



Alberta HUB
Where opportunity comes to life

Labour Force Capacity Study Rural Communities

Prepared for:

Northeast Alberta Information HUB Ltd.

Final Report

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A. Executive Summary

This study was done to investigate the labour force supply and demand in order to support Alberta HUB's effort to create efficiencies for existing businesses, retain existing businesses, and recruit new business ventures. Some of the key questions for this study are:

- Do regional businesses identify any skill surpluses in the local labour markets?
- Are there identifiable growth sectors?
- Are there major skill gaps identified and needed within 1 to 3 years in this rural labour market area?
- Are there education and training needs to address potential growth and skill gaps?

Labour force supply analysis was accomplished through a comprehensive review of secondary data on demographic, educational, and other factors that control the supply of labour. Labour force demand was examined through a survey with telephone interview with 121 stakeholders including 86 businesses in key industries across the Alberta HUB Region. The results of this research were validated by an examination of secondary occupational demand research.

The analysis of labour supply-demand in the Alberta HUB Region resulted in a number of key findings:

- Labour force participation rates in Alberta and the Alberta HUB Region are among the highest in Canada suggesting that there is limited room to expand the labour force through increased participation.
- The Alberta HUB Region's unemployment rates have been stable in the past 5 years staying in a band of 3.6 to 5.0%. This compares to Alberta unemployment figures which have nearly doubled from 3.4% in 2006 to 6.6% in May 2009.
- The Energy sector is the largest and fastest growing industry in the Alberta HUB Region. Employment in Energy industry has grown 87% between 2002 and 2007.
- Population growth averages are lower than for Canada and Alberta over the 2001-2009 period. Population growth in rural areas of the Alberta HUB Region are very low (2.8% during the 2001-2009 period) compared to growth in its urban areas (27% during the 2001-2009 period).
- The median age of the Alberta HUB Region residents (34.4 years) is significantly lower than Canada's (39.5 years) overall but higher than Canada's in rural areas (45 years).
- Most population growth in the Alberta HUB Region (60%) is due to net migration and not natural population growth.
- The majority of Alberta's immigrants move to Edmonton/ Calgary. Similar to other rural locations in Alberta, the Alberta HUB Region attracts comparatively few immigrants.

- First Nations and Métis people make up approximately 16% of the Alberta HUB Region's population, are significantly younger (median age of 22.7 years), and are growing at twice the rate of the Alberta HUB Region's non-city municipalities.
- Alberta HUB's First Nations and Métis labour force participation rate is 49% and their unemployment rate is 21.6% suggesting a labour force opportunity.
- School jurisdictions overlapping the Alberta HUB Region's boundaries have approximately 3,900 students in grade 12 of which, according to Alberta averages, 60% will enter the labour force full-time upon graduation.
- Alberta HUB has 2 comprehensive community colleges and one specialized college with about 3,100 students enrolled and 1,288 graduates in 2008/09.
- Strong growth in trade training attendance in the Alberta HUB Region and across the province is positive for the Alberta HUB Region's labour supply.
- Lakeland College added 2 new trades programs in 2007/08 demonstrating responsiveness to local labour force needs.
- Portage College's reach to smaller communities is crucial in developing the labour force in these centres.

Results of the survey of the Alberta HUB Region's employers identify the following occupations to be those where significant supply-demand gaps are likely to persist over the next 5 years.

- Energy industry related occupations such as power engineers, well drilling and servicing workers and supervisors, testers, engineers, and process operators.
- Construction and trades related occupations such as welders, pipefitters, electricians, fabricators, supervisors, heavy equipment technicians, instrument technicians, labourers, and truck operators.
- Health Care sector workers such as nurses, physicians, specialist physicians, nurses' aides, and ambulance attendants.
- Retail and wholesale workers, accountants, and other financial industry employees.

These recommendations follow from the study:

1. Communicate the findings of this study. Circulate this report to all stakeholders in the Alberta HUB Region including but not limited to Alberta HUB members, colleges, Employment and Immigration offices, and other organizations/ individuals involved in labour force development. The report should also be made available at the Alberta HUB website.
2. Support initiatives to increase labour force participation by First Nations and Métis people. Initiatives may include but are not limited to:

- Continue to foster relationships with all First Nations and Métis communities in the Alberta HUB Region and encourage active participation in the Alberta HUB Partnership.
 - Continue work on programs like the Aboriginal Community Enterprise (ACE) that bring groups together to cooperate on improving readiness for economic development.
 - Work jointly to develop programs that reduce barriers to employment such as transportation, education, training and job skills, and child care.
 - Work with one or more large regional employers to create specific programs, policies, and procedures that target employment of First Nations and Métis people. Programs may include cultural awareness/sensitivity training, job skills training, trade training support, language support, promotional efforts, or other initiatives.
3. Take the lead on initiatives that will stimulate immigration and improve Alberta HUB communities' readiness to support immigrants. These initiatives could include:
- Welcoming communities initiative to encourage the development of resources to help successfully settle new immigrants.
 - Promote programs such as Provincial Nominee Program, the Canada-Germany Youth Worker Exchange Program (YWEP), skilled worker immigration, the Temporary Foreign Worker Program, and other programs that stimulate immigration to the Alberta HUB Region.
 - Collaborate with other organizations and government departments on existing/ new initiatives that market and promote Canada to immigrants.
4. Form a collaborative labour force development action committee with the three regional colleges and businesses from the Alberta HUB Region's key sectors to jointly address an occupational supply-demand gap identified in this report. The action taken may include:
- Collaborate with colleges on instigating the feasibility of expanding trades training by increasing the current programs or by offering new programs.
 - Collaborative research on training needed by the business community.
 - Joint lobbying for additional funding/ permission to expand other key training programs such as Energy and Health Care industry related occupations.
 - Support initiatives that increase access post secondary education in rural communities.

