



Bipole III Transmission Project

Socio-economic monitoring program for construction



Manitoba Hydro
Bipole III Transmission Project

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Abbreviations

CHRPP	Cultural and Heritage Resources Protection Plan
DCS	Dorsey Converter Station
EIA	Economic Impact Assessment
EIS	Environmental Impact Statement
ESS	Environmentally Sensitive Sites
GPS	Global Positioning System
HRIA	Heritage Resources Impact Assessment
HVDC	High Voltage Direct Current
KCS	Keewatinohk Converter Station
km	Kilometer
kV	Kilovolt
m	Meter
PR	Provincial Road
PSA	Project Study Area
RCS	Riel Converter Station
ROW	Right-of-way
RTL	Registered Traplines
SE	Socio-Economic
SEMP	Socio-Economic Monitoring Program
VEC	Valued Environmental Component
WIS	Worker Interaction Subcommittee

1 Introduction

This document describes the construction socio-economic monitoring program (SEMP) results for the Bipole III Transmission Project (the Project) from start of construction to September 30, 2014. Monitoring Project socio- economic (SE) effects was a commitment in the Bipole III Environmental Impact Statement (EIS).

Monitoring SE effects is also a condition of the Bipole III *Environment Act* Licence No. 3055. The monitoring program focuses on key components of the SE environment that may be affected, including both direct and indirect effects during the construction and operation phases of the Project. Monitoring program results will be used to assess success of mitigation measure effectiveness and adaptive management measures will be taken if required.

2 Project overview

The purpose of the Project is to provide enhanced reliability to Manitoba Hydro's electrical system, and to reduce the severity of the consequences of major outages. Approximately 70% of Manitoba's hydroelectric generating capacity is delivered to southern Manitoba, where most of the demand for energy is, via the Bipole I and Bipole II high voltage direct current (HVDC) transmission lines. Bipoles I and II share the same transmission corridor through the Interlake region over much of their length from northern Manitoba to a common terminus at the Dorsey Converter Station (DCS), northwest of Winnipeg. The existing transmission system is vulnerable to the risk of catastrophic outage of either (or both) Bipoles I and II in the Interlake corridor and/or at the DCS due to unpredictable events, particularly severe weather. This vulnerability, combined with the significant consequences of prolonged, major outages, justifies a major initiative to reduce dependence on the DCS and the existing HVDC Interlake transmission corridor.

The Project includes:

- A new converter station, the Keewatinohk¹ Converter Station (KCS);
- A northern ground electrode site connected by a low voltage feeder line to the KCS;
- New 230 kV transmission lines linking the KCS to the northern AC collector system at the existing 230 kV switchyards at the Henday Converter Station and Long Spruce Generating Station;
- Modifications to the 230 switchyards at the Henday Converter Station and the Long Spruce Generating Station to accommodate the new collector lines;
- The development of a new +/-500 kV HVDC transmission line, approximately 1,400 km in length, centered on a 66 metre right-of-way (ROW), originating at the KCS, following a westerly route to southern Manitoba and terminating at a new converter station, the Riel Converter Station (RCS), immediately east of Winnipeg;
- The completion of the RCS, development of the site for which is already underway pursuant to a separate licence; and

¹ The spelling of the northern converter station was revised at the request of Fox Lake Cree Nation from the previous Keewatinoow to the current Keewatinohk.

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- A southern ground electrode site connected by a low voltage feeder line to the RCS.

3 Purpose and objectives

The SEMP for the Project is intended to document conditions over time for Valued Environmental Components (VECs) and other environmental parameters to:

- Confirm impact predictions in the EIS;
- Identify unanticipated effects;
- Confirm adherence to EIS commitments regarding follow-up monitoring;
- Monitor the effectiveness of mitigation measures;
- Identify other mitigation or remedial actions that may be implemented;
- Confirm compliance with regulatory requirements including project approvals and environmental regulations; and
- Provide baseline data and development information and experience for other Manitoba Hydro projects.

The SE monitoring program does not attempt to address all potential changes to the environment described in the EIS, but rather focuses on potential important effects to key components of the SE environment. The program builds on the assessment studies conducted for the EIS using established methods for data collection and analysis.

A separate monitoring program has been undertaken in relation to physical, terrestrial, heritage resources, and aquatic components. Where quantitative information is not available, qualitative trends are described in the monitoring report to the extent feasible.

4 Socio-economic monitoring geographic area

Monitoring activities occurred throughout the Project Study Area (PSA) in relation to the final preferred route (See Appendix A). For routing, the relatively large study area allowed for appropriate range of planning choices for consideration based on the collection of environmental information about the physical and biological characteristics of the PSA (including vegetation, wildlife, and aquatic resources), as well as SE and land use characteristics (including locations of communities, conservation areas, economic land uses [e.g., agriculture], archaeological and heritage resources). The PSA defines the broadest area used to provide spatial context and comparison to the project components (with allowance for some SE topics that require a larger regional context such as northern Manitoba and communities just outside the study area such as Gillam). The majority of the SE monitoring activities occurred in the PSA.

