AN ECONOMIC IMPACT ANALYSIS OF SUNCOR’S
MONTREAL REFINERY IN MONTREAL AND QUEBEC

Prepared for
Suncor Energy

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About Groupe d’analyse, Ltée

Groupe d’analyse, Ltée is the Canadian office of Analysis Group, Inc., a leading economic, financial, and business strategy consulting firm with more than 550 professionals in 11 offices in North America and internationally in Beijing. The Montreal office specializes in engagements that require strong analytical and statistical capabilities. We frequently deliver modeling and statistical analyses led by prominent Canadian and American academics, including French-speaking experts. In recent years, our economists and statisticians have been involved in several highly technical and data-intensive cases that have required both extensive theoretical modeling and comprehensive statistical analyses.

Groupe d’analyse also offers consulting services in strategy and expertise on matters of litigation, public policy, financial economics, health economics and program evaluation. We have played a leading role in many complex litigation matters involving finance, competition, commercial litigation, and patent infringements. Our reports have often been presented before parliamentary committees in Quebec and Ottawa, North American courts, regulators and the media.

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This report was commissioned by Suncor Energy, Inc. but the opinions expressed herein are exclusively those of the authors. Marc Van Audenrode, Lisa Pinheiro and Anne Catherine Faye, are employees of Groupe d’analyse in Montreal, Canada. To request further information or provide comments, Dr. Van Audenrode can be reached at mvanaudenrode@analysisgroup.com.
EXECUTIVE SUMMARY

Suncor’s Montreal refinery is the last refinery in the East Montreal region, once a major North American refining hub reliant on foreign crude oil. The refinery currently has the capacity of processing crude oil into 137,000 barrel-per-day of a broad range of petroleum and petrochemical products. Over recent years, the refinery has been consistently operating at or near capacity to accommodate demand for petroleum products while facing stricter environmental regulations with respect to emissions and fuel quality and market pressures from higher-cost imported crude oil. In order to meet high energy, environment, labour and maintenance requirements, Suncor’s Montreal refinery has to remain competitive with strategies involving capacity expansion and cost reduction.

This is particularly important in a context where only two refineries operate in Quebec and where the global economic performance of the province has been lagging that of the rest of Canada over the past years. Similarly, Montreal’s economic growth has underperformed that of most major Canadian metropolitan areas for several years. With an anticipated economic growth of just 1.7 per cent for 2013 compared to 2.1 per cent in Quebec City and 2.8 per cent in Toronto, Montreal’s economic outlook remains modest. However, Montreal can look to industrial clusters, including that of the refining and petrochemical industry, to improve its economic performance and subsequently the Quebec economy.

In response to new developments and increased attention to the Quebec Energy industry, Suncor Energy has asked Dr. Marc Van Audenrode and Analysis Group to assess the impact of Suncor’s Montreal refinery in Quebec and the Montreal region. The current study measures the direct and indirect impacts as well as the induced economic spinoffs associated with the operation and management of Suncor’s Montreal refinery. These different economic impacts are measured in the form of value added or gross domestic product, employment generated, and tax revenue contribution. In addition, this study discusses the importance of the refining sector to the economy particularly with regards
to the petrochemical industry, security of oil supply, and consequently the sector’s imperative need to remain competitive.

Using Statistics Canada Interprovincial Input-Output Model as a basis, an Input-Output algorithm is developed to simulate the macroeconomic impact of Suncor’s Montreal refinery on the economies of Montreal and Quebec. This impact is divided in three distinct types: i) the direct economic impacts relating to employment resulting from the operation and management of Suncor’s Montreal refinery; ii) the indirect economic impacts relating to the economic benefits realized by suppliers of Suncor’s Montreal refinery; iii) and the induced economic impacts resulting from expenditures by individuals employed directly or indirectly by firms benefitting from the direct and indirect economic impacts. The results of this study are based on a review of Suncor’s Montreal refinery operations in 2012 and data from Statistics Canada and Canada Revenue Agency.

The direct impacts associated with Suncor’s Montreal refinery include 128 and 416 direct person years of employment residents of Montreal and Quebec, respectively. These employees earn over $41 million in annual wages and salaries. The annual direct impact of this employment amounts to $16.3 million and $57.5 million in gross domestic product on the economies of Montreal and Quebec, respectively.

