



## **2009 Industrial Equipment and Machinery Manufacturing Investment Attraction Plan**

### **Growth Initiative Objective**

- *“To encourage investment and expansion of the industrial equipment and machinery manufacturing industry in the BRAED region.”*

### **Overview of Industrial Equipment and Machinery Manufacturing Industry**

Manufacturers in east central Alberta provide a broad range of industrial equipment and machinery and primarily specialize in manufacturing operations in: agriculture equipment, oil and gas equipment, storage equipment, fabrication equipment, and special purpose vehicles. Oil & gas equipment services are one of Alberta’s key manufacturing industries. These products are essential for development, production, distribution and resource exploration.

This sector has experienced strong growth, primarily driven by the oil and gas industry. Investment has been strong in oil and gas; however increased uncertainty has developed due to the economic downturn. There have been innovations in other areas, thereby increasing the demand for these products which presents opportunities for expansion and investment in new technologies and equipment.

### **Current State of the Industry**

Alberta currently ranks third in Canada in output as we have over 10,000 value added manufacturers in Alberta that provide products that range from nano devices for the bio med sector, plastics, food products, forestry products, recognized world class manufacturing equipment for most sectors, and huge steel fabrication and pressure vessel manufactures.

Manufacturing plays a vital role in Alberta’s economy as it is one of the largest industries in the province and employs many Albertans. According to Statistics Canada, in 2008 the value of Alberta’s manufacturing shipments climbed to \$70.1 billion, a seven per cent increase over the previous year. The industrial machinery and equipment sector accounted for approximately 21% or \$13.2 billion of Alberta’s total manufacturing shipments in 2006.

### **Sub-sectors**

#### **Fabrication equipment**

The metal fabrication industry plays a significant role in the development of the oil sands and downstream processing in east central Alberta. The sector provides a wide range of services including pipe and pressure vessel fabrication and machining, with establishments engaged in forging, stamping, forming, turning and

joining processes to produce ferrous and non-ferrous metal products. Within Alberta, the architectural and structural metals manufacturing industry is the largest component of the fabricated metal products sector. The domestic market is continuing to grow and turning out innovative products and services.

According to a 2005 Conference Board Report on the metal fabrication industry in Alberta, the sector is comprised of many small players and very few large companies. For instance, 35% of metal fabrication establishments in Alberta have fewer than five employees, 85% have fewer than 50. This poses challenges for the ability of the sector to respond to the increased demand generated by the development of the oil sands.

Alberta demand for fabricated metal products will be the key source of growth for the sector calling for average annual growth in real domestic demand of approximately 10.3% through to 2009. In 2007, the metal fabrication industry contributed approximately \$9 billion in revenues to the province. As there are over \$250 billion in capital projects planned in Alberta, growth in this sector is expected to continue. Exports are also expected to increase in this sector. As exports and domestic demand increases, real production will rise by an average of 9.6 per cent over the forecast period to 2009.

### **Oil and Gas Equipment**

Technology in oil and gas equipment continues to innovate with more automation being introduced. Equipment is now able to sense where oil lies while cutting through tough geological formations and extraction is becoming more economical. New fields, especially in deep water, are only accessible because of recent advances in technology.

In terms of regional distribution of domestic revenues, Alberta has the largest shares of services and manufacturing revenues in the oil and gas sector. A large majority of oil and gas firms in the industry are located in Alberta (68 percent). Alberta has a high percentage of manufacturing as manufacturers prefer to locate in proximity to their clients in the oil and gas industry.

### **Agriculture equipment**

Machinery is a main staple in the Alberta agriculture industry. The agricultural manufacturing industry has progressively developed as an entity separate from that of commercial or industrial manufacturing. Developing innovative agricultural machinery is essential in Alberta to deal with the challenges in climate and desire for more farm efficiency.

### **Defense industry equipment**

Canada's aerospace industry is comprised of over 400 firms in every region of the country, employing 80,000 Canadians. Since 1990, Canadian aerospace industry sales have more than doubled; reaching \$22 billion in 2002. Aerospace is Canada's leading advanced technology exporter, exporting nearly 80 per cent of its output.