B. Introduction and Methodology

Investigating Northeast Alberta's labour force capacity was identified as a priority in Alberta HUB's 2008-2011 three-year plan. Labour force is likely the single most important variable in economic development as it forms a basis for economic development strategy. Recognizing the linkage between labour capacity and economic development, the Alberta HUB Region commissioned this labour force capacity study.

An in-depth investigation of labour force supply and demand will assist and support Alberta HUB's effort to create efficiencies for existing businesses, retain existing businesses, and recruit new business ventures. Specifically, some of the key questions to be answered in this study are:

- Do regional businesses identify any skill surpluses in the local labour markets?
- Are there identifiable growth sectors?
- Are there major skill gaps identified and needed within 1 to 3 years in this rural labour market area?
- Are there education and training needs to address potential growth and skill gaps?

Alberta HUB is a partnership of 34 communities in Northeast Alberta. Communities are diverse in nature and include small cities, towns, villages, rural municipalities, and First Nations/ Métis communities. Key industries operating in the Alberta HUB Region's communities include:

- Agriculture
- Aerospace and Defence
- Energy
- Manufacturing
- Tourism
- Transportation
- Service

To guide the methodology of the study, the following definitions and parameters were placed on supply and demand quantification:

- **Supply:** Identify, specify, and quantify current & future (5-year) labour force supply in the Alberta HUB Region. Labour force supply is defined as the number of employees the region will supply to the labour force from demographic trends, educational and training programs, and from other sources
- **Demand:** Identify, specify, and quantify current & future (5-year) labour force demand in the Alberta HUB Region. Labour force demand is defined as the number of employees required in key occupations of major regional employers in industries that are strategically important to the Alberta HUB Region's continued economic growth.

To accomplish the objectives of this study with regard to labour force supply, the main method involved secondary research of available data from the following sources:

- Census information from the Alberta HUB Region’s communities
- Statistics and information from the Alberta HUB Region’s First Nations and Métis communities
- Statistics Canada
- Alberta Employment and Immigration
- Human Resources and Skills Development Canada (HRSDC)
- Alberta Education
- Alberta Advanced Education and Technology
- The Alberta Apprenticeship and Industry Training Board
- Labour force literature, studies, and analyses conducted by a variety of groups.

To analyze labour force demand, the main method consisted of a 10-minute telephone survey and a web based survey targeting the Alberta HUB Region’s employers. The person interviewed was either the owner, general manager, or the human resource manager. In addition, interviews were conducted with several stakeholders in the Alberta HUB Region. The figure below details these interviews:

Figure B.1: Sample Detail

Group	Number
Telephone surveys with businesses	51
Web surveys completed with businesses	36
Alberta HUB Region member representatives	12
Community Futures managers	5
Chamber of Commerce executive directors or presidents	9
Other regional stakeholders	8
Total sample	121

Demand estimations for this research are largely based on the interviews with businesses. As such positions in some sectors such as municipal governments, school boards, and others may not be reported even though there may be positions in high demand in these areas. A second limitation of the study is that demand forecasts are based on the opinions of the respondents and are subject to their assumptions regarding business growth and development. These demand projections will be influenced by unforeseen economic events that change the current business environment.

C. The Economy in the Alberta HUB Region

C.1 Key Industries and Economic Growth Indicators

Like many areas of Alberta, the HUB Region's economy is largely driven by resource-based industries. However the presence of a strong and growing Aerospace and Defense industry offers significant diversification not present in many other areas of Alberta. The figure below outlines the key industries in the Alberta HUB Region:

Figure C.1: Key Industries in the Alberta HUB Region - 2007 Statistics

Industry and NAICS ¹ Code	Number of businesses
Construction and Utilities (22-23)	611
Mining and Oil and Gas (21)	435
Agriculture, Forestry, Fishing, Hunting (11)	327
Manufacturing (31-33)	121
Total goods producing establishments with employees (note 2)	1,494
Wholesale and Retail Trade (42-45)	860
Professional, Scientific, Technical Services (54)	530
Transportation and Warehousing (48-49)	472
Finance, Insurance, Real Estate (52-53)	295
Accommodation, Food Services, Arts and Culture (71-72)	320
Health Care and Social Assistance (62)	281
Other	960
Total service producing establishments with employees	3,718

Source: Government of Alberta's Regional Economic Indicators for the Northeast Region, July 2009.

(1): North American Industry Classification System

Comparing the number of number of businesses in 2007 to 2002 the following trends emerge:

- Strong growth (4%+ per year) is occurring in the following:
 - Professional, Scientific, Technical Services
 - Mining and Oil and Gas
 - Finance, Insurance, Real Estate
- Moderate growth (2-3% per year) is occurring in the following:
 - Wholesale and Retail Trade
 - Construction
 - Transportation and Warehousing
- Industries that are declining in the number of businesses include:
 - Agriculture, Forestry, Fishing, Hunting
 - Accommodation, Food Services, Arts and Culture
 - Manufacturing

The figure below outlines the major capital projects that have been made, or are proposed for the Alberta HUB Region. This figure reinforces the significance of the 9 key industry clusters shown in the figure above. Oilsands investments, valued at just over \$3 billion, dwarf the other sector investments and will be a key generator of employment growth in the Alberta HUB Region for several years.

