SOCIO-ECONOMIC AND LAND USE TECHNICAL SUPPORTING DOCUMENT FOR THE HOUND CHUTE PROJECT

Submitted To:

ONTARIO POWER GENERATION

Submitted By:

Montreal River EA Consulting Team

March 2007

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1.0 OBJECTIVE AND PROJECT DESCRIPTION

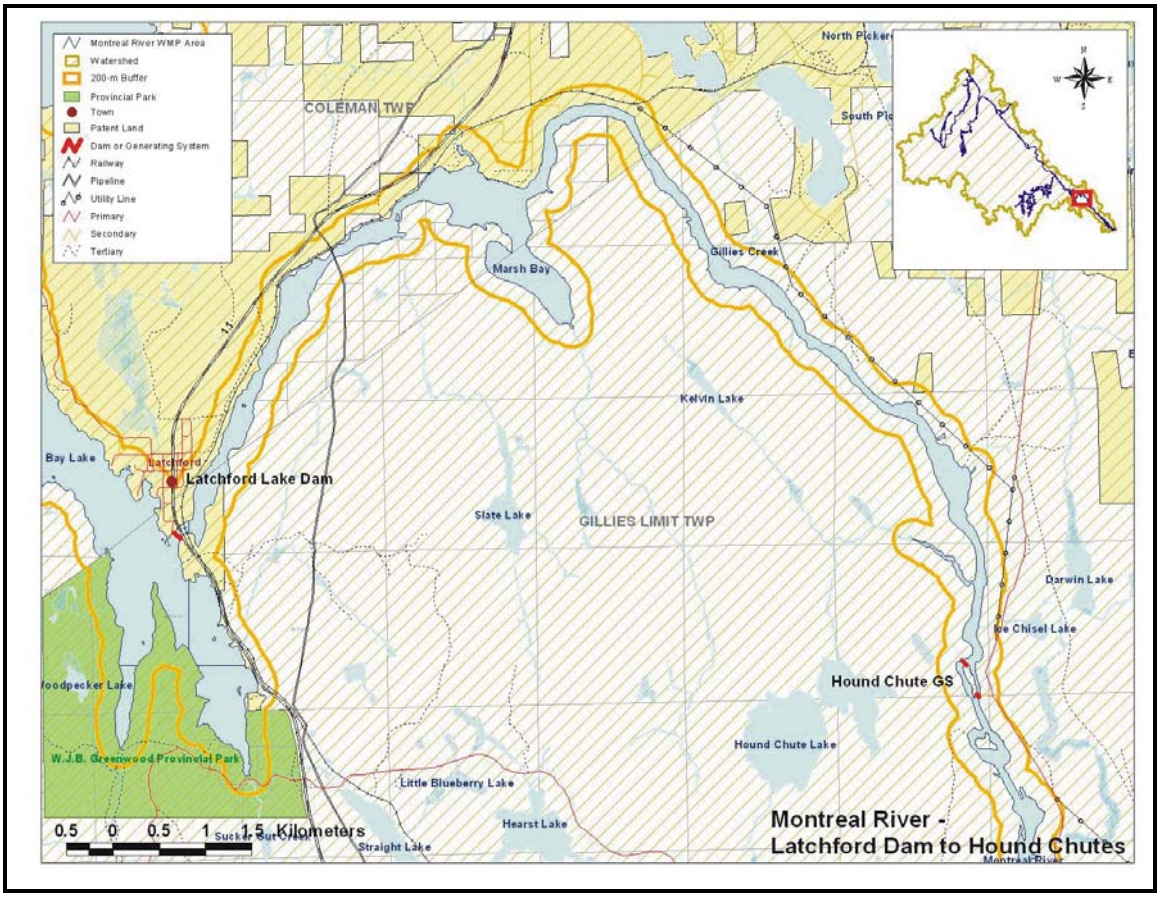
This is the technical support document for the Hound Chute Project assessing the affects of the proposed redevelopment of the Hound Chute Generating Station on the socio-economic environment.

The assessment is broken up into two sections, a description of the existing socio-economic and an assessment of the effects of the proposed undertaking.

1.1 PROJECT DESCRIPTION

Ontario Power Generation Inc. (OPG) is proposing to redevelop the Hound Chute Generating Station (GS), a run-of-the-river hydroelectric power plant located on the Montreal River in Northeastern Ontario (see Figure 1.1). The existing nameplate capacity of Hound Chute GS is 3.6 megawatts (MW). The proposed undertaking will replace the existing generating facility and when completed, will provide an expected nameplate capacity of 10 MW, an increase of approximately 6.0 MW. The proposed Hound Chute GS will be connected to the existing 44-kilovolt (kV) feeder as part of the local distribution system. In order to construct the new powerhouse the existing powerhouse and associated water conveying and electricity connection facilities will be decommissioned. In addition to building a new generating station all existing civil structures on the site shall be rehabilitated or upgrades including the replacement of the flashboards with an automatic bladder type weir.

Figure 1.1: Hound Chute Generating Station Location



The new facility will continue to operate under the existing operating regime that has been long established and more recently formalized in the Water Management Plan for the Montreal River (OPG *et al.*, 2006).

