Canadian Manufacturers & Exporters

Manufacturiers et Exportateurs du Canada

Edmonton Economic Development Corporation

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OIL SANDS MANUFACTURING

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Leadership makes the difference

OIL SANDS MANUFACTURING

A TRILLION OPPORTUNITIES:

How Canada can Access the Value of Developing Alberta's Oil Sands

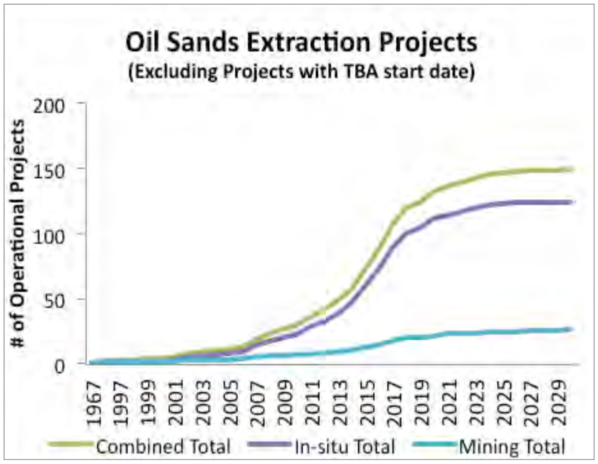
As the most important wealth-generating sector in the Canadian marketplace as well as our country's largest business sector, the Canadian manufacturing sector is vital to both Canada's national economy and the long-term prosperity of all Canadians. Combined, Canadian manufacturers directly employ 1.8 million Canadians, create 13 per cent of Canada's GDP, export 63 per cent of Canada's total goods and services, and are responsible for more than half of all private sector research and development.

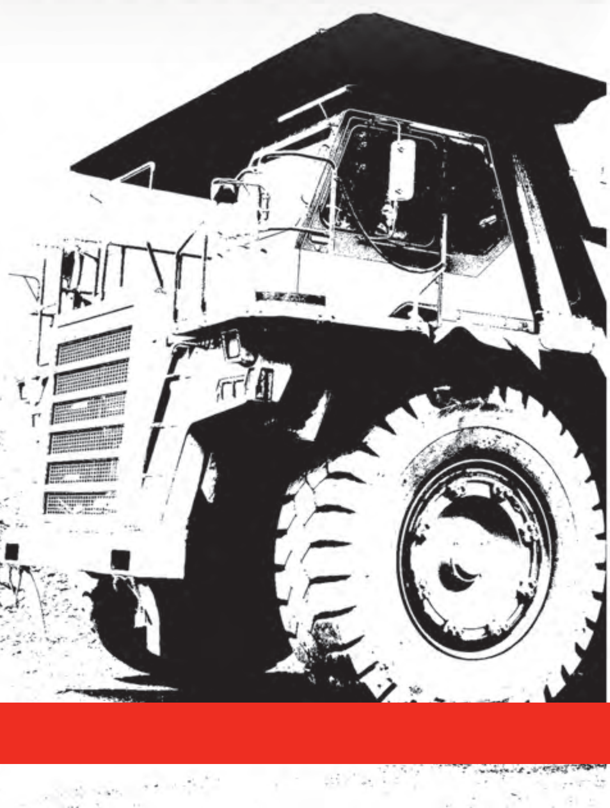
In spite of manufacturing's critically important role in the broader economy, Canadian manufacturers face unprecedented challenges to their ongoing commercial viability. Not only do bottom-line pressures like a strong Canadian dollar add to rising business costs, long-term impacts of globalization, demographics, and rapid technological change present a daunting challenge to their continuing success. These issues notwithstanding, Canadian Manufacturers & Exporters (CME) has identified a number of domestic opportunities that will allow manufacturers to sell their products and improve working relationships with existing customers. Alberta's oil sands stand out as one such example where a single development project is impacting the commercial success of countless manufacturing firms in all parts of Canada. This report examines the linkages between Alberta's oil sands, their capital investment and operations supply chains, and countless manufacturing firms scattered across Canada. In particular, we examine the opportunities that Canadian manufacturers have as a result of the oil sands' continuing development and expansion, as well as the specific challenges that are preventing manufacturers from fully capitalizing on the largest development project in Canadian history.

Alberta's oil sands production and investment:

Even while chronic labour shortages, gaps in infrastructure and the protracted 2008 financial crisis served to undermine the commercial viability of certain oil sands extraction projects, the oil sands have nevertheless marked significant year-over-year growth — in terms of total investment and output. Total output from Alberta's oil sands has grown to nearly 1.7 million barrels per day (MBD) since 2011, and from 1997 to 2012 annual investment increased from $3.5 to $47.3 billion, with combined expenditures amounting to a staggering $291 billion.