Precision manufacturing is required in aerospace (aircraft parts and engines) and automotive (auto engine parts), among others. Canada is ranked number three in the world for cost competitiveness to manufacture these components. As the government demands more for less, integration of existing components is becoming essential. Most economies are recognizing the value and the necessity of a strong defence industrial base.

## Lead companies in the industry

### Agriculture

- Flexi-Coil– <http://www.flexicoil.com/>
  - Offers a wide range of farming equipment. Flexi-Coil has earned a reputation for product quality and superior design in seeding, tillage and chemical application equipment. In particular, the Flexi-Coil air seeding systems stand alone in terms of innovation, efficiency and effectiveness
    - Email: [flexicoil@minacs.com](mailto:flexicoil@minacs.com)
- John Deere– [www.deere.com/](http://www.deere.com/)
  - John Deere is the world's leading manufacturer of farm equipment. The company offers a complete line of farming services and solutions with products primarily sold and serviced through the industry's premier dealer network.
    - Deere & Company World Headquarters  
One John Deere Place  
Moline, Illinois 61265  
Phone: (309) 765-8000
- Case IH– [www.caseih.com/](http://www.caseih.com/)
  - The Case IH brand represents a tradition of leadership. It is the culmination of great agricultural equipment companies and brands, including Case, International Harvester and David Brown, to name a few.
    - Case IH Customer Relations Team  
700 State Street  
Racine, WI 53404  
Phone: 1-877-4CA-SEIH (1-877-422-7344), Option 1  
E-mail Address: [MaxService.NA@cnh.com](mailto:MaxService.NA@cnh.com)
- New Holland – [www.newholland.com/](http://www.newholland.com/)
  - As a recognized world leader and full-line manufacturer, New Holland offers innovative and diverse tractors and equipment for hay and forage, harvesting, crop production and material handling
    - Phone: 866-NEW-HLND (866-639-4563).  
Email: [na.topservice@newholland.com](mailto:na.topservice@newholland.com)
- Agriculture equipment manufacturers, suppliers, distributors

## Oil and Gas

- Canalta Controls– <http://www.flexicoil.com/>
  - The focus of the company has been on the manufacture of Industrial Control and Measurement Equipment. The company now manufactures and services several product lines specifically targeted towards the oil and gas industry.
    - CanAlta Controls Head Office:  
6770-65th Avenue  
Red Deer, Alberta, Canada T4P 1A5  
Ph: 403.342.4494 Fax: 403.346.7110
- Alberta Oil Tool - [www.albertaoiltool.com/](http://www.albertaoiltool.com/)
  - AOT is the Canadian manufacturer of Norris brand products, which are known throughout the industry for precision and reliability. AOT'S product range includes conventional Sucker Rods, specialty Drive Rods® for progressing cavity pump applications., Polished Rods, Sinker Bars, Pony Rods and Sucker Rod/Polished Rod Couplings.
    - 9530 - 60th Avenue  
Edmonton, AB T6E 0C1  
Phone: (780) 434-8566 Fax (780) 436-4329

## Special purpose

- General Dynamics Canada - <http://www.gdcanada.com/>
  - provides technology-based electronic systems, systems integration, and in-service support to defence organizations and public security markets in Canada and abroad.
    - 350 Legget Drive 6th Floor  
Ottawa, Ontario Canada K2K 2W7  
Phone: +1 (613) 596-7000 Fax: +1 (613) 820-5081  
Email: [info@gdcanada.com](mailto:info@gdcanada.com)
- General Atomics – <http://www.ga.com/index.php>
  - one of the world's leading resources for high-technology systems development ranging from the nuclear fuel cycle to remotely operated surveillance aircraft, airborne sensors, and advanced electric, electronic, wireless and laser technologies.
    - 3550 General Atomics Court  
San Diego, CA 92121-1122  
Phone: (858) 455-3000 Fax: (858) 455-3621
- Aero-Safe Technologies Inc. - <http://www.aerosafe.ca/>
  - an ISO-registered provider of inspection and material processing services to the aerospace and defence sector. The company provides high-precision computer numerical control machining, manufacturing and assembly of high-reliability aerospace, defence, life support and electronic components.
    - P.O. Box 335 - 1767 Pettit Road  
Fort Erie, Ontario L2A 5N1  
Telephone: (905) 871-1663 Facsimile : (905) 871-7093  
Email: [sales@aerosafe.ca](mailto:sales@aerosafe.ca)

## Other

- K & M Manufacturing– [www.tractorseats.com/](http://www.tractorseats.com/)
  - Manufacturer of parts and accessories for trucks and tractors, forklifts, mowers, construction and mining equipment.
    - Phone: 1-800-328-1752  
Email: [sales@tractorseats.com](mailto:sales@tractorseats.com)

## **What drives investment in this industry?**

Investment in industrial machinery and equipment manufacturing is primarily driven by large scale projects in development in Alberta.