In 2000, the Ontario *Lakes and Rivers Improvement Act* (LRIA) was amended to establish the statutory authority of the Ministry of Natural Resources (MNR) to order the preparation of a Water Management Plan for operation of waterpower facilities and associated control structures and ensure compliance with the Plan. The intent of the Water Management Plan is to provide certainty and clarity as to how waterpower facilities and control structures are operated with respect to levels and flows so as to balance environmental, social and economic objectives.

The Water Management Plan for the Montreal River system is the result of partnership between OPG, the MNR, Public Works and Government Services Canada (PWGSC) which operate hydroelectric generating facilities as well as flood control and civil structures along the river, as well as First Nations and the general public, which participated in the form of various advisory committees (OPG *et al.*, 2006).

The Water Management Plan was prepared in accordance with the Water Management Planning Guidelines for Waterpower (MNR, 2002), as approved by the Minister of Natural Resources on 14 May 2002. The *LRIA* requires compliance by facility operators with the operating regimes established in the Water Management Plan.

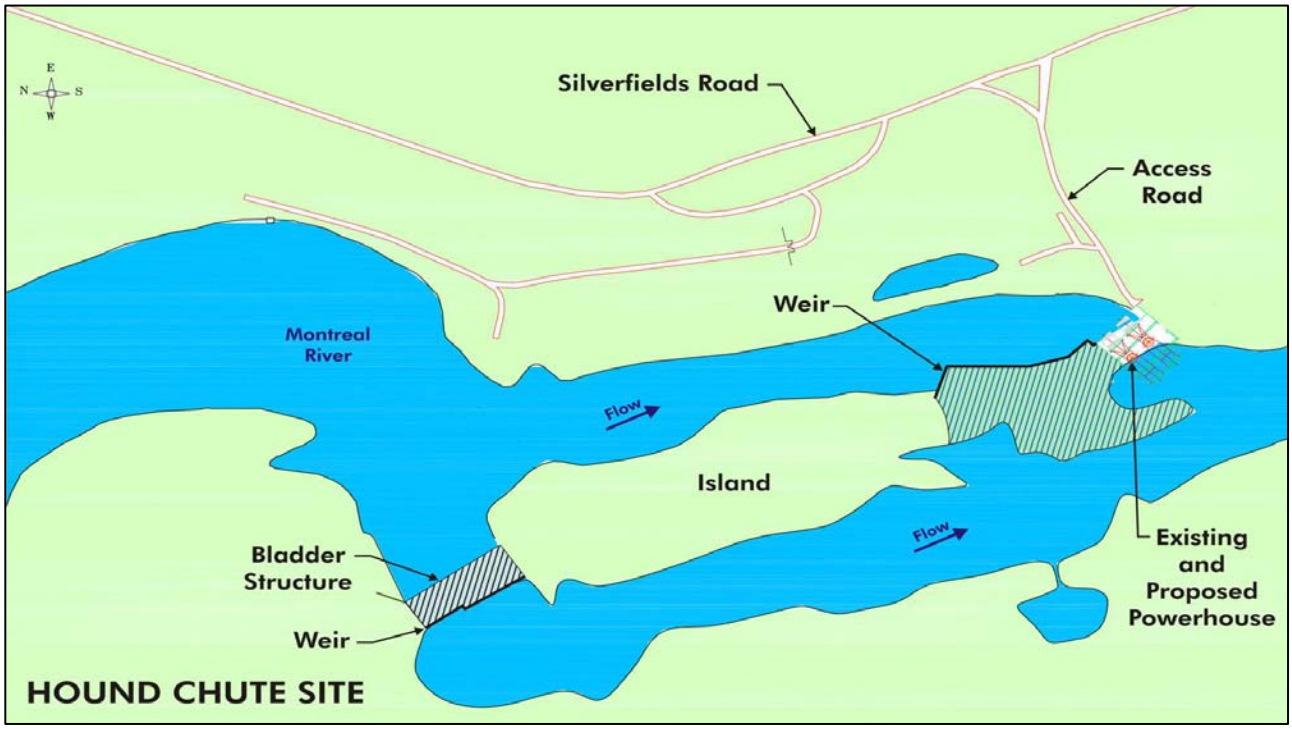
Current Facilities

The 3.6-MW Hound Chute GS is located on the Montreal River straddling the townships of Latchford and Coleman in the District of Timiskaming, approximately 10 kilometers southwest of the Town of Cobalt. This 4-unit plant, initially placed in service in the early 1900s, is accessed by Silverfields Road which is maintained by OPG but open to public use. Photograph 1.1 depicts Hound Chute GS.