Capital investment is the spending related to the development or purchase of new equipment and facilities while MRO costs are the result of ongoing efforts to sustain efficient operations. Rates of capital investment have increased substantially over the past 16 years. From 1997 to 2012 annual capital investment grew from $1.91 billion to $27.19 billion, for a combined total of $173.2 billion for the period. MRO expenditures have grown as well, from $1.66 billion in 1997 to $20.08 billion in 2012 for a combined total of $117.7 billion. Critically, even while capital investment is a larger sum during this period, the volatile nature of





capital investment has ensured that MRO costs will, over the long-term, outpace rates of capital investment. This trend is reflected in our projections and is due at least in part to the uncertainty of global markets limiting available sources of capital.

Given continued global demand for energy, especially among emerging markets, it is expected that increases in investment will continue and output capacity will continue to expand. The Canadian Association of Petroleum Producers estimates significant increases in production over the coming decades, with total output reaching 5.21 MBD by 2030. In order to meet the expected tripling of oil sands production, there will be an increase in the number of resource extraction sites. As of 2013, there are 49 oil sands projects in operation with an additional 178 projects either under construction (23), approved (40), going through the application and approval process (66) or announced (49).

While it is true that some of these projects will be abandoned before completion, even modest increases in the number of extraction projects will translate into dramatic increases in capital investment and rates of MRO. With an understanding of past growth of investment — factoring in constraints on growth — it is possible to construct a number of future development scenarios, and to understand the major forces that influence the oil sands' impact on manufacturing until 2030.

The larger document provides the type and volume of investment in the oil sands with a specific breakdown of new capital investments and ongoing maintenance, repair and operations costs (MRO). Using the historical trends of investment as well as information about new projects set to come online in the coming decades, CME is able to project future investment levels for 2012 to 2030. For capital investment, the projected range will fall between a nominal cumulative total of $476.8 billion and $905.1 billion. For MRO expenditures during the same time period, the expected cumulative range is between $496 and $912.1 billion.

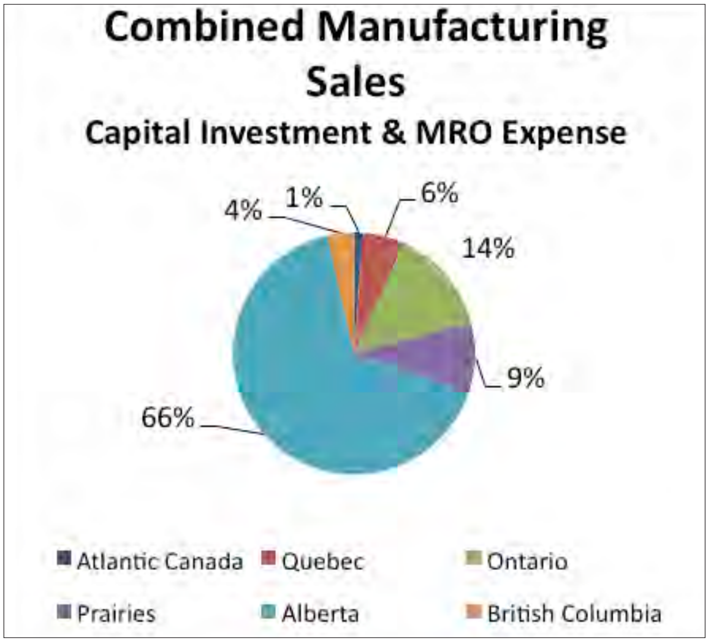
Manufacturing supply chains in the oil sands:

The scale and rate of expansion taking place in Alberta's oil sands is truly immense, and domestic manufacturers have so far played an important role in developing Alberta's vast natural resource wealth. Using Statistics Canada input-output modes, which use 2009 as the year of focus (2009 being the most recent year when data is available), we can simulate the direct and indirect effect of oil sands industrial demand on each provinces' manufacturing sector. According to our simulations, when 2009 oil sands investment was a combined $23 billion, Canadian manufacturers sold over $4.8 billion worth of value added-goods and services directly or indirectly into Alberta's oil sands — 20 per cent of all oil sands related investment for that year.

Critically, our simulations render product level detail about manufacturing sales. The top product categories include agricultural, construction and mining machinery manufacturing ($1,399,831,265), petroleum and coal production ($647,041,265), steel product manufacturing from purchased steel ($340,106,436), general-purpose machinery manufacturing ($313,404,021), and architectural and structural metals manufacturing ($262,645,581). At the greatest level of detail, the simulations show 234 product classifications related to manufacturing that are sold into the oil sands operations by Canadian manufacturers.