Figure C.2: Major Recent Investments in the Alberta HUB Region

Sector	Description	Value (\$Mill)
Oilsands	• Osum Oilsands Corp. 'Taiga' Oilsands Project - Cold Lake area (proposed)	\$1,570.0
	• Imperial Oil 'Nabiye' Oilsands Project - Cold Lake area (proposed)	\$1,300.0
	• Royal Dutch Shell 'Orion' Heavy Oil SAGD ^{note 1} Facility (Phases 1 and 2) - MD of Bonnyville near Hilda Lake (construction)	\$340.0
	Subtotal of Oilsands Sector Investments	\$3,210.0
Infrastructure	• Vermilion River Regional Water System - County of Vermilion River (proposed)	\$200.0
	• Infrastructure upgrades, CFB Cold Lake (construction)	\$120.0
	• Cold Lake Regional Utilities Commission pipeline (proposed)	\$100.0
	• Other - highways, municipal facilities, water treatment plant	\$149.6
Subtotal of Energy (Oil, Natural Gas) Sector Investments		\$569.6
Institutional	• Seniors housing - various locations	\$99.1
	• School renovations/ new schools - various locations	\$34.5
	• Detox and Treatment Facility - County of Vermilion River (construction)	\$16.2
Subtotal of Agriculture and Related Sector Investments		\$149.8
Tourism/ Recreation	• 'Bold Centre' Recreation Multiplex - Lac La Biche (construction)	\$49.4
	• Community Event Centre Phase 1 at the Energy Centre - Cold Lake (proposed)	\$15.0
	• Goodfish Lake Recreation Centre - Whitefish Lake First Nation (announced)	\$9.9
Subtotal of Tourism/ Recreation Sector Investments		\$74.3
Other	• Biostreet Canada, Bio-diesel plant, near Vegreville (proposed)	\$210.0
	• Bio - Energy Facility - Hairy Hill (construction)	\$100.0
	• Sulphur Forming /Shipping Facility - Lamont County (proposed)	\$35.0
	• Residential housing - various locations	\$23.2
	• WAL-MART Store expansion - Cold Lake (construction)	\$10.3
Subtotal of Other Sector Investments		\$378.5

Note 1: SAGD stands for Steam Assisted Gravity Drainage.

Source: Inventory of Major and Regional Projects for April 2010 – Alberta Finance and Enterprise.

Small business expansion will also drive employment growth throughout the Alberta HUB Region over the next 3 years. The business survey indicated that 80% of businesses interviewed expect to increase their hiring due to business growth or expansions.

Stakeholders interviewed for this project indicated the following projects that are contributing to economic growth and expansion in or near their communities:

- Husky Energy expansion of their head office in Lloydminster
- Civic construction projects such as police and fire stations, and recreation facilities
- Retail expansions
- Residential housing growth
- Industrial lot development and sale
- New hotels and restaurants

Major investments in power generation upgrades in the North Battleford area of Saskatchewan will also have an impact on the Alberta HUB’s labour force as skilled workers may leave to work on these projects or work at the finished facilities.

- Saskatchewan Power’s addition of a 141 Megawatt power generator valued at \$250 Million
- Northland Power Income Fund will build a 261 Megawatt power plant valued at \$700 Million. During construction, 400-500 workers will be required

Economic indicators suggest that during the 2005 to 2007 period, the Alberta HUB Region experienced significant economic growth.

Figure C.3: Economic Growth Indicators for the Alberta HUB Region

Indicator	Result
Population Growth	<ul style="list-style-type: none"> • The current population of the Region is approximately 125,700 up 9% from 115,400 in 2001
Employment Growth	<ul style="list-style-type: none"> • Average annual growth in the number of people working between 2002 and 2007 was 3.3%
Unemployment Rate	<ul style="list-style-type: none"> • Between 2002 and 2007, the Region’s unemployment rate was under 3% reflecting a labour shortage situation
Housing Starts	<ul style="list-style-type: none"> • Increased by 29% in the 2005 to 2007 period
Business Formation	<ul style="list-style-type: none"> • In 2002 there were 4,785 businesses with employees in the Alberta HUB Region. This number grew by 8.9% to 5,212 in 2007
Building Permit Value	<ul style="list-style-type: none"> • Total building permit value more than doubled from \$281 Million in 2005 to \$569 Million in 2007

Source for Population Data: Statistics Canada 2001 and 2006 Censuses and municipal censuses for 2007-2009.

Source for Economic Data: Government of Alberta’s Regional Economic Indicators for the Northeast Region, July 2009.

From 2008 to the current period, the Alberta and North American economy is emerging from an economic recession. However, unemployment statistics through this period suggest that the Alberta HUB Region was relatively less impacted by the recession and is making an earlier economic recovery than the rest of Alberta. In the period between 2005 and April 2010 the Alberta HUB Region’s unemployment rate increased about 1.3% whereas Alberta’s unemployment rate rose 3.5% over the same period.

