Appendix C

Economic Benefits Assessment

Note

Prior to the release of the Draft EA, the Project was referred to as the *Island Falls Hydroelectric Project*. Following release of a draft environmental assessment report for review by First Nations, agencies, and members of the public, numerous comments were received. As a direct result of agency and public consultation, YFP made a decision to relocate the Project two kilometres upstream of Island Falls to Yellow Falls. Accordingly, the Project name has changed to the "Yellow Falls Hydroelectric Project" and the Project nameplate capacity has changed from 20 MW to 16 MW.

The following Economic Benefits Assessment was prepared for the Island Falls location. However, recent increases in construction costs and experience with other hydroelectric projects indicate that construction, maintenance, and operational costs will not significantly change due to relocation of the Project to Yellow Falls.

Yellow Falls Power LP

ISLAND FALLS HYDROELECTRIC PROJECT ECONOMIC BENEFITS ASSESSMENT

OCTOBER, 2007

IBI GROUP

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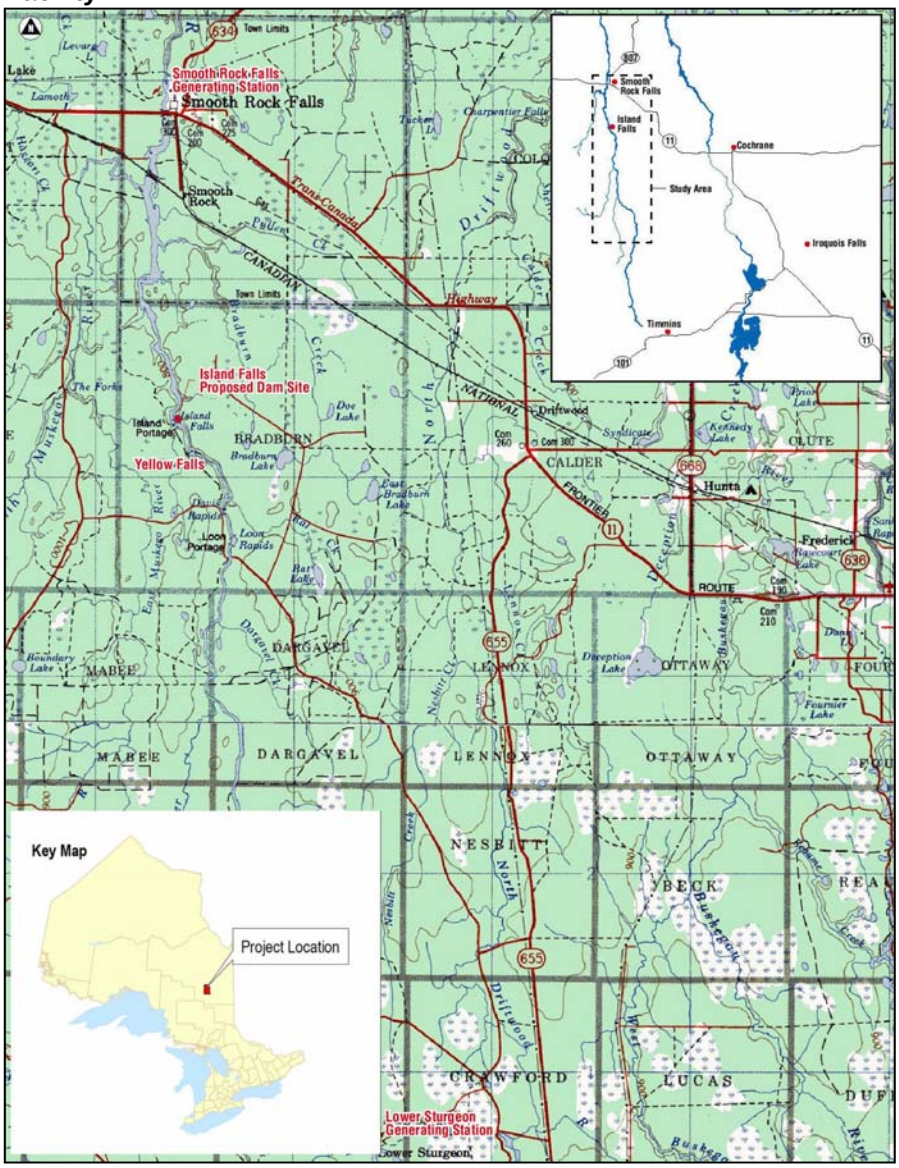
1. INTRODUCTION AND SUMMARY OF FINDINGS

1.1 Introduction and Retainer

Yellow Falls Power LP (YFP) is proposing to construct and operate a hydroelectric generating facility at Island Falls on the Mattagami River (the Project), 16 km south of Smooth Rock Falls, ON (Exhibit 1). IBI Group was retained by YFP to undertake an assessment of the effect of the proposed Project on the local and regional economic base and in particular, the effect on the local employment base and labour supply.

Exhibit 1: Location of Proposed Island Falls Hydroelectric Generating Facility



Source: Courtesy of Yellow Falls Power LP

The assessment of the economic effects of the project on the local economy addresses the requirements of the Environmental Assessment Screening process for the project as specified in the *Electricity Projects Regulation* (O.Reg. 116/01). The *Guide to the Environmental Assessment Requirements for Electricity Projects* (March 2001), published by the Ontario Ministry of Environment, Environmental Assessment and Approvals Branch, includes screening criteria, several of which relate to the socio-economic and fiscal effect of electricity projects. There are several screening criteria which address matters either directly or indirectly related to economic effects of electricity generating projects. The specific criteria against which this report measures the proposed project are itemized below.

1.2 Report Objectives

According to Appendix C (Screening Criteria) of the *Guide to the Environmental Assessment Requirements for Electricity Projects,* the socio-economic criteria relevant to this project include the following:

6.5 (Will the project . . .) have negative effects on the economic base of a municipality or community? and

6.6. (Will the project . . .) have negative effects on the local employment and labour supply?

The following analysis addresses both of these points. The chosen means to address the questions involve the following steps:

i) Estimates of construction-related employment impacts;

ii) Estimates of one time construction-related Provincial and Federal and income tax revenues; and

iii) Estimates of ongoing operating employment.

