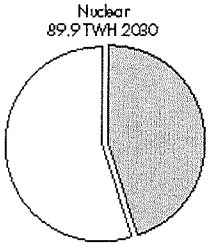
Ontario will continue to explore accelerating the closure of the remaining six units (four at Nanticoke and two at Lambton), taking into consideration the impact of the closures on system reliability.

Ontario will monitor the progress of the continued operation of nuclear units at Pickering. The government expects in 2012 to have an update on the progress of extending the life of these units. At this time, Ontario will consider the possible conversion of some of the units at Nanticoke and Lambton to natural gas, if necessary for system reliability. Due to the lead times involved, planning and approval work for the natural gas pipeline infrastructure required to Nanticoke will begin soon.

Ontario will continue to explore opportunities for co-firing of biomass with natural gas for any units converted to natural gas. Decisions on other biomass opportunities will have to carefully take into account the ability to bring in fuel supply and the cost of conversion.

Nuclear – New/Modernized

Nuclear power is a reliable, safe supplier of the province's baseload generation needs — accounting for about 36 per cent of the province's installed electricity capacity. Nuclear operates 24 hours a day, seven days a week and it produces about 50 per cent of the electricity generated in Ontario. Nuclear power does not produce any primary air pollution or release greenhouse gases into the atmosphere.



Nuclear power plants are able to operate steadily, providing a plentiful, consistent supply of energy for decades at stable prices. In addition, the fuel cost for a nuclear power plant is a small portion of its total costs, so nuclear power is generally not impacted by fuel price escalation or fluctuations.

- Ontario has used nuclear power for more than 40 years.
- In 2009, more than half of the province's electricity came from nuclear energy.
- Ontario's nuclear power stations and waste storage facilities have an excellent safety record. OPG won the Zeroquest Platinum (Sustainability) Award from the Infrastructure Health and Safety Association (IHSA) in June 2010.
- Over 70,000 jobs in Canada are directly or indirectly related to the nuclear power industry.

Accomplishments

A number of nuclear power producing units have been modernized and returned to service since 2003 including:

- Pickering A Unit 1, in November 2005, providing 515 MW (or about 6 per cent of new supply)
- Bruce Unit 3, in March 2004, providing 770 MW (or about 9 per cent of new supply)
- Bruce Unit 4, in November 2003, providing 770 MW (or about 9 per cent of new supply)

Future Needs

Nuclear power is crucial to providing reliable electricity to the province. Units at Bruce B and Darlington are expected to reach the end of their service lives over the next decade. To extend the life of these units, each would have to be shut down for about three years while being modernized.

At the time of the 2007 Plan, there was a need for new nuclear planning to begin immediately. Since then, demand has declined and renewable generation has become a bigger contributor to the system. Investment in renewables, the reduction in demand and the availability of natural gas have all reduced the immediate need for new nuclear. However, to preserve the long-term reliability of the system, particularly for baseload generation, additional investment in nuclear generation will be required.

Ontario will continue to rely on nuclear power – at its current level of contribution to the supply. Nuclear generation is ideally suited for providing baseload generation because of its unique economic and operating characteristics. Nuclear plant operational design and economics depend on the plants being able to operate steadily throughout the year. A generation mix of 50 per cent nuclear combined with baseload hydroelectric generation is sufficient to meet most of Ontario's baseload requirements.

If nuclear capacity beyond this were added, the hours in the year in which nuclear capability exceeded Ontario demand could substantially increase. Under such surplus conditions, some nuclear units might need to be shut down or operate differently than intended. This could lead to significant system and operating challenges and so therefore, generating too much nuclear is undesirable.

The Plan

Over the first 10 to 15 years of this Plan, 10,000 MW of existing nuclear capacity will be refurbished. Investment should focus first and foremost on the improvement of existing assets so that those facilities can continue to provide reliable, affordable electricity. A coordinated refurbishment schedule was agreed to in 2009 by a working group including OPG, Bruce Power, the OPA and the Ministry of Energy. This schedule will be regularly reviewed and updated to reflect current information on resources and plant performance and conditions.

The government is committed to continuing to use nuclear for about 50 per cent of Ontario's energy supply — a capacity of 12,000 MW will produce that amount of energy. The remaining nuclear capacity of 10,000 MW at Darlington and Bruce will need to be refurbished and modernized.

The remainder of the nuclear capacity that Ontario will need for its projected demand (about 2,000 MW) will be made up of new nuclear at Darlington.

The construction of new nuclear infrastructure requires a significant lead time (approximately 8 to 10 years to commercial operation) and while new nuclear supply will be needed in Ontario, it must be provided at a fair price to ratepayers. Both refurbishment and new build will have significant positive impacts on local economies – and considerable employment opportunities.

In February 2008, the government of Ontario launched a process to procure two new units at the Darlington site. Atomic Energy of Canada Limited (AECL) was one of three vendors who met the February 2009 bid submission deadline. AECL emerged as the only compliant bidder in the process; however the AECL bid price exceeded the province's target. Ontario then sought to finalize a deal with the company to procure the units at an acceptable price.

During the discussions between the Ontario government and the federal government, the federal government announced its intention to sell AECL in May 2009. The news cast a great deal of uncertainty over Ontario's procurement process. The position of uncertainty that the federal government placed AECL in, together with a much higher than anticipated price, made it very difficult for Ontario to finalize a procurement that was in the best interest of ratepayers. As a result, Ontario suspended the RFP process in June 2009.

The Province continued to engage AECL, as the only compliant bidder, in discussions with the hope that a deal could still be finalized. The talks did not lead to any demonstrable progress. Consequently, the Premier of Ontario wrote to the Prime Minister requesting that the process to sell AECL be halted. It was Ontario's position that both levels of government should try to complete the procurement with AECL before the company was sold so that Ontario's need for significant nuclear refurbishment and new nuclear generation could be met while simultaneously protecting jobs and preserving the industry in Canada. This proposal was not pursued by the federal government and their process is continuing without a deal with Ontario being completed.

It is anticipated that the federal government will identify a preferred vendor by the end of this year. Ontario is expecting that the federal government will restructure AECL in a manner that will allow Ontario to be able to complete a deal with the new owner at a price that is in the best interest of ratepayers.

The decrease in demand together with the new supply added in recent years, means that Ontario is well-positioned to examine a number of options for negotiating new nuclear production at the right time and at a cost-effective price.

In the meantime, OPG is continuing with two initiatives that were underway prior to the suspension of the new build procurement process: the environmental assessment and obtaining a site preparation licence at Darlington. It is essential that the province stay ready to construct new nuclear plants as part of the government's ongoing commitment to modernize Ontario's nuclear fleet.

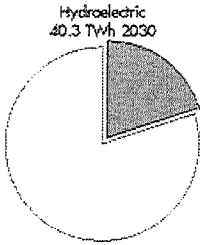
OPG will invest $300 million to ensure the continued safe and reliable performance of its Pickering B station for approximately 10 years, to 2020. Following this, OPG will begin the longer term decommissioning process and will work with the community of Pickering and the advisory committee to explore future opportunities for the site.

A 2010 report by the Canadian Manufacturers and Exporters estimates the employment and economic benefits from refurbishing and operating the Bruce and Darlington reactors will be substantial: almost 25,000 jobs and annual economic activity of $5 billion.

In developing a new-build procurement and modernization strategy Ontario will:

- Secure an acceptably priced contract for construction of nuclear new build under specified timeframes.
- Pursue project terms that are in the best interest of ratepayers.
- Retain the maximum number of high-quality, high-paying nuclear industry jobs in the province while providing opportunities for long-term growth of the nuclear industry.

Ontario has been generating renewable power from water — hydroelectric power — for over 100 years. Hydroelectric power is clean, renewable, cost-effective and helps to contribute to clean air quality. Hydro currently makes up the vast bulk — about 90 per cent — of Ontario's total renewable energy supply, representing 8,127 MW of capacity. It is a reliable source of electricity that can continue to provide clean energy for generations to come.



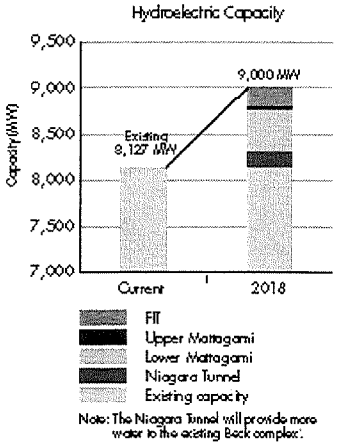
Accomplishments

The 2007 Plan projected a total of 7,708 MW of hydroelectric capacity by 2010. The government has exceeded this goal. Ontario has also launched significant hydroelectric projects — the first major investments in 40 years. Since October 2003, 317 MW of new hydro projects have been brought online.

FIGURE 8: HYDROELECTRIC CAPACITY

Some of the larger completed and ongoing hydro projects to meet Ontario's future needs include:

- Niagara Tunnel project, which will increase the amount of water available for power generation at the Sir Adam Beck Generating Station
- The Lower Mattagami project expansion – the largest hydroelectric project undertaken in Ontario in 40 years. This project will add about 440 MW of clean electricity generating capacity to Ontario's energy grid, while providing $2.6 billion of investment in the North
- Healey Falls, a 15.7 MW facility near Campbellford, east of Peterborough
- Lac Seul Generating Station, a 12.5 MW facility near Ear Falls
- Trent Rapid Hydroelectric Station, an 8 MW facility near Peterborough
- Sandy Falls, a 5.5 MW facility on the Mattagami River, near Timmins.



Future need

More hydroelectric power will be added to Ontario's electricity system in the next eight years than over the previous 40 years. Unlike Quebec, Ontario does not have the geography to support massive reliance on hydroelectric power. (Quebec has almost four times the hydro capacity of Ontario.) New hydroelectric generation will continue to be an important part of a clean, reliable system over the next 20 years. The government is also reviewing how crown land is made available for waterpower projects, particularly for smaller Feed-InTariff (FIT) Program projects.

The Plan

Ontario will continue to develop the province's hydroelectric potential and is planning for 9,000 MW of hydroelectric capacity by 2018.

Once the Niagara Tunnel expansion is complete, it will provide enough electricity to power 160,000 homes. When the capacity expansion at Lower Mattagami is complete, the project will provide enough electricity to power over 300,000 homes. These projects will help to maximize Ontario's existing hydro projects.

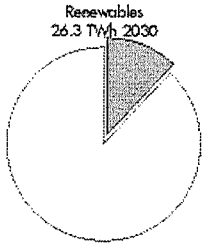
Existing hydro is the cheapest form of generation in Ontario and in many cases, it can help to meet peak power demand. There are a number of projects that are currently under consideration, such as:

- Two hydroelectric generating stations on the Little Jackfish River (north of Lake Nipigon) that could add 100 MW of capacity
- New Post Creek, a 25 MW project in the development stage
- Mattagami Lake Dam, a 3-6 MW development at Kenogamissi Falls on the Mattagami River.

Ontario will plan for future hydroelectric development where it is cost-effective to build. This will mean FIT-level hydro projects (less than 50 MW) will also be considered.

New hydro projects complement other renewable initiatives and help to eliminate coal by 2014. Some additional projects will be considered, but large-scale projects, usually in remote locations, are not economically feasible at this time due to high capital and construction costs. Transmission, engineering and environmental factors are also challenges. However, due the importance of hydroelectric generation, Ontario will continue to study Northern hydro options over the period of the Plan.

Renewables: Wind, Solar and Bio-energy



Ontario has become a North American leader in producing energy from sources that are continually renewed by nature such as wind, sun and bioenergy. Renewables do not produce harmful emissions, which contribute to smog, pollution and climate change. Increasing Ontario's renewable energy supply helps reduce the province's reliance on fossil fuels. Greater investments and reliance on renewable energy help to ensure that Ontario has a clean and reliable electricity system for generations to come.