Figure C.4: Unemployment Rates for Alberta and the Alberta HUB Region

Region	2005	2006	2007	2008	2009	2010 (May)
Alberta	3.9%	3.4%	3.5%	3.6%	6.6%	6.6%
Alberta HUB	3.7%	4.4%	3.8%	3.6%	5.0%	4.6%

Source: Government of Alberta, 2009 Annual Alberta Labour Market Review and Alberta Employment and Immigration Monthly Employment Statistics. The Alberta HUB Region statistics includes the Regional Municipality of Wood Buffalo.

A balanced labour market is indicated by unemployment rate of about 5% where there is neither an under or over supply of workers. A 4% rate indicates a tight labour market where demand for labour exceeds supply. A 3% or lower unemployment rate indicates a “shortage labour market” where demand for labour significantly exceeds supply.¹ Through the recent economic recession, the Alberta HUB Region’s unemployment rate rose by only 1.4% taking the rate to a level that indicates a balanced labour force. Once the economic recovery is on solid footing, the Region will likely be back to a ‘tight’ or ‘shortage’ situation experienced in 2007.

¹ Alberta Human Resources and Employment, Alberta Labour Market Outlook 2003.

D. Analysis of the Alberta HUB Region’s Labour Supply

D.1 Labour Force Growth and Participation Rates

Between 2002 and 2009, the Alberta HUB Region’s labour force grew from 59,300 to 73,000; an increase of about 23% or 3.3% per year. This relatively rapid rate of growth is due in part to increasing population and increasing labour force participation rates.

The Alberta HUB Region’s labour force participation rate has been trending higher in the last 6 years and is currently among the highest in Alberta and Canada. Relatively high labour force participation rates and a trend toward increasing participation rates in the Alberta HUB Region suggest that there is very little room for growing the labour force through increased labour force participation.

Figure D.1: Labour Force Participation Rate Comparisons

Region	2008	2009
Canada	63.6%	61.7%
Alberta	72.0%	69.4%
The Alberta HUB Region¹	76.8%	76.7%

Source: Government of Alberta, 2009 Annual Alberta Labour Market Review and Alberta Employment and Immigration Monthly Employment Statistics. The Alberta HUB Region’s statistics are likely skewed higher by 5%-7% due to the inclusion of the Regional Municipality of Wood Buffalo.

D.2 Labour Force Composition and Trends

Analysis of the labour force by occupation for the 2001 to 2006 period illustrates both the current supply of labour in various occupations and indicates growth trends in potential demand in various occupational groups. The figure below illustrates the following unique aspects of the Alberta HUB Region’s labour force when examining occupational groups:

- While quite similar to the province of Alberta for most occupational groups, the Alberta HUB Region’s labour force is unique in that there are nearly three times as many occupations related to primary industry.
- Trades, transport, and related equipment operators is the fastest growing occupational group. This group grew by 2,645 employees or 26% between 2001 and 2006.
- Business, Finances and Administrative occupations also grew faster than most other groups by adding 1,440 employees (21%).
- Primary industry (farming/ fishing) declined by 1,155 employees.

These observations are consistent with the picture of a trade focused economy of the Alberta HUB Region as outlined in the previous section.

Figure D.2: The Alberta HUB Region Workforce by Major Occupation Group

NOC ¹ One-Digit Code and Description Sorted by Number Employed	Alberta HUB Region			% of Total in Alberta
	Employed in 2006	% of Total	2001- 2006 Increase	
6-Sales and Service	12,970	21.5%	445	22.7%
7-Trades; Transport; Equipment Operators	13,125	21.7%	2,645	18.2%
8-Occupations Unique to Primary Industry	9,055	15.0%	-1,155	6.1%
1-Business, Finances and Administrative	8,430	14.0%	1,440	17.7%
0-Management	5,085	8.4%	235	9.7%
4-Social Science; Education; Government/ Religion	4,095	6.8%	235	2.3%
3-Health Occupations	2,830	4.7%	200	5.4%
9-Unique to Processing; Manufacturing/ Utilities	1,605	2.7%	0	3.4%
2-Natural and Applied Sciences and Related	2,390	4.0%	225	7.5%
5-Art; Culture; Recreation and Sport	730	1.2%	55	2.3%

Source: Statistics Canada 2001 and 2006 Census as reported at Albertafirst.com.

(1): National Occupational Classification System.

Analyzing the workforce by industry group reinforces the observations above and adds some insight into industries that are expanding and contracting in terms of employees.

Figure D.3: The Alberta HUB Region Workforce by Select Industry Groups

Industry Group Description and Two-Digit NAICS ¹ Code	Alberta HUB Region		
	Employed in 2007	Employed in 2002	2002-2007 Increase
11-Agriculture	4,000	5,500	-1,500 (-27%)
21-Mining, Oil & Gas	10,100	5,400	4,700 (87%)
23-Construction	6,700	5,900	800 (14%)
31-33-Manufacturing	2,300	2,300	0 (0%)
42-45-Wholesale and Retail Trade	10,400	10,200	200 (2%)
48-49-Transportation and Warehousing	4,400	3,400	1,000 (29%)
52-53-Finance, Insurance, Real Estate	3,000	2,500	500 (20%)
54-Professional, Scientific, and Technical Services	2,200	1,500	700 (47%)
62-Health Care and Social Assistance	7,200	5,800	1,400 (24%)
72-Accommodation and Food Services	2,700	3,300	-600 (-18%)
92-Public Administration	3,300	2,500	800 (32%)

Source for Economic Data: Government of Alberta's Regional Economic Indicators for the Northeast Region, July 2009.

