

MANITOBA-MINNESOTA TRANSMISSION PROJECT

Socio-Economic Technical Data Reports

2.5 Economic Impact Assessment





MANITOBA – MINNESOTA TRANSMISSION PROJECT

ECONOMIC IMPACT ASSESSMENT

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EXECUTIVE SUMMARY

This document presents the results of an economic impact analysis of the proposed Manitoba-Minnesota Transmission Project (MMTP).

The MMTP is the Canadian portion of a proposed single-circuit international transmission line in southern Manitoba that includes upgrades to three associated transmission stations at Dorsey, Riel and Glenboro. The project will take approximately two years to construct with an anticipated in-service date by 2020. The project consists of a 500-kilovolt (kV) alternating current (AC) transmission line starting at the existing Dorsey Converter Station northeast of Winnipeg and connecting at the Manitoba-Minnesota border to a new transmission line proposed by Minnesota Power. The project also includes additions and modifications to associated transmission stations at Dorsey, Riel and Glenboro in southern Manitoba. It is designed to provide increased transmission capacity between Manitoba and the U.S. for export surplus electricity while enhancing reliability of the province's electricity supply during emergency and drought conditions.

The MMTP Project includes:

- A 213 km 700-megawatt (MW), 500-kV transmission line. The capital cost of the transmission line is estimated to be \$135.3 million (in 2014 dollars) to build. The annual operating and maintenance costs are estimated to be \$189,000 (in 2014 dollars).
- Upgrades to three associated transmission stations at Dorsey, Riel and Glenboro in southern Manitoba with a capital cost estimated to be \$76.5 million (in 2014 dollars). Future annual operating and maintenance costs are not available as of yet. It is expected that incremental staff will not be required for the station upgrades, and therefore, there will be no additional labour costs.

The gross cost of the MMTP project is estimated to be \$350 million, however the economic impact analysis of the project takes into account only direct expenditures associated with on-site construction totaling approximately \$211.8 million (in 2014 dollars). The economic impact analysis excludes sunk costs, interest and escalation during construction, costs associated with pre-project planning, design, and training, costs associated with environmental studies, and any potential local development payments.

The major economic benefit of the project is from construction. In total, the entire project construction expenditure is expected to contribute to Manitoba as follows:

- 504 person-years of direct and indirect employment
- \$35.3 million in labour income
- \$49.8 million in GDP
- \$29.4 million in tax revenue

Operating and maintaining the project is expected to contribute, on average, annually to Manitoba as follows:

- 2 person-years of direct and indirect employment
- \$0.14 million in labour income
- \$0.17 million in GDP
- \$1.2 million in tax revenue

In total, the entire project construction expenditure is expected to contribute to all of Canada as follows:

- 951 person-years of direct and indirect employment
- \$53.7 million in labour income
- \$78.4 million in GDP
- \$46.3 million in tax revenue

In total, operating and maintaining the project is expected to contribute, on average, annually to all of Canada as follows:

- 2.7 person-years of direct and indirect employment
- \$0.17 million in labour income
- \$0.21 million in GDP
- \$1.2 million in tax revenue

1.0 Economic Impact Assessment

1.1 Introduction

The purpose of this document is to present the results of an economic impact analysis of the proposed Manitoba-Minnesota Transmission Project (MMTP). The MMTP project includes:

- A 500-kV AC transmission line linking the Dorsey Converter Station to the international border between Manitoba and Minnesota. The capital cost of the transmission line is estimated to be \$135.3 million (in 2014 dollars). The annual operating and maintenance costs are estimated to be \$189,000 (in 2014 dollars).
- Additions and modifications to three associated transmission stations at Dorsey, Riel and Glenboro in southern Manitoba with a capital cost estimated to be \$76.5 million (in 2014 dollars). Future annual operating and maintenance costs are not available as of yet. It is expected that incremental staff will not be required for the station upgrades, and therefore, there will be no additional labour costs.

The gross cost of the MMTP project is estimated to be \$350 million, however the economic impact analysis of the project takes into account only direct expenditures. The economic impact analysis excludes sunk costs, interest, and escalation during construction, costs associated with pre-project planning, design, and training, costs associated with environmental studies, and any potential local development payments, and contingency costs.

The economic impact analysis provides an estimate of the total employment impacts of the project on the economies of i) Manitoba, ii) the rest of Canada and iii) all of Canada. It also estimates the total Gross Domestic Product, tax revenue impacts, and labour income. It indicates not only the potential impacts generated directly by the project, but also the potential spin-off effects generated as a result of purchases of domestic goods and services and the local recirculation of increased income.

The economic impacts for the construction phase represent the estimated impacts for the entire construction period. The economic impacts for the operational phase are expressed on an annual basis.

Economic impacts have been calculated separately for construction and operational phases of the project. The analysis is based on construction, and operation and maintenance cost estimates available as of April 2015. The construction and operating and maintenance cost estimates for the MMTP may change as a result of further enhancements to the design. This may lead to changes in the economic impacts presented in this report.

Economic impact analysis is a useful component in decision making since it estimates the economic impacts of project expenditures. However, to understand the complete costs and benefits of a project the entire business case for the project must be considered.

Section 1.3 of this report provides the potential economic impact details of the MMTP on the Province of Manitoba. Appendix 1A and 1B provided similar detail for the rest of Canada (excluding Manitoba) and for all of Canada, respectively.