1.3 Outline of Report

The remainder of the report is as follows:

- **Section 2** provides a description of the project as it relates to potential economic and municipal fiscal effects;
- **Section 3** provides analysis of the economic impact arising from (i) the construction of the hydroelectric generating facility and (ii) the on-going economic impact; and
- **Section 4** provides a review of other benefits to the local and regional economic base.

2. DESCRIPTION OF PROJECT

2.1 Yellow Falls Power Limited Partnership

Yellow Falls Power LP is owned by Canadian Hydro Developers, Inc. (50%) and two private individuals (25% each). With 19 plants in operation, Canadian Hydro Developers, Inc. (CHD) is one of Canada's premier providers of low-impact renewable energy. As a result of CHD's experience in the development, construction and operation of hydroelectric facilities, CHD is the lead partner in the development of the Project.

CHD's approach to construction of their projects includes preference for the utilization of local labour, equipment and materials, where they are available in sufficient quantity, quality and at comprehensive prices.

2.2 Project Site

The Island Falls Hydroelectric project is located 16 km south of Smooth Rock Falls in Cochrane District, Ontario. The proposed Island Falls hydroelectric generating station would lie between the Lower Sturgeon Generating Station and the Smooth Rock Falls Generating Station.

Access to the site is proposed via the existing Red Pine Road located south of Highway 11 and west of Smooth Rock Falls, on the west side of the Mattagami River. New additions of a 7-km road and three bridges will connect Red Pine Road to the hydro site.

2.3 Local and Regional Community Economic Characteristics

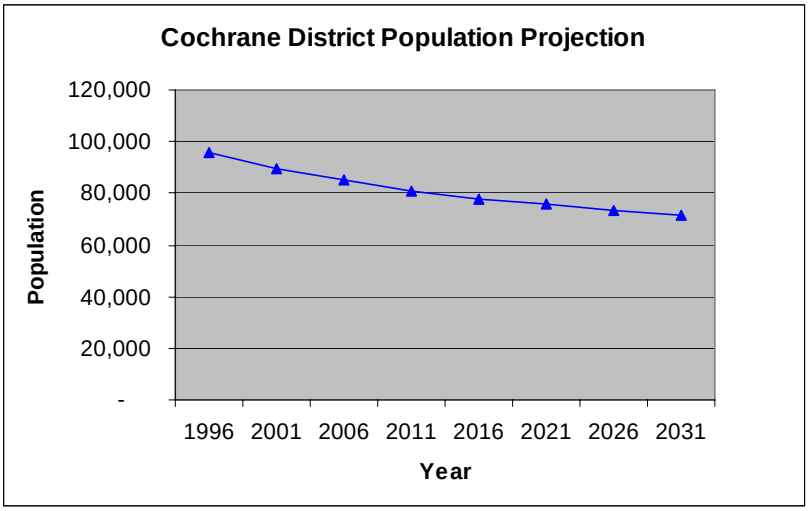
According to Statistics Canada, between 1996 and 2006 both the Cochrane District and the Town of Smooth Falls experienced a decline in population. While over the past decade the District experienced a 11.5% population decline, the population of Smooth Falls fell by 509 people (from 1,982 to 1,473), representing a 26% decline. Census information for the District and Town is shown in Exhibit 2 below.

Exhibit 2: Census Population of Cochrane District and Smooth Rock Falls

Census Data	Cochrane District	Town of Smooth Rock Falls
Population, 1996 - 100% Data	93,240	1,982
Population, 2001 - 100% data	85,247	1,830
Population percentage change, 1996-2001	-8.6%	-7.7%
Population, 2006 - 100% data	82,503	1,473
Population percentage change, 2001 to 2006	-3.2%	-19.5%
Population percentage change, 1996 to 2006	-11.5%	-25.7%

Source: Statistics Canada

Exhibit 3: Population Projection for Cochrane Census Division



Source: Ministry of Finance, Spring of 2007

The Ministry of Finance provides population projections for Ontario. The latest publication in the Spring of 2007 indicated that the Cochrane District is expected to have the fastest population decline among the northern Census Divisions. Exhibit 3 shows the population projection for Cochrane from 1996 to 2031.

Labour information is presently unavailable from Statistics Canada for Census 2006. The most current information is available at the Economic Regions level. Labour force in the Northeast Ontario Economic Region has declined slightly since 1990. The 2005 labour force is relatively the same as those in 1995. The unemployment rate has improved over the last 15 years, and is at 7.1% in 2005. Yet, this is still higher than the Provincial unemployment rate. Exhibit 4 details labour force information for the Northeast Ontario Economic Region and the Province of Ontario.

Exhibit 4: Labour Force Profile of Northeast Ontario Economic Region and the Province of Ontario

Year	1990		1995		2000		2005	
Estimates in Thousands	NE	ON	NE	ON	NE	ON	NE	ON
Population	454	7960	464.2	8536	454.4	9210	452.5	10070
Labour force	280.2	5536	275.9	5589	272.9	6173	275.7	6849.1
Employment	255.5	5194	246.5	5100	248.8	5817	256.2	6397.7
Full-time employment	206.1	4310	192.3	4144	192	4773	203.6	5242.7
Part-time employment	49.5	884.5	54.2	956.1	56.8	1045	52.6	1155
Unemployment	24.6	341.5	29.4	489	24.1	355.6	19.6	451.3
Not in labour force	173.9	2424	188.3	2947	181.5	3037	176.8	3221.3
Unemployment rate	8.8%	6.2%	10.7%	8.7%	8.8%	5.8%	7.1%	6.6%
Participation rate	61.7%	69.5%	59.4%	65.5%	60.1%	67.0%	60.9%	68.0%
Employment rate	56.3%	65.3%	53.1%	57.0%	54.8%	63.2%	56.6%	63.5%

Source: Statistics Canada, 71F0004XCB

The industries in the Northeast Ontario Economic Region is predominantly in the Services-Producing Sector, particularly in Trade and Health Care and Social Assistance. The Goods-Producing Sector has declined slightly over the last 15 years. Industries that shows significant decline are the Forestry, Fishing, Mining, Oil and Gas sectors. Exhibit 5 depicts the share of industries by sector in the Northeast Ontario Economic Region from 1990 to 2005.