Investment drivers for the industrial equipment and machinery manufacturing sub-sectors include:

- Oil sands projects, including new plants and projects, ongoing maintenance of existing plants, etc.
- A strong Alberta economy will create opportunities
- Local Alberta development in key sectors will create opportunities
- New and potential opportunities in the alternative energy sector, in upgraders, in nuclear plants, and in the construction industry
- Opportunities for companies in diversification, new product development and in deployment of new technologies
- Opportunities in the US and in international markets
- Continued heavy involvement by industry in trades training

## **What are the strengths in the industry in the BRAED region?**

- Skilled people in the industry, including good trades people
- Diverse capabilities
- Experience and expertise at high level
- Knowledge of industries served in the resources and mining sectors
- Location of the industry relative to the oil and gas sector
- Technology and automation
- Alberta has the best apprenticeship program in Canada
- Superior quality and safety regulations in Alberta

## **What are the barriers/threats to the development of this industry in the BRAED region?**

- Remaining competitive in global economy
- Labour issues with certain firms – shortage and retention of skilled labour
- Competing economies that are shifting from industrial-based models to knowledge-based models driven by innovation, technology, entrepreneurship and sustainability
- Rising wages and labour costs
- Increasing process innovation within competitive industries requires Alberta manufacturing companies to stay-current, and keep changing
- New and more exacting global customer expectations
- Increasing costs and availability of material inputs
- Economic slow-down in the global economy, primarily the US

- Volatility of oil markets and effects of increased royalties programs
- Lack of economic diversification in the province
- Challenge in the distribution of equipment – Edmonton and Calgary are the main distribution centers
- Lack of infrastructure, access to a 24 hour North/South transportation route
- Lack of adequate commercial air landing strip

### **What can BRAED do to attract or facilitate investment?**

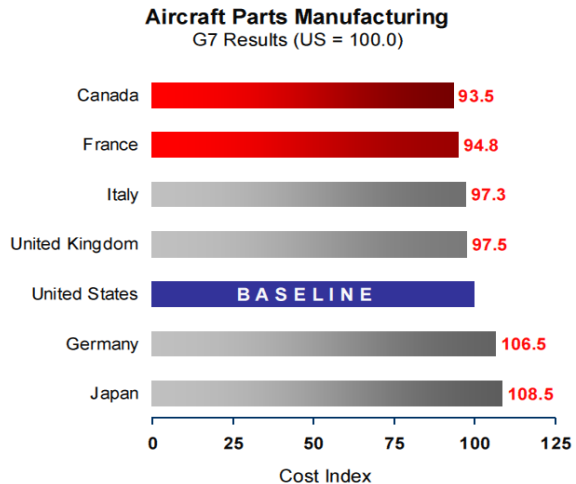
- Investigate and penetrate niche markets and/or products
- Need for highly skilled workers in order to alleviate labour shortages
- Promote productivity, innovation and technology advancements to increase competitiveness.
- Create cost reduction strategies, such as supply sourcing, transportation costs, energy efficiency, employee productivity, etc.
- Create new market and export opportunities and product development, such as aerospace, defence and military, alternate energy equipment, etc.
- Provide information on BRAED's advantages to the larger industrial equipment and machinery manufacturing companies currently in the BRAED region or outside the region.

### **Potential Opportunities**

As the Defence Industry continues to play a vital role in the BRAED region, opportunities exist to expand the industry, particularly manufacturing of aerospace and defence equipment. Advantages are already prominent, such as a growing cluster of military training and testing activities, an array of established defence industries, leading edge research, lower costs for land and buildings as well as lower costs for transportation. In addition, there are over 170 companies in the aerospace and defence sector offering a wide range of aerospace goods and services.