5 Socio-economic topics

Monitoring activities linked to broad environmental components of the SE environment that were identified in the EIS include:

- Economy (employment/workforce, business, labour income and tax revenue)²;
- Community services (community concerns, service/infrastructure-related matters, worker interaction);
- Resource use (trapper education); and
- Personal and community well-being (public safety, worker interaction, transportation)

Monitoring activities focused on those effects that are potentially significant, effects where there is high uncertainty regarding the effects prediction, or effects that discipline specialists identified as requiring further monitoring.

Monitoring activities occurred throughout the PSA and will be presented by the three primary project components, the KCS, the transmission line and the RCS. However, during the monitoring period presented in this report, there were no reportable activities undertaken at the RCS work site. Information presented in this report is specific to the construction activities for the KCS and for portions of the transmission line work.

² The monitoring results for Economy includes activities described in the Keewatinoow Construction Camp Lagoon and Start-up Camp - Environment Proposal for which Environment Act Licence No. 3015 was issued. These activities occurred prior to the issuance of Environment Act Licence No. 3055 but the activities were part of the overall Bipole III Project and included in the EIS (Construction Schedule and Workforce Table for Keewatinohk Converter Station within the project description (figures 3.5-15 & 3.5-16 of the EIS).

6 Economy

Economic monitoring includes monitoring of employment and business activities associated with the Project. The objectives of economic monitoring for the Project are as follows:

- To track employment outcomes;
- To track construction business outcomes; and
- To track the effect on project income levels, including labour income resulting from direct employment, as well as estimated taxes paid to the government.

For the subject report, economic monitoring data is presented for the reporting year period (i.e., from the start of construction to September 30, 2014). Data will be collected over a number of years to assess the actual economic benefits from the Project. Multiple years of data will permit more meaningful comparison of actual benefits with the economic analysis presented in the Bipole III Transmission Project EIS.

6.1 Employment outcomes

The EIS estimated the workforce for all Project components on a yearly basis. Estimates vary by project component and year depending on the activity. The majority of employment opportunities occur during the construction phase of the Project with fewer opportunities during the operations phase of the Project. Due to seasonality constraints for some aspects of the work, certain Project components will have activities concentrated at specific times of the year (e.g., clearing and construction of the transmission line in the winter months for certain areas), while other project construction components occur throughout the entire year (e.g., RCS and KCS). For the reporting period, winter-only transmission line construction was limited due to late receipt of approvals and permits in January 2014.

During construction, employment data is collected on-site by contractors through an employee self-declaration form designed specifically for the Project (“Employee Report-Bipole III Project”). All completed forms are provided by on-site contractors to Manitoba Hydro, and stored in a central database for the Project. Contractors also provide information to Manitoba Hydro on hours worked and labour income to enable calculations for person years and income estimates during construction.

Employment data is provided in the categories outlined below:

- Person years – For work that involves part-time and/or seasonal workers, it is useful to standardize the hires in terms of person years of employment. Person years of employment are defined as the amount of work that one worker could complete during twelve months of full-time employment. For economic planning purposes and to compare to the Economic Impact Assessment (EIA), the number of hours worked per year is approximately 2,000 hours per year (assuming 40-44 regular hours trade categories). For construction comparison purposes, the number of hours worked per year is approximately 3,000 hours per year (assuming 60 regular hours weekly). As this report can be used for various types of comparisons, the data has been presented in terms of 2,000 and 3,000 hours per year.
- Hires - Refers to the number of people hired on the Project site for any duration.
- Employees - Refers to the number of individuals hired. The variance between hires and employees can be attributed to an individual being hired to the Project more than once.
- Duration – Refers to the average duration of work on the Project.
- Type – refers to job classifications of work available from the Project.

6.1.1 Person years of employment

Over the duration of construction, direct Project employment for on-site Manitoba Hydro and contractor employees is estimated at 5,194³ person years. During construction, hours of direct employment data is collected by contractors and Manitoba Hydro. Table 1 presents the direct Project employment for on-site Manitoba Hydro and contractor employees.

From the outset of the Project to the reporting period ending September 2014, Bipole III construction generated 417 person years of direct Project employment in terms of a 2 000 hour per year basis (278 person years in terms of a 3 000 hour per year basis). This number represents approximately eight percent of the total person years employment for the construction phase of the Project. Approximately seventy-nine per cent of the person years employment was for construction of the KCS, with twenty-one per cent for transmission line

³ Bipole III Transmission Project, Economic Impact Assessment Technical Report Manitoba Bureau of Statistics - November 2011: Table 1, Economic Impact on Manitoba - Construction Phase [Transmission Line 3,181; Converter Facilities 2,013

construction. Due to the late receipt of approvals and permits in 2014, transmission line work was limited for the reporting period. See Tables 1-3 below for additional breakdowns of person years of employment up to September 2014.