(1): North American Industry Classification System.

Analysis of employment by major industry category suggests the following about the Alberta HUB Region's labour force:

- The number of people employed in the Energy Extraction industry has nearly doubled between the 2002 and 2007 period.
- Transportation and warehousing is also a growth sector showing almost 30% growth over the 2002-2007 period.
- The Agriculture industry employed 1,500 fewer people during the 2002-2009 period. This phenomenon is mainly due to increased mechanization and increasing farm size.
- Although relatively small, Professional, Scientific, and Technical Services industry has grown by 47% over the past 5 years. This is likely due to the presence of major oil sands projects and the aerospace industry.

If recent positive economic trends continue, and the labour force in total grows at historical rates, there is reason to believe that the Alberta HUB Region's labour force could grow from its current estimated total of 73,000 to about 88,000 by 2015.

D.3 Population Demographics

D.3.1 Population Growth

The population of the Alberta HUB Region is approximately 125,700. Over the 2001-2009 period the Alberta HUB Region's population grew by just under 9% compared to 13% for Canada and over 20% for Alberta. As the figure below shows, the Region's population is projected to grow to just under 132,000 by 2014.

Figure D.4: The Alberta HUB Region Population and Projections

	2001	2009	% Change (+/-)	Five Year Projection				
				2010	2011	2012	2013	2014
Total	115,382	125,686	8.93%	126,886	128,098	129,321	130,556	131,803
Population by age groups:								
Under 15	28,285	28,487	0.71%	28,552	28,615	28,676	28,735	28,792
15-24	16,198	17,512	8.11%	17,686	17,861	18,038	18,216	18,397
25-44	33,135	33,944	2.44%	34,082	34,219	34,355	34,490	34,623
45-64	23,642	30,134	27.46%	31,033	31,948	32,880	33,828	34,792
Over 64	14,122	15,609	10.53%	15,803	15,999	16,197	16,398	16,601
Median	32.6	34.4		34.6	34.8	35.1	35.3	35.5
% Population distribution by age groups:								
Under 15	24.51%	22.67%	-7.54%	22.48%	22.29%	22.10%	21.91%	21.72%
15-24	14.04%	13.93%	-0.75%	13.92%	13.91%	13.90%	13.89%	13.88%
25-44	28.72%	27.01%	-5.96%	26.83%	26.65%	26.47%	26.29%	26.11%
45-64	20.49%	23.98%	17.01%	24.43%	24.88%	25.33%	25.79%	26.24%
Over 64	12.24%	12.42%	1.47%	12.44%	12.46%	12.48%	12.50%	12.52%
Total	100%	100%		100%	100%	100%	100%	100%

Source: 2009 population figures are estimated using Alberta Municipal Affairs Official Population Statistics and municipal censuses performed by Alberta HUB's communities. 2010-2014 population projections are derived from regional and provincial population growth trends.

Alberta HUB's relatively low population growth rate will be a challenge with respect to a growing labour force. In addition, demographic factors related to Canada's aging population will add significantly to the challenge. As the figure above shows, the fastest growing age categories are 45-64 and 64+ and the slowest growing age category is the under 15. The rural areas of the Alberta HUB Region are particularly challenged by these trends:

- Villages and municipal districts had a combined population growth rate of 2.8% during the 2001-2009 period compared to a 27% growth rate in Alberta HUB's cities over the same period.
- The median age of residents of Alberta HUB's rural areas is about 45 years compared to 33 years in Alberta HUB's cities.

Like the rest of Alberta, the Alberta HUB Region's population growth is highly dependent on inter and intra-provincial migration, and immigration.ⁱⁱ In 2009 just over half (55%) of Alberta's population growth was due to net migration and immigration.ⁱⁱⁱ It is likely that close to 40% of the Alberta HUB Region's population growth is attributable to natural growth (births minus deaths). Net migration (people moving to the area minus people moving from the area) probably accounts for the other 60%.^{iv}

Calgary and Edmonton are the most popular destinations for immigrants drawing 87% of those arriving in Alberta during the 2001 to 2006 period. In the same period, the Alberta HUB drew approximately 600 or about 0.5% of Alberta's immigrants.^v All of Alberta's rural areas are challenged to attract immigrants. However, given slowing natural population growth rates, immigration and migration will be key strategies to grow the Alberta HUB Region's labour force.

D.3.2 First Nations and Métis Communities

Approximately 14,600 people live in one of 11 First Nations and Métis communities in the Alberta HUB Region. In addition, the 2006 Canadian Census indicates there were approximately 5,200 First Nations and Métis people living outside of Reserves and Settlements in the Alberta HUB Region. Taken together, First Nations and Métis people make up approximately 16% of the population of the Alberta HUB Region. These populations represent a significant opportunity for the regional labour force. Key demographic trends of this group include:

- The median age of residents of First Nations and Métis communities is 22.7 years; 14 years younger than the non-Aboriginal population of the Alberta HUB Region of 36.8 years.
- Population growth rates in First Nations and Métis communities are twice the rate of other municipalities in the Alberta HUB Region except for the cities of Cold Lake and Lloydminster. During the 2001 to 2009 period, First Nations and Métis communities' population grew by about 10% compared to 5% for the Alberta HUB Region's towns, villages, and rural municipalities.
- Aboriginal fertility rates in Canada are significantly higher than for non-Aboriginal people. Given the young demographics in Alberta HUB's First Nations and Métis communities, it is likely that population growth rates will increase significantly over the next 5-10 years.