<table>
<thead>
<tr>
<th>Highlights</th>
<th>Montreal</th>
<th>Quebec</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Economic Impacts</strong></td>
<td></td>
<td></td>
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<tr>
<td>Direct Person Years of Employment</td>
<td>128</td>
<td>416</td>
</tr>
<tr>
<td>Total Person Years of Employment</td>
<td>921</td>
<td>2,480</td>
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<tr>
<td>Direct Wages and Salaries</td>
<td>$11,387,922</td>
<td>$41,397,408</td>
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<tr>
<td>Total Wages and Salaries</td>
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<td>$116,869,730</td>
</tr>
<tr>
<td>Direct Gross Domestic Product</td>
<td>$16,273,055</td>
<td>$57,529,969</td>
</tr>
<tr>
<td>Total Gross Domestic Product</td>
<td>$81,448,139</td>
<td>$229,905,055</td>
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The economic impact of Suncor’s Montreal refinery extends beyond its facilities since other industries in Montreal and surrounding regions supply it with goods and services.
The economic activity of suppliers to Suncor’s Montreal refinery generates indirect economic impacts while spending by direct and indirect employees of Suncor’s Montreal refinery and related businesses generates induced economic impacts in the wider economy. The total impact of Suncor’s Montreal refinery is calculated by combining the direct, indirect, and induced economic impacts.

On-going operations at Suncor’s Montreal refinery generate total impacts of 921 and 2,480 person-years of employment in Montreal and Quebec, respectively, and $230 million in gross domestic product in Quebec. Furthermore, Suncor’s Montreal refinery is an important tax contributor to all levels of government with annual tax contributions reaching $26.8 million for the federal government and $28.3 million for the provincial government.

This study shows that Suncor’s Montreal refinery generates significant economic benefits to the Montreal region and Quebec. An increase in the refinery’s activity contributes to Quebec’s overall economic growth. Further to providing fuels to consumers and businesses for transportation and the manufacturing of consumer products, the refining sector is vital to many industries particularly to the petrochemical industry. In Eastern Montreal, the unique production line of polyester consists of three petrochemical businesses entirely reliant on feedstock from Suncor’s Montreal refinery. In addition, the refining sector is an important contributor to energy security, a driver of economic resilience. As such, Suncor’s Montreal refinery will benefit from greater stability by reducing its reliance on pricier foreign offshore oil and remaining competitive in face of changing economic and market conditions. Potential avenues for competitiveness are discussed in this report. For instance, Enbridge’s Line 9B Reversal Project can provide a direct boost in refining and petrochemical activities which can result in additional economic impacts in terms of more employment, significant tax benefits, and greater overall economic output to the benefit of Montreal and Quebec’s economies.

Suncor’s refinery is an important economic contributor to the economies of Montreal, Quebec and Canada. Maintaining the viability and competitiveness of Suncor’s refinery is essential for the preserving of:
- Hundreds of well-paid jobs;
- An important source of value added;
- Readily available feedstock for manufacturing businesses;
- Considerable tax revenues for the provincial and national government; and
- Energy and economic security.
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1. Introduction

A. Background

Suncor’s Montreal refinery (Suncor’s refinery) was established in 1955.\(^1\) Since its creation, ownership has changed between corporations. Suncor’s refinery is currently owned and operated by Suncor Energy, a global integrated energy company.

Suncor’s refinery produces gasoline, distillates, asphalts, heavy oil, petrochemicals, solvents and feedstock for lubricants. Its current production capacity is estimated at 137,000 barrels of crude oil per calendar day.\(^2\) As such, Suncor’s refinery accounts for approximately 33% of the refining capacity in Quebec.\(^3\)

Crude oil, the primary raw material, is imported from foreign offshore reserves and transported via ship to Portland, Maine and via pipe to Suncor’s refinery. Final products from Suncor’s refinery are sent to distribution terminals in Ontario via the Trans-Northern pipeline, and delivered by truck or rail to customers including those located in Montreal and surrounding areas and other regions in Quebec.\(^4\)

Suncor’s refinery employs a total of 416 individuals, of whom 31% are residents of Lanaudiere and 30% of Montreal. The total annual earnings of these employees are estimated at $41.4 million. After accounting for associated employment benefits, the total earnings are estimated at $55.9 million. The average yearly earnings of employees at Suncor’s refinery are estimated at $99,513, which is substantially above average earnings of full-year full-time workers in Montreal and Quebec.\(^5,6\)

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\(^3\) Suncor’s refinery is one of two operating refineries in Quebec. The other refinery, Jean-Gaulin refinery (Ultramar Ltd.) is located in Levis, Quebec. The refining capacities of Suncor’s refinery and Jean-Gaulin refinery are 20.7 and 42.1 thousand of cubic metres per day respectively. See Canadian Fuels Association at: [http://canadianfuels.ca/index_e.php?p=65](http://canadianfuels.ca/index_e.php?p=65), Accessed July 12, 2013.


\(^5\) Information provided by Suncor Energy.
After it reached 50 years of age, Suncor’s refinery completed major improvements of its facilities including the refurbishment of the water sprinkler system, renovation of tanks and power of the whole refinery, the gradual replacement of operating equipment and increased automation of processes.⁷ In addition, several millions have been invested in Suncor’s refinery during the past decade, including substantial investments for desulphurization.⁸ Suncor’s refinery is also being integrated with the operations of Suncor’s other three refineries in part for improvement in energy efficiency.⁹ These important works of rejuvenation and renewals of facilities at Suncor’s refinery have helped in increasing the plant’s production capacity and solidified its position as the sole remaining refinery in the Montreal region following several refinery closures over the years.