Exhibit 5: Industries in Northeast Ontario's Economic Region

Year	1990	1995	2000	2005
Industry				
Goods-producing sector	30%	27%	23%	23%
Agriculture	1%	1%	1%	1%
Forestry, fishing, mining, oil and gas	10%	9%	6%	6%
Utilities	1%	1%	1%	1%
Construction	6%	6%	6%	6%
Manufacturing	12%	10%	9%	9%
Services-producing sector	70%	73%	77%	77%
Trade	16%	16%	17%	16%
Transportation and warehousing	5%	5%	6%	5%
Finance, insurance, real estate and leasing	4%	4%	4%	4%
Professional, scientific and technical services	2%	2%	3%	3%
Business, building and other support services	2%	2%	3%	4%
Educational services	7%	8%	8%	8%
Health care and social assistance	12%	14%	14%	14%
Information, culture and recreation	3%	3%	4%	4%
Accommodation and food services	8%	7%	7%	6%
Other services	4%	5%	5%	5%
Public administration	7%	7%	6%	6%

Source: Statistics Canada, 71F0004XCB

In 2006, Tembec, a major employer in Smooth Rock Falls announced a permanent closure of its market pulp mill. The mill produced 200,000 tonnes of Northern Bleached Softwood Kraft pulp annually. The closure eliminated about 230 jobs, of which 185 were unionized positions. This represented nearly 30% of the total number of jobs in the Town based on census 2001. The Town and the local economy were significantly affected by the closure.

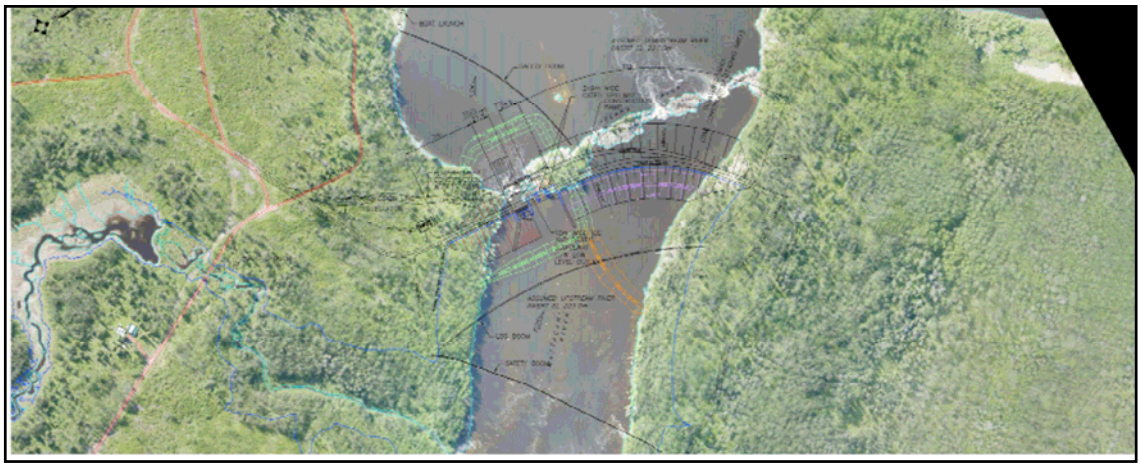
2.4 Hydroelectric Generating Facility

The facility is a 2-unit "run-of-river" hydroelectric generating facility comprised of: a powerhouse, 15-metre high embankment dams, sluiceways, emergency spillway, and substation. Two 10-megawatt (MW) turbines in the powerhouse will be located adjacent to the west bank of the river. The substation will be located on the west bank of the river and will contain a step-up transformer.

A headpond will be created behind the dam. Its size will be approximately 230 hectares (119 hectares of which is the existing river surface area) and will extend about nine kilometres upstream of the hydro facility to Loon Rapids.

The Project will be connected to the existing electricity grid via a new 115 kV transmission line. The proposed 21-km transmission line route will follow Red Pine Road north, across Highway 11, and finally connecting with the existing Hydro One H9K's 115 kV transmission line.

Exhibit 6: Project Layout



Source: Courtesy of Yellow Falls Power LP

2.5 Power Generated and Distribution

Island Falls Hydroelectric Project has a peak capacity of 20 MW. It is expected to produce on average 93,000 megawatt-hours of electricity per year, enough electricity to power 13,000 average Ontario homes. The power generated from the Project will be sold to the Ontario Power Authority under the 20-year Renewable Energy Supply II (RES II) contract.

The Project will generate renewable energy, supporting the broader Provincial economic base, and at lower long-term cost than conventional forms of non-renewable energy generation.

2.6 General Considerations of Economic Impact

There are a number of measures of economic benefits, each of which expresses the effects in different ways. Given that the screening criteria require an assessment of effects to the local employment base, the benefits have been expressed in terms of employment created. Other measures include:

- Contribution to Gross Domestic Product (GDP), also referred to as value added to the local economy; and

- Income – the income generated to the local economy through construction activity and ongoing operation of the facility.

Gross Domestic Product (GDP) measures the output produced by factors of production located in the domestic economy. To avoid double counting in the measurement of GDP, analysts use the concept of "Value Added" which represents the increase in the value of goods and services as a result of the process by which goods and services are produced.

Value added represents the net output of the economy and, more specifically, is the difference between the value of an output of a firm and the cost of inputs to produce that output. The value added is available to be paid as earnings to those involved in the production process (employees) or indirectly as profit.

The various measures do not represent separate and additional economic benefits to the economy but are alternative measures of the net output of the economy.

2.7 Direct and Multiplier Impact

Economic impacts can be categorized in terms of direct, indirect and induced impacts, each of which is described in further detail below. The chosen measure of impact is employment gain.

2.7.1 DIRECT EMPLOYMENT IMPACT

Direct employment impacts refer to the employment created in the construction industry (usually on-site) as a result of the development of the Project. The ongoing operations of the Project will also result in direct employment generation. A broader definition of **direct** economic impact includes the initial, immediate effects caused by a specific investment. The direct effect, or impact, will create iterative rounds of income or employment creation called indirect and induced effects.