Table 1 Person years of employment – Project Commencement to September 2014: Northern Manitoba Indigenous and Northern Manitoba non-Indigenous

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Person years 2 000 ⁴ (3,000) ⁵	% of Project Component	Person years ⁶ 2 000 (3,000)	% of Project Component	Person years 2000 (3 000)	% of Total Project
Northern Manitoba Indigenous	86 (57)	26%	19 (13)	22%	105 (70)	25%
Northern Manitoba Non-Indigenous	9 (6)	3%	3 (2)	3%	12 (8)	3%
Cumulative Total	95 (63)	29%	22 (15)	25%	117 (78)	28%

Table 2 Person Years of Employment– Project Commencement to September 2014: Indigenous and non-Indigenous

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Person years 2 000 ⁴ (3 000) ⁵	% of Project Component	Person years ⁶ 2000 (3 000)	% of Project Component	Person years 2000 (3000)	% of Total Project
Indigenous	128 (85)	39%	28 (19)	33%	157 (104)	38%
Non-Indigenous	203 (135)	61%	58 (38)	67%	261 (174)	62%
Cumulative Total	331 (220)	100%	86 (57)	100%	418 (278)	100%

Table 3 Person years of employment – Project Commencement to September 2014: Northern Manitoba Indigenous and Northern Manitoba non-Indigenous

⁴ This number is used for economic comparison purposes and to compare to the numbers in the EIA.

⁵ This number is used for construction planning purposes.

⁶ Table 1 in the Bipole III Transmission Project, Economic Impact Assessment Technical Report uses 1832 hours per year for the estimate of Person years of employment. Transmission line work in this reporting period was limited to approx. 2 months duration due to delays in planned start of construction

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Person years 2000 ⁴ (3,000) ⁵	% of Project Component	Person years ⁶ 2000 (3,000)	% of Project Component	Person years 2000 (3000)	% of Total Project
Manitoba	274 (183)	83%	83 (55)	96%	357 (238)	86%
Non-Manitoba	57 (38)	17%	3 (2)	4%	60 (40)	14%
Cumulative Total	331 (221)	100%	86 (57)	100%	417 (278)	100%

6.1.2 Hires

Hires were not a parameter used in the EIA but is tracked by Manitoba Hydro for its projects. Hires refer to the number of people hired on the Project site for any duration. To September 2014, there were 1,443 hires on the Project. As a percentage of total project hires, seventy-one percent were working at KCS and twenty-nine percent were working on transmission line construction. Approximately forty-seven percent of the total project hires were Indigenous with fifty-three per cent identified as non-Indigenous. See Tables 4-6 below for the breakdown of total hires up to September 2014.

Table 4 Total hires – Project Commencement to September 2014: Northern Manitoba Indigenous and Northern Manitoba non-Indigenous

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Hires	% of Total Project Hires	Hires	% of Total Project Hires	Hires	% of Total Project Hires
Northern Manitoba Indigenous	316	22%	126	9%	442	31%
Northern Manitoba Non-Indigenous	19	1%	<5	<1%	23	2%
Total Hires	1026	71%	417	29%	1443	100%

Note: Figures above are not additive.

Table 5 Total hires – Project Commencement to September 2014: Indigenous and non-Indigenous

Measure	Keewatinohk Converter Station	Transmission Line Construction	Bipole III Project Total

	Hires	% of Total Project Hires	Hires	% of Total Project Hires	Hires	% of Total Project Hires
Indigenous	482	33%	194	13%	676	47%
Non-Indigenous	544	38%	223	15%	767	53%
Total Hires	1026	71%	417	29%	1443	100%

Table 6 Total hires – Project Commencement to September 2014: Manitoba and non-Manitoba

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Hires	% of Total Project Hires	Hires	% of Total Project Hires	Hires	% of Total Project Hires
Manitoba	871	60%	396	27%	1267	88%
Non-Manitoba	155	11%	21	1%	176	12%
Total Hires	1026	71%	417	29%	1443	100%

6.1.3 Employees

The total number of employees is less than the total number of hires because the same individual may have been hired more than once. For example, an individual may have moved to work on a different contract or moved to a different job classification to improve their position. To September 30, 2014, a total of 1163 employees were hired on the Project. Sixty-six per cent of the employees were working at the KCS and thirty-four per cent of employees were working on transmission line construction. Forty-five per cent of total project employees during this reporting period were Indigenous with fifty-five per cent non-Indigenous. See Tables 7-9 below for the breakdown of total employees up to September 2014.

Table 7 Total employees – Project Commencement to September 2014: Northern Manitoba Indigenous and northern Manitoba non-Indigenous

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Employees	% of Total Project Employees	Employees	% of Total Project Employees	Employees	% of Total Project Employees
Northern Manitoba Indigenous	207	18%	125	11%	332	29%

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Employees	% of Total Project Employees	Employees	% of Total Project Employees	Employees	% of Total Project Employees
Northern Manitoba Non-Indigenous	19	2%	6	1%	25	2%
Total Employees	773	66%	390	34%	1163	100%

Note: Figures above are not additive. Some employees may work across multiple Project components

Table 8 Total employees – Project Commencement to September 2014: Indigenous and non-Indigenous

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Employees	% of Total Project Employees	Employees	% of Total Project Employees	Employees	% of Total Project Employees
Indigenous	328	28%	192	17%	520	45%
Non-Indigenous	445	38%	198	17%	643	55%
Total Employees	773	66%	390	34%	1163	100%