Photograph 1.1: Hound Chute Generating Station

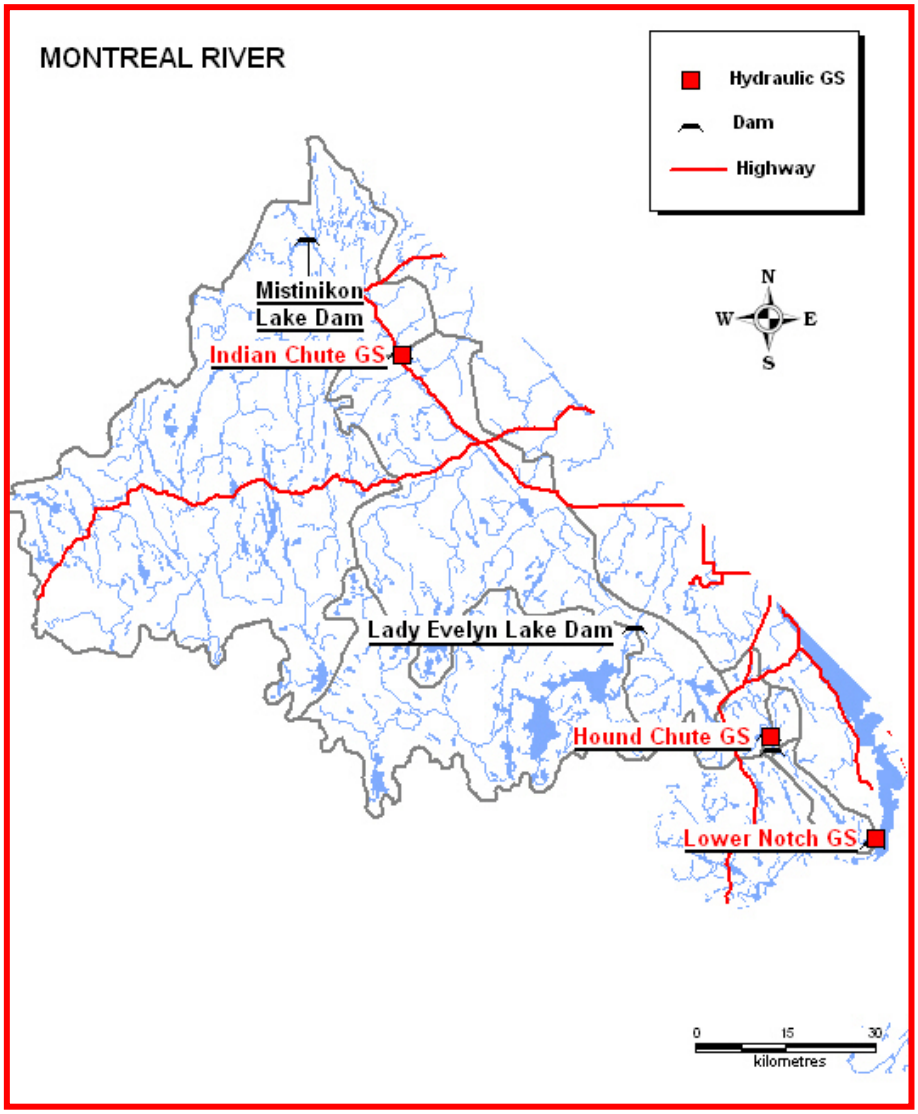
The Hound Chute GS has a cement-capped rockfill weir and a concrete spillway terminating in abutments at each end. Flash boards are removed each spring prior to the freshet to help mitigate flooding upstream. The dam diverts the river through a 427 meters canal excavated along the east bank of the river, directly to the headgates (see Figure 1.2). The bottom of the large forebay is 0.3 meters deeper than the intake. Two underflow sluices built at the south end of the powerhouse are large enough to take all of the water during very low water flow conditions. At the intake of each turbine chamber, there is a gate 3 meters high by 4.6 meters wide with a pass and gate lifting apparatus as well as two stoplog checks.

Figure 1.2: Current and Proposed Facilities, Hound Chute Generating Station



Upstream storage is provided by the Lady Evelyn Dam which replaced the Mattawapika Dam on the upstream Lady Evelyn River in 1972 (see Figure 1.3). This dam, operated by OPG, consists of four sluices with sluices 2 and 3 having double stoplog gains so underwater flow is possible. The dam has an operating range of 5.1 meters and a capacity of 3,620 m^3/s days. The Bay Lake Dam in Latchford is owned and controlled by PWGSC which operates it for the benefit of the power stations downstream except during the navigational season.

Figure 1.3: Montreal River Watershed and OPG Facilities



Proposed Facilities

The proposed Hound Chute GS is planned to be located on the same footprint as the existing powerhouse and will consist of two units with a total expected nameplate capacity of approximately 10 megawatts. The existing powerhouse will be demolished followed by the construction of the new facility.

Water would continue to be conveyed from the forebay along the existing canal into a direct intake in the new powerhouse.

A small amount of excavation and slope stabilization will be required for the new powerhouse foundation and underground tailrace canal. Geotechnical studies at the new powerhouse site

and the nearshore of the new tailrace outlet location have been undertaken and the rock is not acid generating (Martin, 2006).

Refurbishments to the wing wall will be required and can be done in the dry while the powerhouse is being constructed. A new electrical substation will be built. The proposed facility will be connected to the existing 44 kV feeder.

The dam with flashboards on the western channel will also require rehabilitation and modifications. Once this dam is refurbished the water in the river will be directed down the western channel while the cofferdam at the forebay neck is built and subsequently the powerhouse constructed.

Table 1.1 provides a summary of the existing and proposed plant operating characteristics. The gross head, i.e., the difference in elevation between the water surface at the intake and tailrace, will remain the same. However, the rated flow through the Hound Chute GS will increase from 57 to 105 m^3/s, decreasing the frequency of spill over the Obermeyer weir.