2.7.2 INDIRECT EMPLOYMENT IMPACT

In terms of the employment impacts during construction, indirect employment refers to the employment created in other industries in order to produce the materials (goods) and other inputs (services) necessary for the construction work. In terms of the ongoing operations of any facility, indirect impact relates to employment created in other industries that supply goods and services necessary for the ongoing operations of the facility.

2.7.3 INDUCED EMPLOYMENT IMPACT

Induced employment refers to the employment created in the total economy as a result of the so-called “Keynesian Multiplier” effect. This latter effect equates to employment generated throughout the economy resulting from the expenditure of incomes generated through the direct and indirect impacts.

Part of the multiplier impact will comprise of spending impacts in the local and regional economies by persons employed in the construction of the facility. Part of the multiplier impact comprises of spending by those employed in industries supplying the construction project. A proportion of these spending impacts may be local/within the region, which other impacts would ripple further through the wider economy.

In terms of the scale of effects on local and regional economies, direct impacts are the most significant. Indirect and induced impacts are more broadly dispersed throughout the wider economy. In the case of a northern environment such as the Smooth Rock Falls area, the potential scale of benefit to the local community may be distributed over a wider area by the very nature of the source of employment for the Project. The extent to which local/regional versus out-of-region labour is required will only be known once the project is underway and employment contracts advertised.

Notwithstanding, the project can be expected to generate a degree of benefit to the regional (Cochrane District) economy while also generating direct benefits to the broader Provincial labour market.

2.7.4 PERSON-YEARS OF EMPLOYMENT

In the case of construction projects, the estimation of economic effect in terms of jobs created is often expressed in terms of person-years of employment. Person-years of employment is a unit of measure that allows for a consistent definition of the scale of employment impact. Person-years of employment relates to the employment of a single person for one full year. Hence, as an example,

10 person-years of employment indicates conceptually that 10 people can be employed for one year or one person can be employed for a period of 10 years or other combinations thereof, depending on the duration and other specifics of the construction project.

2.7.5 CALCULATION OF INDIRECT AND INDUCED EMPLOYMENT

Indirect and induced employment is based upon the application of employment multipliers based on the 2003 Statistics Canada Input-Output Multipliers for Ontario. The specifics of these multipliers are provided in the notes accompanying Appendix A. The multipliers represent the additional employment generated above and beyond the direct employment impact. For example, the construction industry multiplier is currently estimated at 1.51 which means for every 100 jobs created as a direct effect, 151 jobs are created in the wider economy as a result of indirect and induced impacts. Total job creation is therefore 251 jobs.

For consulting employment, the total indirect and induced employment multiplier is a ratio of 1.26, resulting in a total effect including direct, indirect and induced impacts of 2.26.

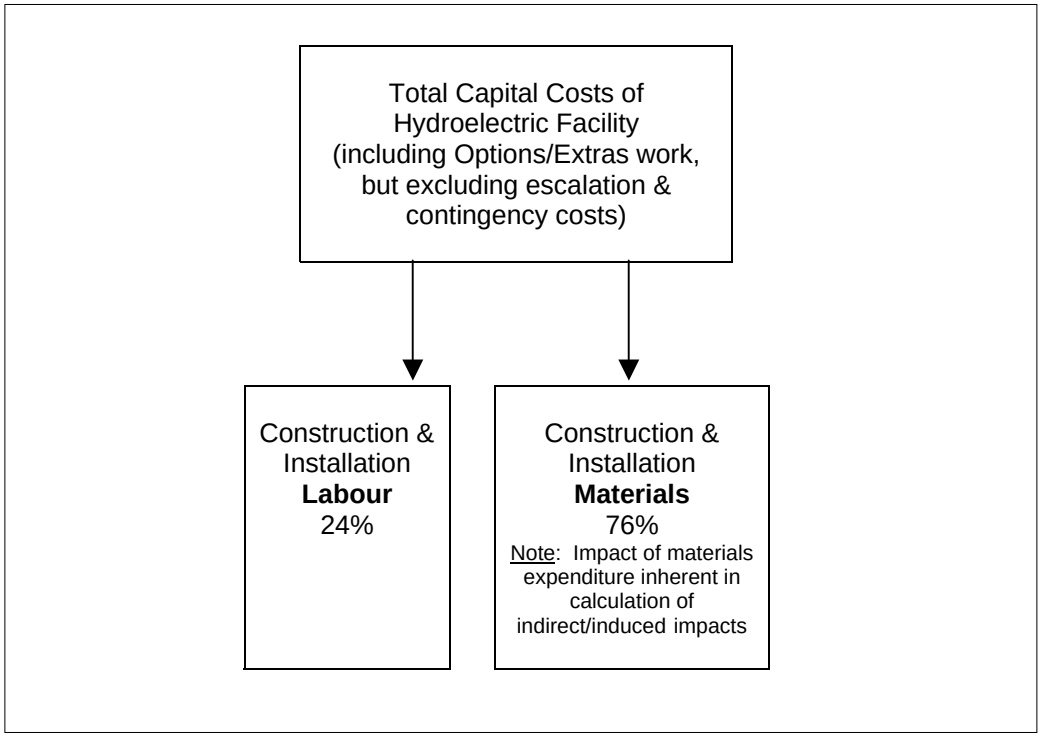
3. ANALYSIS OF CONSTRUCTION – RELATED EMPLOYMENT IMPACTS

3.1 Method

The intent of this section is to provide an estimate of the construction-related employment impacts arising from the development of the Project. These are short-term effects and are expressed in terms of the direct, indirect and induced employment impacts.

The following outlines the method for the estimation of construction-related employment impact as well as the annual economic impact in terms of ongoing jobs related to the operation of the facility.

Overview of Construction Impact Method



3.2 Estimated Labour Versus Materials Costs

The estimated capital costs include the costs of hydroelectric facility equipment, materials and labour to construct the facility on-site and all soft costs (professional fees and project management) relating to the installation of the equipment on-site. Costs such as lands costs and any penalty costs or other financing payments do not directly bear relation to employment generation either in materials production (out-of region impacts) or installation labour costs.