Note: Figures above are not additive. Some employees may work across multiple Project components

Table 9 Total employees – Project Commencement to September 2014: Manitoba and non-Manitoba

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Employees	% of Total Project Employees	Employees	% of Total Project Employees	Employees	% of Total Project Employees
Manitoba	624	54%	369	32%	993	85%
Non-Manitoba	149	13%	21	2%	170	15%
Total Employees	773	66%	390	34%	1163	100%

Note: Figures above are not additive. Some employees may work across multiple Project components

The number of employees to date does not reflect the number of employees on-site at a given time. The number of employees on-site at any given time varies depending on the work in progress and the time of year. The actual number of employees on-site over the course of the year ultimately depends upon the work plans and schedules of the contractors for the various

project components.

6.1.4 Employment duration

From the onset of the Project to the reporting period ending September 2014, the average employment duration was 2.9 months. Data for the calculation includes both separated and active hires (hires that were still working on September 30, 2014). As of September 30, 2014, 356 hires were active. Average employment duration (months) was longer for KCS (3.2) than for transmission line construction (2.1). See Table 10 for a breakdown of employment duration.

Table 10 Breakdown of employment duration – Project Commencement to September 2014

Measure	Average Employment Duration (Months)		
	Keewatinohk Converter Station	Transmission Line Construction	Bipole III Project Total
Indigenous	2.7	1.9	2.4
Non-Indigenous	3.7	2.3	3.4
Northern Manitoba	2.6	1.8	2.4
Indigenous	3.9	2.6	3.6
Northern Manitoba			
Non-Indigenous			
Manitoba	2.9	2.1	2.7
Non-Manitoba	5.0	1.9	4.6
Project Averages	3.2	2.1	2.9

Note: Figures above are not additive.

6.1.5 Type (job classifications) of work available

Total hires by job classification are provided in Table 11 below. In total there were 22 job categories in which 1443 workers were hired over the span of the Project to September 2014. Seventy-one per cent of the total hires were working at the Keewatinohk Converter Station and 29% were working on transmission line construction. The top three combined categories as a percentage of total hires were “other” (27%), equipment operators (23%) and labourers (14%). For employee privacy and confidentiality reasons, the numbers of hires by residency cannot be disclosed, as the numbers are low for some of the classifications listed.

Table 11 Total Hires by Job Classification – Project Commencement to September 2014

Classification	Keewatinohk Converter Station	Transmission Line Construction	Bipole III Project Total

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	Hires	% of Total Project Hires	Hires	% of Total Project Hires	Hires	% of Total Project Hires
Labourers	115	8%	91	6%	206	14%
Security Guards	21	1%	0	0%	21	1%
Crane Operators	6	0%	0	0%	6	0%
Equipment Operators	171	12%	164	11%	335	23%
Teamsters	96	7%	12	1%	108	7%
Carpenters	81	6%	1	0%	82	6%
Painters	2	0%	0	0%	2	0%
Floor Covering Installers	5	0%	0	0%	5	0%
Insulator Workers	3	0%	0	0%	3	0%
Lathing and Drywall Workers	1	0%	0	0%	1	0%
Sheet Metal Workers	4	0%	0	0%	4	0%
Roofers	12	1%	0	0%	12	1%
Sheeters, Deckers and Cladders	1	0%	0	0%	1	0%
Boilermakers	10	1%	0	0%	10	1%
Iron Workers	31	2%	0	0%	31	2%
Electrical Workers	31	2%	3	0%	34	2%
Plumbers and Pipefitters	27	2%	0	0%	27	2%
Refrigeration Workers	1	0%	0	0%	1	0%
Sprinkler System Installers	2	0%	0	0%	2	0%
Office and Professional Employees	92	6%	2	0%	94	7%
Catering & Janitorial Staff	62	4%	8	1%	70	5%
Other⁷	252	17%	136	9%	388	27%

⁷ The "Other" category refers to hires in non-craft job classifications. This includes managerial and supervisory staff (both contractor and Manitoba Hydro), other Manitoba Hydro on-site staff and certain technical staff (e.g., engineers and technicians).

Classification	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Hires	% of Total Project Hires	Hires	% of Total Project Hires	Hires	% of Total Project Hires
Total Hires	1026	71%	417	29%	1443	100%

6.2 Business outcomes

Construction of the Project has resulted in business opportunities locally, regionally and throughout the province and Canada. Manitoba Hydro has policies in place to promote local businesses on its projects. For example, Manitoba Hydro’s Northern Purchasing Policy’s objective is to guide actions with the aim of promoting business, contract and employment opportunities for northern Indigenous people and northern Manitoba businesses on work within the Province of Manitoba’s Northern Affairs Boundary. The goal is to enhance business relationships with communities and assist them in building capacity and competitiveness of their businesses through involvement in Manitoba Hydro contracts.

Application of this policy ensures northern Indigenous and northern Manitoba businesses have the opportunity to participate in economic activities resulting from project construction. Manitoba Hydro has also entered into Direct Negotiated Contracts. Business outcomes are measured in terms of direct expenditures of the project for goods and services.