ⁱⁱ Intra-provincial migration is people moving to Alberta HUB from other parts of Alberta; inter-provincial migration is people moving to Alberta HUB from other parts of Canada

ⁱⁱⁱ Government of Alberta, Finance and Enterprise, quarterly population Report, March 25, 2010.

^{iv} Derived from birth and death statistics in Alberta Vital Statistics Annual Review 2007 published by Service Alberta.

^v Government of Alberta's Regional Economic Indicators for the Northeast Region, July 2009

Combining the First Nations and Métis communities in the Alberta HUB Region, the following data summarizes key labour force statistics:

Figure D.5: Labour Force Statistics for First Nations and Métis People living on Reserve or Settlements

Labour Force Dimension	Alberta HUB First Nations and Métis People Living on Reserves / Settlements	Alberta Off-Reserve/ Settlement First Nations and Métis People
Total Population	14,589	160,500
Labour Force (aged 15+)	9,453	104,000
Labour Force Participation Rate	49%	70%
Unemployment Rate	21.6%	15.4%
Estimated number of unemployed	994	11,211

Source: 2001 and 2006 Federal Census Data. Alberta figures are sourced from Government of Alberta, Alberta Labour Force Profiles: Aboriginal People 2009.

At 21.6%, the unemployment rate in Alberta HUB’s First Nations and Métis communities is 4.6 times higher than it is in other parts of the Alberta HUB Region and about 5% higher than for Aboriginal people living outside of First Nations and Métis communities. These gaps suggest a labour force opportunity.

A larger labour force opportunity is likely to be found in increasing the current labour force participation rate from 49% to a figure that is closer to the average for off-Reserve/ Settlement figure. For example, if the participation rate for Alberta HUB’s First Nations and Métis people was the same as provincial averages, the labour force would grow by almost 2,000 people.

It is important to note that First Nations and Métis Communities in the Alberta HUB Region vary significantly in terms of their labour force participation rates and unemployment rates.

Interviews with Alberta HUB’s member First Nations and Métis community members suggest that while there are challenges in increasing employment levels, there are also several enablers.

Figure D.6: Labour Force Development Enablers and Challenges

Dimension	Challenge	Enabler
Location and transportation	<ul style="list-style-type: none"> • Commuting distance and lack of transportation. • Vehicle ownership/driver training. • Lack of public transportation. 	<ul style="list-style-type: none"> • Many communities are located relatively close to larger centres. • Driver training education is a recognized barrier and programs have been put in place in some communities. • Business development initiatives that are in progress in some communities will create local jobs reducing the need for travel.
Demographics	<ul style="list-style-type: none"> • A young population needs training and other employment supports such as child care. 	<ul style="list-style-type: none"> • Young population means a young, large, healthy labour force. • Some communities have recognized child care needs and have facilities in place or are planning to do so.
Education and Training	<ul style="list-style-type: none"> • Low high school completion rates. • Job related skills require development. 	<ul style="list-style-type: none"> • Many training initiatives in place for safety, basic upgrading, trades and pre-trades, and life skills. • Coordinators in place in most communities to link people, funding and programs. • Some post-secondary institutions in the region such as Blue Quills First Nations College offer programs specifically tailored for Aboriginal learners.
Leadership and cooperation	<ul style="list-style-type: none"> • Disparity between communities in terms of resources, initiatives, and successes. 	<ul style="list-style-type: none"> • Partnership programs like Alberta HUB Region Economic Development Alliance/ Aboriginal Community Enterprises (ACE) bring groups together to share ideas, issues, programs, and resources. • Proactive communities are showing leadership by hosting joint training programs, offering employment opportunities, and demonstrating good economic development practices.
Other barriers	<ul style="list-style-type: none"> • Health related barriers, addictions, personal issues, adaptability. 	<ul style="list-style-type: none"> • Some communities are increasing resources and services to help people with these barriers such as life and job skills training, and addictions programs.

Increasing First Nations and Métis participation in the labour force hinges on continuing/ furthering the work that has been in progress with programs to reduce employment barriers.

D.4 Educational Institutions and Training Resources

D.4.1 High School and College Graduates

High School Graduates:

There are 9 school boards whose jurisdiction overlaps with the Alberta HUB Region. These boards have about 3,900 students in grade 12 in the 2009/10 school year. Using the provincial averages for post-secondary transition^{VI}, there are at most, about 2,340 (60%) who may enter the workforce per year whereas the balance (40%) go on to some form of post-secondary education.

The 3-year high school completion rate in Alberta for 2008 is 70.7%. Without post-secondary training and education, it is reasonable to expect that this group will supply the labour market with occupations requiring less specialized skill and training such as Sales and Service, Food Services, Equipment Operators, and Labourers. In addition to high school graduates, it is important to recognize that thousands of youth make a significant contribution to the labour force during their high school years.

College Graduates (Non-Trade):

There are three colleges that have a physical presence in the Alberta HUB Region, Lakeland College, Portage College, and Blue Quills First Nations College. These colleges awarded 1,288 parchments in the 2008/09 academic year.^{VII}

Figure D.7: Colleges in the Alberta HUB Region

College	Locations	2008/09 FLEs ¹	Programs
Lakeland College	• Lloydminster, Vermilion	2,051	• Upgrading, agriculture, business, environmental science, emergency services, nursing, educational assistant, tourism, trades, university transfer.
Portage College	• Bonnyville, Cold Lake, Frog Lake, Goodfish Lake, Lac La Biche, Saddle Lake, St. Paul, Vegreville, Wainwright	980	• Upgrading, trades, business administration, emergency services, nursing, art, transport operator training.
Blue Quills First Nations College	• St. Paul	Not available	• Aboriginal languages, art, social services, education, business, pre-trades training.