Table 1.1: Existing and Proposed Plant Operational Summary

	Hound Chute GS	
Parameter	**Existing**	**Proposed**
Number of Units	4	2
Capacity (MW)	3.6	9.5
Annual Energy Production (GWh)	26.2	50
Gross Head (m)	10.3	10.3
Rated Flow (m^3/s)	57	105
Capacity Factor (%)[1]	74.0	55.0

[1] Ratio of the actual energy produced to the maximum energy which could be delivered under continuous operation at maximum rating.

2.0 DESCRIPTION OF THE EXISTING SOCIO-ECONOMIC ENVIRONMENT

For the purposes of the assessment the socio-economic analysis has been broken down into a regional/local socio-economic environment and a specific socio-economic environment around each generating station.

2.1 REGIONAL/LOCAL SOCIO-ECONOMIC ENVIRONMENT

2.1.1 Study Area

The regional/local study environment has been defined as the District of Timiskaming. Most of the local and regional socio-economic affects of the project are to be experienced in Timiskaming as OPG's Northeast Plant Group Dymond facility.

Figure 2.1: Timiskaming District

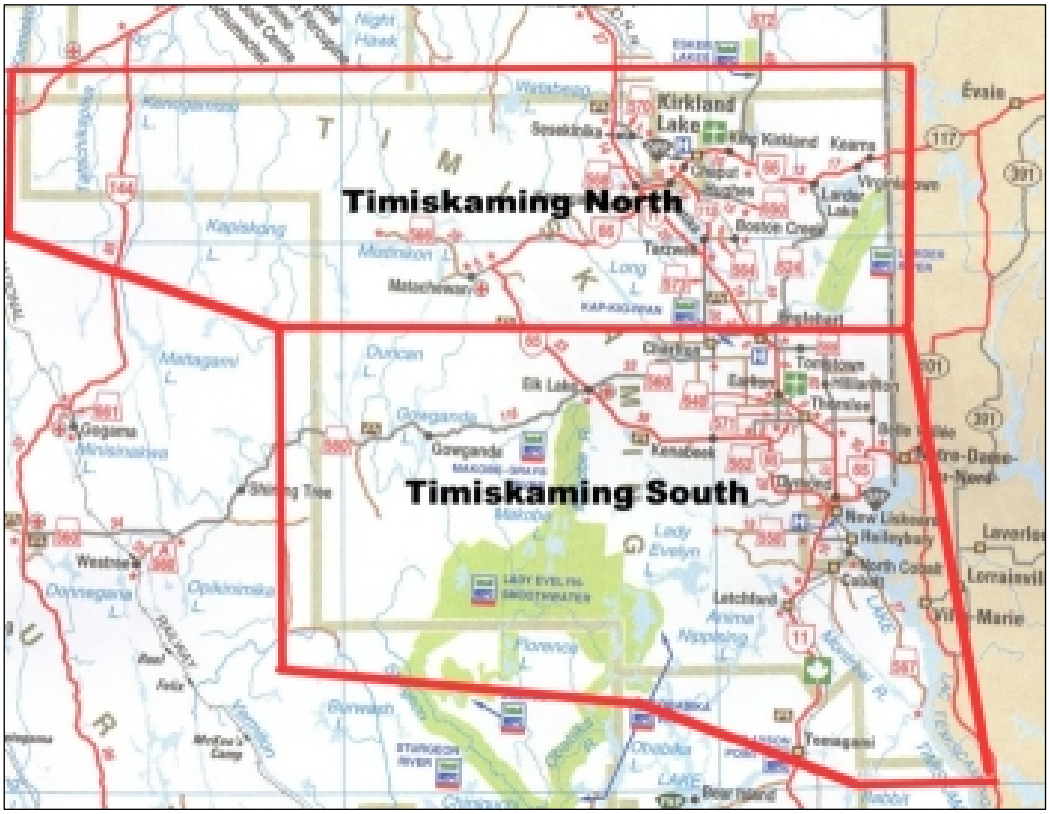
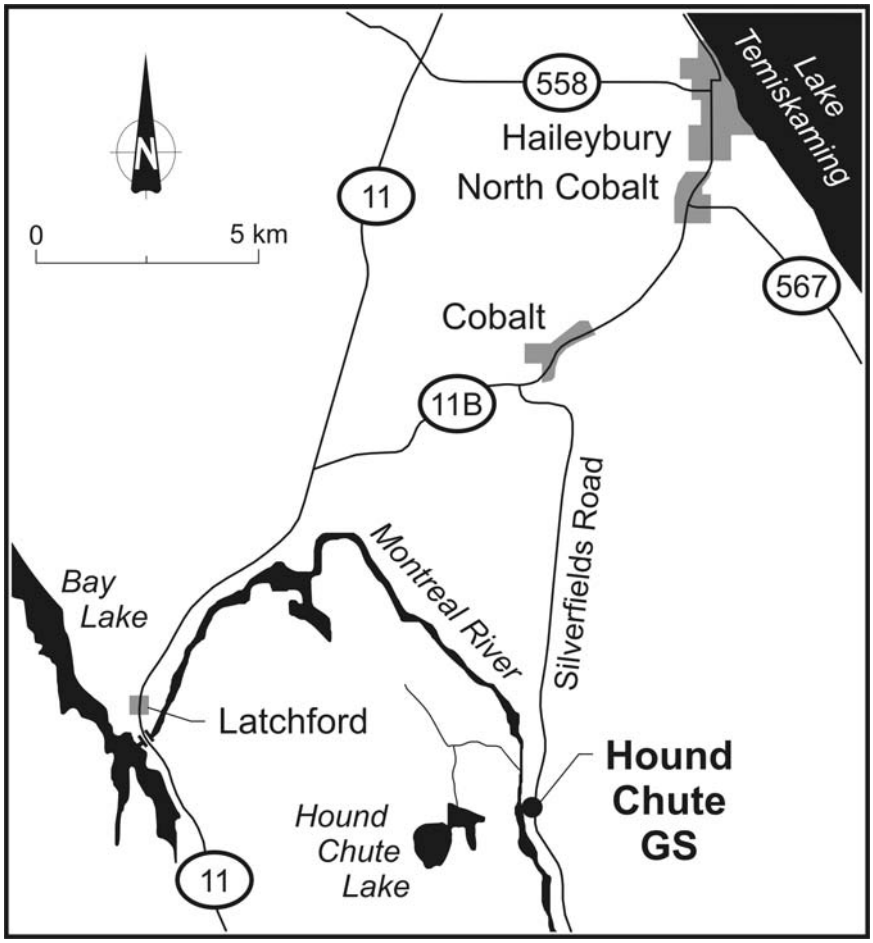