Monitoring both direct and indirect business effects provides data on the success and effectiveness of efforts to enhance local business participation, as well as an indication of the general economic impact of the Project in nearby communities.

Business outcomes are measured in terms of data on the direct expenditures of the Project for goods and services with a focus on Indigenous and northern spending.

6.2.1 Direct project expenditures

There was \$249.5 million spent on goods and services for the Project from its’ inception to September 2014. During construction it is estimated that there will be approximately 2,115.2 million dollars in expenditures. This reporting period represents approximately 11% of the total expenditures made for the project during the construction phase. Sixty-six per cent of the total expenditures were spent on the Keewatinohk Converter Station while the remainder (34%) was spent on transmission line construction. Of this, \$166.4 million were Manitoba purchases. Total

northern Manitoba (Indigenous and non-Indigenous) purchases represent \$65 million or 26 percent of total Manitoba purchases. Another \$6.6 million was spent on other purchases using credit cards and cheques where there is no definitive way to confirm whether the vendor is a northern, Indigenous, Manitoba or non-Manitoba business. Tables 12-14 below summarizes the breakdown of total Project purchases to September 2014.

Table 12 Direct purchases to September 2014: Northern Manitoba Indigenous and northern Manitoba non-Indigenous

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	\$ (Millions)	% of Total Project	\$ (Millions)	% of Total Project	\$ (Millions)	% of Total Project
Northern Manitoba Indigenous	\$7.1	3%	\$54.5	22%	\$61.6	25%
Northern Manitoba Non-Indigenous	\$1.2	0.5%	\$2.2	1%	\$3.4	1%
Total	\$165.6	66%	\$83.9	34%	\$249.5	100%

Note: Figures above are not additive.

Table 13 Direct purchases to September 2014: Indigenous and non-Indigenous

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	\$ (Millions)	% of Total Project	\$ (Millions)	% of Total Project	\$ (Millions)	% of Total Project
Indigenous	\$7.1	3%	\$58.7	24%	\$65.8	26%
Non-Indigenous	\$158.6	64%	\$25.1	10%	\$183.7	74%
Total	\$165.7	67%	\$83.8	34%	\$249.5	100%

Table 14 Direct purchases to September 2014: Manitoba and non-Manitoba

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	\$ (Millions)	% of Total Project	\$ (Millions)	% of Total Project	\$ (Millions)	% of Total Project
Manitoba	\$88.3	35%	\$78.1	31%	\$166.4	67%
Non-Manitoba	\$76.4	31%	\$5.5	2%	\$81.9	33%
Total	\$164.7	66%	\$83.6	33%	\$248.3	100%

6.3 Labour income and tax revenue

Labour income is an important indicator of direct economic impact of a project. Income levels also affect the general standard of living of individuals and families by influencing the acquisition of basic human needs including housing, food and clothing. Consequently, monitoring income levels can provide a general indication of a project's contribution to overall standard of living. The estimate of labour income reflects the direct income of wages and salaries associated with direct person-years employment.

Regarding taxation, direct taxes paid reflect incremental revenue sources generated for governments as a result of the project. The incremental revenues, in turn, contribute to societal programs and general well-being. The following parameters are monitored during the construction phase:

- Labour income – direct income earned by workers from employment on the project
- Taxes paid:
 - Provincial sales tax
 - Payroll tax
 - Corporate capital tax
 - Fuel tax

The EIS estimated the entire project construction expenditure would contribute \$482.3 million in labour income and \$352.4 million in tax revenue to Manitoba and \$721.3 million in labour income and \$489.1 million in tax revenue to all of Canada.

6.3.1 Labour income

The estimate of labour income reflects the direct income earned by workers from employment on the Project. It is the sum of wages and salaries associated with direct person years of employment⁸⁸. Total labour income earned was approximately \$33.6 million up to September 2014, which represents approximately seven per cent of the total labour income planned for the entire duration of construction. Approximately eighty-three per cent of the total labour income was derived from the KCS with the remainder attributed to the transmission line

⁸ Labour income is calculated based on information provided by contractors, engineering estimates and Manitoba Hydro.

construction. Sixty-five per cent of the labour income was earned by individuals who were non-Indigenous, while thirty-three per cent were from individuals who identified as being Indigenous. Tables 15- 17 lists the breakdown of labour income earned on the Project.

Table 15 Labour income to September 2014: Northern Manitoba Indigenous and northern Manitoba non-Indigenous

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Labour Income (Millions)	% of Project Component	Labour Income (Millions)	% of Project Component	Labour Income (Millions)	% of Total Project
Northern Manitoba Indigenous	6.7	24%	1.1	19%	7.8	23%
Northern Manitoba Non-Indigenous	0.7	2%	0.6	10%	1.3	4%
Total	27.9	100%	5.8	100%	33.6	100%

Note: Figures above are not additive.