B. Mandate

Suncor Energy has asked Dr. Van Audenrode and Analysis Group to assess the economic impact of Suncor’s Montreal refinery in Montreal and its surrounding areas and in Quebec. In particular, this assessment is to provide the regional and provincial economic impacts of Suncor’s refinery in terms of employment and labour income, value added or gross domestic product (GDP), and government tax revenue. The report will also discuss the importance for refineries to remain competitive and responsive to rapidly evolving market conditions.

C. Scope of Study and Outline

An economic impact study typically estimates the economic contribution of a policy, a project or an industry on the economy of a given area. This economic contribution is

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⁶ In 2011, the average earnings of full-year full time workers were estimated at $54,400 and $51,000 in Montreal and Quebec, respectively. See Statistics Canada. Table 202-0101 - Distribution of earnings, by sex, 2011 constant dollars, annual, CANSIM (database), Accessed August 14, 2013.


usually measured in terms of the value added or GDP, or additional tax revenues, or person years (full-time equivalents (FTEs)) of employment generated from the policy, project or industry being analysed. Economic impacts can be estimated at the direct, indirect, and induced levels. An economic impact analysis is needed to inform the decision-making process on matters such as the retention or expansion of an existing business or the development of a proposed project. However, an economic impact is not an analysis that weighs benefits against costs.

The current study estimates the economic contribution of Suncor’s refinery on the economies of Montreal and that of Quebec in terms of value added or GDP, employment generated, and additional government tax revenues. The economic benefits resulting from the operations of Suncor’s refinery are measured at the direct, indirect, and induced levels.

The remainder of the report is organized as follows. Section 2 describes the methodology including the definitions, data and the input-output model used in the analysis. Section 3 presents the employment impacts related to the operations of Suncor’s refinery. Section 4 contains the economic impacts associated with the value added or GDP of Montreal and Quebec. Section 5 measures the tax contribution of Suncor’s refinery paid to the provincial and federal levels of government. The total economic impacts of Suncor’s refinery are summarized in Section 6. Finally, Section 7 discusses the contribution of Suncor’s refinery and that of the refining sector in general to the economy and provides a conclusion to the report.

2. Methodology

A. Definitions

This report provides an estimate of the economic impacts of Suncor’s refinery broken down into the following categories:
- **Direct impacts** consist of employment resulting from expenditures associated with the operation and management of Suncor’s refinery;

- **Indirect impacts** result from the suppliers of Suncor’s refinery purchasing goods and services and hiring workers to conduct their business. These indirect impacts would not have occurred but for the demand generated by Suncor’s refinery;

- **Induced impacts** result from purchases of goods and services made by employees working at Suncor’s refinery and employees of suppliers to Suncor’s refinery. These consumer expenditures are estimated at a household level;

- **Total impacts** represent the sum of the direct, indirect, and induced impacts. The multiplier impacts are the sum of the indirect and induced impacts.

The measures used to quantify the economic impacts associated with Suncor’s refinery are:

- **Employment** refers to the number of additional jobs created as a result of expenditures made by Suncor’s refinery. Direct employment includes employees on payroll at Suncor’s refinery while indirect employment is related to the workforce employed by suppliers to Suncor’s refinery. Induced employment refers to all other jobs driving household expenditures;

- **Wages and salaries** refer to earnings of employees of Suncor’s refinery, or employees of suppliers to Suncor’s refinery or other related businesses as indicated;

- **Value added or Gross domestic product** (GDP) is a measure of the incremental value of a good or service produced over the cost of inputs. GDP only includes revenues from value-added production thereby avoiding double-counting of revenues from intermediate goods;

- **Government tax revenues** refer to tax revenues paid to each level of government (provincial and federal) stemming from personal and corporate income.
B. Input-Output Model

An Input-Output (IO) model is a matrix of inputs and outputs useful for calculating the total output by industry required to meet a given final demand expenditure or “shock” (e.g.: new project) in an economy. The IO model in this analysis is based on Statistics Canada Input-Output data consisting of three tables (Input, Output, and Final Demand) with the most detailed accounting of the Canadian economy at the provincial and regional levels updated on an annual basis. At a specific point in time, these tables provide detailed commodity and industry information in terms of dollars and producer prices. The interprovincial model calculates the impacts at the provincial level and the regional model at the census division level within a given province.