Accomplishments

Ontario is now Canada's leading province for wind and solar capacity and home to the country's four largest wind and solar farms. The world's largest photovoltaic solar farm is in Sarnia (Enbridge's 80 MW Sarnia Solar) and Canada's largest wind farm is near Shelburne (the 199.5 MW Melancthon EcoPower Centre). In 2003, Ontario had 10 wind turbines; today, the Province has more than 700.

Since October 2003, the government has signed more than 16,000 renewable energy supply contracts from wind, water, solar and bio-energy sources. This includes almost 2,400 MW of small and large renewable power projects under North America's first comprehensive Feed-in Tariff (FIT) Program, introduced in 2009. These FIT contracts represent a private sector investment of $9 billion and are projected to create approximately 20,000 direct and indirect clean energy jobs.

The success of the FIT Program has also attracted the notice of global investors, including a consortium of companies led by Samsung C&T Corporation, laying the foundation for Ontario to become a global clean energy production and manufacturing hub.

Ontario's Feed-in Tariff (FIT) Program combines stable, attractive prices and long-term contracts for energy generated using renewable resources.

Homeowners, business owners and developers may apply to the FIT Program if they use one or more forms of renewable energy, including wind, waterpower, solar photovoltaic (PV) power and bioenergy.

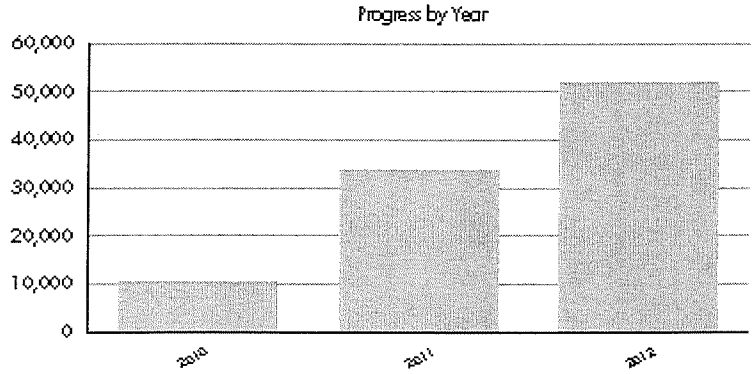
The Program is the first comprehensive FIT program in North America. It was launched through the Green Energy and Green Economy Act, 2009.

Over 1,000 FIT contracts are currently in place for clean energy projects.

Some 51 community projects will provide renewable electricity supply to the grid through the Ontario FIT program. From these projects, more than 200MW of clean electricity will be generated by communities engaging in, solar, wind and bio-energy projects across Ontario.

Thousands of Ontarians are also participating in the microFIT Program. Homeowners, farmers or small business owners, are able to develop a very small or "micro" renewable electricity generation project (10 kilowatts or less in size) on their properties. Under the microFIT program, they are paid a guaranteed price for all the electricity they produce for 20 years.

FIGURE 9: PROGRESS ON 50,000 PROJECTED GREEN ENERGY ACT JOBS



Major Private-Sector Renewable Investments in Ontario

The $7-billion Green Energy Investment Agreement with Samsung C&T Corporation and Korea Electric Power Corporation (Consortium), is the single largest investment in renewable energy in provincial history. It will:

- Build 2,500 MW of wind and solar power.
- Deliver an estimated 110 million megawatt-hours of emissions-free electricity over the 25-year lifetime of the project — enough to supply every Ontario home for nearly three years.
- Create more than 16,000 new clean energy jobs to supply, build, install and operate the renewable generation projects.
- Lay the groundwork with major partners to attract four manufacturing plants.

Out of the 16,000 new clean energy jobs, this investment is expected to create or sustain 1,440 manufacturing and related jobs, building wind and solar technology for use in Ontario and export across North America.

As part of the Green Energy Investment Agreement, Samsung and Siemens have announced plans to build Ontario's first wind turbine blade manufacturing plant, which will create up to 900 direct and indirect jobs. The Consortium will negotiate with manufacturing partners to locate three other plants in Ontario for wind turbine towers, solar inverters and solar module assembly.

Under the agreement, three of the four manufacturing facilities are scheduled to be ready in 2013, while the fourth is scheduled to be in operation by the end of 2015. The Consortium also intends to use Ontario-made steel and other Ontario content in its renewable energy projects for items such as wind turbine towers.

More than 20 companies have publicly announced plans to participate in Ontario's clean energy economy, in the last year. These companies are currently operating or plan to set up solar and wind manufacturing facilities in Ontario in the following categories: solar PV modules, mounting systems, inverters, wind turbine blades and wind turbine towers. Some recent examples include:

- Heliene Inc., producing modules in Sault Ste. Marie;
- Canadian Solar, will manufacture modules in Guelph;
- Photowatt, producing modules in Cambridge;
- Samco, an auto parts manufacturer now also producing solar mounting systems in Scarborough;
- Schletter, producing solar mounting systems in Windsor;
- Sustainable Energy Technologies partnering with Melitron to produce inverters in Guelph;
- Satcon, producing inverters in Burlington;
- Siemens will be producing wind turbine blades; and,
- DMI Industries is producing wind turbine towers in Fort Erie.

Future Needs

Ontario will continue to be a leader in renewable energy development and generation. The growth of the renewable energy sector will be influenced by electricity demand, the ability of the system to accommodate additions to the grid, continued innovation in the renewable technology sector and global demand for renewable energy production. Expansions and upgrades to the transmission and distribution system will be necessary to increase the capacity for renewable energy in Ontario.

As more and more of Ontario's electricity comes from renewable energy sources and research and innovation of Smart Grid technologies continues, there will be increased opportunities for renewable energy projects, both large and small to be established in Ontario.

There will also be greater opportunity for employment in this field. Renewable energy projects require skilled labour, such as engineers as well as construction and maintenance labour across the province. As renewable energy projects are established, the need for skilled and general labour will continue to provide jobs for thousands of Ontarians over the next decade. Innovation in new technology also contributes high skilled jobs and economic opportunities for Ontario.

Biomass is dispatchable and can be used as a peaking resource. This attribute allows it to complement increased wind and solar generation. The conversion of Atikokan Generating Station to run on biomass will contribute to long-term system reliability, especially during low water conditions in the region. The conversion from coal to biomass at Atikokan by 2013 will create up to 200 construction jobs and help protect jobs at the plant. It will also support jobs in Ontario related to the production of wood pellets and sustain other jobs in the forestry sector. Ontario will continue to monitor the conversion of Atikokan and consider future potential of biomass generation.

The Plan

Ontario will continue to develop its renewable energy potential over the next decade. Based on the medium growth electricity demand outlook, a forecast of 10,700 MW of renewable capacity (wind, solar, and bioenergy) as part the supply mix by 2018 is anticipated. This forecast is based on planned transmission expansion, overall demand for electricity and the ability to integrate renewables into the system. This target will be equivalent to meeting the annual electricity requirements of two million homes.

The province's renewable energy capacity target will be met with the development of renewable energy projects from wind, solar, biogas, landfill gas and biomass projects across Ontario.

Future rounds of FIT projects will be connected to the Bruce to Milton transmission line and the priority transmission projects identified as part of this Long-Term Energy Plan. This will enable 4,000 MW of new renewable energy projects to be connected.

In the near term, the OPA will be releasing information regarding the status of all FIT applications not offered contracts as of June 4, 2010. These applications will be subject to the first Economic Connection Test (ECT) under the FIT program. The ECT process, to be conducted on a regular basis and in alignment with major planning or system development milestones, will help to determine whether the costs of grid upgrades to allow a FIT project to connect to the grid are economically viable.

For the period after 2018, depending on changes in demand, Ontario will look for opportunities to increase the development of renewable energy projects and expand renewable energy capacity in the Province. Ontario will review the electricity demand outlook in the next Long-Term Energy Plan to explore whether a higher renewables capacity forecast is required.

FIT contract prices were set following extensive consultations and are designed to ensure a reasonable rate of return for investors while providing good value for clean, renewable energy for Ontario ratepayers.

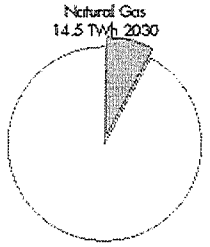
As part of the scheduled two-year review of the FIT Program in 2011, the FIT price of renewables in Ontario will be re-examined. Successful and sustainable FIT programs in a number of international jurisdictions (such as Germany, France and Denmark) have decreased price incentives. Advances in technology and economies of scale reduce the cost of production. A new price schedule will be carefully developed to achieve a balance between the interests of ratepayer and the encouragement of investment in new clean energy in Ontario.

The response to the microFIT and FIT programs has been a tremendous. Thousands of Ontarians are participating in the program to feed clean energy into the grid.

Given the popularity of Ontario's growing clean energy economy, applications to the microFIT and Capacity Allocation Exempt (CAE FIT) program are outpacing needed upgrades to the grid. To continue to ensure the growth of small clean energy projects, Ontario will continue to invest in upgrades to the transmission and distribution systems to accommodate renewable supply.

In areas where there are technical challenges, the OPA, Hydro One and Local Distribution Companies will continue to work with proponents that have already applied to the CAE FIT or microFIT program.

Natural Gas



Natural gas plants have the flexibility to respond well to changes in demand, making them an important cushion for Ontario's electricity system — particularly for peak periods.

Natural gas produces electricity either by burning to directly power a gas turbine or by producing steam to drive a steam turbine. A combined cycle gas plant combines these two technologies. Natural gas can supplement baseload power supply and, because it responds quickly to increases in demand, it can also complement the intermittent nature of wind and solar electricity generation.

Natural gas is much cleaner than coal. Some air emissions — particularly mercury and sulphur dioxide — are totally eliminated when natural gas replaces coal. Carbon dioxide emissions are reduced by between 40 and 60 per cent. Currently, Ontario's electricity generation capacity from natural gas is over 9,500 MW.

By replacing coal with natural gas and renewable energy sources, Ontario has greatly reduced greenhouse gas emissions from its electricity supply mix. This policy has prepared Ontario for the possibility of greenhouse gas regulation in the North American market.

Accomplishments

The Ontario government and the OPA have launched a number of clean natural gas and cogeneration projects since 2003 to help with local reliability and peak demand.

The 2007 Plan projected that some 12,000 MW of natural gas would be needed by 2015. Since then, changes in demand and supply — including about 8,400 MW of new, cleaner power across the system and successful conservation efforts — means that less capacity will be required.

Future Needs

In 2009, about 10 per cent of Ontario's electricity generation came from natural gas. In the coming years, the government anticipates that it will be necessary to maintain the amount of natural gas supply at its current level in the supply mix.

The Plan

Natural gas will continue to play a strategic role in Ontario's supply mix as it helps to:

- Support the intermittent supply from renewables like wind and solar
- Meet local and system reliability requirements
- Ensure adequate capacity is available as nuclear plants are being modernized

The 2007 Plan outlined a forecast need for an additional three gas plants in the Province, including one in the Kitchener-Waterloo-Cambridge and one in the southwest GTA.

Because of changes in demand along with the addition of approximately 8,400 MW of new supply since 2003, the outlook has changed and two of the three plants — including the proposed plant in Oakville — are no longer required. However, a transmission solution to maintain reliable supply in the southwest GTA will be required.

As indicated in 2007 Plan, the procurement of a peaking natural gas-fired plant in the Kitchener-Waterloo-Cambridge area is still necessary. In that region, demand is growing at more than twice the provincial rate.

Ontario is taking advantage of its existing assets with the conversion of two coal-fired units in Thunder Bay to natural gas. (See page 21 on Coal.)

Over the next few years, non-utility generation contracts, which were entered into between the private sector and the former Ontario Hydro in the early 1990s, will begin to expire. Many of these are natural gas-fired. These non-utility generators — or NUGs as they are known — have been part of Ontario's overall supply mix for 20 years. They can contribute up to 1,550 MW of clean power to the system. The contracts with NUGs are currently held by the Ontario Electricity Financial Corporation, an agency of the Ministry of Finance.