(1): FLE = Full Load Equivalent enrolments.

^{VI} Alberta Education, Accountability Pillar Report for Annual Education Results Report , October 2009, p. 178.

^{VII} Alberta Education, LERS Enrolment Cubes Report and Parchments Awarded by Sector and Institution Report. Does not include Blue Quills College data.

The following figure displays the number of graduates from Lakeland and Portage Colleges.

Figure D.8: 2008/09 Non-Trade Graduates from Lakeland and Portage Colleges ^{note}

2008/09 Degree Graduates by Program	Number
Business Administration	24
Environmental Science	27
2008/09 Certificate and Diploma Graduates by Program	
Emergency Services	336
Childcare / Social Services / Teacher Assistant	268
Business & Administration	144
Nursing/ Health Care Related/ Emergency services(Portage)	121
Agriculture	71
University Studies (Portage College)	57
Gas field operator/ Heavy Oil Technician	52
Environmental Science	47
Massage therapy/ beautician	26
Pre-trades	12
Tourism	11
Other programs	45

Source: Lakeland College/ Portage College. Figures do not include university transfers and trade training.

Note: Data from Blue Quills First Nations College was not available.

Over the past 5 years, enrolment trends at Lakeland College and Portage College have been constant overall but with significant growth in certain programs. For example, overall full load equivalent enrolments were 3,108 in 2004/05 and 3,031 in 2008/09. However, there has been significant growth in apprenticeship training, emergency services programs, and some other programs.

Strong post-secondary presence is critical for developing a skilled workforce since studies have shown that when rural students in Alberta travel to Edmonton or Calgary for their post-secondary education, only about half of them return to their rural home to work.^{VIII} The study also showed that only about 10% of graduates whose home is in a large urban centre will settle in a small urban centre or rural area.

^{VIII} Dr. Marianne Sorenson: The 'Class of 2000' Two Years after Graduation, Results From the 2002 Alberta Universities and University Colleges' Graduate Employment Survey, November 2002.

D.4.2 Apprenticeship Training

Apprenticeship training is a vital ingredient to the Alberta HUB Region’s workforce. Trades, Transport Equipment Operators, and related occupations account for the largest category of occupations with over 13,000 employed. This category is the fastest growing occupational category in the Alberta HUB Region.

Alberta has 50 designated trades. A designated trade is one in which industry along with the Alberta Apprenticeship and Industry Training Board has established training and certification standards.

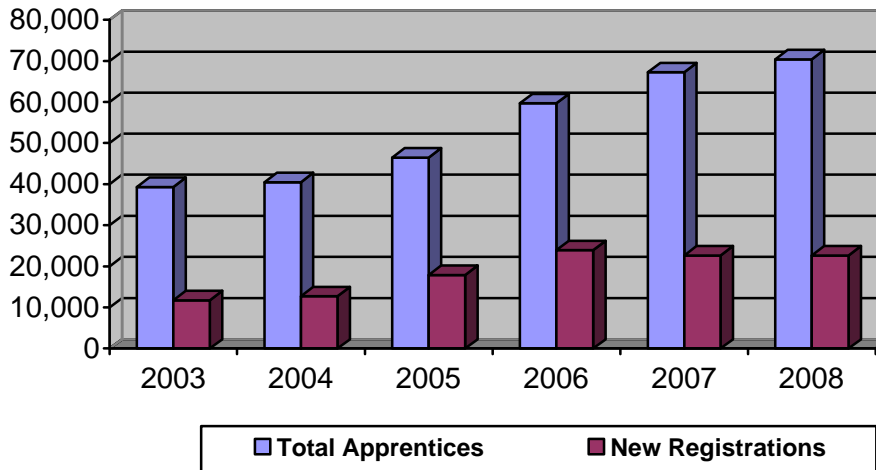
Figure D.9: Alberta’s Designated Trades

Agricultural Equipment Technician	Gasfitter	Powerline Technician
Appliance Service Technician	Glazier	Power System Electrician
Auto Body Technician	Hairstylist	Recreational Vehicle Service Technician
Automotive Service Technician	Heavy Equipment Technician	Refrigeration and Air Conditioning Mechanic
Baker	Instrument Technician	Rig Technician
Boilermaker	Insulator	Roofer
Bricklayer	Ironworker	Sawfiler
Cabinetmaker	Landscape Gardener	Sheet Metal Worker
Carpenter	Lather-Interior Systems Mechanic	Sprinkler Systems Installer
Communication Technician	Locksmith	Steamfitter-Pipefitter
Concrete Finisher	Machinist	Structural Steel and Plate Fitter
Cook	Millwright	Tilesetter
Crane and Hoisting Equipment Technician	Motorcycle Mechanic	Tool and Die Maker
Electric Motor Systems Technician	Outdoor Power Equipment Technician	Transport Refrigeration Technician
Electrician	Painter and Decorator	Water Well Driller
Elevator Constructor	Parts Technician	Welder
Floor Covering Installer	Plumber	

Source: www.tradesecrets.gov.ab.ca List of Compulsory and Optional Certification Trades.