Figure 2.2: Location of Hound Chute Generating Station in Relation to Communities



2.1.2 Economy

Northern and Northeastern Ontario is a resource based economy driven primarily by the forest products and mining sectors. Tourism which is largely resource-based (e.g., fishing, hunting, other outdoor recreation) is a more minor but important contributor to the economy as is the production of energy. Government services whether it be federal, provincial or local are also a major contributor to the economy and employer of people. Most of the other sectors of the northern Ontario economy such as retail and wholesale trade, other manufacturing, construction and services are generally dependent on and strongly impacted by the resource industries.

The District of Timiskaming is comprised of a large number of towns, villages and rural areas. The largest communities are the City of Timiskaming Shores which was formerly the Towns of Haileybury and New Liskeard and the Township of Dymond. Other communities in the District include Kirkland Lake, Larder Lake, Latchford, Cobalt, Coleman, Elk Lake, Englehart and Matachewan. In total there are twenty-three incorporated municipalities in Timiskaming District. The communities of the District are located in relative close proximity to each other allowing

residents to live in one community and work in another. As such the economy is very integrated in the region. There are no large private sector employers in the District of Timiskaming, however there are a number of medium sized employers including: Grant Forest Products, Grant Transport, Elk Lake Planing Mill, 3-H Manufacturing. The former Town of New Liskeard is the main service area for the region and includes a large number of public sector employers such as the Temiskaming Hospital (MNR, 2004).

Total employment (15,735) in the District by industry is as follows (Statistics Canada, 2006):

- Agriculture and Other Resource Extraction – 1,715;
- Manufacturing and Construction – 2,585;
- Wholesale and Retail Trade – 2,395;
- Finance and Real Estate – 505;
- Health and Education – 3,090;
- Business Services – 2,460;
- Other Services – 2,985.

Perhaps most interesting is the large number of people employed in agriculture and other resource extraction. This is attributable to two factors. First, Timiskaming District is known as the Little Claybelt and is probably the largest agricultural area in Northern Ontario. Second, a large number of individuals are employed in logging operations throughout the District.

Historically, the District was known as an important mining area and while there is still small scale mining operations and claim staking there are no major mines at present in operation.

Ontario Power Generation's Northeast Plant Group employs 173 people in its operations and a total number of 34 people are employed at Dymond.

2.1.3 Social Composition

The total population of the District of Timiskaming in 2001 was 34,442, a -8.9% reduction from the 1996 population of 37,807. The Town of Latchford's population in 2001 was 363 and Coleman's was 550 (Statistics Canada, 2006).

The median age of the population of Timiskaming District was 41.1, in contrast to 37.2 of the Province, indicating that the region is aging in place. The combination of the loss of population and aging of population would indicate that many young people in the District are leaving the area in search of economic opportunities elsewhere.

Close to one-quarter of the population of the District has French as their first language learned and understood. The census reported that 1,215 people in the District identified themselves as Aboriginal in identity, which is low for Northern Ontario.

In general the population has a lower level of education attainment than the Province as a whole. The percentage of the population aged 20-34 with a university certificate, diploma or degree in Timiskaming is 10.0% in contrast to 25.7% for the Province as a whole. For the population 35-44 it was 7.6% for Timiskaming in contrast to 24.3% for the Province.

The median income for the District was $17,972, which was lower than the provincial median of $24,816. The median family income in 2000 was $45,885 compared to the Provincial median of $61,024. The average dwelling value was $87,314 compared to $199,884 in the Province as a whole. The composition of total income demonstrates that the population of Timiskaming relies to a greater extent on government transfer payments. Eighteen percent of total income is derived from government transfers in contrast to 9.8% for the Province as a whole. This indicates that the population relies higher on government transfers such as employment insurance, Canada Pension Plan payments, welfare, etc. The unemployment rate in Temiskaming was 10.0% in contrast to 6.1% for the Province as a whole. Overall, the economic indicators reinforce the notion that there are fewer and more limited economic opportunities in the District than the Province as a whole with a resultant effect of the population being less well off.