1.2 Methodology

Assessing economic impacts of the construction and subsequent operation of the MMTP project involves estimating (1) direct expenditures that would be made by entities within Manitoba or Canada, and (2) the secondary impacts that would be expected to result from these direct expenditures. The economic modeling framework used for estimating these economic impacts is the Manitoba Bureau of Statistics' Input-Output model. The model is based on statistical information about the flow of goods and services among various sectors of Manitoba's economy. In effect, it allows one to trace the demands placed on one industry resulting from increased activity in another. Thus the model provides estimates of direct, indirect, and induced impacts of the proposed MMTP project on the economy of Manitoba or Canada. In summary, economic impact analysis refers to three different types of impacts:

- **Direct.** These are the impacts of the initial project expenditures. On-site direct employment of Manitoba Hydro and contractor employees which is directly generated by the project is included.
- **Indirect.** These are the impacts that are created through increased sales for suppliers to the direct activity. For example, direct expenditures on transmission line towers will create an indirect increase in spending on transportation fuel and transportation repair services.
- **Induced.** These are impacts that are created by additional income and profits earned by workers and company owners associated with the project directly or indirectly. This additional income leads to more spending on food, housing, entertainment, transportation, and all of the other expenses that make up a typical household budget.

In determining the economic impact, there are two major purchasing categories considered: local purchases and non-local purchases. Non-local purchases represent a leakage or loss to a local economy.

The results of economic impact analysis are reported with the following data:

- **Employment.** This is a straightforward measure of the number of person-years of employment (full-time job equivalents) that are generated by the project, including direct employment, indirect employment with suppliers to the main project, and induced employment that is associated with the extra spending by households. A person-year of employment is defined as one full-time job for one year, typically about 2,000 hours of work.

- **Labour Income.** This is the additional income earned by workers as a result of the project. It is the sum of wages, supplementary labour income, and net income of unincorporated business. Any or all of these may be present in the direct expenditures and resultant direct, indirect, and induced impacts.
- **Gross Domestic Product (GDP).** Also referred to as “value-added,” GDP represents the additional value of production that is generated by the project after removing the cost of intermediate inputs. For the purpose of this analysis, GDP at market price is reported. GDP at market price is a measure of the total value of goods and services produced in the economy.
- **Tax Revenue.** Tax revenue is calculated for all three levels of government – federal, provincial, and local.

Key economic impacts resulting from the MMTP project are presented in the sections that follow. The construction phase impacts indicate the cumulative employment, labour income, GDP, and tax revenue impacts generated over the entire construction period. The operation and maintenance phase impacts indicate the annual impacts generated for a typical year of operation when the project is at full production.

1.3 Potential Economic Impacts on Manitoba

1.3.1 Construction Phase

Total expenditures during the construction phase are estimated to be \$211.8 million. The majority, \$110.7 million, is estimated to be spent outside the province (mainly on specialized equipment such as steel towers and converters). The remaining \$101.1 million are assumed to be spent within the province and are estimated to yield the impacts set out in Table 1-1 and Figure 1-1.

Table 1-1 Economic Impact on Manitoba – Construction Phase^{1,2}

	Construction Phase		
	Transmission Line	Transmission Station	Total
Employment (person-years)			
Project Direct	65	59	124
Other Direct ³	97	24	121
Indirect and Induced	171	88	259
<i>Total Employment (person-years)</i>	<i>333</i>	<i>171</i>	<i>504</i>
Labour Income (\$ millions)	\$21.4	\$13.9	\$35.3
GDP (\$ millions) ⁴	\$32.2	\$17.6	\$49.8
Tax Revenues (\$ millions) ⁵			
Provincial	\$9.9	\$6.3	\$16.2
Local	\$1.8	\$0.5	\$2.3
Federal	\$6.7	\$4.3	\$11.0
<i>Total Tax Revenue (\$ millions)</i>	<i>\$18.4</i>	<i>\$11.1</i>	<i>\$29.4</i>

NOTES:

¹ Figures may not add to total, due to rounding.

² In 2014 dollars.

³ Employment of suppliers to support the main project and other jobs created by additional spending by households.

⁴ GDP at market price is the total value of goods and services produced in Manitoba's economy.

⁵ Tax revenue estimates are based on 2013-14 Manitoba Budget and 2010 income tax data adjusted to 2014 rates.