As non-utility generator contracts expire, the IESO and the OPA will determine if the generation is still required to help ensure reliability. The government will direct the OPA to design contracts that will encourage NUGs to operate during periods when it would most benefit the electricity system. The OPA will be authorized to enter into new contracts where this generation is needed and will negotiate to get the best value for consumers.

CHP (Combined Heat and Power/Cogeneration)

Combined Heat and Power is the simultaneous production of electricity and heat using a single fuel such as natural gas. The heat produced from the electricity generation process is captured and used to produce steam or hot water that can then be used for industrial and commercial heating or cooling purposes, such as district energy systems.

CHP can make more efficient use of fuel and therefore reduce greenhouse gas emissions. CHP overall efficiency can exceed 80 per cent — which means that 80 per cent of the energy can be captured as electricity or usable heat.

Accomplishments

Currently, the total industrial CHP capacity in Ontario is estimated to be about 2,000 MW, or about 6 per cent of Ontario's installed generation capacity.

In October 2006, the OPA awarded seven contracts with a total capacity of 414 MW — enough to provide the power for 400,000 Ontario homes. Much of this new capacity (395 MW) will be coming from industrial projects. These facilities are in communities across the province including: Windsor, Kingsville, London, Oshawa, Markham, Sault Ste. Marie and Thorold.

Algoma Energy Cogeneration Facility

The 63 MW Algoma Energy Cogeneration Facility is located in Sault Ste. Marie, Ontario. The facility uses the by-product fuels from cokemaking and ironmaking (blast furnace and coke oven gas) to generate electricity and steam used for steel manufacturing operations.

The facility reduces Essar Steel Algoma's reliance on the provincial power grid by 50 per cent on average, freeing up this capacity for the rest of the province. This cogeneration facility helps to reduce Essar Steel Algoma's nitrous oxide emissions by 15 per cent (approximately 400 metric tonnes a year).

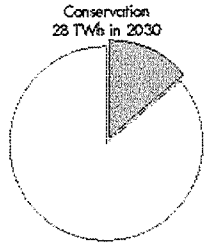
The Plan

Ontario will target a total of 1,000 MW of CHP. It will be procured through the OPA and will include existing contracts, individual negotiations for large projects and a new standard offer program for smaller projects in key strategic locations.

The government will encourage new local CHP generation projects, where price, size and location make sense. The government will work with the OPA to develop options for small, targeted programs. Over the next 20 years, Ontario will see more community-scale CHP projects. The OPA will create a new standard offer program for CHP projects under 20 MW in specific locations.

The OPA will continue to negotiate larger CHP projects on an individual basis. For example, the OPA and St. Marys Paper Corporation recently signed a 10-year contract for the company to generate clean electricity at a new 30 MW biomass-fuelled plant to be built next to St. Marys existing mill in Sault Ste. Marie. The plan is expected to reach commercial operation by early 2014 and will support 550 direct and indirect jobs.

3 conservation



Conservation is Ontario's most environmentally friendly and cost-effective resource. Conservation initiatives save money and reduce greenhouse gas emissions. Reducing consumption reduces bills for consumers and reduces demand on the system, avoiding the need to build new generation. For every dollar that is invested in conservation, two to three dollars of net savings are realized over the life of the investment. Conservation can also create local jobs in energy audits and energy services.

Accomplishments

From 1995 to 2003, there were no provincial conservation programs — it was not a priority. Since 2003, Ontario has had goals for conservation and as a result, this province has become a North American leader. The goal to reduce peak demand by 6,300 MW by 2025 was included in the 2007 Plan. Ontario is on target to meet this goal.

Ontario's A+ 2009 National Energy Efficiency Report Card from the Canadian Energy Efficiency Alliance

The province raised its grade from a "C-" in 2004 to an A+ in 2009 with its strong commitment to energy efficiency and conservation as cornerstones of its energy plan. In addition to the Green Energy and Green Economy Act, 2009, the report lauds Ontario's energy conservation programs, improved energy efficiency in building codes and product standards, as well as other initiatives supporting energy efficiency.

To improve the quality of the province's air and the efficiency of the system, Ontario invested about $1.7 billion in conservation programs from 2006 to 2010. This will save ratepayers $3.8 billion in avoided costs.

Conservation programs also give customers the tools to help them manage costs, and balance demand in peak periods in winter and summer. Conservation programs also create jobs in the clean energy sector.

Ontario has helped to create a culture of conservation since 2003 by:

- Updating Ontario's building code to make energy efficiency a core purpose.
- Delivering the Home Energy Savings Program which has helped over 393,000 homeowners with energy audits and helped nearly 250,000 homeowners with energy savings and retrofits. Despite the federal government's early withdrawal from funding this conservation program in March 2010, Ontario will continue to support the Home Energy Savings Program until March 31, 2011. This program helped save annual greenhouse gas emissions equivalent to taking over 83,000 cars off the road.
- Initiating the OPA's Great Refrigerator Round Up which has removed more than 230,000 old appliances since 2007. It will result in lifetime savings of more than one million megawatt hours over the life of the program.
- Providing $550 million over two years for energy retrofits in schools.
- Launching the Ontario Solar Thermal Heating Initiative for solar water and air heating projects for institutional, commercial or industrial organizations. The program continues until March 31, 2011. Almost 600 projects have been launched or completed to date.
- Moving forward with Smart Meters and Time of Use billing to encourage consumers to shift electricity consumption away from peak periods of demand; Avoided system expenditures help keep costs down for Ontarians.
- Reducing electricity consumption in government buildings through initiatives such as deep lake water cooling — a reliable, efficient and sustainable way to cool buildings while reducing demand on the grid.

Over the past five years, Ontario's conservation programs have generated over 1,700 MW of peak demand savings — the equivalent of over 500,000 homes being taken off the grid. Local Distribution Companies have been partners in helping Ontario achieve its conservation targets.

Conservation efforts are measured by looking at the results of conservation programs. The impacts of the global economic recession are not counted as part of conservation efforts, although they did result in a significant reduction in electricity demand. The recession also affected the level of participation in conservation programs which, although successful, are not expected to allow Ontario to meets its 2010 interim target. Confirmation of this will occur late in 2011, after program results undergo rigorous verification by independent third-parties. Had the global recession not had a significant impact on Ontario's economy, 2010 conservation achievements would have been significantly higher.

The Plan

Working together to reduce electricity use at peak times makes sound economic and environmental sense. Providing consumers with the benefit of up-to-date and accurate electricity consumption readings is also critical to the creation of a culture of conservation. The government is committed to moving forward with implementation of a Time-of-Use pricing structure that balances benefits for both the consumer and the electricity system as a whole.

To help families, Ontario will move the off-peak period for electricity users to 7 p.m. which will provide customers with an additional two hours in the lowest cost period. This change will be in effect for the May 2011 Regulated Price Plan update.

Time-of-Use

"On average, most farmers will pay slightly less on time-of-use billing than they currently pay. Advantages for farmers will be modest with a savings in the range of one to five per cent. However, the advantages for the power supply system will be substantial..."

- Don McCabe, Ontario Federation of Agriculture

Ontario is already a North American leader in conservation (the province conserved over 1,700 MW since 2005). The government's target is 7,100 MW and 28 TWh by 2030. This would mean the equivalent of taking 2.4 million homes off the grid. This level of conservation will reduce Ontario's greenhouse gas emissions by up to 11 megatonnes annually by 2030. These targets are among the most aggressive in North America.

As part of the Green Energy and Green Economy Act, 2009, Local Distribution Companies (LDCs) will become a more recognizable "face of conservation" and have been assigned conservation targets which they must meet as a condition of their licence. LDCs will meet their targets through a combination of province-wide and local conservation programs.

Ontario proposes to provide support for homeowners to have energy audits to become better informed of the opportunities to improve the energy efficiency of their homes.

Conservation targets

Date	2015	2020	2025	2030
Capacity	4,550 MW	5,840 MW	6,700 MW	7,100 MW
Generation	13 TWh	21 TWh	25 TWh	28 TWh

These targets will be met through a combination of programs and initiatives:

- Innovative energy efficiency programs for residential, commercial and industrial sectors
- Next-generation building code updates and standards for appliances and products
- Demand response programs to help reduce peak demand
- Time-Of-Use rates

The government anticipates that the commercial sector will contribute 50 per cent of the conservation target; residential sector will contribute 30 per cent; and industrial sector 20 per cent.

Over the next 20 years, Ontario's conservation targets and initiatives are projected to save about $27 billion in ratepayer costs on the basis of a $12 billion investment. Conservation will also do more than that by helping to ensure that Ontario's air is cleaner and the electricity sector reduces its impact on the environment.

Ontario will continue to provide broad support for achieving these targets through policy initiatives such as bringing forward a proposed regulation to require the broader public sector (municipalities, universities, schools and hospitals) to develop energy conservation plans.

In early 2011, together with LDCs, Ontario will launch a number of new programs, which will allow the province to meet its conservation targets over the next few years and make up for the slower period between 2009 and 2010. The programs will target all sectors, be better coordinated and have greater customer focus than previous programs.

Ontario is designing, implementing and funding a province-wide electricity conservation and demand management program for low-income residential consumers . Ontario is also developing a low-income energy program comprised of natural gas conservation, customer service standards and emergency financial assistance.

These new conservation programs, together with programs for very large industrial customers, will require an investment of about $3 billion over the next five years. The results will be significant: an avoided lifetime supply cost of $10 billion and a net benefit to Ontario ratepayers of about $7 billion over the life of the conservation measures.

4 reliable transmission/ modern distribution

Reliable transmission and modern delivery is the backbone of Ontario's electricity system. It is crucial for supporting Ontario's evolving supply mix, including the closing of coal-fired plants by 2014 and the further expansion of Ontario's clean energy resources. Reliable, safe transmission brings electricity from large generators to Ontario's largest industries and local distribution companies who in turn, deliver to homes and businesses. A modern distribution system, utilizing new technology, allows for greater customer control, incorporates renewable energy, enhances reliability, and supports new technology like electric vehicles.

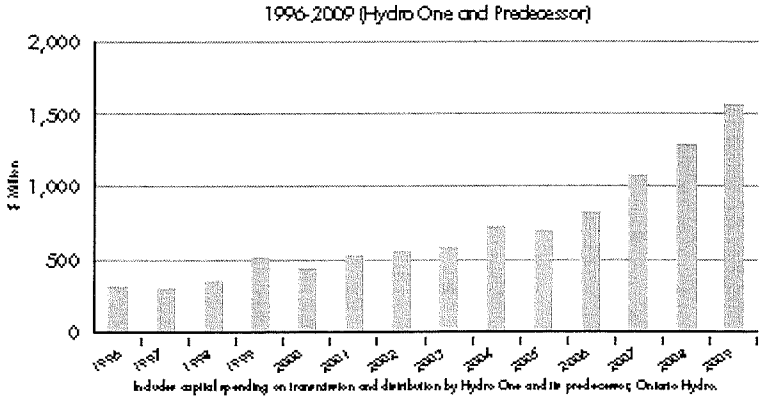
Transmission

Ontario must take the transmission system that's been built over the past century and continue to renew and update it to meet Ontario's growing population, evolving supply mix, and enable more distributed generation.

The Ontario government has taken early and decisive steps to enhance existing electricity infrastructure. It is important to ensure that Ontario can efficiently upgrade the grid to carry additional renewable generation to homes, businesses and industries.

Since 2003, Hydro One has invested more than $7 billion in its transmission and distribution systems. The average annual investment has been double what it was from 1996-2003.