2.1.4 First Nations

Three First Nations were identified as potentially having an interest in the Hound Chute project: Temagami First Nation, the Teme-Augama Anishnabai and Matachewan First Nation.

Temagami First Nation (TFN) has a total population of 555 of which 198 are on reserve. Temagami's Reserve is Bear Island located in the middle of Lake Temagami. There are approximately 50 homes on the reserve. Major employers include the Band office and First Nation privately owned companies and business in the building, construction, recreation and hospitality industries (MNR, 2006).

The Teme-Augama Anishnabai are known as the Deep Water People of the Algonquin and Ojibway Nations. The TFN represents the First Nation Registered (status) Band population and the Teme-Augama Anishnabai (TAA) represents all Temagami aboriginals with ties to the traditional lands (Daki Menan). The TFN and the TAA are in the midst of negotiations with the crown for a land claim to the Daki Menan area.

Matachewan First Nation is located near the unincorporated municipality of Matachewan in the northwest section of Timiskaming District. Matachewan has a total population of 494 of which 49 live on reserve.

2.2 SITE SPECIFIC SOCIO-ECONOMIC ENVIRONMENT

2.2.1 Land Use

The Hound Chute Generating Station is located about 10 kilometers southeast of the Town of Latchford. The Hound Chute Generating Station straddles Coleman Township and Latchford, with the weir on the western channel being located in Coleman and the powerhouse located in Latchford. In early 2006 Latchford annexed these lands formerly known as Gilles Limit. There is no Official Plan that covers the site as the Town's OP is restricted to the village (May, 2006).

It is important to note that sections 1.8.2 and 1.8.3 of the Provincial Policy Statement encourage increased energy supply from waterpower resources:

> "Increased energy supply should be promoted by providing opportunities for energy generation facilities to accommodate current and projected needs, and the use of renewable energy systems[1] and alternative energy systems, where feasible."
>
> "Alternative energy systems and renewable energy systems shall be permitted in settlement areas, rural areas and prime agricultural areas in accordance with provincial and federal requirements. In rural areas and prime agricultural areas, these systems should be designed and constructed to minimize impacts on agricultural operations."

Virtually all of the land within a few km of the Hound Chute Generating Station is crown general use land. Two crown land use designations occur on either side of the Montreal River at the location of the Hound Chute GS. On the east side of the river is the Pine Lake Integrated Management Area (Crown Land Use Atlas ID: 1963), an 11,457 hectare General Use Area. The management of this area is governed by the policies of the Temagami Land Use Plan (1997), however that Plan did not mention or address hydro development (MNR, 2005). The general land use intent articulated in the policy makes no mention of concerns, objectives or strategies relevant to hydro power. On the west side of the river is the Roosevelt Road (Integrated management Area) (Crown Land Use Atlas ID: 1965) a 23,261 hectare General Use Area. The management of this area is governed by the policies of the Temagami Land Use Plan (1997), however that Plan did not mention or address hydro development (MNR, 2005). The general land use intent articulated in the policy makes no mention of concerns, objectives or strategies relevant to hydro power. The site is located about 5 km north of the Cliff Lake Conservation Reserve.

Access to the Hound Chute Generating Station is via Silverfields Road which runs south of Cobalt. OPG maintains this road although it is open for public use. Traffic on the road is very light and generally limited to OPG vehicles, vehicles associated with the operation of the

[1] Renewable energy systems means the production of electrical power from an energy source that is renewed by natural processes including, but not limited to, wind, water, a biomass resource or product, or solar and geothermal energy.

Ragged Chute Generating Station operated by Canadian Hydro Developers Inc. and outdoor enthusiasts include anglers, hunters and canoeists. The road is also occasionally used for logging (Barton, 2006).

This is a well maintained road because of the need for permanent access by OPG and Canadian Hydro Developers.

Hound Chute occurs in largely a wilderness setting south of Cobalt. The area is primarily used by outdoor enthusiasts such as anglers, hunters and canoers.

The Lower Montreal River is an identified canoe route within the Temagami area. The route is identified in both the MNR's "Canoeing in the Temagami Area" and in Hap Wilson's "Temagami Canoe Routes". This route is identified in Wilson's book as the "Latchford – Montreal River Route" with a total length of 46 kilometers and an estimated duration of 2 days. While Temagami is a well-known canoe-camping destination area in Ontario and beyond it is likely that this route is too short to be of high interest by canoeists. Staff at the Hound Chute facility have mentioned that they observe a few canoe parties per season.

Figure 2.3: Portage Egress Point

Figure 2.4: Portage from Access Point to Silverfields Road

The main portage around the generating station occurs to the east of the facility and is identified as being 155 meters in length. There are several access points upstream of the boom line where canoeists can exit the river. The portage then follows the informal roads at the Hound Chute site leading up to Silverfields Road. From here it is a short 50 meter walk to a trail that skirts around the main generating station site and returns back via a steep climb to the river's edge. The Wilson book identifies that an alternative to the eastern portage is to travel to the island and then cross the width of the island around the existing weir with stoplogs and returning to the Western Channel. There is then another portage at the rapids at the end of the island. The route along the Western Channel is likely to be often in low water conditions through most of the peak canoeing time and therefore not a desirable location.