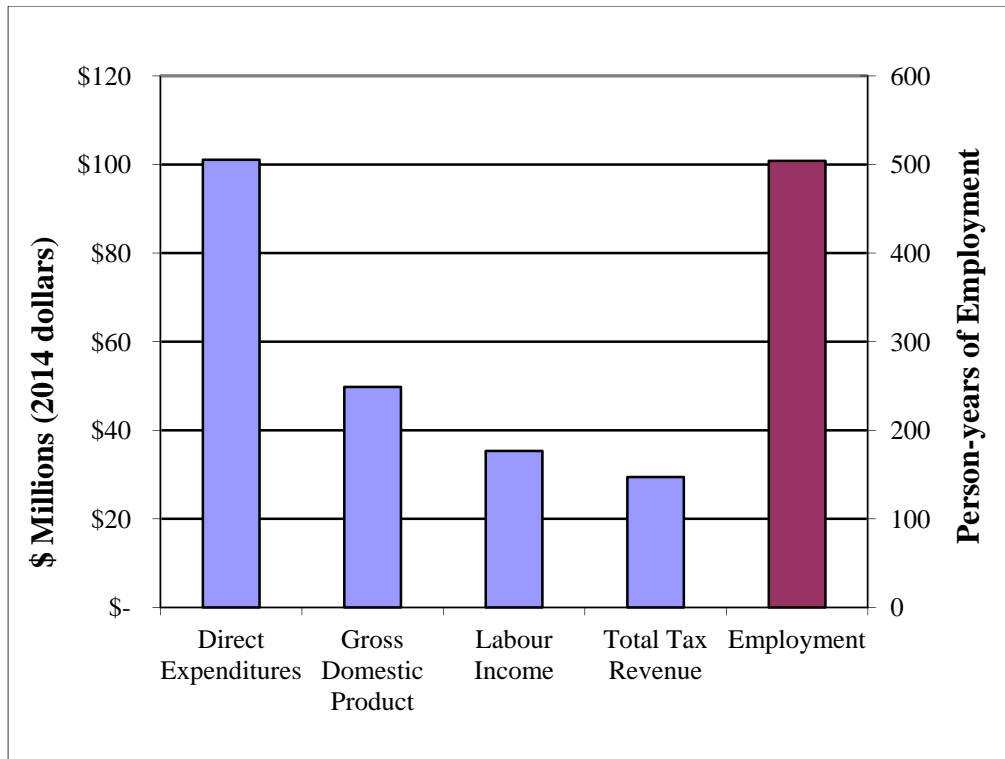


Figure 1-1 Economic Impact on Manitoba – Construction Phase

1.3.1.1 Employment

The major economic benefit of the project is from construction. Total provincial employment impacts from the construction phase of the MMTP project are estimated at 504 person-years. For every \$1 million direct capital expenditure in Manitoba, the MMTP project is expected to generate 5 person-years of employment.

1.3.1.2 Labour Income

The total provincial labour income impacts from the construction phase of the MMTP project are estimated at \$35.3 million. For every \$1 million direct capital expenditure in Manitoba, labour income impact in the province is estimated at \$0.3 million for the MMTP project.

1.3.1.3 Gross Domestic Product

Total provincial impacts due to GDP at market price from the construction phase of MMTP project are estimated at \$49.8 million. For every \$1 million direct capital expenditure in Manitoba, the GDP impact in the province is estimated at \$0.5 million for the MMTP project.

1.3.1.4 Tax Revenue

Provincial, local, and federal tax revenues generated in Manitoba are estimated at \$29.4 million from the construction of the transmission line and station upgrades. As shown in Figure 1-2, this is comprised of \$16.2 million in provincial, \$2.3 million in local, and \$11.0 million in federal taxes.

For every \$1 million direct capital expenditure in Manitoba, the tax revenue impacts are estimated at \$0.2 million at the provincial, \$0.02 million at the local, and \$0.1 million at the federal levels for the MMTP project.

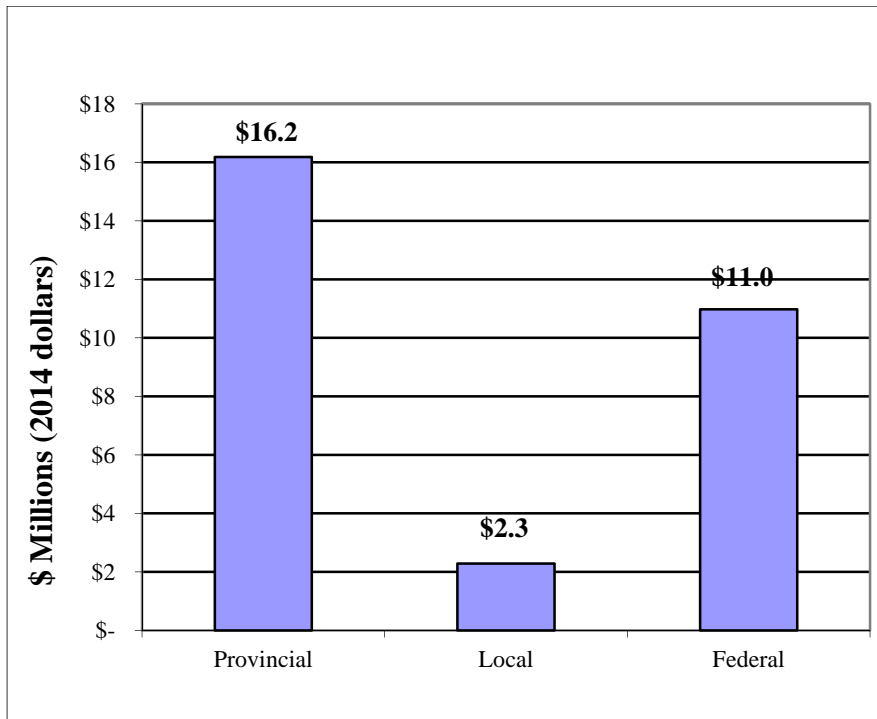


Figure 1-2 Tax Revenue – Construction Phase

1.3.2 Operational Phase

Average annual expenditures during the operational phase associated with the transmission line are estimated at \$189,000. Approximately ninety-seven per cent (97%) of the total annual expenditures are assumed to be direct expenditures in Manitoba. Cost estimates for the future operating and maintenance associated with the upgrades to the transmission stations are not available. It is expected incremental staff will not be required for the station upgrades, and therefore, there will be no additional labour costs. Table 1-2 and Figure 1-3 provide the detailed economic impacts during the operational phase of the project.

Table 1-2 Economic Impact on Manitoba – Operational Phase^{1,2}

	Operations – per Year		
	Transmission Line	Transmission Station	Total
Employment (person-years)			
Project Direct	1.0	--	1.0
Other Direct ³	0.2	--	0.2
Indirect and Induced	0.8	--	0.8
<i>Total Employment (person-years)</i>	<i>2.0</i>	<i>--</i>	<i>2.0</i>
Labour Income (\$ 000s)	\$140	--	\$140
GDP (\$ 000s) ⁴	\$171	--	\$171
Tax Revenues (\$ 000s) ⁵			
Provincial ⁶	\$1,174	--	\$1,174
Local	\$5	--	\$5
Federal	\$27	--	\$27
<i>Total Tax Revenue (\$ 000s)</i>	<i>\$1,206</i>	<i>--</i>	<i>\$1,206</i>

NOTES:

¹ Figures may not add to total, due to rounding.

² In 2014 dollars.

³ Employment of suppliers to support the main project and other jobs created by additional spending by households.

⁴ GDP at market price is the total value of goods and services produced in Manitoba's economy.

⁵ Tax revenue estimates are based on 2013-14 Manitoba Budget and 2010 income tax data adjusted to 2014 rates.