FIGURE 10: GRID INVESTMENTS



Some of Ontario's recent investments include:

- The launch of the Bruce to Milton transmission expansion project — the largest electricity transmission investment in Ontario in the last 20 years, which will connect refurbished nuclear units and additional renewable energy to the grid.
- Ongoing work to reinforce the power transfer capability between northern and southern Ontario including additional 750 MW of planned clean northern generation (Lower Mattagami and some northern FIT Program projects).
- The new Ontario-Québec Interconnection Project (2010), which increased access to 1,250 MW of hydroelectric power and enhanced system reliability in eastern Ontario.
- Additional transmission projects that will facilitate the retirement of coal-fired generation, including transmission reinforcement in the Sarnia area, the installation of new transformers in the northern GTA, and voltage support facilities in the Niagara, London and Kitchener areas. These projects represent an investment of over $400 million.
- Over 15 per cent of transformer stations across Ontario have received overhauls in the past five years, amounting to a total investment of $850 million.
- Installation of almost 4.3 million smart meters across the province, which are already helping with outage management and remote meter reading and reducing the number of estimates for consumers.
- Early investments in Smart Grid infrastructure and technologies, including pilots and demonstration projects. These projects will help Ontario move toward a Smart Grid system that can integrate energy monitors, home automation systems, in-home renewable generation and electric cars.
- Hydro One's $125-million Grid Control Centre opened in 2004 and uses some of the most sophisticated technology in the world to efficiently manage the bulk of Ontario's electricity network.

Reliability has also been improved since 2003 due to a combination of new generation, transmission upgrades, reduced load growth and successful conservation programs. For example, Toronto's reliability was enhanced with the installation of two new underground cables between downtown transfer stations and will be further assisted by reinforcement and upgrade projects worth about $360 million. Annual capital investments by Ontario's Local Distribution Companies, including Hydro One, have averaged $1.1 billion between 2004 and 2009, maintaining reliable and high quality power for Ontario's electricity customers. These investments have made the operation of the system more cost-effective, which will have an impact on Ontarians' bills over the long term.

Modern Distribution

Local distribution systems are an important link in how electricity moves from generators to homes and businesses. In 2003, Ontario's distribution systems often relied on older technology. The government's move towards a Smart Grid was driven by the need to replace aging infrastructure, introduce customer control, incorporate more renewable energy and accommodate new adaptive technology such as electric vehicle charging. Over time, LDCs will have to replace old mechanical infrastructure with newer automated infrastructure that meets Ontario's future needs.

A modern distribution system must be able to accommodate new energy supply from a variety of sources and deliver it reliably to consumers. It must take advantage of Smart Grid technologies to enable efficient and cost-effective delivery of electricity, helping customers to better manage their electricity use, and integrate more renewable energy.

Building a Smart Grid that can coordinate the production of power from large numbers of small power producers and allow utilities to more efficiently manage their grid infrastructure is another essential element of Ontario's clean energy future. Other jurisdictions (Australia, Great Britain and California) are moving toward a smarter grid, but Ontario is leading the way in many areas. By leveraging existing communications technology, a Smart Grid will enable the two-way power flow of electricity across the grid. The Smart Grid will help incorporate distributed generation. It will also improve grid automation with real-time information that will help save energy, reduce the cost of supply over time and increase reliability.

A Smart Grid is a more intelligent grid infrastructure, incorporating communications technology and automation to:

- Maximize existing infrastructure
  - Rather than building out more traditional grid infrastructure (poles, wires, etc), a Smart Grid will use Information Technology solutions to improve and automate distribution.
- Modernize the grid
  - The current distribution system in some places is decades old. A modernized grid is critical for improving reliability, home automation and adapting to evolving transportation needs.
- Lay the foundation for Smart Homes
  - A Smart Grid will put in place the intelligent infrastructure required to support applications for home automation, conservation and smart charging for electric vehicles.

The Green Energy and Green Economy Act, 2009 identified three main areas of focus for Ontario's Smart Grid:

- Helping consumers become active participants in conservation.
- Connecting new and renewable sources of energy to the overall system (consumers and businesses produce energy that can be connected to the local system) to help address power demands.

- Creating a flexible, adaptive grid that can accommodate the use of emerging, innovative energy-saving technologies and control systems.

Smart meters provide a foundation for the Smart Grid and provide customers with timely and accurate information about their electricity use. Smart meters also provide utilities with automatic notification of outages, save on in-person meter-reading costs and enable Time-of-Use pricing.

Smart meters also help avoid system costs that in turn save money for ratepayers: Hydro Ottawa saved $200,000 in meter reading in 2008 and Toronto Hydro estimates that smart meters will cut meter-reading costs by $2.5 million by 2010.

Future Needs

The Ontario government, working with its agencies, will move forward responsibly on a number of new and modernizing transmission projects as well as on improving and maintaining the province's existing infrastructure across all regions in Ontario. These improvements will also balance environmental concerns and the cost to ratepayers. In addition to evaluating the province's need for transmission to integrate renewables, meet provincial demand growth and ensure reliable service, system planning will address community needs. For example, a transmission solution to maintain reliable supply in the southwest GTA will be required.

The Plan

In 2009, the government asked Hydro One to start planning and developing a series of new transmission and distribution projects. Since that time, there have been a number of developments, such as the substantial interest in the Green Energy and Green Economy Act, 2009 to develop renewable energy projects.

Based on the advice of the OPA, the government will prudently move forward with cost-effective priority transmission projects that meet current and future demand and also:

- Accommodate renewable projects;
- Serve new load; and
- Support reliability.

Ontario will proceed first with an investment of approximately $2 billion in five priority projects to be completed in the next seven years, which will ensure a growing mix of renewable sources can be reliably transmitted across the province. These priority projects together with the Bruce to Milton line, in addition to various other station and circuit upgrades, will enable approximately 4,000 MW of additional renewable energy.

FIGURE 11: TRANSMISSION INVESTMENTS: COMPLETE, UNDERWAY AND PROPOSED

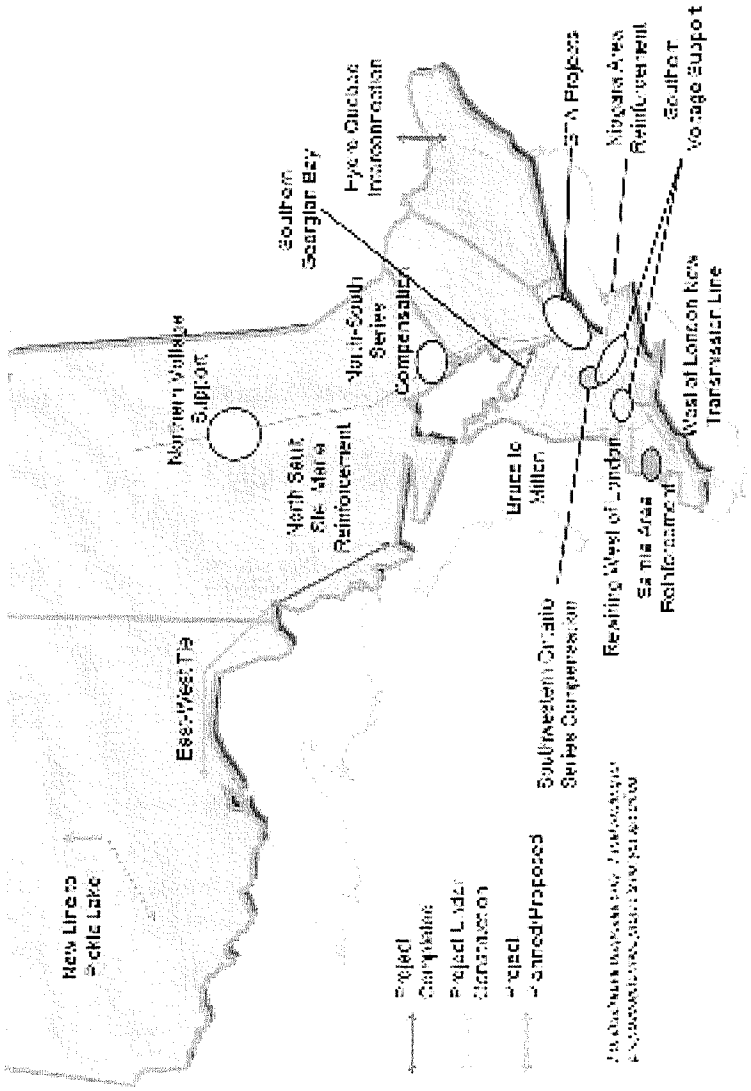


FIGURE 12: PRIORITY TRANSMISSION PROJECTS

Project	Type	Need	Target Completion Date
Series compensation in Southwestern Ontario	Upgrade	Add renewables to grid	2014
Rewiring west of London	Upgrade	Add renewables to grid	2014
West of London	New Line	Add renewables to grid	2017
East-West Tie	New Line	Maintain system reliability, allow more renewables, accommodate electricity requirements of new mineral processing projects.	2016-17
Line to Pickle Lake	New line	Serve industry needs and help future remote community connection	Pending consultation

Given the nature of the transmission upgrades in southwestern Ontario, including series compensation, rewiring and a new line west of London, the government intends to direct Hydro One to carry out these projects immediately.

The East-West tie will be submitted to the OEB to carry out a designation process to select the most qualified and cost-effective transmission company to develop the line.

To ensure successful and timely implementation of the line to Pickle Lake, the government will work with its agencies and the multiple parties involved, including the Federal government, local industries, and First Nation communities that stand to benefit from the project to establish an implementation schedule and a proponent for the line.

Transmission planning will also continue at the regional level, using an approach that considers conservation, demand management, distributed generation and transmission. Regional plans will assess needs based on a region's unique resource mixes and community priorities. Load growth and system reliability are also factors in determining system planning and transmission solutions. Ontario will continue to plan and study additional transmission projects as demand and changes to supply require.

To build a modern system, the government will issue a set of Smart Grid principles and objectives to the Ontario Energy Board. These will provide guidance to LDCs in modernizing their distribution systems and enable the smart home of the future. LDCs will develop smart grid plans and ensure that these are coordinated across the Province. The government will also establish a Smart Grid Fund in 2011 which will provide assistance to Smart Grid companies with a strong Ontario presence. This will lead to new economic development opportunities and bolster Ontario's position as a leader in the Smart Grid.

5 aboriginal communities

Accomplishments

The Ontario government is committed to encouraging opportunities for Aboriginal participation in the energy sector and has launched several initiatives to support participation by First Nation and Métis communities in energy projects, including:

- The Aboriginal Energy Partnerships Program
- The FIT Program: 17 aboriginal-led or partnered projects have secured contract offers
- The $250-million Aboriginal Loan Guarantee Program

Ontario also has a significant partnership at the $2.6 billion Lower Mattagami hydroelectric project, which will see Moose Cree First Nation have up to a 25 per cent equity position with OPG.

Future Needs

First Nation and Métis communities have diverse energy needs and interests. Ontario will work to ensure there is a wide range of options for Aboriginal participation in Ontario's energy future.

Conservation

Conservation priorities and the applicability of programs will vary between First Nation and Métis communities. Community education and youth engagement are also critical for conservation success. Ontario will launch programs to support participation in conservation initiatives, including Aboriginal Community Energy Plans and targeted conservation programs.

Renewable Energy

Future opportunities for First Nation and Métis communities include:

- Partnerships with private developers on confirmed FIT projects under development,
- Development of smaller renewable microFIT projects, like small wind or solar, to build community capacity in energy and generate income.

Existing Green Energy and Green Economy Act, 2009 support programs will be adjusted to ensure that aboriginal communities can take advantage of these opportunities. Aboriginal participation levels will also be reviewed during the regular FIT program review to determine whether adjustments are needed to the rules and incentives.

Transmission

Where new transmission lines are proposed, Ontario is committed to meeting its duty to consult First Nation and Métis communities in respect of their aboriginal and treaty rights and accommodate where those rights have the potential to be adversely impacted. Ontario also recognizes that Aboriginal communities have an interest in economic benefits from future transmission projects crossing through their traditional territories and that the nature of this interest may vary between communities.