The current analysis uses a dynamic IO model that simulates the impact associated with operating Suncor’s refinery which will result in direct, indirect, and induced economic production. Both the interprovincial and regional models comprised of 469 goods and services and 117 industries are used in this analysis for Quebec. An iterative process determines how expenditures by Suncor’s refinery flow entirely within the Canadian economy through numerous monetary transactions between various industries. At different iterative steps, the models first provide an estimate for sales by industry, then determine GDP components and employment by industry, and finally calculate tax revenues for each level of government. The amount of expenditures incurred by Suncor’s refinery flowing through the economy decreases at each iteration step until it is reduced to zero. A set of aggregate impacts is calculated by following the multiplying demand observed through the inter-connection between industries.

An IO model based on Statistics Canada input-output tables is known to have certain limitations. Functions of production are assumed to be in sufficient supply. There is no technological progress or economies of scale. For instance, a doubling of inputs for a given industry will lead to a doubling of its outputs.
C. Data

Data used as inputs to the model consist of operating expenditures for Suncor’s refinery during the 2012 fiscal year. Since estimates from the model are more accurate for well detailed data, expenditures incurred by Suncor’s refinery are broken down at the following level of inputs:

- Physical inputs including expenditures on chemicals, laboratory equipment and supplies, and spare parts and maintenance supplies;
- Services including expenditures on telephone and other communication services, professional services (IT, engineering, accounting, legal, etc.), services to buildings (janitorial, security, snow removal, etc.);
- Construction including expenditures on repair and building construction and oil and gas construction (e.g.: refinery-specific installations).

Anonymous data on the number of employees by salary range and region and the total amount of earnings paid to employees of Suncor’s refinery by region are also used as inputs to the model. Information related to Suncor’s refinery is provided by Suncor Energy. Additional data on industry averages are retrieved from Statistics Canada and the Canada Revenue Agency to support expenditures data in the model. All financial values are reported in 2012 Canadian dollars.

3. Impact on Employment

Person years of employment are reported and considered as full-time equivalents. Exhibit 1 presents a heat map of total person years of employment in Quebec. Regions are color-coded based on their number of person years of employment so that the darker the colour the higher the employment in the region resulting from Suncor’s refinery. The total economic impact on employment attributed to Suncor’s refinery is mostly located in Montreal, Monteregie, Laval and Lanaudiere.
A. Direct Employment and Wages

The direct impacts consist of employment generated within Suncor’s refinery as a result of its on-going operations. Direct employment related to on-going operations at Suncor’s refinery amounts to 128 person years of employment in Montreal and 416 person years of employment in Quebec (See Exhibit 2). These direct person years of employment attributable to Suncor’s refinery generate a total of $41.4 million in direct wages and salaries in Quebec (See Exhibit 3).

B. Indirect Employment

Several industries of the economies of Montreal and Quebec are dependent on business generated by Suncor’s refinery. Indirect employment consists of employment at industries in Montreal and surrounding regions that supply goods and services to Suncor’s refinery. Using Statistics Canada interprovincial input-output model and Quebec employment impact multiplier, a total of 503 and 1,257 person years are estimated for indirect employment related to Suncor’s refinery for Montreal and Quebec, respectively (See Exhibit 2). Wages and salaries associated with the total indirect employment are estimated at $51.1 million in Quebec (See Exhibit 3).

C. Induced Employment

Expenditures made by direct and indirect employees create a demand for businesses in Montreal and surrounding regions. Induced employment results from the demand for goods and services generated by direct and indirect employees spending their wages and salaries earned because of on-going operations at Suncor’s refinery. A total of 290 and 807 person years of induced employment is attributable to Suncor’s refinery in Montreal and Quebec, respectively (See Exhibit 2). Wages and salaries associated with the total induced employment are estimated at $24.4 million in Quebec (See Exhibit 3).
D. Overall Employment by Industry

Total employment refers to the sum of direct, indirect, and induced employment generated by on-going operations at Suncor’s refinery. Overall person years of employment are estimated at 921 in Montreal and 2,480 in Quebec. On-going operations at Suncor’s refinery mostly generate employment in the manufacturing, trade, construction, or professional, scientific and technical services. About 22% of total persons years of employment have positions in manufacturing industries and 17% in Professional, Scientific & Technical Services industries (See Exhibit 4).

4. Impact on GDP

A. Direct GDP

GDP only measures revenues from value-added production. As such, GDP does not include revenues from suppliers of intermediate goods and services but only revenues from all final goods and services produced within a given economy. GDP avoids double counting of revenues at each stage of production and is a more meaningful measure than economic output, another common measure of economic contribution. Suncor’s refinery operations generate $16.3 million and $57.5 million annually in direct GDP, in Montreal and Quebec, respectively (See Exhibit 5).