⁶ Estimates associated with annual corporation capital tax revenue are included in the provincial tax revenues.

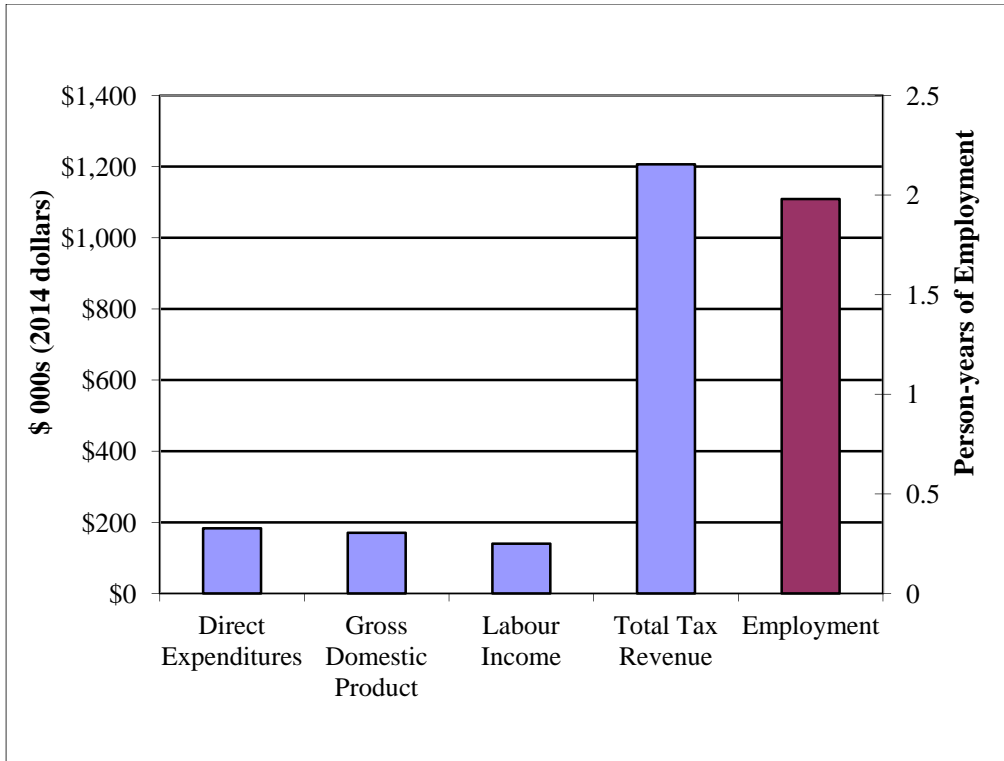


Figure 1-3 Economic Impact on Manitoba – Operational Phase

1.3.3 Summary of Manitoba Economic Impacts

Table 1-3 provides the overall impacts of the MMTP project in Manitoba.

Table 1-3 Manitoba Economic Impacts of MMTP Project^{1,2}

	Transmission Line		Transmission Station		Total Project	
	Construction (total)	Operations (per year)	Construction (total)	Operations (per year)	Construction (total)	Operations (per year)
Employment (person-years)						
Project Direct	65	1.0	59	--	124	1.0
Other Direct ³	97	0.2	24	--	121	0.2
Indirect and Induced	171	0.8	88	--	259	0.8
<i>Total Employment (person-years)</i>	<i>333</i>	<i>2.0</i>	<i>171</i>	<i>--</i>	<i>504</i>	<i>2.0</i>
Labour Income (\$000s)	\$21,423	\$140	\$13,887	--	\$35,310	\$140
GDP (\$ 000s) ⁴	\$32,211	\$171	\$17,551	--	\$49,762	\$171
Tax Revenues (\$ 000s) ⁵						
Provincial ⁶	\$9,921	\$1,174	\$6,262	--	\$16,183	\$1,174
Local	\$1,767	\$5	\$519	--	\$2,286	\$5
Federal	\$6,670	\$27	\$4,304	--	\$10,974	\$27
<i>Total Tax Revenue (\$ 000s)</i>	<i>\$18,359</i>	<i>\$1,206</i>	<i>\$11,085</i>	<i>--</i>	<i>\$29,444</i>	<i>\$1,206</i>

NOTES:

¹ Figures may not add to total, due to rounding.

² In 2014 dollars.

³ Employment of suppliers to support the main project and other jobs created by additional spending by households.

⁴ GDP at market price is the total value of goods and services produced in Manitoba's economy.

⁵ Tax revenue estimates are based on 2013-14 Manitoba Budget and 2010 income tax data adjusted to 2014 rates.

⁶ Estimates associated with annual corporation capital tax revenue are included in the provincial tax revenues associated with the operational phase.

Appendix 1A

Potential Economic Impacts to Rest of Canada

1A Potential Economic Impacts to Rest of Canada

1A.1 Construction Phase

During the construction phase, \$10.0 million are estimated to be spent in rest of Canada, excluding Manitoba, and are estimated to yield the impacts set out in Table 1A-1 and Figure 1A-1.

Table 1A-1 Economic Impact on Rest of Canada – Construction Phase^{1,2}

	Construction Phase		
	Transmission Line	Transmission Station	Total
Employment (person-years) ³			
Project Direct ⁴	0	0	0
Other Direct ⁵	105	15	120
Indirect and Induced ⁶	248	79	327
<i>Total Employment (person-years)</i>	<i>353</i>	<i>94</i>	<i>447</i>
Labour Income (\$ millions) ⁷	\$14.6	\$3.8	\$18.4
GDP (\$ millions) ⁸	\$22.4	\$6.2	\$28.6
Tax Revenues (\$ millions) ⁹			
Provincial	\$5.0	\$1.0	\$6.0
Local	\$1.2	\$0.2	\$1.5
Federal	\$6.2	\$3.3	\$9.4
<i>Total Tax Revenue (\$ millions)</i>	<i>\$12.4</i>	<i>\$4.5</i>	<i>\$16.9</i>

NOTES:

¹ Figures may not add to total, due to rounding.