Table 16 Labour income to September 2014: Indigenous and non-Indigenous

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Labour Income (Millions)	% of Project Component	Labour Income (Millions)	% of Project Component	Labour Income (Millions)	% of Total Project
Indigenous	9.5	35%	1.8	31%	11.3	34%
Non-Indigenous	17.7	65%	4.0	69%	21.7	66%
Total	27.2	100%	5.8	100%	33	100%

Table 17 Labour income to September 2014: Manitoba and non-Manitoba

Measure	Keewatinohk Converter Station		Transmission Line Construction		Bipole III Project Total	
	Labour Income (Millions)	% of Project Component	Labour Income (Millions)	% of Project Component	Labour Income (Millions)	% of Total Project
Manitoba	22.3	80%	5.5	96%	27.8	83%
Non-Manitoba	5.6	20%	0.3	4%	5.8	17%
Total	27.9	100%	5.8	100%	33.6	100%

6.3.2 Taxes

The Project also contributed to federal and provincial government revenues, including payroll tax, personal income tax, capital tax, fuel tax and provincial sales tax. Not all of these taxes are payable by the Project; however, they are generated as a result of the work undertaken. The estimate provided here does not include taxes received by the local or municipal government, or taxes associated with indirect or induced employment.

The estimated total tax impact to September 2014 is \$25.9 million. This amount represents approximately 7 per cent of the total tax revenue generated by the project during the construction phase. The estimate includes \$0.71 million in payroll taxes⁹, \$8.3 million in personal income taxes¹⁰, \$1.0 million in capital tax, \$1.3 million in fuel tax¹¹ and \$14.6 million in provincial sales tax¹².

⁹ Health and Post-secondary Education Tax is calculated as 2.15 per cent of the estimated labour income of \$33.6 million.

¹⁰ Personal income taxes are paid by individual employees to the federal and provincial governments. Each individual's personal tax situation (and therefore taxes payable) will vary. However, this estimate is based on a range of reasonable assumptions.

¹¹ The fuel tax estimate is based on provincial taxes of 14 cents/litre for both diesel and gasoline and federal taxes of 4 cents/litre for diesel fuel and 10 cents/litre for gasoline; provincial and federal taxes of 3.2 cents/litre and 4.0 cents/litre, respectively, for aviation fuel.

¹² PST is based on estimates of taxes paid directly by the project and PST on materials provided by suppliers under real property contracts.

7 Community services

Community-based services (e.g., emergency, health and social services) have the potential to be impacted in communities in close proximity to various components of the Project. Such effects are more likely to occur for the KCS than for the Bipole III Transmission Line, given the differences in workforce magnitude and the use of mobile construction camps for the transmission line. Monitoring the extent of the Project's construction effects on community services in the Gillam area forms an important component of the Bipole III SEMP. Information related to such impacts is anticipated to be available through a Worker Interaction Subcommittee (WIS) that has been established by Manitoba Hydro. The WIS is part of a corporate-wide initiative intended to address anticipated increases in the Gillam area workforce resulting from all Manitoba Hydro projects being constructed in the area in an overlapping timeframe. The WIS members include Manitoba Hydro, Fox Lake Cree Nation, the Town of Gillam, RCMP (Gillam Detachment), Gillam Hospital, Gillam School; other stakeholder members may be identified by the WIS on an as-needed basis. Information to be collected by the WIS is to include data related to the demand for health services (e.g., Gillam hospital worker visits) and policing (e.g., RCMP calls). Given the various developments currently taking place in the area, the extent to which such community services impacts can be broken down by individual project is yet to be determined.

Subcommittee discussions are underway to determine the details of data availability for reporting purposes. It is anticipated that, due to the sensitive nature of the topics addressed, some information gathered by the WIS will remain confidential. Additional information on the WIS's purpose and current status is provided under "Public Safety - Worker Interaction".

8 Resource use

8.1 Trapper education

The furbearer and trapline monitoring program focuses on commercial trappers who are trapping on active registered traplines (RTL) that are set aside by Manitoba Conservation and Water Stewardship as Community/Youth RTLs. The main purpose of the program is to help Manitoba Hydro and local communities better understand the impacts of transmission facilities on furbearer behavior and trapper success. This program is based on the Wuskwatim Transmission Line Furbearer Pilot Project.

Manitoba Hydro has potentially six RTLs to work with (e.g., Fox Lake Cree Nation, Tataskweyak Cree Nation, Thicket Portage, Wabowden, Cormorant and Opaskwayak Cree Nation). The initial part of the program is to conduct a trapper training workshop with the participating Community/Youth RTLs. Manitoba Hydro will continue to work with the communities after the training program to establish a three year trapping program on the Community/Youth RTLs involving both elders and youth. Other project deliverables will include documentation of project meetings and other communications, trapper/community involvement summaries, project mapping, trapper diaries, program results and reports.

To date, there have been two trapper education courses conducted in both Fox Lake Cree Nation and Tataskweyak Cree Nation in preparation for commencing the trapping program. This involved approximately ten youth from each community who participated in a course that was conducted by the Manitoba Trappers Association. The participants learned about the different trap types, trapping regulations and fur preparation. In the evening, there was also an opportunity for elders from each community to educate the participants about traditional harvesting techniques. Each participant wrote the provincial exam and received a certificate allowing them to purchase a trappers licence.