B. Overall GDP Impacts

On-going operations at Suncor’s refinery generate $39.8 million in indirect GDP and $25.4 million in induced GDP in the Montreal economy. At the province-wide level, Suncor’s refinery supports up to $103.4 million in indirect GDP and $69.0 million in induced GDP. In total, Suncor’s refinery generates total economic impacts of $81.4 million and $229.9 million in total annual GDP in the economies of Montreal and Quebec, respectively (See Exhibit 5).
5. Impact on Government Tax Revenues

A. Taxes by Level of Government

Additional government revenues result from on-going operations at Suncor’s refinery and related economic activity. Tax revenue contributions are divided into two categories corresponding to taxes paid to the provincial and federal levels of government. In addition, three types of taxes are considered: income taxes, sales tax and other indirect taxes, and taxes on profits.

Tax revenue contributions resulting from Suncor’s refinery to the provincial and federal governments are estimated at a total of $55.1 million.\(^{10}\) The provincial government is the largest recipient of tax revenue, with $28.3 million. In comparison, the federal government receives an annual tax revenue contribution of $26.8 million (See Exhibit 6). At the municipal level, Suncor’s refinery has contributed over $5 million in yearly taxes to the City of Montreal from 2010 to 2013.\(^{11}\)

6. Discussion on Oil Refining Sector

A. Refining Sector Contributes to Stronger Economy

Suncor’s refinery acts as an important economic contributor to regional and provincial gross domestic product and employment in the Montreal area and as an enabler of the economic activity of several other industrial sectors. With only 2 refineries and total operable capacity of nearly 400,000 barrel-per-day, Quebec refineries have to be configured to optimally process crude oils into high quality petrochemical feedstock, fuels and other products adding significant value to Quebec’s economy.

The refining industry is a significant contributor to a stronger economic:

\(^{10}\) Tax revenues are underestimated since calculations exclude tax on profits made by Suncor’s refinery.

\(^{11}\) Information provided by Suncor Energy.
In Quebec, Suncor’s refinery supports hundreds of well-paid jobs and thousands of other highly skilled workers indirectly. In Canada, 17,000 highly skilled workers are employed by 19 refineries;  

Suncor’s refinery contributes up to $230 million annually to Quebec’s GDP while in Canada, a total of 19 refineries contributes $2.5 billion to Canada’s GDP each year;  

Suncor’s refinery contributes over $55 million a year to both the provincial and federal government.

Moreover, refiners including Suncor’s refinery, make significant operational and infrastructure investments. For instance, over the last decade, refineries have invested over $8 billion in order to improve their environmental performance. Suncor’s refinery has contributed approximately $30 million each year since 2008 to the “Fonds Vert du Gouvernement du Quebec”, a special fund dedicated to financing programs on environment and climate change issues.

The economic contribution of Suncor’s refinery is rendered even more important in a context where the relative economic performance of Montreal and Quebec are lagging that of the rest of Canada based on different measures. In 2011, real GDP per capita in constant 2002 dollars amounted to $32,601 in Montreal and $38,783 (+19%) in Toronto. The proportion of persons in low income families in the population amounted to 14.7% in Montreal comparatively to 10.7% in Toronto during 2011. Data from the

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13 Idem  
15 Information provided by Suncor Energy.  
2010 Census indicate that the median income for families was estimated at $67,010 in Montreal compared to $68,110 in Toronto, reflecting a gap of $1,100.\textsuperscript{18} At the provincial level, real GDP grew at an annual average rate of 1.8\% in Quebec compared to 1.9\% in the rest of Canada defined as the difference between Canada and Quebec between 2000 and 2010.\textsuperscript{19} Furthermore, Quebec generated 21.2\% of total employment created in Canada while its population represented an average of 23.5\% of the Canadian population during the 2000-2012 periods.\textsuperscript{20,21}

A comparison of Montreal with other metropolitan areas within Quebec also highlights Montreal’s economic underperformance. According to the Institut de la Statistique du Québec, the average annual growth rate of GDP has been lower in Montreal 3.5\% than in Lanaudiere 5.4\%, in Montérégie 4.3\%, or the province as a whole 4.0\% during the 2000-2011 years. During the same period, Montreal had the highest average unemployment rate 10.0\% compared to Lanaudiere 7.4\%, Montérégie 7.1\%, or Quebec 8.2\%.\textsuperscript{22} In 2010, the share of families with low income in the population was higher in Montreal (16.6\%) than in neighbouring metropolitan areas (Average of (7.7\%) in Montérégie, Laval, and Lanaudiere) or in Quebec (9.3\%).\textsuperscript{23}

These economic figures suggest that the poor economic performance of Montreal has contributed to the underperformance of Quebec compared to the national average for quite some time. As the key economic driver of the Quebec economy, the economic success of Montreal will highly benefit the province and Canada as a whole. Several