There are a number of ways in which First Nation and Métis communities could participate in transmission projects. Where a new transmission line crosses the traditional territories of aboriginal communities, Ontario will expect opportunities be explored to:

- Provide job training and skills upgrading to encourage employment on the transmission project development and construction.
- Further Aboriginal employment on the project.
- Enable Aboriginal participation in the procurement of supplies and contractor services.

Ontario will encourage transmission companies to enter into partnerships with aboriginal communities, where commercially feasible and where those communities have expressed interest. The government will also work with the OPA to adjust the Aboriginal Energy Partnerships Program — currently focussed on renewable energy projects — to provide capacity funding for aboriginal communities that are discussing partnerships on future transmission projects.

The Plan

Ontario recognizes that successful participation by First Nation and Métis communities will be important to advance many key energy projects identified under a Long-Term Energy Plan. The path forward needs to be informed by regular dialogue with First Nation and Métis leadership through distinct processes. Working with First Nation and Métis leadership, Ontario will look for opportunities to promote on-going discussion of these issues.

Ontario's remote First Nation communities currently rely on diesel generation for their electricity supply — but diesel fuel is expensive, difficult to transport, and poses environmental and health risks. According to analysis done so far, transmission connection would be less expensive over the long term than continued diesel use for many remote communities.

New transmission supply to Pickle Lake is a crucial first step to enable the connection of remote communities in northwestern Ontario. A new transmission line to Pickle Lake — one of this plan's five priority projects — will help to service the new mining load and help to enable future connections north of Pickle Lake. Subject to cost contributions from benefiting parties, Ontario will focus on supplying Pickle Lake from the Ignace/ Dryden area immediately. A line to serve the Nipigon area specifically will continue to be considered as the need for it evolves.

As part of this project, the government will also ask the OPA to develop a plan for remote community connections beyond Pickle Lake, including consideration of the relevant cost contributions from benefiting parties, including the federal government. This plan may also consider the possibility of onsite generation such as small wind and water to reduce communities' diesel use.

6 energy in Ontario's economy — capital investments

Energy has a significant impact on Ontario's economy. Ontario businesses rely on electricity to produce goods and services and it is essential to our quality of life.

- Ontario's electricity sector is a $15 billion annual industry.
- Energy accounts for eight per cent of Canada's GDP.
- Some 95,000 Ontarians are currently directly and indirectly employed in the energy sector.
- More than $10 billion has been invested in Ontario in new clean energy projects that are online or under construction.
- Ontario has attracted more than $16 billion in private sector investments in the energy sector in the past year.

Ontario's progress in modernizing and upgrading electricity has not only benefited electricity users, it has strengthened the economy by attracting investment and creating jobs. Large infrastructure projects typically have high GDP and employment impacts, and this is also true of the ongoing and planned investments in Ontario's electricity sector.

Hydroelectric investment

Waterpower has been helping to fuel Ontario's economic growth for more than 100 years and is the backbone of renewable supply.

Ontario hydroelectric producers spend $250 million annually in operating and maintenance costs and in the past decade alone have made additional capital investments of $400 million to bring new waterpower online. Today, Ontario's hydroelectric producers directly employ more than 1,600 people and support an additional 2,000 jobs.

Hydroelectric has an even greater impact in Ontario's north, where it accounts for more than 80 per cent of the electricity generated. Twenty-four of 65 generating stations run by OPG are located in Ontario's north, representing close to 2,000 MW.

Many older hydroelectric facilities date to Ontario's early industrial mining and forestry activities and some of these sites are being rebuilt at higher capacity. Recent substantial investments are playing an important economic role in the north. The Lower Mattagami River Hydroelectric Project, Ontario's largest hydroelectric project in 40 years, will bring a $2.6-billion investment into northeastern Ontario and create up to 800 construction jobs.

In southwestern Ontario, work is underway on the Niagara Tunnel project, the single biggest construction project for the Niagara region since the Beck 2 Generating Station was built 55 years ago. The project means that region will benefit from over 230 construction jobs.

Wind, Solar and Bio-Energy investment

Ontario is creating a new sector for investment and is becoming a global destination of choice for clean energy developers and suppliers. Ontario's Green Energy and Green Economy Act, 2009 has laid the foundation for economic opportunities throughout the province. In the coming years, over 20,000 people will be employed in renewable energy and development activities including manufacturing triggered by North America's most comprehensive FIT program.

Ontario has already attracted more than $16 billion of private sector investment and over 20 companies have announced plans to set up or expand operations in Ontario. This activity will create or support indirect jobs in areas such as finance, consulting and other manufacturing, service, and development industries.

Many communities that were hard-hit during the recent economic downturn are reaping benefits of Ontario's growing clean energy economy. According to the Windsor Essex Economic Development Commission, of the 6,000 new jobs created in Windsor in the past 10 months, five to 10 per cent are tied to renewable energy.

The Green Energy and Green Economy Act, 2009 has already attracted the single-largest investment in renewable energy in provincial history. The Consortium, led by Samsung C&T Corporation, is investing $7 billion to create 2,500 MW of new wind and solar power in Ontario. The investment will lead to more than 16,000 new clean energy jobs to build, install and operate the renewable generation projects and associated manufacturing. The consortium is also working with major partners to secure four manufacturing plants in the province. This will lead to the creation of 1,440 manufacturing and related jobs to build wind and solar technology for use in Ontario and export across North America.

Plans for the first of the four plants have already been announced. Samsung and Siemens have said they intend to build Ontario's first wind turbine blade manufacturing plant, creating up to 900 direct and indirect jobs. The supply-chain of Ontario's new clean energy economy is providing benefits to other sectors of the economy. For example, the Consortium intends to use Ontario steel in its projects, subject to necessary quality standards.

The clean energy sector is also providing new opportunities to people in rural Ontario. Farmers are leasing portions of their land for wind turbines, allowing them to generate income while continuing to farm. For example, in Port Alma, local farmers and landowners are leasing their land to the 44-turbine Kruger Energy wind power project, which produces enough clean electricity to power 30,000 households.

Province-wide, farmers and agri-food businesses received a total of $11.2 million to develop and build generating systems that produce clean energy, reduce electricity costs and contribute to local economies through OMAFRA's Biogas Systems Financial Assistance Program, which ran from September 2008 to March 2010.

"Building a clean energy economy is not an issue that splits left from right. It's about past and future. People of all political stripes who are entrusted in building a modern economy can – and do – look ahead."

- Rick Smith, founding partner of Blue Green Canada

Modernization of nuclear fleet

The nuclear sector has contributed a great deal to Ontario's economy over the past forty years. According to the Canadian Nuclear Association, the sector supports over 70,000 jobs across Canada and injects some $6 billion into the national economy every year. The Organization of CANDU Industries estimates that its 165 members employ over 30,000 people, many of them here in Ontario. Its members supply goods and services for nuclear reactors in domestic and export markets.

Plans to upgrade and refurbish Ontario's nuclear plants are expected to create and support thousands of jobs and inject billions of dollars into this sector over the next decade. A report by the Canadian Manufactures and Exporters estimates that the refurbishment and operation of the Bruce and Darlington units will create or sustain 25,000 jobs and provide $5 billion in annual economic activity.

The design and construction of two new nuclear units at Darlington will employ up to 3,500 people and support many thousands more indirect jobs. Ongoing operation at the plant will require a further 1,400 tradespeople, nuclear operators, and engineering and technical support staff for the duration of the plant's life.

Transmission upgrades

Thousands of Ontarians are employed in the province's electricity transmission sector and billions of dollars in planned upgrades to and expansion of the system are expected to support and create thousands more jobs in the future.

Fully owned by the Province of Ontario, Hydro One is the province's largest electricity transmission and distribution company. It owns 97 per cent of the transmission facilities in the province and employs approximately 5,400 workers, many of them highly skilled technicians, in communities throughout Ontario.

This Plan includes a commitment to develop five priority transmission projects. Employment on the five priority projects alone will peak at over 5,000 in 2013. This new transmission capacity will enable further generation development, including many new private-sector renewable projects.

The rollout of new transmission projects will also allow communities, including Aboriginal communities, to develop more small-scale renewable generation and, in certain cases, reduce their dependence on polluting forms of electricity generation.

Coal plant conversion

Converting Ontario's existing coal-fired generating stations to new fuels will create new constructions jobs and support clean energy jobs in operations and maintenance.

For example, the Atikokan biomass conversion project will create up to 200 construction jobs and help protect jobs at the plant. It will also support an estimated 20 to 25 jobs in Ontario related to the production of wood pellets and sustain other jobs in the forestry sector. The project will provide engineering and construction jobs during the conversion as well as ongoing employment in the forestry and transportation sectors to keep the station supplied with fuel. Natural gas conversion at Thunder Bay will provide additional jobs in pipeline construction and ongoing operations.

Conservation

Conservation programs contribute to local and regional jobs, creating employment and new business opportunities in a number of areas, including technology and product development, manufacturing, distribution, marketing, sales, installation and maintenance. For example, Ontario's $3-billion investment in conservation programs over the next five years is expected to create or sustain about 5,000 jobs annually.

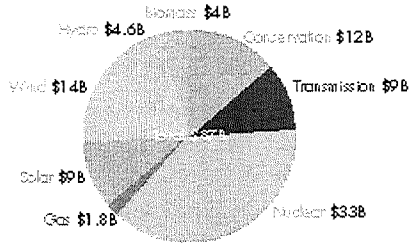
Capital investments

Ontario's electricity sector is a $15-billion annual industry. Investments in the electricity system are helping to clean Ontario's air, improve the reliability of the energy supply and create jobs and economic opportunities in communities across the province. Since 2003, over $10 billion has been invested to bring new supply on line, and over $7 billion has been spent to strengthen the transmission system. Ontario has also attracted more than $16 billion in private sector investment through the FIT program.

Investments over the past seven years to build new cleaner generation and modernize electricity infrastructure has increased significantly to make up for years of underinvestment. Needed capital investments in Ontario's energy system over the next 20 years will be significant, and are in line with the government's efforts to upgrade and replace aging infrastructure. For example, the ReNew Ontario Infrastructure plan invested $30 billion over four years in capital projects across the province.

This Plan outlines essential capital expenditures to continue building a clean and modern electricity system and to keep the lights on for Ontario families and businesses. The total capital cost in 2010 dollars is estimated to be $87 billion over the life of the Plan. This accounts for new and refurbished energy supply, transmission and distribution infrastructure and conservation investments. This Plan provides more investments over the 2007 Plan due to increased investments in renewables, updated capital cost assumptions, and more certainty on the costs of nuclear refurbishments and new build. These cost estimates will be further refined by the OPA in the coming months and then submitted to the OEB.

FIGURE 13: ESTIMATED CAPITAL COST OF LONG-TERM ENERGY PLAN: 2010 TO 2030 ($ BILLIONS)



The capital investments outlined are through both the private and public sector, and the majority will be paid for by electricity consumers spread over many years, depending on the cost recovery mechanism. (For example, electricity generators typically recover their investment over 20 years, whereas transmission investments may take up to 40 years to be fully repaid). This ensures that the annual costs to consumers, as reflected on electricity bills are spread over a longer period of time.

Conservation expenditures in this Plan include direct program costs and additional capital expenditures driven by higher appliance energy efficiency standards and higher building code efficiency standards.

Overall, renewables account for one third of total expenditures, nuclear just over one third, and natural gas, conservation and transmission the remainder. The breakdown is reflective of the Plan's objective to deliver a balanced and diverse supply mix that is cost effective, clean and helps create clean energy jobs.