3.2.1 OVERALL CAPITAL COSTS

Exhibit 3 shows the estimated breakdown of the capital costs to develop the hydroelectric facility. These are based on broad categories of costs, each of which vary in respect of the degree to which costs pertain to installation of equipment (and hence labour costs) versus equipment and materials costs. For each category, IBI Group in conjunction with our client, YFP, have estimated the

anticipated proportion of costs, which comprise labour costs versus materials costs. These relative proportions are shown in Exhibit 7.

Exhibit 7: Estimated Direct Labour Costs

Code	Description	Estimated Costs [2]	Estimated Costs at 90% of Hard Construction Costs[3]	% Cost of Labour	% Cost of Material	Labour Costs	Material Costs
Hard Construction Costs							
1	Site Works	$ 1,741,000	$ 1,566,900	26%	74%	$ 404,145	$ 1,162,755
2	Headpond	$ 760,000	$ 684,000	61%	39%	$ 420,300	$ 263,700
3	Cofferdams & Dewatering	$ 910,000	$ 819,000	36%	64%	$ 294,300	$ 524,700
4	Powerhouse	$ 4,685,750	$ 4,217,175	33%	67%	$ 1,396,328	$ 2,820,848
5	Gated Sluiceway (2 gates)	$ 4,710,000	$ 4,239,000	25%	75%	$ 1,076,625	$ 3,162,375
5-1	Low Level Outlet	$ 325,000	$ 292,500	29%	71%	$ 85,500	$ 207,000
5-2	Overflow Spillway (10m wide c/w LLO)	$ 2,034,000	$ 1,830,600	32%	68%	$ 578,430	$ 1,252,170
6	Dam - Curved Alignment	$ 3,563,500	$ 3,207,150	34%	66%	$ 1,074,848	$ 2,132,303
7	Fishway	$ 2,500,000	$ 2,250,000	30%	70%	$ 675,000	$ 1,575,000
8	Turbine/Generator	$ 15,916,714	$ 14,325,043	10%	90%	$ 1,439,087	$ 12,885,956
9	Substation/Transmission	$ 5,285,000	$ 4,756,500	23%	77%	$ 1,070,775	$ 3,685,725
10	Miscellaneous Items/Facilities	$ 200,000	$ 180,000	30%	70%	$ 54,000	$ 126,000
11	Construction Site Services & Supervision	$ 2,193,000	$ 1,973,700	67%	33%	$ 1,321,740	$ 651,960
	Total Project Cost [2]	$ 44,823,964	$ 40,341,568	25%	75%	$ 9,891,077	$ 30,450,491
	Options/Extras:						
1	Increase Sluiceway Size to 1:10,000 yr flood design	$ 1,060,000	$ 954,000	40%	60%	$ 381,600	$ 572,400
3	Upgrade of Hydro One transmission & substation	$ 4,000,000	$ 3,600,000	20%	80%	$ 720,000	$ 2,880,000
	Total Cost of Options/Extras	$ 5,060,000	$ 4,554,000	24%	76%	$ 1,101,600	$ 3,452,400
	Total Hard Cost [2]	$ 49,883,964	$ 44,895,568	24%	76%	$ 10,992,677	$ 33,902,891
Soft Costs [4]						**Labour**	**Non-labour related Costs**
12	Project Management & Engineering	$ 3,448,000	$ 3,448,000	40%	60%	$ 1,379,200	$ 2,068,800
13	Owner Costs	$ 3,888,311	$ 3,888,311	40%	60%	$ 1,555,324	$ 2,332,987
	Total Soft Cost [2]	$ 7,336,311	$ 7,336,311	40%	60%	$ 2,934,524	$ 4,401,787
Total Project Cost							
(excluding escalation & contingency costs)		$ 63,031,275	(includes Options/Extras)				

Source: Yellow Falls Power LP

Note: Total soft costs is 16% of total hard costs

[1] Based on Total Cost Update provided by Yellow Falls Power LP

[2] Excluding costs of site acquisition, escalation, contingency, interest, and delay

[3] Construction Labour and Material costs are calculated as 90% of the hard construction costs to exclude 10% profit

4 Soft costs are calculated as 100% of the estimated costs

The assumption of this exercise is that materials are produced out of region and hence benefits to the economy as a result of the production of materials is also out of region. While it should be fully recognized that these costs have significant employment, spending and value added effects in the wider economy, the focus of the screening criteria is the local economic impacts. For this reason, the remainder of this analysis is restricted to the effects arising from labour involved in the *installation* of the dam and related hydroelectricity generating infrastructure.

The analysis also reduces the potential direct effect to both the local and wider economy by assuming that that there is a general provision for 10% profit-taking by the contractor/supplier on both materials and construction/installation works.

3.2.2 ESTIMATING LABOUR COMPONENT

The estimated overall labour costs net of certain exclusions (e.g. land costs, constructors/materials, profit, etc.) is $10,992,677 hard construction/installation costs.

Appendix A contains detailed assumptions regarding the total annual salary for skilled versus unskilled labour. By estimating the overall level of employment costs, reasonable estimates can be made as to the number of jobs for a given project based on a broad appreciation of the scope of labour and typical annual wages associated with labour employed on the project.

3.2.3 ESTIMATING LABOUR ARISING FROM "SOFT COSTS"

Soft costs represent those costs in addition to the costs of construction itself. Typically, soft costs include the following:

- Building and other permit requirements;
- Legal and accounting;
- Architect engineering and other professional fees;
- Project management; and
- Contingency for cost overrun.

Soft costs for a project of this nature are difficult to estimate. However, previous research indicates that they represent a relatively small proportion of total hard (construction and materials) costs, typically somewhere between 10% and 15%.

The estimate of total soft costs associated with the project is in the order of 16% of total hard construction costs, a portion of which can be expected to be accounted for by firms in the wider Provincial and even National economies. It is estimated that consulting employment costs represent approximately 40% of total soft costs. Given the somewhat complex nature of the project, involving significant upfront design and other professional consulting costs, it is possible that consulting employment costs could represent more than 40% of the total soft costs. However, as a conservative estimate, a lower proportion of labour costs is presented as a basis for calculating employment impact.