\textsuperscript{18} Statistics Canada. Table 111-0009 – Family characteristics, summary, annual (number unless otherwise noted), CANSIM (database), Accessed August 19, 2013.
\textsuperscript{19} Statistics Canada. Table 384-0002 - Gross domestic product (GDP), expenditure-based, provincial economic accounts (Percentage Change (period-to-period)), annual (dollars), CANSIM (database), Accessed August 19, 2013.
\textsuperscript{20} Statistics Canada. Table 051-0005 - Estimates of population, Canada, provinces and territories, annual (persons), CANSIM (database), Accessed August 19, 2013.
\textsuperscript{22} Institut de la statistique du Québec, “Principaux indicateurs économiques”, Available at : \url{http://www.stat.gouv.qc.ca/princ_indic/}, Accessed August 14, 2013.
avenues could be explored in order to boost and strengthen Montreal’s economy including the need for several industrial sectors, and the oil refining sector, to develop a competitive edge in both domestic and foreign markets.

Over the years, the Canadian refining industry has seen a decline in the number of refineries in response to several market factors including greater competition due to sustained growth in the world’s refining capacity. Particularly, Asian refineries which enjoy low operating costs and important economies of scale that compensate for transportation costs bring about growing competition to the North American market. 24 Today, fewer but larger refineries operate in Canada producing more fuel with improved efficiency. These 19 Canadian refineries need to remain competitive while facing important challenges including weaker refining margins, greater international competition, and stricter environmental requirements. For instance, in 2010 the closure of the Shell refinery in Montreal reduced Canadian refining capacity by approximately 7%. 25 A loss in refinery competitiveness and sustainability could result in further refinery closures with associated losses in employment and tax revenues, and damaging impacts to other manufacturing industries and the economy as a whole.

In fact, a study from the Conference Board of Canada found that for every $1 reduction in real refining GDP, total real GDP is reduced by $3. A permanent loss of 10 per cent in Canadian refining capacity would significantly reduce manufacturing GDP by $800 million per year, employment by 7,700 jobs per year, and government tax revenue by $231 million per year. Over a five-year period, real GDP is reduced by a cumulative total of $4 billion while 38,300 person-years of employment are lost and the federal and provincial balances are diminished by a cumulative $1.72 billion. 26 These findings suggest that the refining sector is an important contributor to the Canadian economy.

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25 Ibid at p. 2.
B. Refining Sector Is Vital to the Petrochemical Industry

Moreover, Canadian refiners provide transportation fuels to consumers and businesses for mobility and the manufacturing of consumer products essential for the well-being of the economy. The industrial sector which is the largest consumer of refined products relies on readily available fuel and petrochemical feedstock to be in business. As a result, refining capacity is often integrated with the petrochemical manufacturing sector.

For instance, the production line of polyester in Eastern Montreal is unique in Canada and consists of three businesses entirely reliant on feedstock from Suncor’s refinery. First, Suncor’s refinery provides the petrochemical feedstock xylene to ParaChem Chemicals, a petrochemical plant operator adjacent to the refinery. Next, ParaChem Chemicals transforms the xylene into paraxylene which is then sent to Cepsa Chimie Montreal which transforms it into an intermediate product called the purified terephthalic acid. Third, Selenis Canada is provided with this intermediate product which it uses to produce polyethylene terephthalate, a type of polyester recyclable 100 per cent indefinitely and essential for the manufacturing of many goods such as food packaging, bottling, textiles or carpets.

The production line of polyester depends on the proximity and synergy between the refinery and the petrochemical and chemical plants established in Eastern Montreal. In return, these businesses contribute to the local economy by providing highly paid jobs, using raw materials from local suppliers in Quebec, and paying substantial government taxes. With such extensive importance in the survival of many industrial sectors, Suncor’s refinery helps Montreal and Quebec maintain economic security.


29 Minardi, Jean-Francois, “The Economic Benefits of Pipeline Projects to Eastern Canada”, Economic Note, Montreal Economic Institute, September 2013 at pp. 3-4.
C. Refining Sector Contributes to Energy Security

Canadian people and businesses are highly reliant on oil products for daily activities. As such, domestic refineries play a key role in timely supplying the market with refined products, thereby contributing to Canada’s economic resilience. Although domestic refineries have increasingly relied on imported crude oil over the years, their refining capability has improved to currently include the ability to process domestic oil production into readily useable products. This is important as fuel security depends on both domestic refining capability and reliable supply sources of crude oil from domestic and international markets. Suncor’s refinery and other Eastern Canadian refineries could significantly reduce their dependence on foreign crude oil if they are allowed access to domestic oil sources. This in turn will diminish the potential risks and impacts associated with a sudden shortage or disruption in foreign crude oil supply. The Canadian refining sector will remain an important contributor to energy security by being competitive in face of challenging market conditions, stricter oil product requirements, and environmental demands.