3.0 SOCIO-ECONOMIC IMPACT ASSESSMENT

3.1 PROVINCIAL, REGIONAL/LOCAL SOCIO-ECONOMIC IMPACT

3.1.1 Construction Phase

The proposed undertaking will have a positive economic impact on the Province, Northeastern Ontario and in Timiskaming District. The economic impact of the proposed undertaking was assessed using the Lake Abitibi Model Forest Community Constellation Impact Model.[2] SENES Consultants and OPG prepared a series of input tables for the model and the City of Timmins Economic Development Corporation, which has a license for use of the model, performed the actual model runs.[3] This model is an economic input/output model (I/O Models) developed by Econometric Research Limited for the Lake Abitibi Model Forest and several Northeastern Ontario communities including Timmins. Input/Output models are typically developed and used at the provincial and national levels; however, this model has been adapted for more local use. The Ministry of Natural Resources uses a similar model but without community level impact analysis for project and program evaluation.

An economic impact is the economic activity generated from some initial expenditure by an individual, a business, or government. In this case, the expenditure will be the implementation or capital cost to OPG to build the Hound Chute project.

Central to any economic impact study is the fact that the total economic impacts associated with an expenditure are greater than the initial expenditure (capital cost to OPG to build) itself because re-spending by businesses creates additional impacts throughout the economy. This re-spending effect and the related concept of economic ***multipliers*** is worthy of further explanation.

Economic impacts are generally broadly defined as "direct" impacts and "indirect" impacts. Direct impacts can be measured by a number of indicators, such as gross output (sales), employment in the industries directly working on the project, the income of workers so employed, or the proportion of provincial tax revenue.

However, the concept of "indirect" impacts is more elusive. Consider, for example, a company that supplies $10,000 worth of concrete to the Hound Chute Project. Some portion of the $10,000 will likely go towards paying the employees their hourly wage. Those employees will in turn spend a portion of their wage locally for such things as groceries, which will in turn cause further re-spending and economic activity in other businesses, some of which are quite

[2] This model is an economic input/output model (I/O Models) developed by Econometric Research Limited for the Lake Abitibi Model Forest and several Northeastern Ontario communities including Timmins. I/O models are typically developed and used at the provincial and national levels; however this model has been adapted for more local interpretation.

[3] This I/O model can be run by just selecting Northeastern Ontario as the desired geography. Therefore economic impacts are presented just for Northeastern Ontario and not at the community level.

unrelated to the outfitting industry. This is referred to as the **multiplier** effect. Economists have been able to trace the impact of expenditures through an economy to arrive at multiplier estimates. As an example, an output multiplier of 2.0 for a particular category of goods and services means that an expenditure of $10,000 would eventually result in total output (or sales) in the economy of $20,000. The "direct" economic impact is the initial $10,000 expenditure and the "indirect" impact is the additional $10,000 of sales generated through business re-spending.

The higher the output multiplier, the greater the amount of additional economic activity generated. One of the determining factors in the size of a regions output multiplier is the amount of "leakage" outside the regional economy. "Leakage" is the amount of wholesale and retail services bought in an outside region by businesses plus the interest, profits, rents and taxes paid outside the region by local businesses. It follows that the more that local businesses spend and re-spend within their own region, the higher will be that region's output multiplier.

High and low estimates of the total project expenditures for each were identified. These expenditures were further broken down according to three geographies – Northeastern Ontario, Ontario and National/International. This was done in order to ensure that economic impacts within the north and throughout the Province would not be overstated.

The proposed undertaking will have a positive economic impact on the Province, regionally and locally in Timiskaming District.

For Hound Chute it is estimated that expenditure in the range of $12.4M to $16.5M will be made in the Northeastern Ontario economy. This initial expenditure will primarily occur in the non-residential construction sector but also in other business services. The expenditure will result in the following economic impacts within Northeastern Ontario.

- Total sale volume of $18.7M - $24.8M (which includes the initial expenditure);
- Total income of $10.2M - $13.5M;
- Total wages and salaries of $7.5M to $9.9M;
- Wages and salaries will account for 73.3% of the gross provincial income associated with the project;
- For every dollar of expenditure associated with the project a total of $1.50 in sales will occur in Northeastern Ontario (sales multiplier of 1.50);
- 136 (83 direct) – 181 (110 direct) years of permanent full-time job equivalents;
- 11 PYs per one million dollars of expenditure;
- For every one job associated with the initial expenditure 0.65 jobs are supported in the economy at large.

Beyond the impact within Northeastern Ontario these projects are anticipated to result in an expenditure of $9.6M to $12.7M[4] in other parts of Ontario. The expenditure will result in the following economic impacts within Ontario.

[4] The provincial expenditure is an additional expenditure anticipated on top of the Northeastern Ontario expenditure.

- Total sales of $23.4M to $30.8M;
- Total wages and salaries of $8.2M to $10.8M;
- Sales multiplier of 2.42;
- 160 (66 direct) to 211 (86 direct) PYs of employment.