7 electricity prices

Over the past 20 years, the price of water, fuel oil and cable TV have outpaced the price of electricity. Over the next 20 years, Ontario can expect stable prices that also reflect the true cost of electricity. The government will need to take a balanced and prudent approach to investment and pricing that ensures that Ontario's children and grandchildren have a clean, reliable system.

Ontarians now pay the true cost of electricity to ensure that essential investments are made in clean energy and modern transmission. About 40 per cent of Ontario's electricity generation is subject to price regulation, contributing significantly to predictable prices for Ontario consumers. Regulated Price Plan (RPP) rates (adjusted every six months) ensure pricing reflects the true cost of generating electricity. This helps to provide stable and predictable electricity prices for consumers.

Accomplishments

In 2003, the electricity system was in significant decline but Ontario families and businesses have invested in the creation of cleaner sources and the restoration of reliability. The cost of energy has increased in order to provide cleaner, more reliable energy for generations to come.

The government has also taken several steps to keep the cost of electricity down for Ontario families and businesses. Actions taken to prudently manage expenditures total over $1 billion, including:

- Freezing the compensation structures of all non-bargained public sector employees for two years – which include the five energy agencies.
- Limiting travel costs and other expenses for public sector workers.
- Requesting that Hydro One and Ontario Power Generation revise down their 2010 rate applications to find savings and efficiencies.
- The IESO has reduced costs by $23 million over the past seven years.
- For 2011, the OPA has reduced its overall operating budget by 4.1 per cent.
- Hydro One will reduce operations costs by $170 million in 2010 and 2011. Information technology upgrades will save $235 million over the next four years.
- OPG is reducing operations costs by more than $600M over the next four years.

Ontario has taken steps to lower the hydro debt left by the previous government. In 1999, the restructuring of Ontario Hydro and the attempt to sell-off Hydro left electricity consumers with a debt of $20.9 billion. Since 2003, Ontario has decreased that stranded debt by $5.7 billion. Payments toward the debt are made through Payments in Lieu of Taxes, dedicated income from government energy enterprises, and by ratepayers through the Debt Retirement Charge.

The government has also launched a number of initiatives to help Ontario families and businesses manage electricity bill increases. Some of these include:

- The Northern Ontario Energy Credit, a new, permanent annual credit to help families and individuals in the North who face high energy costs. The yearly credit of up to $130 for a single person and up to $200 for a family would be available to over half of all northern Ontario households.
- Ontario Energy and Property Tax Credit, starting with the 2010 tax year, to low-income Ontarians who own or rent a home would receive up to $900 in tax relief, with seniors able to claim up to $1,025 in tax relief to help with both their energy costs and property tax. Overall, the proposed Ontario Energy and Property Tax Credit would provide a total of about $1.3 billion annually to 2.8 million Ontarians.

Energy Consumer Protection Act, 2010:

On January 1, 2011, new rules will take effect under the Energy Consumer Protection Act, 2010 that will help protect electricity and natural gas consumers by putting an end to unfair practices by energy retailers. The rules will ensure that consumers receive accurate price disclosure from all energy retailers before they sign contracts, helping to protect Ontario families and seniors.

Ontario is helping low-income Ontarians with their energy costs through a province-wide strategy to help consumers better manage their energy consumption and costs, including:

- Establishing a new emergency energy financial assistance fund.
- Implementing enhanced customer service rules that will assist all customers, particularly low-income Ontarians.

Ontario is also developing a comprehensive electricity conservation program for low-income households in coordination with the natural gas utilities. Through the conservation measures, customers will be better able to manage their energy bills.

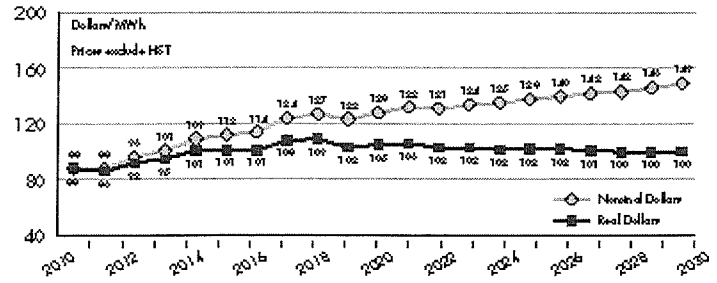
The Plan

Industrial Users

Due to investments to make the electricity system cleaner and more reliable for industry, the government projects that the industrial rate will increase by about 2.7 per cent annually over the next 20 years. The Ontario government has introduced initiatives to enhance the efficiency and competitiveness of large industrial consumers as well as protect jobs and local economies. These include:

- The Industrial Conservation Initiative will help the province's largest industrial and manufacturers to conserve energy, save on costs and increase their competitiveness. By changing the Global Adjustment Mechanism, large industrial users can shift their usage off peak times and save on electricity costs.
- The OPA's Industrial Accelerator Program has been launched to assist transmission-connected industrial electricity users to fast-track capital investment in major energy-efficiency projects.
- The Northern Industrial Energy Rate Program provides electricity price rebates for qualifying northern industrial consumers who commit to an energy efficiency and sustainability plan. On average, the program reduces prices by about 25 per cent for large facilities.

FIGURE 14: INDUSTRIAL PRICE PROJECTIONS (2010-2030)



Helping Ontario Small Businesses and Families

In order to ensure that Ontario has a clean, modern system that increases renewables, ensures reliability and creates jobs, continued investments in the electricity system are essential.

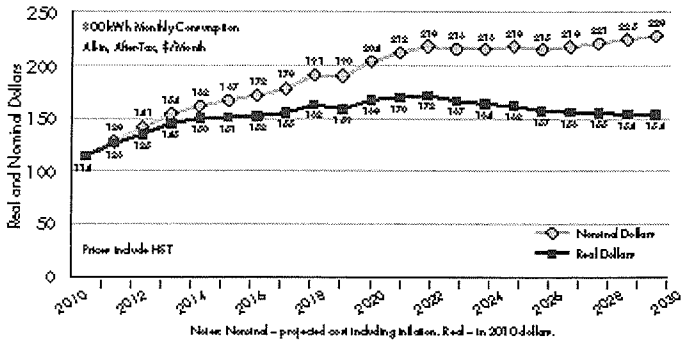
Based on the significant investments in clean, modern energy outlined in this plan, the government projects, based on current forecasts, that electricity prices will increase. Over the next 20 years, prices for Ontario families and small businesses will be relatively predictable. The consumer rate will increase by about 3.5 per cent annually over the length of the long-term plan.

Over the next five years, however, residential electricity prices are expected to rise by about 7.9 per cent annually (or 46 per cent over five years). This increase will help pay for critical improvements to the electricity capacity in nuclear and gas, transmission and distribution (accounting for about 44 per cent of the price increase) and investment in new, clean renewable energy generation (56 per cent of the increase).

Continued investments in transmission, conservation and supply are needed for a system that provides more efficient and reliable electricity to consumers whenever they need it and does not pollute Ontario's air or negatively affect the health of citizens and future generations.

After five years, Ontario will have largely completed the transition to a cleaner more reliable system due to the replacement of coal-fired generation and new renewable generation under the GEA. Once these investments have been made, price increases are expected to level off. The investments that the entire province is making in the future of electricity will help to ensure that Ontario never finds itself in the dire straits it was in just seven years ago.

FIGURE 15: RESIDENTIAL PRICE PROJECTIONS (2010-2030)



However, in the next five years, the government recognizes that the increases will have an impact on Ontario families and businesses.

The government's 2010 Ontario Economic Outlook and Fiscal Review took action to help Ontarians who are feeling the pinch of rising costs and electricity prices. The Ontario government proposed direct relief through a new Ontario Clean Energy Benefit (OCEB).

For eligible consumers, the proposed OCEB would provide a benefit equal to 10 per cent of the total cost of electricity on their bills including tax, effective January 1, 2011. Due to the length of time required to amend bills, the price adjustments would appear on electricity bills no later than May 2011, and would be retroactive to January 1, 2011.

Every little bit of assistance helps during lean times. The proposed OCEB together with the Northern Ontario Energy Credit and the Ontario Energy and Property Tax Credit will all help mitigate electricity costs for families.

Eligible consumers would include residential, farm, small business and other small users. The proposed OCEB would help over four million residential consumers and over 400,000 small businesses, farms and other consumers with the transition to an even more reliable and cleaner system.

Benefits for Eligible Consumers

Typical Monthly Consumption	Current Estimated Monthly Bill	Estimated Bill After Ontario Clean Energy Benefit	Monthly Benefit* (10%)	Yearly Benefit (10%)
Typical Residential 800kWh	$128	$115.20	$12.80	$153.60
Small Business 10,000kWh	$1,430	$1,287	$143	$1,716
Farm 12,000kWh	$1,710	$1,539	$171	$2,052
*Typical 2011 monthly benefit for a consumer. Benefit amount will vary based on actual price, consumption and location				

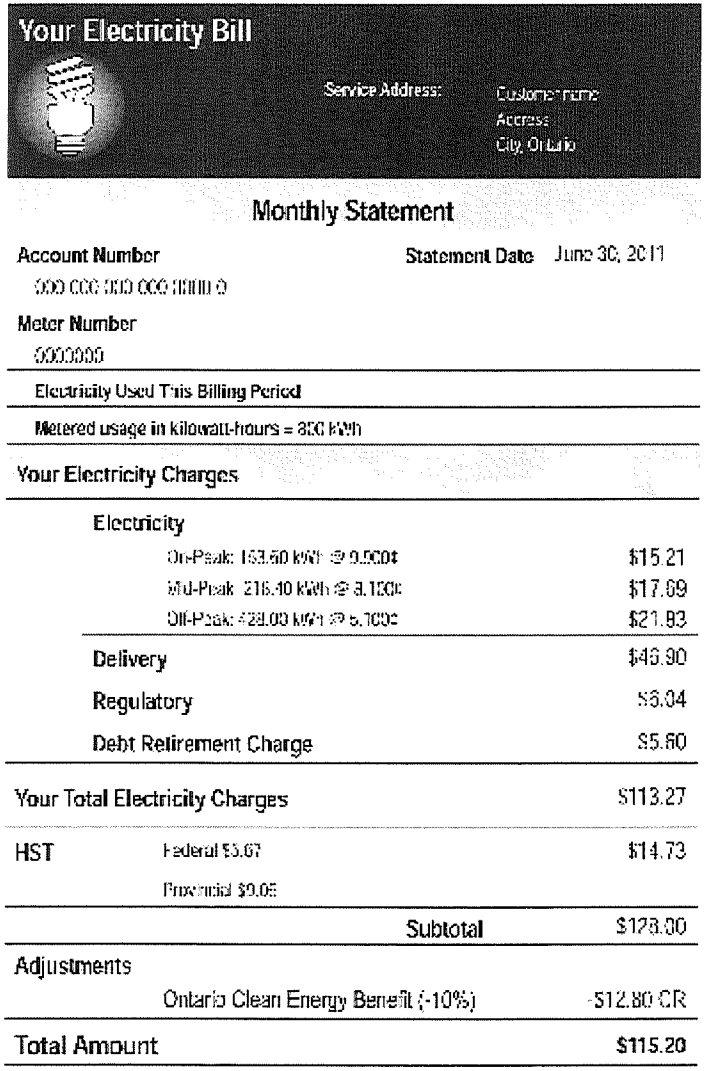
Providing the 10 per cent OCEB to Ontarians is a responsible way of helping Ontario families and businesses through the transition to a cleaner electricity system. The OCEB would help residential and small business consumers over the next five years as the grid is modernized. The government has introduced legislation to implement the proposed OCEB.

Working together to reduce electricity use at peak times makes sound economic and environmental sense. Providing consumers with the benefit of up-to-date and accurate electricity consumption readings is also critical to the creation of a culture of conservation. The government is committed to moving forward with implementation of a Time-of-Use pricing structure that balances benefits for both the consumer and the electricity system as a whole.