² In 2014 dollars.

³ Employment impacts are in “person-years.” A person-year of employment is defined as one full-time job for one year, typically about 2,000 hours of work.

⁴ On-site direct employment of Manitoba Hydro and contractor employees which is directly generated by the project.

⁵ Employment of suppliers to support the main project and other jobs created by additional spending by households.

⁶ Indirect employment refers to the employment of people who supply raw materials, equipment, or services to the initial direct suppliers to the project.

⁷ Labour income is the sum of wages, supplementary labour income, and net income of unincorporated business. Any or all of these may be present in the direct expenditures and resultant direct, indirect, and induced impacts.

⁸ GDP at market price is the total value of goods and services produced in Manitoba’s economy.

⁹ Tax revenue estimates are based on 2013-14 Manitoba Budget and 2010 income tax data adjusted to 2014 rates.

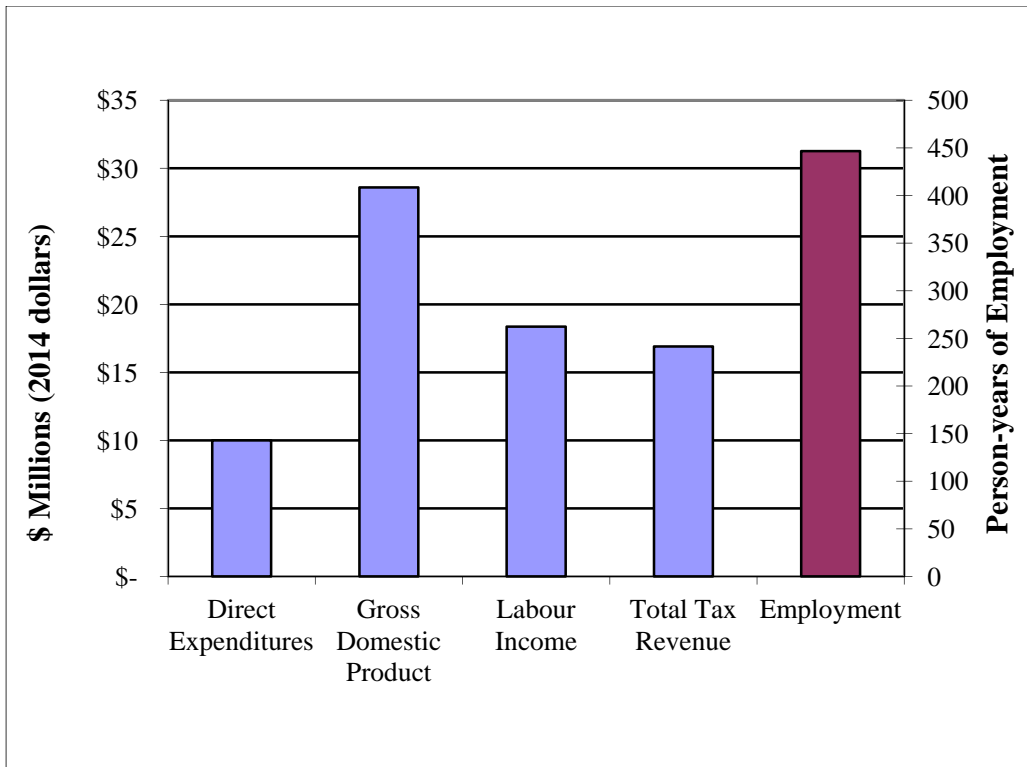


Figure 1A-1 Economic Impact on Rest of Canada – Construction Phase

1A.2 Operational Phase

During the operations and maintenance phase, \$4,000 is estimated to be spent annually in the Rest of Canada, outside of Manitoba, and is estimated to yield the impacts set out in Table 1A-2 and Figure 1A-2.

Table 1A-2 Economic Impact on Rest of Canada – Operational Phase^{1,2}

	Operations – per Year		
	Transmission Line	Transmission Station	Total
Employment (person-years) ³			
Project Direct ⁴	0	--	0
Other Direct ⁵	0.1	--	0.1
Indirect and Induced ⁶	0.6	--	0.6
<i>Total Employment (person-years)</i>	<i>0.7</i>	<i>--</i>	<i>0.7</i>
Labour Income (\$ 000s) ⁷	\$26	--	\$26
GDP (\$ 000s) ⁸	\$42	--	\$42
Tax Revenues (\$ 000s) ⁹			
Provincial	\$6.3	--	\$6.3
Local	\$1.6	--	\$1.6
Federal	\$6.7	--	\$6.7
<i>Total Tax Revenue (\$ 000s)</i>	<i>\$14.6</i>	<i>--</i>	<i>\$14.6</i>

NOTES:

¹ Figures may not add to total, due to rounding.

² In 2014 dollars.

³ Employment impacts are in “person-years.” A person-year of employment is defined as one full-time job for one year, typically about 2,000 hours of work.

⁴ On-site direct employment of Manitoba Hydro and contractor employees which is directly generated by the project.

⁵ Employment of suppliers to support the main project and other jobs created by additional spending by households.

⁶ Indirect employment refers to the employment of people who supply raw materials, equipment, or services to the initial direct suppliers to the project.

⁷ Labour income is the sum of wages, supplementary labour income, and net income of unincorporated business. Any or all of these may be present in the direct expenditures and resultant direct, indirect, and induced impacts.

⁸ GDP at market price is the total value of goods and services produced in Manitoba’s economy.

⁹ Tax revenue estimates are based on 2013-14 Manitoba Budget and 2010 income tax data adjusted to 2014 rates.