Even while our simulations show a majority of manufacturing sales being made by companies located within the provincial boundaries of Alberta, manufacturers from virtually every Canadian province show evidence of oil sands related procurement — with Ontario manufacturers capturing roughly 14 per cent, Prairie Provinces nine per cent and Quebec nearly six per cent.

While Canadian manufacturers are actively participating in oil sands opportunities today, our projections indicate an unprecedented opportunity for the domestic manufacturing sector over the coming decades. Provided interprovincial trade capacity increases at the correct rate, the projected range of opportunities for Canadian manufacturers supplying oil sands operations between 2012 and 2030 will be between $211 billion and $387 billion. To put this growth into perspective, if the high end of the projection is accurate this would result in oil sands related manufacturing being equal to 75% of current annual Canadian industrial production.



Maximizing Value from Oil Sands Development:

It is clear that the oil sands represent an enormous opportunity for all those involved, both through direct resource extraction and through the indirect supply chains discussed in the preceding sections. However, the point must be made that even while the oil sands are broadly titled the Canadian oil sands, there is no guarantee that the industrial benefits, specifically value-added manufacturing, will be concentrated among Canadians or Canadian manufacturing firms. If Canada is to fully realize the growth offered by this natural resource, both in the short and long-term, we need to foster an attractive investment climate

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About CME:

Canadian Manufacturers & Exporters (CME), established in 1872 by an Act of Parliament, is Canada's largest trade and industry association and is the voice of manufacturing and global business in Canada. Its membership spans Canada and is primarily comprised of small and mid-sized companies, however it also includes global multinationals involved in manufacturing, supplying, and investing in Alberta's oil sands.

and create world-class upstream and downstream value-added manufacturing and technology supply chains.

From the perspective of an oil sands producer, there are many factors that influence investment decisions. Among the top areas of concern is their ability to efficiently move a product to market, both across Canada, to the US and around the world. Their ability to have manufactured products delivered on time and on budget is of critical importance, and influences the commercial viability of their operations at a disproportionate rate.

Addressing the former concern, it becomes critical that Canada and its provinces support the development of new pipeline capacity, linking Alberta's oil sands to customers both domestically and around the world. Even while rail, truck, and pipelines are presently used to transport output, the lack of increased capacity is restricting shipments, and will severely restrict investment in the years to come. Additional pipeline capacity is the only way for oil sands producers to effectively reach their target consumers, as well as justify future investment.

The latter concern, the ability to deliver projects on time and on budget, has rapidly become a major barrier to new development as investment has continued to climb. Delivering projects on time and on budget is the responsibility of project owners, engineer, construction, project management (EPCs) and manufacturers. Without significantly improved cooperation, communication, and collaboration between those involved in oil sands supply chains investment growth will be significantly restricted moving forward.

CME has also made use of a number of interviews and surveys with representatives from all parts of the oil sands supply chain. There was general consensus that significant improvements were necessary in both the internal working of the supply chain as well as the business environment surrounding their operations.

As a starting point, improved supporting mechanisms and dialogues between oil sands producers and Canadian manufacturers are essential. Specifically we recommend:

- Creating an oil sands supply chain working group be established with senior leaders from project owners, EPCs and manufacturers that can focus on major bottlenecks in the supply chain and identifying common threats to growth (such as labour shortages) and identify the role that each party can play in improving overall performance;
- Creating detailed "how-to" guides for manufacturers from both project owners and EPCs on the expected actions to be undertaken to participate in oil sands supply chains;
- Establishing an oil sands supply chain resource office to help manufacturers learn about specific procurement opportunities and how to efficiently engage and navigate supply chains; and
- Developing common supply chain prequalification standards and centralizing a process for prequalifying manufacturers and their specific products and services

To strengthen the investment climate and make the supply chain more efficient, the business environment across Canada must be improved with a specific focus on manufacturing competitiveness and productivity. With globally integrated supply chains and the ability to supply customers around the world, creating a competitive business climate is critical to attracting investment for value-added innovative goods and services. Specifically we recommend:

- Improving the quantity and quality of the available labour pool;
- Supporting manufacturing investments in production, productivity, innovation and commercialization through globally competitive direct support mechanisms and through competitive tax regimes;
- Reforming and modernizing the regulatory system to lower operating costs and speed decision making; and
- Strengthening supporting infrastructure that is essential to manufacturing competitiveness including the cost and reliability of energy and the connecting trade networks, especially east-west railway corridors.

Hundreds of billions of dollars are at stake for Canada's economy over the coming decades. The question remains: Will Canada's provinces, the federal government and those in the private sector develop solutions to current supply chain issues, and unlock the full value of Alberta's oil sands for the benefit of all Canadians?

The full *A TRILLION OPPORTUNITIES: How Canada can Access the Value of Developing Alberta's Oil Sands* repor is available for download at www.cme-mec.ca.