3.3 Estimated Construction – Related Employment Impact

3.3.1 DIRECT IMPACTS

Exhibit 8 shows the one-time job creation (person-years of employment) during construction. A total of 95 direct jobs are estimated to be created from installation of the hydroelectricity generating station and from consulting employment related to the installation (on-site design and development) aspects of the project.

Exhibit 8: Direct and Indirect/Induced Employment

A	Construction Employment (Person-Years)			*D*	Consulting Employment[2] (Person-Years)			Total Number of Persons Year of Employment		
Hard Installation Cost[1]	*B* Direct	*C* Indirect & Induced	Total	Soft Cost relating to Consulting	*E* Direct	*C* Indirect & Induced	Total	Direct	Indirect & Induced	Total
$10,992,677	55	84	139	$2,934,524	40	50	90	95	134	229

Source: IBI Group

[1] Includes Options/Extras Work

[2] It is assumed Consulting Payroll equals to 40% of total soft costs

3.3.2 INDIRECT AND INDUCED IMPACTS FROM CONSTRUCTION / INSTALLATION

The indirect and induced employment multiplier for the construction industry is 1.51. The consulting employment multiplier is estimated at 1.26. The previous exhibit (Exhibit 8) shows that a further 134 jobs are created as a result of indirect and induced impacts.

With respect to the local nature of effects, our analysis of construction-related impacts is limited specifically to that element of the capital cost of development which can realistically generate local/regional economic impacts – i.e. the installation of the facility. With respect to consulting employment, it should be noted that only a portion of these jobs are likely to be retained locally/regionally and more likely these effects are disbursed broadly throughout the economy.

3.4 Calculation of One-Time Provincial and Federal Income Tax Revenues

Exhibit 9 shows the income taxes generated from both construction and consulting work, benefiting both Federal and Provincial governments. The analysis assumes the tax year as being 2007. The combined taxes generated from direct and indirect/induced employment is nearly $5,092,000.

Exhibit 9: Personal Income Tax Generated from Direct & Indirect/Induced Employment

Direct Employment				Indirect & Induced Employment			Personal Income Tax from All Types of Employment During Construction	
Jobs Created (Person-Years)		Personal Income Tax Generated		Jobs Created (Person-Years)	Personal Income Tax Generated			
Installation Labour[1]	Consulting	Federal	Provincial		Federal	Provincial	Federal	Provincial
55	40	$2,861,565	$1,606,653	134	$432,150	$191,620	$3,293,715	$1,798,273

Source: IBI Group

[1] Includes Options/Extras Work

The assessment does not include an estimate of additional Provincial and Federal sales taxes that may arise as a result of the spending of income generated from construction–related employment. These effects represent further rounds of effect to the wider economy.

These tax revenues have the potential to contribute to the creation of jobs in the economy and provide resources through policy efforts that will ensure the effective operation of local labour markets such as those in Northern Ontario.

3.5 Consideration of On-going Operational Employment Gains

It is estimated that two full-time equivalent employment positions will be required to manage and operate the facility year-round. It is also forecasted that each full-time equivalent position will be remunerated on the basis of a total salary (excluding benefits) of $60,000 per annum. The indirect and induced employment multiplier for the utilities industry is estimated at a ratio of approximately 1.67. Hence, the indirect and induced employment is three more full time equivalent positions. The additional employment gain is equivalent to wage benefits of $39,900 per person per annum. The total economic impact is an additional $99,900 of gross employment income to the economy. The income tax generated by these positions is calculated and shown in Exhibit 10. A portion of the disposable income arising from these jobs will be available for local expenditure.

Exhibit 10: Estimated Annual Operating Employment and Generated Income Tax

Annual Operating Employment (Full Time Equivalent Positions)			Annual Taxes					
			Annual Income Tax from Operating Employment					
			To Federal Government			To Provincial Government		
Direct Operating Employment	Indirect & Induced Operating Employment	Total Operating Employment	Direct Employment	Indirect Employment	Total	Direct Employment	Indirect Employment	Total
2	3	5	$15,294	$9,675	$24,969	$6,538	$4,290	$10,828
(1)	(2)							

Source: IBI Group

(1) 2 Full Time Operating Employees at $60,000 excluding benefits.

(2) Indirect and Induced Employment is based on the Ontario figures of the 2003 Employment Multipliers, Input-Output Model (source: Industry Accounts Division, Statistics Canada).

Utilities 1.674

4. OTHER IMPACT CONSIDERATIONS

4.1 Positive Fiscal Effect to the Province of Ontario

4.1.1 PROPERTY TAXES AND WATER RENTAL CHARGES

The facility and associated lands under operational inclusion are subject to the payment of property tax. Payment of property taxes is based on the following formula:

- 2.5% x power generation (Gwh) x $40,000.

On this basis the annual liability at peak generation is $93,000 p.a. There is an additional water rental charge to the Province based on the following formula:

- 9.5% x power generation (Gwh) x $40,000.

This results in an estimated payment of $353,400 p.a.

Both payments are covered by the Provincially instigated 10-year tax holiday for renewable energy projects, a policy first announced in the 2004 Province of Ontario Budget. Following the 10-year period, taxes and rental charges will be payable in full subject to any other legislative change to these provisions.

4.1.2 ROAD IMPROVEMENTS

The proponent, Yellow Falls Power, will be improving the existing public road (Red Pine Road) south from Highway 11 for a distance of 13 km including 7 km of new road. The upgrade will also include two new bridges. These improvements will be permanent in nature. Below is a summary of these works:

Road	**Length of Upgrade**	**Cost**
Upgrades to **existing** road (North Red Pine)	6 km	$185,000
New Roads	7 km	$800,000
Bridge Upgrade/New		$730,000
Total	***13km***	***$1,715,000***

The improvement of the existing Red Pine Road will facilitate use of the road by the local community. The Red Pine Road will be maintained by YFP and other registered road users.