9 Personal, and community well being

Personal, family and community life can be affected by a variety of Project-related effects (e.g., physical changes to the land; noise and nuisance effects during construction). The experience of such effects will vary for individuals, families and communities as a whole.

One potential Project-related issue that has been identified is related to public safety and the interaction of workers with community members in Gillam and the surrounding area.

9.1 Public safety - worker interaction

Construction of the KCS and associated facilities requires a sizeable workforce drawn from a wide geographic area. Neighboring communities have identified concerns regarding potential adverse effects of increased numbers of construction workers in the area.

Manitoba Hydro has established a Worker Interaction Subcommittee (WIS). (Additional information is provided under “Section 7 Community services”). The WIS is intended to serve as a forum for information sharing and communication related to the anticipated increased workforce in the Gillam area in order to provide for early identification of potential issues, prevention of issues to the extent possible, and identification of ways and means to work cooperatively to address issues as they arise. The WIS is currently developing a monitoring plan and establishing a reporting schedule.

Future Bipole III SEMP Annual Reports will include information on WIS activities, the nature of issues identified by the WIS or its representatives, and mechanisms used or actions taken to address identified issues. Given the various developments currently taking place in the area, the extent to which any impacts can be broken down by individual project is yet to be determined. WIS discussions are underway to determine the details of data availability for reporting purposes. It is anticipated that, due to the sensitive nature of the topics addressed, some information gathered by the WIS will remain confidential.

9.2 Transportation

9.2.1 Road traffic

A commitment in the Bipole III EIS was to conduct transportation monitoring in the vicinity of northern project infrastructure. Over the last year, different technologies have been

researched, traffic counters constructed, and necessary agreements signed to ensure comprehensive data collection can be achieved during construction. Two permanent traffic counters will be installed on PR 280 in consideration of compiling traffic volumes for traffic entering/exiting the intersection of PR 280 at PR 290. The locations of the traffic counters are north of PR 290 prior to any major construction access and south of PR 290 west of Long Spruce Generating Station. These two traffic counters will provide data of background traffic volumes and construction traffic volumes when used with gate counts at Keewatinohk and provide the required assurance and confidence of traffic data collection required for this project.

The equipment being used is Diamond Traffic’s Phoenix II traffic counters. The traffic counters will be housed with an electrical supply, complete with solar electrical charging panels, deep cycle batteries, CDMA data modems and custom fabricated induction loops. The equipment was chosen for its robust and reliable nature. Continuous traffic volume data (i.e. 24 hours per day) during construction will be collected and included in the next reporting period. The traffic data will include traffic volumes, travel speed and vehicle classification (i.e. passenger vehicle, WB-15, WB-19, specialty combination vehicles) and will assist in determining overall total vehicle counts.

In addition to traffic volumes, collision data will be collected and reported. Likely causation of collisions will be identified to the extent feasible and corrective remedial actions will be recommended. Corrective actions could include posted travel speed reductions, additional warning signs for motorists, or maintenance considerations (i.e., grading of road, clearing of right-of-way).

Data collection for the KCS work site began on January 6th, 2014 through a Direct Negotiated Contract signed with the Fox York & Sodexo Joint Venture Company. Traffic at the control/security gate monitors the movement of traffic to and from the project site at all hours of operation. Table 18 provides a summary of traffic coming to the project site. On average, 123 vehicles per day used the road.

Table 18 Gate Counts at the Keewatinohk Converter Station Security Gate, January 6th, 2014 to September 30, 2014

	2014									
	Jan*	Feb	March	Apr	May	June	July	Aug	Sept	Total

Bipole III socio-economic monitoring program for construction 2014

	2014									
	Jan*	Feb	March	Apr	May	June	July	Aug	Sept	Total
Total	3 537	4537	4 44	5135	4232	3268	2693	2028	2814	33 088
Daily Average	136	162	156	171	137	109	87	65	94	123

*Gate record keeping began January 6th, 2014 Source: Manitoba Hydro gate records

Note: Vehicles by month, with daily average

10 Mitigation

A number of mitigation measures were prescribed to minimize SE effects and address local concerns. Examples of mitigation measures implemented in 2013/14 include:

- Subject to detailed engineering analysis, tower location is being used to reduce potential negative effects where feasible.
- Consultation with agencies responsible for infrastructure crossed by the transmission line.
- Cultural Awareness training was provided for workers.
- A regular charter service was implemented to accommodate the workforce, especially during peak construction periods, to ensure that scheduled flights were still available for local residents.
- Prior to construction activities, registered trapline holders were notified as to the schedule for construction activities.
- Lodge owners, recreational resource users and snowmobile associations were notified in advance of 2013/14 clearing and construction.

Additional studies and monitoring are required to assess the effectiveness of all mitigation related the SE environment. Information generated will be used within an adaptive management approach to improve both mitigation measure effectiveness and monitoring program design as required.

11 Future monitoring

Clearing activities are anticipated to begin in transmission line construction sections N1, N4, C1 and C2 during the 2014/15 winter construction season. The following monitoring activities are anticipated to occur during this upcoming season and into the future.