D. Potential Avenues for Competitiveness

In order to face high energy, environment, labour and maintenance requirements, Suncor’s Montreal refinery has to remain competitive with strategies involving capacity expansion and cost reduction. Different types of investment including maintenance or renewal of processing units and new expansion projects can enable the refinery to process more crude oil. Other cost reduction strategies can involve a trade-off between cheaper domestic crude oil and higher cost foreign supply based on mid- to long-term market conditions.

For instance, requests from Eastern Canadian refineries and other customers for access to lower-priced North American crude oil have prompted Enbridge Pipelines Inc. to now seek approval before the National Energy Board to reverse the crude oil flow into an eastward direction for the remaining segment of Line 9 extending from North Westover
to Montreal. This proposed project referred to as the Line 9B Reversal Project will expand the overall capacity of the Line 9 pipeline from Sarnia to Montreal by modifying Enbridge’s existing facilities in Ontario and Quebec. With the proposed expansion and reversal, Eastern Canadian refineries will benefit from competitively-priced North American crude oil from locations such as Alberta, Saskatchewan, Manitoba, and the Bakken region in North Dakota. And as a result, the Canadian economy, particularly those of Ontario and Quebec, should reap the ensuing economic benefits associated with competitive and impactful refineries.

E. Summary Conclusion

Suncor’s refinery is an important economic contributor to the economies of Montreal, Quebec and Canada. Maintaining the viability and competitiveness of Suncor’s refinery is essential for the preserving of:

- Hundreds of well-paid jobs;
- An important source of value added;
- Readily available feedstock for manufacturing businesses;
- Considerable tax revenues for the provincial and national government; and
- Energy and economic security.
7. References


11. Statistics Canada. Table 111-0009 – Family characteristics, summary, annual (number unless otherwise noted), CANSIM (database), Accessed August 19, 2013.


8. Exhibits

Exhibits 1 through 6 are presented in the following pages.
IMPACT ON EMPLOYMENT
Notes

[a] Person-years of employment are mostly located in Montreal, Monteregie, Laval, and Lanaudiere.
[b] Based on Input-Output model simulations performed July 2013.
**Exhibit 2: Total Person Years of Employment in Quebec**

<table>
<thead>
<tr>
<th>Region</th>
<th>Direct</th>
<th>Indirect</th>
<th>Induced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montréal</td>
<td>128</td>
<td>76</td>
<td>290</td>
</tr>
<tr>
<td>Montérégie</td>
<td>133</td>
<td>215</td>
<td>503</td>
</tr>
<tr>
<td>Laval</td>
<td>71</td>
<td>152</td>
<td>142</td>
</tr>
<tr>
<td>Lanaudière</td>
<td>72</td>
<td>58</td>
<td>129</td>
</tr>
<tr>
<td>Laurentide</td>
<td>44</td>
<td>59</td>
<td>8</td>
</tr>
<tr>
<td>Mauricie</td>
<td>24</td>
<td>65</td>
<td>4</td>
</tr>
<tr>
<td>Other regions</td>
<td>102</td>
<td>204</td>
<td>0</td>
</tr>
</tbody>
</table>

### Notes

[a] There are 416 direct person years of employment, 1,257 indirect person years of employment, and 807 induced person years of employment in Quebec for a total of 2,480.

[b] Other regions consist of the 11 remaining regions in Quebec.

[c] Based on Input-Output model simulations performed July 2013.
Exhibit 3: Wages and Salaries by Region and Impact Type in Quebec, $ millions

<table>
<thead>
<tr>
<th>Regions</th>
<th>Direct</th>
<th>Indirect</th>
<th>Induced</th>
<th>Total by Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montréal</td>
<td>$11.4</td>
<td>$20.2</td>
<td>$9.0</td>
<td>$40.6</td>
</tr>
<tr>
<td>Montérégie</td>
<td>$8.0</td>
<td>$8.5</td>
<td>$3.9</td>
<td>$20.4</td>
</tr>
<tr>
<td>Lanaudière</td>
<td>$13.6</td>
<td>$2.2</td>
<td>$2.0</td>
<td>$17.8</td>
</tr>
<tr>
<td>Laval</td>
<td>$7.2</td>
<td>$6.1</td>
<td>$4.4</td>
<td>$17.7</td>
</tr>
<tr>
<td>Laurentides</td>
<td>$0.8</td>
<td>$2.6</td>
<td>$1.3</td>
<td>$4.6</td>
</tr>
<tr>
<td>Mauricie</td>
<td>$0.4</td>
<td>$2.9</td>
<td>$0.7</td>
<td>$3.9</td>
</tr>
<tr>
<td>Other Regions</td>
<td>$0.0</td>
<td>$8.6</td>
<td>$3.1</td>
<td>$11.8</td>
</tr>
<tr>
<td><strong>Total by Impact Type</strong></td>
<td><strong>$41.4</strong></td>
<td><strong>$51.1</strong></td>
<td><strong>$24.4</strong></td>
<td><strong>$116.9</strong></td>
</tr>
</tbody>
</table>