4.2 Employment, Energy and Revenue Benefits to the Taykwa Tagamou Nation (TTN)

The proponent and the Taykwa Tagamou Nation (TTN) have signed an agreement that outlines the broad basis for involving the TTN in the Project. The specific provisions of the business-to-business agreement are subject to confidentiality, however, the benefits identified in the agreement include the following broad elements:

- First Nations employment opportunities;
- Royalties;
- Employment learning opportunities for the TTN youths; and
- Recreation and housing opportunities.

The provisions of the agreement provide direct benefits to the TTN, and provide impetus to the regional labour market in the form of work experience, skills training and other such benefits.

5. CONCLUSIONS

The project will result in potentially significant construction related employment gains. A proportion of these gains can be expected to be sourced from the local labour market while a proportion will be sourced from the broader Northern Ontario regional economy, specifically:

- The project is unlikely to result in any labour shortages from the labour market in the local community over the life of the project and may result in some improvement in the skills training associated with workers in the region.
- The project will result in an estimated 95 direct full-time equivalent jobs and 134 indirect and induced full-time equivalent jobs.
- The project is unlikely to generate any negative effects on local private property interests and will not place a burden on the Provincial Government by way of any operating costs associated with the facility or access roads.
- The project will generate some capital improvements in public roads in the vicinity of the project.
- The project will result in direct benefits to the Taykwa Tagamou First Nation.
- The project will result in wider benefits to the Provincial, and National economy. Some components of the facility (such as the turbines) will be sourced off-shore, but much of the rest of the components will be sourced from Canada or the United States.
- The generation of energy from a renewable energy source represents good public policy, is supported by the Provincial Policy Statement (PPS) and will itself contribute to economic growth within the Province and potentially within Northern Ontario in particular.

Based on the foregoing, the analysis of effect of the project, both in terms of its construction-related and ongoing operational employment effects, indicates that effects on the local economic base and employment market will be positive.

* * * * *

IBI Group would be pleased to provide any further details as may be required regarding the analysis contained in this report. Please refer to the Appendix A for a detailed rationale of the employment impact estimates.

APPENDIX A

ECONOMIC IMPACT MODEL ASSUMPTIONS

Appendix A
Yellow Falls Power LP
Island Falls Hydroelectric Facility
Economic Impact Analysis
Assumptions

A Total Hard Construction Labour Cost $12,214,085
Total Hard Construction Labour Cost excluding 10% Profit $10,992,677
Installation Labour is estimated at 24% of Total Hard Construction Cost
Soft Costs represent 16% of total Construction and Materials Costs, only a portion of which will be accounted for by local consulting employment.

B Average annual construction salary is calculated based on the following basic union wage rate including supplements for major construction trades:

Number of Hours Per Week		Basic Rate (includes travel time and accounts for over-time)		
40 Regular	Total Weekly Hrs			Weighted
26 Overtime	66	Regular	Overtime	Average Hourly Rate
Skilled Labor	Carpenters Cement Finishers Electricians Sheet Metal Workers Brick Layers Painters			
	Average Hourly Wage	$55.00	$70.00	$ 60.91
Unskilled Labor	General Laborer	$40.00	$50.00	$ 43.94
Safety, Surveyor,	Superintendent	$60.00	$80.00	$ 67.88
Average Hourly Wage (includes accommodation costs) [1]				**$ 61.12**

Supplements include vacation pay, statutory holyday pay and employers' contribution to pension plans, health and welfare plans, industry promotion and training funds.
Assuming Skilled Labor = 40.0% of Total Labor Costs
Unskilled Labor = 60.0% of Total Labor Costs
Average Number of Hours per Week = 66
Average Number of Weeks Worked per Year = 50
Average Number of Hours per Year = 3,300

		Rounded	
Average Annual Construction Salary	$201,700	$201,700	
Average Annual Construction Labor Cost	$201,700	**$201,700**	including supplements

Source: Yellow Falls Power LP., based on recent project at Cobolt, Ontario (Ragged Chute Hydro Project, 3 hours east of Island Falls)

C Indirect & Induced Employment Multiplier[2]

Construction	1.51	**Consulting**	1.26
	1.00		1.00
Including Direct Impact	2.51		2.26

D It is assumed Consulting Payroll equals to 40.0% of Soft Cost.

E Average Annual Consulting Salary is based on the average hourly earnings of the salaried employees of the following industries:

NAICS	Industry	Average Hourly Earnings	Average Annual Earnings
5413	Architectural, engineering & related services	$33.02	
54	Professional, scientific & technical services	$31.83	
	Salary Before Benefit	$32.43	$60,800 Rounded
	Salary Cost including 20% Benefit		**$73,000** Rounded

Assumed 1,875 working hours / year
Source: Statistics Canada *Employment, Earnings and Hours* , February 2007 (Catalogue Number 72-002-XIB), Table 7, Ontario figures.
[1] Cost of accommodation is built into wages, at $9/hour
[2] Source: Statistics Canada, Industry Accounts Division, Input-Output Tables, 2003

Appendix A (continued)
Yellow Falls Power LP
Island Falls Hydroelectric Facility
Economic Impact Analysis
Assumptions

Per Person Per Year Employment Income Tax Estimate for Various Employment

	Construction			Operating	
Type of Employment	Installation Labour1	Consulting	Indirect & Induced	Direct	Indirect & Induced
Taxable Income (1)	$201,700 (2)	$60,800 (2)	$39,900 (3)	$60,000	$39,900
Estimated Federal Income Tax	**$46,339**	**$7,823**	**$3,225**	**$7,647**	**$3,225**
Estimated Ontario Income Tax	**$26,781**	**$3,342**	**$1,430**	**$3,269**	**$1,430**

Notes:

(1) Taxable income is assumed to be the same as annual salary excluding benefit.

(2) See Assumptions B and E.

(3) Source: Statistics Canada *Employment, Earnings and Hours, February 2007*
(Catalogue Number 72-002-XIB, Table 2, Ontario figures)

	NAICS	Industry	Average Weekly Earnings	Average Annual Earnings
Indirect Employment	11-91N	Industry aggregate	$798.35	$39,900 before Benefit

Assumed 50 worked weeks.