11.1 Transportation monitoring

Traffic volumes will continue to be monitored. Continuous traffic volume data during construction will be collected and will be included in the next reporting period.

11.2 Community services

The WIS will continue to address anticipated increased pressure on community services in the Gillam area resulting from all Manitoba Hydro projects being constructed in the area in an overlapping timeframe. The extent to which such community services impacts can be broken down by individual project is yet to be determined. WIS discussions are underway to determine data availability for future reporting periods.

11.3 Trapping

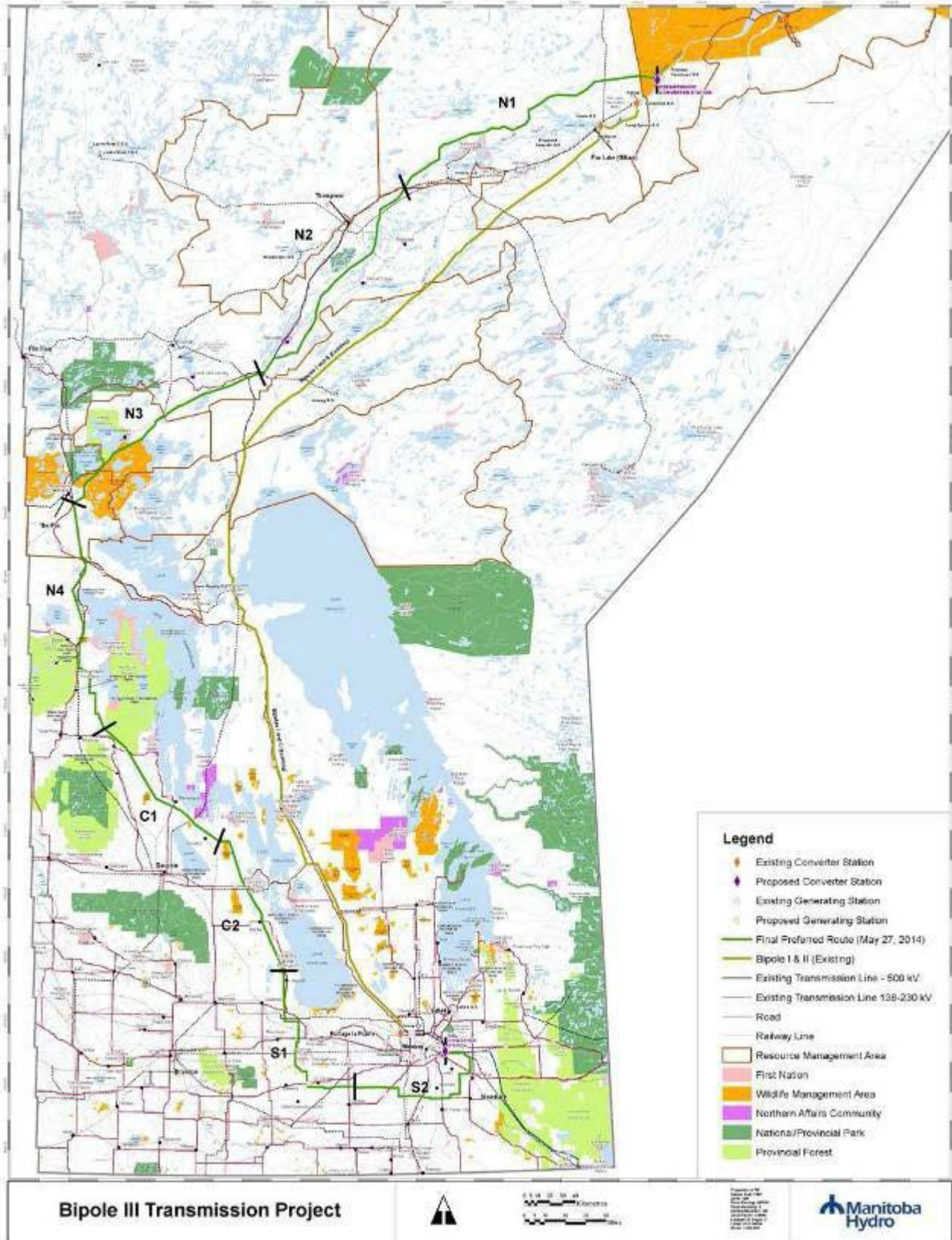
Manitoba Hydro will continue to work with the communities to establish a furbearer and trapline monitoring program to help Manitoba Hydro and local communities better understand the impacts of transmission facilities on furbearer behavior and trapper success. A three-year trapping program on the Community/Youth RTLs involving both elders and youth will serve as the basis for monitoring trapping success rates.

12 Summary

Initial results of the first year of the monitoring plan have begun to establish information to evaluate long-term changes or trends. Monitoring results have been reviewed and as additional data is collected will continue to be used to develop appropriate responses consistent with an adaptive management approach to ensure environmental protection throughout the implementation of the Bipole III Project.

13 Appendix A: Final preferred route

Bipole III socio-economic monitoring program for construction 2014



Available in accessible formats upon request