Unmanned Vehicle Systems (UVS) is a rapidly emerging sector with huge potential. Alberta offers competitive strengths in UVS development, with more than 70 companies, military agencies and educational institutions engaged in various forms of UVS research, testing, development and manufacturing. The strategic importance of this sector continues to grow as technological advances have moved beyond military use and into commercial, civilian and industrial applications.

- As shown by the chart to the right, Canada ranks as the most cost-competitive investment location in the aerospace sector in the G7.
- The U.S. accounts for the majority of Canadian aerospace and defence exports.
- Canada has an easy access to the U.S. market, such as:
  - NAFTA
  - North American Defence Industrial Base
  - Special trade agreements



Source: Competitive Alternatives: KPMG's Guide to International Business Costs, 2006 Edition

The construction industry also shows potential. According to Alberta Finance and Enterprise, Alberta will require more than \$200 billion of new construction and maintenance spending in the next 10-15 years, much of it—approximately \$50 billion—for fabricated metal products. Alberta is quickly becoming one of Canada's major metal manufacturing centres which presents a remarkable opportunity for Alberta's metal fabrication companies to grow.

Opportunities may also exist in the oil and gas industry if prices rebound. As it currently stands, the fabrication sector is mainly focused on the oil and gas activity in Alberta. As such, new products for the oil sand developments in Northeast Alberta will be required.

It is also evident in the industrial equipment and machinery manufacturing industry that companies with niche markets and/or products tend to be the most successful in accessing markets outside the province.

## New Initiatives in the Industry

Industrial equipment manufacturers can no longer survive solely on their capacity to build machines. As such, one initiative that is gaining momentum is the idea of "lean manufacturing". Lean manufacturing is a philosophy that promotes continuous improvement, the simplification and standardization of business processes and the elimination of all forms of waste. The main purpose for adopting lean is to deliver a high quality product, on time, and at the lowest price. Companies that are succeeding are implementing lean measurement and control programs to accomplish this goal. The implementation of lean has proved to be the best defense against competition from low-cost countries. As the industrial machinery manufacturing industry is extremely competitive, companies must be able to compete in the global environment and those that are successful have most likely adopted lean thinking. In addition, many of these managers are turning to lean manufacturing techniques as part of a strategy to not just survive hard economic times, but to ensure their firms have a more profitable future.

Canadian manufacturers, however, are relatively new to this philosophy in comparison to other geographic regions. One company that has adapted to this philosophy and has

been very successful is Bombardier Aerospace. They have been recognized as having the most outstanding initiative across the entire aerospace group, primarily with the successful implementation of lean manufacturing on the Learjet assembly line. The Vice President of Bombardier partially attributes it to applying new thinking to some of their traditional supply chain approaches.

Action Plan Elements for 2009-2014	Estimated Cost
<b>Local Opportunity Identification and Awareness – internal</b>	
Conduct assessment to identify opportunities in the Industrial Equipment and Machinery sector within the BRAED region	\$ 15,000
Promote identified opportunities to BRAED businesses	\$ 3,000
Link BRAED website to Industry Canada and Rendez-Vous website	N/A
<b>Promotion and Marketing Initiatives – external</b> ( <i>development of promotion materials, attend conferences, incoming and outgoing trade missions</i> )	
Development of Investment Attraction promotional materials	\$ 3,000
Update BRAED website with identified opportunities related to Industrial Equipment and Machinery manufacturing	\$ 5,000
Attend national/international conferences in 2009: <b>DSEi — Defence Systems &amp; Equipment International Exhibition 2009</b> London, United Kingdom September 8-11, 2009 Website: <a href="http://www.dsei.co.uk/">http://www.dsei.co.uk/</a> <b>Western Canada Farm Show</b> Regina, Saskatchewan Website: <a href="http://www.myfarmshow.com/">http://www.myfarmshow.com/</a> <b>GO-EXPO: Gas and Oil Exposition</b> Calgary, Alberta Website: <a href="http://www.petroleumshow.com/GOEXPO/">http://www.petroleumshow.com/GOEXPO/</a>	\$ 15,000
Join Industry associations: Machinery and Equipment Manufacturers Association of Canada (MEMAC) Association of Equipment Manufacturers (AEM)	\$ 500
<b>Total budget requirement</b>	
	<b>\$ 41,500</b>