Federal Tax (4)	$49,476	$10,960	$6,362	$10,784	$6,362
Less: Non-refundable Tax Credit					
(5) $20,568 x 15.25%	($3,137)	($3,137)	($3,137)	($3,137)	($3,137)
Estimated Federal Income Tax	$46,339	$7,823	$3,225	$7,647	$3,225
Ontario Tax (6)	$19,983	$4,463	$2,551	$4,390	$2,551
Less: Non-refundable Tax Credit					
(7) $18,525 A x 6.05%	($1,121)	($1,121)	($1,121)	($1,121)	($1,121)
Subtotal	$18,862	$3,342	$1,430	$3,269	$1,430
Ontario Surtax A					
(A - $4,100) x 20%	$2,952	$0	$0	$0	$0
(A - $5,065) x 36%	$4,967	$0	$0	$0	$0
Estimated Ontario Income Tax	$26,781	$3,342	$1,430	$3,269	$1,430

Appendix A (continued)
Yellow Falls Power LP
Island Falls Hydroelectric Facility
Economic Impact Analysis
Assumptions

(4) Federal Marginal Tax Rates		<	$37,178	15.50%		
(tax year 2007)		<	$74,357	22.00%	+	$5,763
		<	$120,887	26.00%	+	$13,942
		>	$120,887	29.00%	+	$26,040

(5) The non-refundable tax credit in the federal tax calculation includes

Basic personal amount	$8,929.00		
One eligible dependant	$8,929.00		
CPP Contribution	$1,989.90		
EI Premium	$720.00		
Total	$20,567.90	at	15.25%

(6) Ontario Marginal Tax Rates		<	$35,488	6.05%		
(tax year 2007)		<	$70,976	9.15%	+	$2,147
		>	$70,976	11.16%	+	$5,394

(7) The non-refundable tax credit in the provincial tax calculation includes

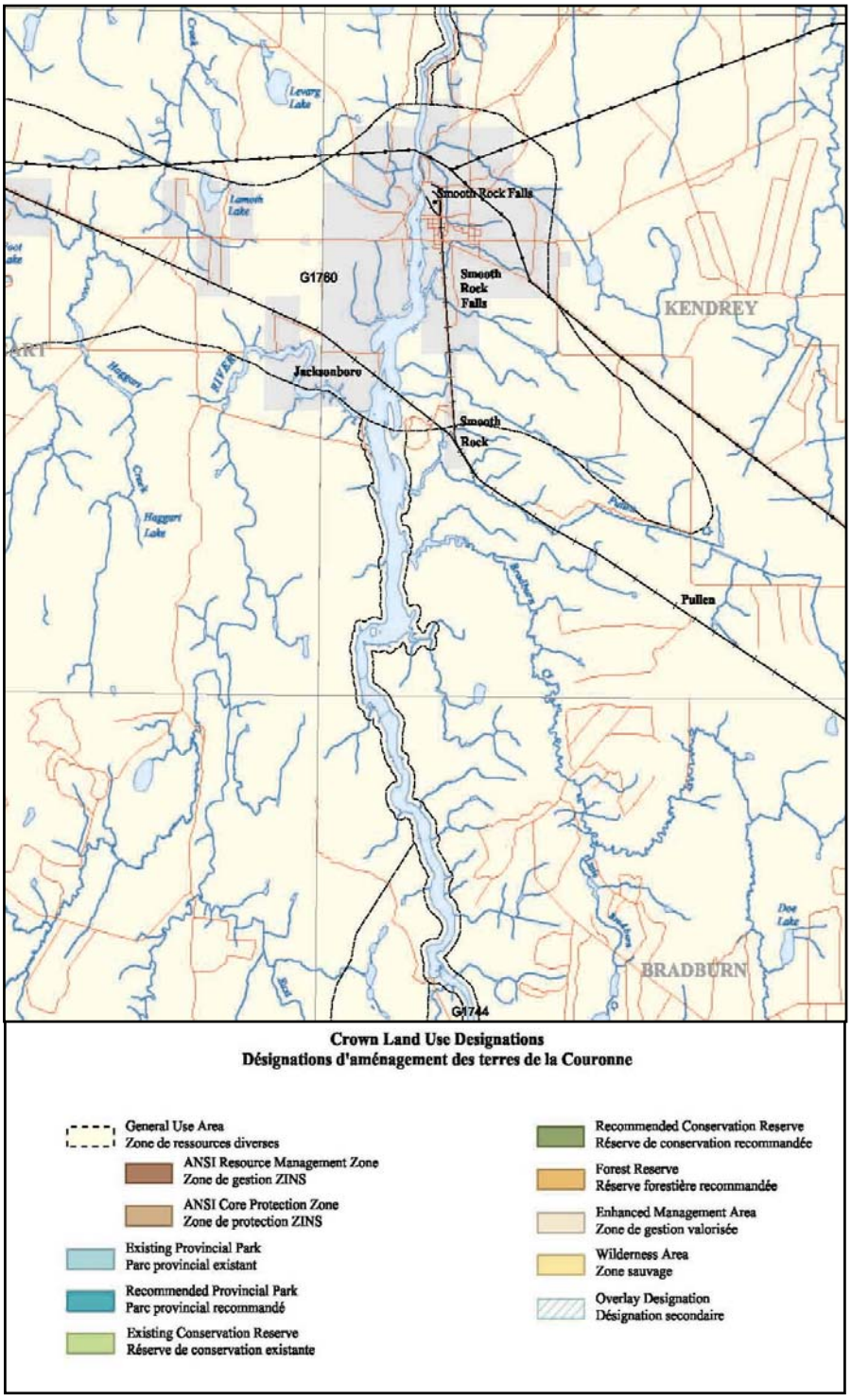
Basic personal amount	$8,553.00		
One eligible dependant	$7,262.00		
CPP Contribution	$1,989.90		
EI Premium	$720.00		
Total	$18,524.90	at	6.05%

Note: Federal and provincial non-refundable tax credit rate is unknown until Nov./Dec. 2007; current non-refundable tax credit rate is based on 2006 tax rates

APPENDIX B

MAP OF CROWN LAND USE DESIGNATION

EXHIBIT B: MAP OF CROWN LAND USE DESIGNATION



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Source: Government of Ontario, Ministry of Natural Resources, February 2006

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