To help families, Ontario will move the off-peak period for electricity users to 7 p.m. which will provide customers with an additional two hours in the lowest cost period. This change will be in effect for the May 2011 Regulated Price Plan update.

This plan has outlined a new clean, modern and reliable electricity system for the people of Ontario. Instead of a system that was polluting, unreliable and in decline with unstable pricing, Ontarians will have a North American-leading clean energy system that keeps the lights on for generations to come, creates jobs for Ontario families and ensures that the air they breathe is cleaner.

FIGURE 16: SAMPLE BILL



Your Electricity Bill

Service Address: Customer name
Address
City, Ontario

Monthly Statement

Account Number	**Statement Date** June 30, 2011
000 000 000 000 (0000 0)	
Meter Number	
0000000	

Electricity Used This Billing Period

Metered usage in kilowatt-hours = 800 kWh

Your Electricity Charges

Electricity		
	On-Peak: 153.60 kWh @ 9.000¢	$15.21
	Mid-Peak: 216.10 kWh @ 8.100¢	$17.69
	Off-Peak: 429.00 kWh @ 5.100¢	$21.93
Delivery		$46.90
Regulatory		$6.04
Debt Retirement Charge		$5.60
Your Total Electricity Charges		$113.27
HST	Federal $5.67	$14.73
	Provincial $9.06	
	Subtotal	$128.00
Adjustments		
	Ontario Clean Energy Benefit (-10%)	-$12.80 CR
Total Amount		**$115.20**

Sample bill for illustrative purposes only. Other adjustments may apply.

Appendix One: who does what

Ontario Power Generation: Generates 60 per cent of Ontario's electricity.

Hydro One: Operates 97 per cent of Ontario's transmission network.

Independent Electricity System Operator: Ensures reliability, forecasts short-term demand and supply, monitors supply, and manages the Ontario wholesale market.

Ontario Power Authority: Responsible for system planning (generation, transmission, demand and conservation), contracts for new generation and conservation, and manages contracts for about 40 per cent of Ontario's generation.

Ontario Energy Board: Independent, quasi-judicial regulator of Ontario's energy sector

Licensed Transmission System Operators: Transmit electricity (There are five; Hydro One Networks is the largest).

Local Distribution Companies: More than 80, mostly owned by municipalities, deliver electricity and serve customers in a given area.

Electricity Retailers: Seventy-seven private-sector companies that sell contracts to businesses and consumers

Privately-owned generators: Facilities that produce energy (Bruce Power, wind and solar energy companies)

Appendix Two:
consultations and next steps

Ontario's Long-Term Energy Plan was informed by public and stakeholder consultations as well as advice from the OPA. In addition to issuing this plan, the government is posting a proposed supply mix Directive on the Environmental Registry for a 45 day public comment period. Following this posting, the directive will be finalized and sent to the OPA. The OPA will consult publicly during the development the Integrated Power System Plan (IPSP) and submit the plan to the OEB. The OEB will conduct a review of the IPSP including public hearings. The final IPSP will constitute the detailed long-term energy plan for the next 20 years. It will be updated every three years as required by regulation.

Public and Stakeholder and Online Consultations

September 21st – November 18, 2010

More than 40 stakeholder sessions and over 2,500 online response

↓

Ontario's Long-Term Energy Plan

November 23, 2010

↓

45-Day Posting on Environmental Registry of Proposed Supply Mix Directive

www.ebr.gov.on.ca

November 23, 2010-January 7, 2011

↓

OPA prepares detailed IPSP, holds consultations and submits it to the OEB

Mid-2011

↓

OEB Review

2011-2012

Appendix Three:
installed capacity (MW)

Installed Capacity	2005	2010 (Projected)	2030 (Projected)
Nuclear	10,061	11,446	12,000
Renewables – Hydroelectric	7,880	8,127	9,000
Renewables – Wind, Solar, Bioenergy	155	1,657	10,700
Gas	4,364	9,424	9,200
Coal	7,546	4,484	0
Conservation	0	1,837	7,100
Total	30,006	36,975	48,000

glossary – of energy terms

Baseload Power: Generation sources designed to operate more or less continuously through the day and night and across the seasons of the year. Nuclear and generally large hydro generating stations are examples of generators that operate as baseload generation.

Biomass: Energy resources derived from organic matter, including wood, agricultural waste and other living cell material that can be burned to produce heat energy or electricity.

Demand Response (DR): Programs designed to reduce the amount of electricity drawn by customers from the grid, in response to changes in the price of electricity during the day, incentive payments and/or other mechanisms. In Ontario, both the OPA and the IESO run demand response programs.

Dispatchable Generation: Sources of electricity such as natural gas that can be dispatched at the request of power grid operators; that is, output can be increased or decreased as demand or availability of other supply sources changes.

Distribution: A distribution system carries electricity from the transmission system and delivers it to consumers. Typically, the network would include medium-voltage power lines, substations and pole-mounted transformers, low-voltage distribution wiring and electricity meters

Feed-in Tariff (FIT): A guaranteed rate program that provides stable prices through long-term contracts for energy generated using renewable resources

Greenhouse Gas (GHG): Gases that contribute to the capture of heat in the Earth's atmosphere. Carbon dioxide is the most prominent GHG, in addition to natural sources it is released into the Earth's atmosphere as a result of the burning of fossil fuels such as coal, oil or natural gas. Widely acknowledged as contributing to climate change.

Intermittent Power Generation: Sources of electricity that produce power only during certain times such as wind and solar generators whose output depends on wind speed and solar intensity.

Kilowatt (kW): A standard quantity of power in a residential-size electricity system, equal to 1,000 watts (W). Ten 100-watt light bulbs operated together consume one kW of power.

Kilowatt-hour (kWh): A standard unit of electrical energy in a residential-size system. One kWh (1,000 watt-hours) is the amount of electrical energy produced or consumed by a one-kilowatt unit during one hour. Ten 100-watt light bulbs, operated together for one hour, consume one kWh of energy.

Load or Demand Management: Measures undertaken to control the level of energy usage at a given time, by increasing or decreasing consumption or shifting consumption to some other time period.

Local Distribution Company (LDC): An entity that owns a distribution system for the local delivery of energy (gas or electricity) to consumers.

Megawatt (MW): A unit of power equal to 1,000 kilowatts (kW) or one million watts (W).

Megawatt-hour (MWh): A measure of the energy produced by a generating station over time: a one MW generator, operating for 24 hours, generates 24 MWh of energy (as does a 24 MW generator, operating for one hour).

MicroFIT: Ontario residents are able to develop a very small or "micro" renewable electricity generation project (10 kilowatts or less in size) on their properties. Under the microFIT Program, they are paid a guaranteed price for all the electricity they produce for at least 20 years.

Peaking Capacity: Generating capacity typically used only to meet the peak demand (highest demand) for electricity during the day; typically provided by hydro, coal or natural gas generators.

Peak Demand: Peak demand, peak load or on-peak are terms describing a period in which electricity is expected to be provided for a sustained period at a significantly higher than average supply level.

Photovoltaic: A technology for converting solar energy into electrical energy (typically by way of photovoltaic cells or panels comprising a number of cells).

Regulated Price Plan (RPP): Rates (adjusted every six months) to ensure electricity pricing reflect the true cost of generating electricity. They provide stable and predictable electricity prices for consumers.

Smart Grid: A Smart Grid delivers electricity from suppliers to consumers using digital technology with two-way communications to control appliances at consumers' homes to save energy, reduce costs and increase reliability and transparency.

Supply Mix: The different types of fuel that are used to produce electricity in a particular jurisdiction. Normally the mix is expressed in terms of the proportion of each type within the overall amount of energy produced.

Terawatt-hour (TWh): A unit of power equal to a billion kilowatt-hours. Ontario's annual electricity consumption is around 140 TWh.

Transmission: The movement or transfer of electricity over an interconnected group of lines and associated equipment between points of supply and points at which it is transformed for delivery to consumers, or is delivered to other, separate electric transmission systems. Transmission of electricity is done at high voltages (50kV or higher in Ontario); the energy is transformed to lower voltages for distribution over local distribution systems.

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Ontario

This is **EXHIBIT "H"** of the Affidavit of **CHIEF JOE MISKOKOMON** sworn before me this 14th day of July , 2012

A Commissioner etc.

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Ontario

APR 0 5 2012

MC-2012-1071

Mr. Colin Andersen
Chief Executive Officer
Ontario Power Authority
1600–120 Adelaide Street West
Toronto ON M5H 1T1

Dear Mr. Andersen:

RE: Feed-in Tariff Program Review

The government is committed to implementing the recommendations outlined in *Ontario's Feed-In Tariff Program, Two-Year Review Report.* I acknowledge the work of the Ontario Power Authority during the two-year review. To ensure the long-term sustainability of renewable energy while creating more jobs, lowering prices and giving communities a greater say, the government is committed to the timely implementation of all the recommendations, which include:

- Reducing prices – for solar projects by more than 20 per cent and wind projects by approximately 15 per cent.
- Encouraging greater community and Aboriginal participation through a new priority point system, which will also prioritize projects with municipal support.
- Reserving a minimum of 10 per cent of remaining capacity for projects with significant participation from local or Aboriginal communities.

The province's Long-Term Energy Plan (LTEP) and the February 17, 2011 "Supply Mix Directive" established Ontario's target for clean, renewable energy from wind, solar and bioenergy at 10,700 MW (excluding hydroelectric) and 9,000 MW of hydroelectric by 2018. Ontario is on track to procure 10,700 MW of non-hydro renewable energy generation by 2015. Ontario will continue to grow the clean energy economy through the continuation of the FIT and microFIT programs.

Direction

Pursuant to the authority I have, as Minister of Energy, under sections 25.32 and 25.35 of the *Electricity Act, 1998,* I hereby direct the Ontario Power Authority (OPA) to continue the Feed-in Tariff (FIT) and microFIT programs developed pursuant to the direction issued September 24, 2009 subject to such amendments as may be required in order to implement the policies set out below:

.../cont'd

Continuing the Commitment to Clean Energy

As a first step, the OPA shall begin by awarding 50 MW of microFIT and 200 MW of small FIT projects as soon as possible.

At the end of 2013, the government will review Ontario's electricity supply and demand forecast to explore whether a higher renewable target is warranted.

Encouraging Greater Community and Aboriginal Participation

The OPA shall amend the FIT Program Rules to encourage publicly-funded school, hospital, publicly-owned long-term care home, public university, public college, Aboriginal and community participation by prioritizing applications through a points system in accordance with the document set out in Appendix A.

In offering contracts for small and large FIT projects, the OPA shall allocate of the available capacity:

i. a minimum of 100 MW for projects with greater than or equal to 50 per cent community and Aboriginal equity participation; and
ii. a minimum of 50 MW for hydroelectric projects.

During the term of the FIT Contract, with respect to any facility that is not a rooftop solar photovoltaic project that has been awarded points under the prioritization process based on applicant type, a change shall be prohibited if such change would mean that an economic interest in the project (including a local participation level as set out in Appendix A) would drop below the level that resulted in the project receiving the applicant type points that it did in the prioritization process. The FIT Contract shall provide that, if such a prohibited change takes place from the contract effective date and during the term of the contract, it shall constitute a ground for termination of the contract. For additional clarity, the change restrictions contemplated by this paragraph shall not apply to rooftop solar photovoltaic projects.

With respect to rooftop solar photovoltaic projects, a change to any such project that has been awarded points under the prioritization process based on applicant type prior to the fifth anniversary of the commercial operation date shall be prohibited by the FIT Contract if such change would mean that an economic interest in the project (including a local participation level as set out in Appendix A) would drop below the level that resulted in the project receiving the applicant type points that it did in the prioritization process. The FIT Contract shall provide that, if such a prohibited change takes place from the contract effective date and up to five years after commercial operation, it shall constitute a ground for termination of the contract.