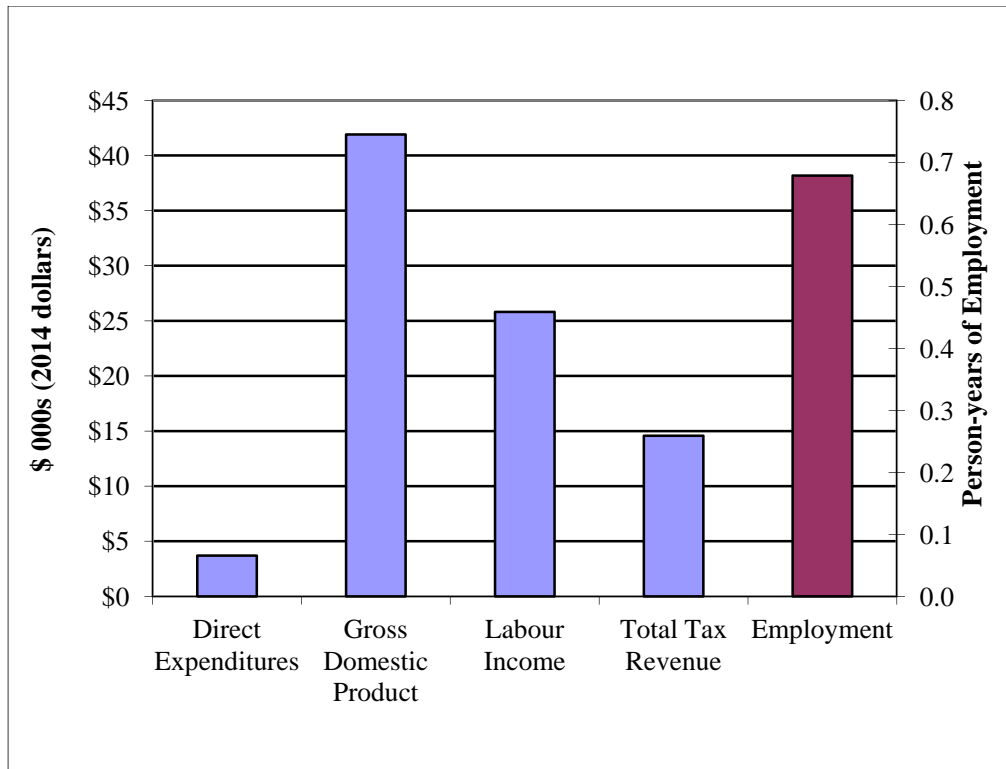


Figure 1A-2 Economic Impact on Rest of Canada – Operational Phase

1A.3 Summary of Economic Impacts to Rest of Canada

Table 1A-3 provides the overall impacts of the MMTP project in the Rest of Canada.

Table 1A-3 Rest of Canada Economic Impacts of MMTP Project^{1,2}

	Transmission Line		Transmission Station		Total Project	
	Construction (total)	Operations (per year)	Construction (total)	Operations (per year)	Construction (total)	Operations (per year)
Employment (person-years) ³						
Project Direct ⁴	0	0	0	--	0	0
Other Direct ⁵	105	0.1	15	--	120	0.1
Indirect and Induced ⁶	248	0.6	79	--	327	0.6
<i>Total Employment (person-years)</i>	<i>353</i>	<i>0.7</i>	<i>94</i>	<i>--</i>	<i>447</i>	<i>0.7</i>
Labour Income (\$000s) ⁷	\$14,586	\$26	\$3,774	--	\$18,360	\$26
GDP (\$ 000s) ⁸	\$22,373	\$42	\$6,217	--	\$28,590	\$42
Tax Revenues (\$ 000s) ⁹						
Provincial	\$4,978	\$6.3	\$1,013	--	\$5,991	\$6.3
Local	\$1,218	\$1.6	\$248	--	\$1,465	\$1.6
Federal	\$6,193	\$6.7	\$3,257	--	\$9,449	\$6.7
<i>Total Tax Revenue (\$ 000s)</i>	<i>\$12,388</i>	<i>\$14.6</i>	<i>\$4,517</i>	<i>--</i>	<i>\$16,906</i>	<i>\$14.6</i>

NOTES:

¹ Figures may not add to total, due to rounding.

² In 2014 dollars.

³ Employment impacts are in "person-years." A person-year of employment is defined as one full-time job for one year, typically about 2,000 hours of work.

⁴ On-site direct employment of Manitoba Hydro and contractor employees which is directly generated by the project.

⁵ Employment of suppliers to support the main project and other jobs created by additional spending by households.

⁶ Indirect employment refers to the employment of people who supply raw materials, equipment, or services to the initial direct suppliers to the project.

⁷ Labour income is the sum of wages, supplementary labour income, and net income of unincorporated business. Any or all of these may be present in the direct expenditures and resultant direct, indirect, and induced impacts.

⁸ GDP at market price is the total value of goods and services produced in Manitoba's economy.

⁹ Tax revenue estimates are based on 2013-14 Manitoba Budget and 2010 income tax data adjusted to 2014 rates.

Appendix 1B

Potential Economic Impacts to All of Canada

1B Potential Economic Impacts to All of Canada

1B.1 Construction Phase

During the construction phase, \$111.1 million are estimated to be spent in all of Canada, and are estimated to yield the impacts set out in Table 1B-1 and Figure 1B-1.