Notes

[a] Other regions consist of the 11 remaining regions in Quebec.
[b] Based on Input-Output model simulations performed July 2013.
### Exhibit 4: Person Years of Employment by Region and Industry in Quebec

<table>
<thead>
<tr>
<th>Industries</th>
<th>Montréal</th>
<th>Montérégie</th>
<th>Laval</th>
<th>Lanaudière</th>
<th>Laurentide</th>
<th>Mauricie</th>
<th>Other regions</th>
<th>Total by Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>28</td>
<td>13</td>
<td>10</td>
<td>2</td>
<td>13</td>
<td>1</td>
<td>31</td>
<td>98</td>
</tr>
<tr>
<td>Utilities</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Construction</td>
<td>60</td>
<td>26</td>
<td>12</td>
<td>20</td>
<td>8</td>
<td>46</td>
<td>33</td>
<td>205</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>176</td>
<td>98</td>
<td>101</td>
<td>135</td>
<td>14</td>
<td>6</td>
<td>18</td>
<td>548</td>
</tr>
<tr>
<td>Trade</td>
<td>152</td>
<td>67</td>
<td>64</td>
<td>33</td>
<td>19</td>
<td>14</td>
<td>52</td>
<td>401</td>
</tr>
<tr>
<td>Transportation &amp; Storage</td>
<td>24</td>
<td>10</td>
<td>10</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>12</td>
<td>65</td>
</tr>
<tr>
<td>Finance, Insurance &amp; Real Estate</td>
<td>54</td>
<td>21</td>
<td>35</td>
<td>8</td>
<td>8</td>
<td>3</td>
<td>20</td>
<td>148</td>
</tr>
<tr>
<td>Professional, Scientific &amp; Technical Services</td>
<td>185</td>
<td>98</td>
<td>52</td>
<td>17</td>
<td>16</td>
<td>4</td>
<td>54</td>
<td>425</td>
</tr>
<tr>
<td>Other</td>
<td>235</td>
<td>90</td>
<td>81</td>
<td>39</td>
<td>31</td>
<td>17</td>
<td>84</td>
<td>576</td>
</tr>
<tr>
<td><strong>Total for Quebec</strong></td>
<td>921</td>
<td>424</td>
<td>365</td>
<td>259</td>
<td>111</td>
<td>93</td>
<td>307</td>
<td>2,480</td>
</tr>
</tbody>
</table>

**Notes**

[a] Other regions consist of the 11 remaining regions in Quebec.

[b] Based on Input-Output model simulations performed July 2013.
IMPACT ON GROSS DOMESTIC PRODUCT
### Exhibit 5: Gross Domestic Product by Region and Impact Type in Quebec, $ millions

<table>
<thead>
<tr>
<th>Region</th>
<th>Direct</th>
<th>Indirect</th>
<th>Induced</th>
<th>Total by Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montréal</td>
<td>$16.3</td>
<td>$39.8</td>
<td>$25.4</td>
<td>$81.4</td>
</tr>
<tr>
<td>Montérégie</td>
<td>$11.0</td>
<td>$17.0</td>
<td>$11.2</td>
<td>$39.1</td>
</tr>
<tr>
<td>Laval</td>
<td>$9.9</td>
<td>$12.0</td>
<td>$11.6</td>
<td>$33.5</td>
</tr>
<tr>
<td>Lanaudière</td>
<td>$18.4</td>
<td>$5.7</td>
<td>$6.8</td>
<td>$30.9</td>
</tr>
<tr>
<td>Laurentides</td>
<td>$1.0</td>
<td>$5.1</td>
<td>$3.4</td>
<td>$9.5</td>
</tr>
<tr>
<td>Mauricie</td>
<td>$0.8</td>
<td>$5.5</td>
<td>$2.1</td>
<td>$8.4</td>
</tr>
<tr>
<td>Other regions</td>
<td>$0.1</td>
<td>$18.3</td>
<td>$8.6</td>
<td>$27.0</td>
</tr>
<tr>
<td><strong>Total for Quebec</strong></td>
<td><strong>$57.5</strong></td>
<td><strong>$103.4</strong></td>
<td><strong>$69.0</strong></td>
<td><strong>$229.9</strong></td>
</tr>
</tbody>
</table>

**Notes**

[a] Gross domestic product is measured at market price.

[b] Other regions consist of the 11 remaining regions in Quebec.

[c] Based on Input-Output model simulations performed July 2013.
IMPACT ON GOVERNMENT TAX REVENUE
Exhibit 6: Government Tax Revenues, $ millions

Notes
[a] Calculations exclude profits made by Suncor’s Montreal refinery.
[b] Based on Input-Output model simulations performed July 2013.