Support Programs

The Ministry of Energy remains committed to providing support for community participation through the Community Energy Partnerships Program (CEPP). The CEPP program administrator and the Ministry of Energy will make recommendations regarding the program rules and eligibility criteria of the CEPP to the OPA. I direct the OPA pursuant to subsection 25.32(4.6) of the *Electricity Act, 1998* to redesign the CEPP program rules and eligibility criteria taking into account those recommendations. The CEPP shall be re-launched by July 1, 2012.

.../cont'd

In order to encourage continued Aboriginal participation in the electricity sector, I direct the OPA, pursuant to subsection 25.32(4.5) of the *Electricity Act, 1998,* to amend the Aboriginal Energy Partnerships Program (AEPP) to align with the goal of prioritizing Aboriginal participation in the FIT Program. The OPA shall expand eligibility for the AEPP to include projects developed pursuant to the Green Energy Investment Agreement. The OPA shall amend the Aboriginal Renewable Energy Fund to focus on supporting projects in the design, development and regulatory approvals phases. The OPA shall establish a minimum eligibility threshold for projects with Aboriginal equity participation of at least 15 per cent where the project is smaller than 100 MW and of at least 10 per cent where the project is equal to or larger than 100 MW.

Protecting Agricultural Lands

The OPA shall not enter into FIT contracts for ground-mounted solar photovoltaic generation facilities greater than ten (10) kW, or amend an existing FIT contract for a facility greater than ten (10) kW to relocate the facility location, where those facilities are proposed to be located on or relocated to a site that contains:

- Land with any Class 1, 2 and 3 soils or a mix of those soils as they appear on the Canada Land Inventory Agricultural Capability Maps published by the Ontario Ministry of Agriculture, Food and Rural Areas and Agriculture and Agri-Food Canada
- Land comprised of organic order soils as it appears on the Canada Land Inventory Agricultural Capability Maps published by the Ontario Ministry of Agriculture, Food and Rural Areas and Agriculture and Agri-Food Canada
- Specialty Crop Areas within the meaning of the Provincial Policy Statement as amended from time to time

Strengthening Land Use Rules

The OPA shall not enter into FIT or microFIT contracts for ground-mounted solar photovoltaic generation facilities or for wind generation facilities up to and including 3 kW where those facilities are located on property that:

- Is zoned to permit residential use; or
- Borders a property zoned to permit residential use.

This restriction does not apply to property that is zoned for agricultural use where residential use is permitted as ancillary to the agricultural use.

The OPA shall not enter into FIT or microFIT contracts for ground-mounted solar photovoltaic generation facilities where those facilities are proposed to be located on property that:

- Is zoned for commercial or industrial use but where no such use is occurring; or
- Is zoned for commercial or industrial use and where the solar ground-mount photovoltaic generation facility is or will be the main or primary purpose for which the property is used.

.../cont'd

Improving Municipal Engagement

The OPA shall allocate $100,000 annually of CEPP funding for guidance and outreach purposes related to the municipal role in renewable energy development with the Association of Municipalities of Ontario (AMO). This allocation shall be reviewed in 2013.

The OPA shall not launch the Municipal Renewable Energy Program given new and existing initiatives that support municipal input and participation.

Reducing Prices to Reflect Lower Costs

The OPA shall amend the FIT Program Rules to establish pricing for a project at the time the project is offered a contract.

The OPA shall use the price schedules and adders published in the FIT Review Report and included in this direction as Appendix B with the new FIT and microFIT Program Rules. In October of each year, in consultation with the Ministry of Energy, the OPA shall consult about the price schedules. Following consultation, the OPA shall update the price schedules and shall publish the updated schedules in November of each year to be effective January 1st of the following year. During the annual price review in 2012, the OPA shall review price escalation for inflation in new FIT contracts to determine if adjustments are required.

The requirement that the OPA conduct the annual price review described above shall amend and replace the requirement in the direction of the Minister of Energy dated September 24, 2009 for a review of the FIT Program and its Support Programs and report to the Minister at least every two years.

For new large FIT projects, the OPA shall amend the FIT contract to provide for greater generator accountability in circumstances where generation must be dispatched off.

Transitioning to new FIT and microFIT Rules

The OPA shall develop and implement a transition process to provide an opportunity for suppliers with existing FIT contracts to withdraw from the FIT Program and have their security returned.

In relation to:

1. microFIT applications submitted on or after September 1, 2011 and prior to the date of this direction; and

2. FIT applications submitted prior to the date of this direction and in relation to which a contract offer had not been made (both 1 and 2 the "Pre-Existing Applications");

the OPA shall develop and implement a transition process to provide an opportunity for a Pre-Existing Application to be revised in accordance with the process and eligibility requirements in the new FIT and microFIT Rules (as applicable) as amended pursuant to this direction.

.../cont'd

The OPA shall provide such transition opportunity during the first available application window applicable to the type project applied for in the Pre-Existing Application to be revised (i.e. microFIT, small FIT and large FIT). Subject to limits in the FIT Rules and microFIT Rules on (i) when a revised application must be submitted, and (ii) the type of revisions to a Pre-Existing Application, a revised Pre-Existing Application shall be entitled to retain its original timestamp. The OPA shall discontinue Pre-Existing Applications that are not revised during the first applicable application window or that are withdrawn by the applicant. The OPA shall return the application fee and application security that had been paid in relation to the Pre-Existing Application.

Defining microFIT Participation

The OPA shall not award an individual or farmer (as those terms are defined in the OPA's microFIT Eligible Participant Schedule) more than one microFIT contract. The OPA shall amend the microFIT Eligible Participant Schedule to include farming co-operatives whose members are limited to farmers and require a farming co-operative to locate a microFIT project on the property of a member of the co-operative. The OPA shall not launch the Commercial FIT (CFIT) Program.

Connecting Constrained microFIT Projects

In implementing the August 19, 2011 "Constrained microFIT Projects" direction, the OPA shall:

1. Only allow those Constrained Applicants (as defined in the August 19, 2011 direction) to exercise an option identified in that direction if the Constrained Applicant identifies in writing its interest in one of the options to the OPA no later than May 31, 2012, following the posting of this direction on the OPA's website;

2. Only consider a microFIT project applicant that submitted a complete application prior to December 8, 2010 to be a Constrained Applicant if the applicant made an application for connection to the applicable Local Distribution Company by August 19, 2011 and was denied connection;

3. For the purposes of paragraph 2 of the August 19, 2011 direction, the other conditions and requirements that may be included in a power purchase agreement include the requirement for the Constrained Applicant to take such actions as the OPA considers appropriate to remediate Constrained Projects (including of other Constrained Applicants) where the Constrained Applicant had purchased its generation equipment;

4. Where a power purchase agreement includes remediation requirements, the OPA shall provide the price in the Conditional Offer for the Constrained Project only if the Constrained Applicant carries out the remediation requirements.

5. For the purposes of paragraph 2 of the August 19, 2011 direction, "New Property" shall be limited to the same agricultural land protections and land use restrictions contemplated by this direction; and

.../cont'd

6. For the purpose of paragraph 1 and 3 of the August 19, 2011 direction limit the relocation of Constrained Projects to another location in Ontario subject to the land use restrictions contemplated by this direction.

Clarifying Transmission and Distribution

To promote efficient use of land and resources for connection infrastructure, I direct the OPA pursuant to subsections 25.35 and 25.32(4.4) of the *Electricity Act, 1998* to work with the Ministry of Energy, consult with stakeholders and revise the FIT Rules to provide a limit with respect to the distance between a project site and its connection point on the existing transmission or distribution grid.

The OPA shall make the FIT Program transmission availability tables publicly available and shall update the tables on a regular basis.

The OPA shall subject small FIT projects to system availability testing similar to the method used for larger projects.

The OPA shall revise the FIT Rules to permit FIT Contract offers to be made to projects where upgrades are not required to the transmission system or where only minor upgrades are necessary.

Given the transmission projects planned through the Long Term Energy Plan and changes to the FIT Program, the OPA shall not run the Economic Connection Test.

Reducing Delay

The OPA shall change the FIT Contract to provide for a milestone date for commercial operation for FIT rooftop solar photovoltaic projects of eighteen (18) months.

General

This direction supplements previous directions related to the FIT Program, the microFIT Program and FIT Support Programs and replaces provisions of these previous directions only to the extent that a particular provision of this direction is inconsistent with a provision of a previous direction. For greater certainty, nothing in this direction changes the effect of the August 19, 2011 "Constrained microFIT Projects" direction other than the "Constrained microFIT Projects" provisions.

It is my expectation that the OPA will establish appropriate policies and procedures with respect to the administration of the programs, including ensuring that program participants are subject to audit.

This direction takes effect on the date issued.

Sincerely,

Chris Bentley
Minister

APPENDIX A

PRIORITIZATION TABLE

Applicant Type	**Points**
A project in which a local community has a minimum 15% equity interest held by a co-op with, in the case of large FIT projects, 50 or more property owners who live in the municipality where the project is located. In the case of small FIT projects, a project in which a local community has a minimum 15% equity interest held by a co-op with 35 or more property owners who live in the municipality where the project is located.	3
A project in which an Aboriginal community has a minimum 15% equity interest	3
A project in which publicly-funded schools, public colleges, public universities, hospitals and publicly-owned long-term care homes have a minimum 15% equity interest or that are a project host	2
Other Applicants	0
Additional Points	
Local Municipal Council Support Resolution	2
Aboriginal Community Support Resolution	2
Project Readiness • Applicants for wind, solar ground-mount, bioenergy and waterpower projects on Aboriginal Reserve, Federal land or private land have sufficient space for the project and a firm lease, firm option to lease/purchase, or ownership of the land • Solar rooftop applicants either own the host building or if they do not own the host building have proof of firm site control in the form of a firm lease or option to lease	2
System Benefit (water and bioenergy)	1

Priority between projects that have an equal number of points shall be determined based on each project's timestamp.

The OPA shall not offer a project a FIT contract if the project does not have any prioritization points.

A publicly-owned long term care home is a municipal home, joint home or First Nations home as provided for under the *Long Term Care Homes Act, 2007*, S.O. 2007, c.8.

APPENDIX B

FIT PRICE SCHEDULE

Fuel	Project Size Tranche	Price (¢/kwh)	Escalation Percentage**
Solar Rooftop	≤10 kW	54.9	0%
	> 10 ≤ 100 kW	54.8	0%
	> 100 ≤ 500 kW	53.9	0%
	>500 kW	48.7	0%
Solar Groundmount	≤ 10 kW	44.5	0%
	> 10 kW ≤ 500kW	38.8	0%
	> 500 kW ≤ 5 MW	35.0	0%
	> 5 MW	34.7	0%
Wind	All Sizes	11.5	20%
Water	≤ 10 MW	13.1	20%
	> 10 MW ≤ 50 MW	12.2	20%
Biomass	≤ 10 MW	13.8	50%
	> 10 MW	13.0	50%
Biogas On Farm	≤ 100 kW	19.5	50%
	100 kW ≤ 250 kW	18.5	50%
Biogas	≤ 500 kW	16.0	50%
	> 500 kW ≤ 10MW	14.7	50%
	> 10 MW	10.4	50%
Landfill Gas	≤ 10MW	11.1	50%
	> 10 MW	10.3	50%

**Escalation Percentage based on the Consumer Price Index will be applied to eligible Renewable Fuels as calculated in FIT Contract. The Base Date is January 1 of the year in which the Project achieves commercial operation, unless the Project achieves commercial operation in October, November or December, in which case the Base Date is January 1 of the following year.

FIT PRICE ADDERS

	Aboriginal Projects		Community Projects	
Participation Level (Equity)	>50%	>15% ≤50%	>50%	>15% ≤50%
Price Adder (¢/kWh)	1.5	0.75	1.0	0.5

Note: The above table applies to all FIT project sizes and all technologies except rooftop solar.