The higher sales multiplier and higher ratio of indirect and induced employment to direct employment in Ontario versus Northeastern Ontario is a result of the larger economy.

As a result of the project's expenditure, the following tax benefits are predicted to occur.

- $8.5M to $11.2M in taxes will accrue to all levels of government;
- Roughly 50% of the tax revenue accrues to the federal government, 39% to the provincial government and 11% to local government.

In summary the project will have significant positive impacts on the economy of Northeastern Ontario and Northeastern Ontario and positive impacts on the economy of Ontario.

In particular the project will have positive economic and resultant social benefits in the District of Timiskaming which has experienced difficult economic times.

3.1.2 Operational Phase

OPG estimates that even though the redeveloped generating stations will increase the power production, the overall operational employment and expenditures associated with the facilities will be maintained at present day levels. As such there is no expected economic and social change in the community as a result of the projects over the long-term. The redevelopment does provide more certainty around the maintenance of those jobs in the community and region.

3.2 SITE SPECIFIC SOCIO-ECONOMIC IMPACT

3.2.1 Land Use

As the Hound Chute Generating Station currently exists there will be no affect on land use and development in the area.

3.2.2 Access and Transportation

OPG does not propose to alter any of the access roads adjacent to the site.

The Design-Build Contractor is being asked to use existing parking lots and access roads.

It is estimated that the daily traffic associated with the construction phase of the project will be 15-20 vehicles, some of which will be large construction vehicles and some of which will be personal vehicles of the contractors.

All roads will have a half load restriction mid-April to 1st of June.

3.2.2.1 Social and Economic Uses

Other social and economic uses in the area around Hound Chute are very limited and are largely outdoor recreation based. The proposed undertaking during either the construction or operation phases of the project will not impact local recreational, social and economic uses.

Access along Silverfields Road will continue throughout the construction period and therefore, not impact other users.

Portions of the existing portage would be blocked during construction; however OPG has identified an alternative route around construction activities and staging areas.

Because of the area's importance as a fishing, wilderness and recreation area it is important that workers associated with the project not degrade the experience of these other users. Therefore, it is recommended that contractors and employees of the DBC be restricted from fishing at the site during the duration of the construction period. As well, overnight trailers and stays by workers will not be permitted.

3.2.2.2 Conclusion

In summary, the redevelopment of the Hound Chute Generating Station will have a positive local, regional and provincial economic impact. There will be no changes required to any land uses or any changes to the general social and economic uses of the area.

4.0 MARSH BAY

During the development of the Montreal River System Water Management Plan a group of property owners located in the Marsh Bay area of Coleman Township upstream of the Hound Chute Generating Station raised a variety of socio-economic and environmental concerns to the Ministry of Natural Resources and to Ontario Power Generation.5 These individuals own properties along the river and their properties are susceptible to fluctuating water levels. Specifically the concerns of the residents included:

- Fluctuating water levels at their properties owing to the use of flashboards at Hound Chute.
- Maximum water levels during a flood event.
- Property rights; and,
- Risks to the natural environment from fluctuating water levels.

OPG initiated a number of studies in order to better understand the extent of the flooding and impacts on individual properties. These additional studies included: improved bathymetric data on the riverbed; topographic surveying of the properties and buildings of owners to 0.5 meter contours; and, modelling of the abrupt water level fluctuations during the operation of the flashboards.

Presently, manually operated flashboards are used to assist in the control of the water levels. In the event that there is fluctuation in water levels, OPG has to dispatch personnel to then manually install or remove the flashboards.

In order to address the concerns of the property owners OPG is proposing to replace the existing flashboards with an inflatable Obermeyer Weir as part of the redevelopment of the existing Hound Chute Generating Station. The inflatable weir, which would be automatically controlled, would allow OPG to more tightly control the water levels upstream of Hound Chute and thereby reduce the fluctuating water levels throughout the year, but in particular in spring. On a reasonable effort basis, OPG will operate Hound Chute in order to maintain the water level towards the upper end of the Montreal River System Water Management Plan's summer operating regime(at Hound Chute), year round. The redevelopment will also include plans for OPG to increase the discharge capacity of the Generating Site by approximately 150 cubic meters per second (100 from the weir and 50 from the additional station capacity) and thereby have additional capacity to reduce the potential for flooding of properties upstream of Hound Chute.

The Obermeyer weir will:

- Eliminate the need to drop the water level in order to remove and install flashboards.
- Provide for automatic water level operation within discharge capacity of generating station and weir.

[5] These issues are well documented in the Water Management Plan.

- Result in a major reduction in water level fluctuation over what has been experienced in the past.
- Lower the likelihood of exposing spring spawning areas (pike and walleye).
- Lower the likelihood of exposing early summer spawning areas (smallmouth bass).
- Provide consistent water level throughout the year.

Overall, the property owners at Marsh Bay will experience much more consistent water levels than what they have previously experienced. The concerns of the Marsh Bay residents are historic concerns associated with the location of these properties and the operations at Hound Chute Generating Station. The effects that are of a concern are therefore historic and the proposed undertaking at Hound Chute represents a unique opportunity to address these concerns and improve the existing situation.

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