Table 1B-1 Economic Impact on All of Canada – Construction Phase^{1,2}

	Construction Phase		
	Transmission Line	Transmission Station	Total
Employment (person-years) ³			
Project Direct ^{4,5}	65	59	124
Other Direct ⁶	202	38	241
Indirect and Induced ⁷	419	167	586
<i>Total Employment (person-years)</i>	<i>686</i>	<i>265</i>	<i>951</i>
Labour Income (\$ millions) ⁸	\$36.0	\$17.7	\$53.7
GDP (\$ millions) ⁹	\$54.6	\$23.8	\$78.4
Tax Revenues (\$ millions) ¹⁰			
Provincial	\$14.9	\$7.3	\$22.2
Local	\$3.0	\$0.8	\$3.8
Federal	\$12.9	\$7.6	\$20.4
<i>Total Tax Revenue (\$ millions)</i>	<i>\$30.7</i>	<i>\$15.6</i>	<i>\$46.3</i>

NOTES:

¹ Figures may not add to total, due to rounding.

² In 2014 dollars.

³ Employment impacts are in “person-years.” A person-year of employment is defined as one full-time job for one year, typically about 2,000 hours of work.

⁴ On-site direct employment of Manitoba Hydro and contractor employees which is directly generated by the project.

⁵ Direct employment related to direct suppliers (i.e., contractors) from outside of Manitoba

⁶ Employment of suppliers to support the main project and other jobs created by additional spending by households.

⁷ Indirect employment refers to the employment of people who supply raw materials, equipment, or services to the initial direct suppliers to the project.

⁸ Labour income is the sum of wages, supplementary labour income, and net income of unincorporated business. Any or all of these may be present in the direct expenditures and resultant direct, indirect, and induced impacts.

⁹ GDP at market price is the total value of goods and services produced in Manitoba's economy.

¹⁰ Tax revenue estimates are based on 2013-14 Manitoba Budget and 2010 income tax data adjusted to 2014 rates.

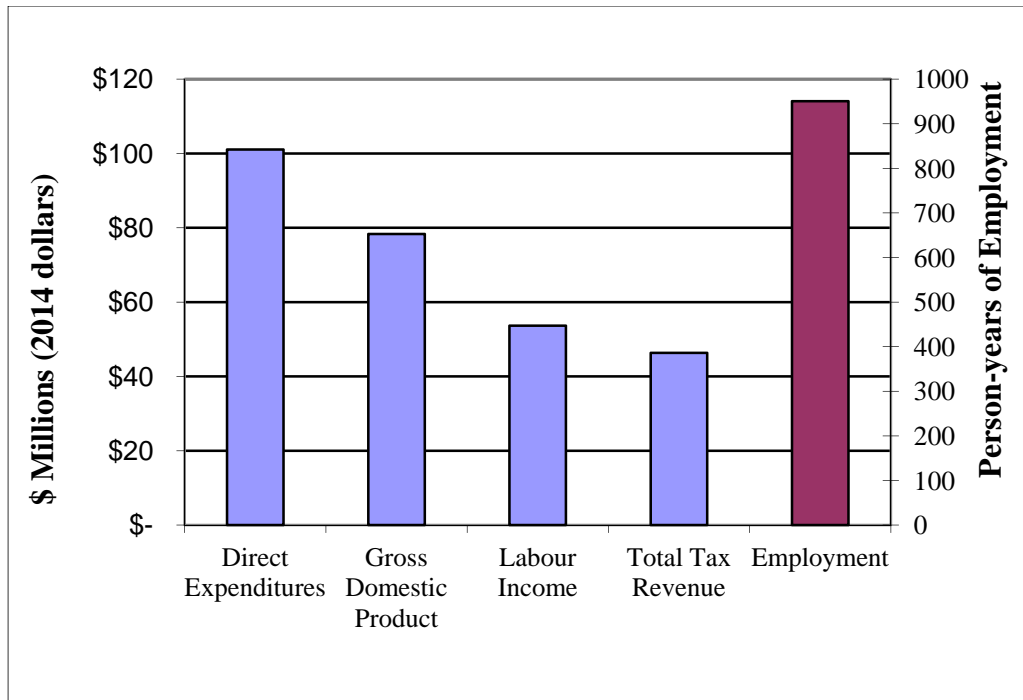


Figure 1B-1 Economic Impact on All of Canada – Construction Phase

1B.2 Operational Phase

During the operations and maintenance phase, \$187,000 is estimated to be spent annually in Canada and are estimated to yield the impacts set out in Table 1B-2 and Figure 1B-2.

Table 1B-2 Economic Impact on All of Canada – Operational Phase^{1,2}

	Operations – per Year		
	Transmission Line	Transmission Station	Total
Employment (person-years) ³			
Project Direct ^{4,5}	1.0	--	1.0
Other Direct ⁶	0.3	--	0.3
Indirect and Induced ⁷	1.4	--	1.4
<i>Total Employment (person-years)</i>	<i>2.7</i>	<i>--</i>	<i>2.7</i>
Labour Income (\$ 000s) ⁸	\$166	--	\$166
GDP (\$ 000s) ⁹	\$212	--	\$212
Tax Revenues (\$ 000s) ¹⁰			
Provincial ¹¹	\$1,181	--	\$1,181
Local	\$7	--	\$7
Federal	\$33	--	\$33
<i>Total Tax Revenue (\$ 000s)</i>	<i>\$1,221</i>	<i>--</i>	<i>\$1,221</i>

NOTES:

¹ Figures may not add to total, due to rounding.

² In 2014 dollars.

³ Employment impacts are in “person-years.” A person-year of employment is defined as one full-time job for one year, typically about 2,000 hours of work.

⁴ On-site direct employment of Manitoba Hydro and contractor employees which is directly generated by the project.

⁵ Direct employment related to direct suppliers (i.e., contractors) from outside Manitoba

⁶ Employment of suppliers to support the main project and other jobs created by additional spending by households.

⁷ Indirect employment refers to the employment of people who supply raw materials, equipment, or services to the initial direct suppliers to the project.

⁸ Labour income is the sum of wages, supplementary labour income, and net income of unincorporated business. Any or all of these may be present in the direct expenditures and resultant direct, indirect, and induced impacts.

⁹ GDP at market price is the total value of goods and services produced in Manitoba's economy.

¹⁰ Tax revenue estimates are based on 2013-14 Manitoba Budget and 2010 income tax data adjusted to 2014 rates.

¹¹ Estimates associated with annual corporation capital tax revenue are included in the Provincial tax revenues.

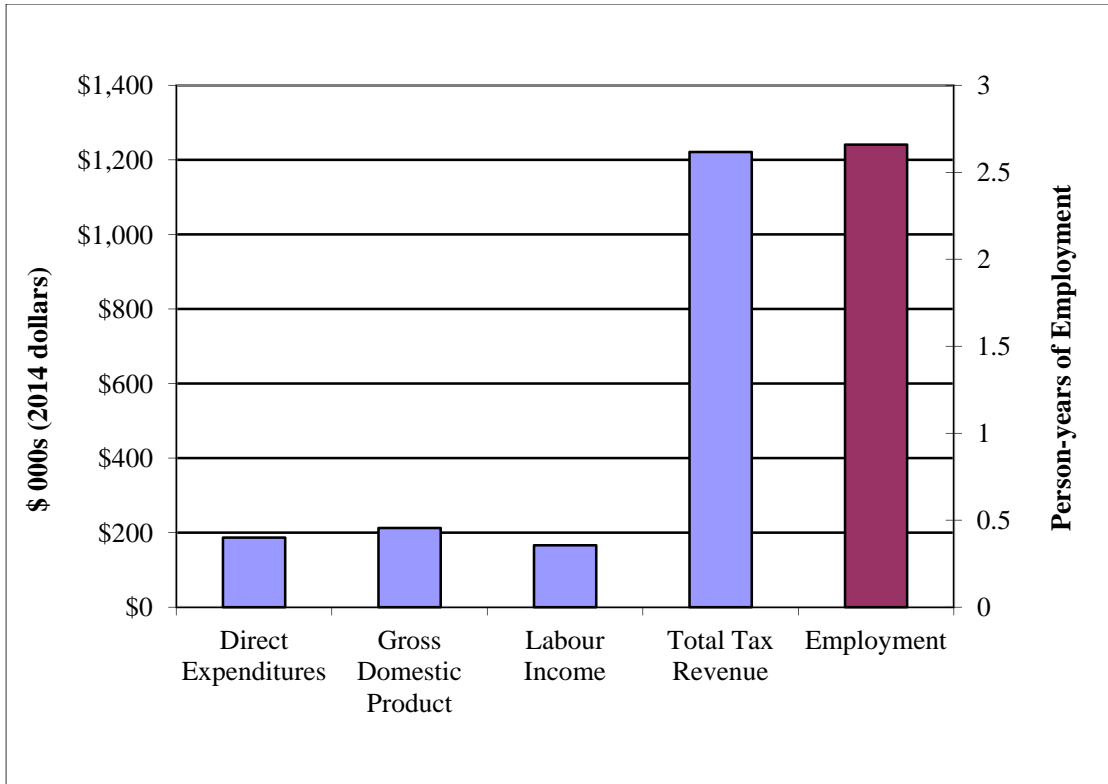


Figure 1B-2 Economic Impact on All of Canada – Operational Phase

1B.3 Summary of Economic Impacts to all of Canada

Table 1B-3 provides the overall impacts of the MMTP project in All of Canada.

Table 1B-3 Canada Economic Impacts of MMTP Project^{1,2}

	Transmission Line		Transmission Station		Total Project	
	Construction (total)	Operations (per year)	Construction (total)	Operations (per year)	Construction (total)	Operations (per year)
Employment (person-years) ³						
Project Direct ^{4,5}	65	1.0	59	--	124	1.0
Other Direct ⁶	202	0.3	38	--	241	0.3
Indirect and Induced ⁷	419	1.4	167	--	586	1.4
<i>Total Employment (person-years)</i>	<i>686</i>	<i>2.7</i>	<i>265</i>	<i>--</i>	<i>951</i>	<i>2.7</i>
Labour Income (\$000s) ⁸	\$36,010	\$166	\$17,661	--	\$53,671	\$166
GDP (\$ 000s) ⁹	\$54,584	\$212	\$23,768	--	\$78,352	\$212
Tax Revenues (\$ 000s) ¹⁰						
Provincial ¹¹	\$14,899	\$1,181	\$7,275	--	\$22,147	\$1,181
Local	\$2,985	\$7	\$767	--	\$3,752	\$7
Federal	\$12,863	\$33	\$7,561	--	\$20,423	\$33
<i>Total Tax Revenue (\$ 000s)</i>	<i>\$30,747</i>	<i>\$1,221</i>	<i>\$15,602</i>	<i>--</i>	<i>\$46,349</i>	<i>\$1,221</i>

NOTES:

¹ Figures may not add to total, due to rounding.

² In 2014 dollars.

³ Employment impacts are in "person-years." A person-year of employment is defined as one full-time job for one year, typically about 2,000 hours of work.

⁴ On-site direct employment of Manitoba Hydro and contractor employees.

⁵ Direct employment related to direct suppliers (i.e., contractors) from outside Manitoba.

⁶ Employment of suppliers to support the main project and other jobs created by additional spending by households.

⁷ Indirect employment refers to the employment of people who supply raw materials, equipment, or services to the initial direct suppliers to the project.

⁸ Labour income is the sum of wages, supplementary labour income, and net income of unincorporated business. Any or all of these may be present in the direct expenditures and resultant direct, indirect, and induced impacts.

⁹ GDP at market price is the total value of goods and services produced in Manitoba's economy.

¹⁰ Tax revenue estimates are based on 2013-14 Manitoba Budget and 2010 income tax data adjusted to 2014 rates.

¹¹ Estimates associated with annual corporation capital tax revenue are included in the Provincial tax revenues associated with the operational phase.