In response to a substantial demand for trade occupations in Alberta, the Alberta Apprenticeship and Industry Training Board has been working to accelerate the growth in apprenticeship training. As the next graph shows, between 2003 and 2008 the number of registered apprentices and new apprentices has grown significantly in the past six years. Between 2003 and 2008, the average growth rate of registered apprentices and new apprentices in Alberta was 15.8% and 18.6% respectively.

Figure D.10: Number of Registered Apprentices in Alberta by Year



Source: Alberta Apprenticeship and Industry Training Board 2008 - 2009 Annual Report.

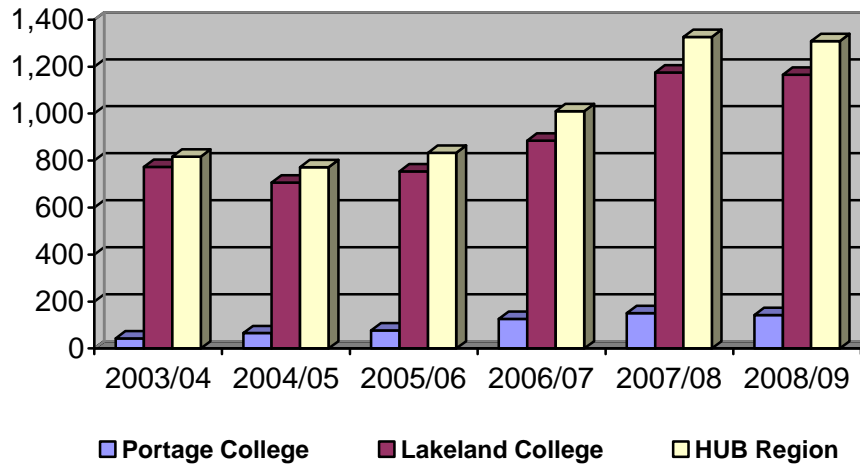
The Alberta Registered Apprenticeship Program (RAP) allows high school students to begin apprenticeship training in high school and leave high school with a diploma as well as time and training credits toward their apprenticeship training. In 2008, this innovative program registered 1,555 youth in the program and has certified 1,658 apprentices since inception of the program.

Growth in apprenticeship programs has also been aided with growing registrations from women and First Nations/ Métis people. For example, in the 2003 to 2008 period the number of First Nations/ Métis apprentices grew by 250% from 736 registrants to 1,812. In that same period, the number of apprenticeship completions grew 8-fold from 18 in 2003 to 144 in 2008. In 2008, 5,745 (8%) of Alberta’s registered apprentices were women

In the Alberta HUB Region, Lakeland College and Portage College offer technical training for 8 of the 50 designated trades. Blue Quills First Nations College offers pre-trade preparation and an advocacy program. In 2008, 287 apprentices were certified through the Bonnyville or Vermilion Apprenticeship and Industry training office locations.

As shown in the graph below, technical training attendance at Lakeland College and Portage College has shown robust growth over the past 6 years. Training attendance at Portage College grew from 43 attendees in 2003/04 to 143 in 2008/09. Training attendance at Lakeland College grew by 51% during this same period from 773 to 1,166 apprentices in training.

Figure D.11: Attendance at Technical Training in the Alberta HUB Region



Source: Alberta Apprenticeship and Industry Training Board 2008 - 2009 Annual Report.

Welder, Electrician, and Heavy Equipment Technician are the Trades that have the highest technical training attendance at Lakeland College and have all grown significantly in the past 5 years. Growth in training attendance for Steamfitter-Pipefitter and Instrument Technician have also grown rapidly since they were launched in 2007/08.

Figure D.12: Technical Training Attendance at Lakeland College^{note}

Trade	04/05	05/06	06/07	07/08	08/09	Growth 04/05 to 08/09
Welder	172	181	286	431	332	160 or 93.0%
Electrician	206	237	224	246	261	55 or 26.7%
Heavy Equipment Technician	97	125	149	204	229	132 or 136.1%
Carpenter	96	104	110	131	159	63 or 65.6%
Automotive Service Technician	96	81	79	74	79	-17 or (17.7%)
Steamfitter-Pipefitter	-	-	-	19	45	26 or 136.1%
Parts Technician	37	19	25	41	37	0 or 0.0%
Instrument Technician	-	-	-	10	17	7 or 70.0%
Total	704	747	873	1,156	1,159	455 or 64.6%

Source: Lakeland College.

Note: Data from Portage College was not available by trade.

D.5 Summary of Factors Influencing the Alberta HUB Region’s Labour Force Supply

The figure below outlines the key factors influencing the supply of labour in the Alberta HUB Region.

Figure D.13: Factors Influencing Labour Force Supply

Factor	Observation
Labour Force trends	<ul style="list-style-type: none"> Labour force participation rates in Alberta and the Alberta HUB Region are among the highest in Canada suggesting that there is limited room to expand the labour force through increased participation. The Alberta HUB Region’s unemployment rates have been stable in the past 5 years staying in a band of 3.6 to 5.0%. This compares to Alberta unemployment figures which have nearly doubled from 3.4% in 2006 to the 6.6% in May 2009. Employment in Energy industry has grown 87% between 2002 and 2007.
Population trends	<ul style="list-style-type: none"> Population growth averages are lower than for Canada and Alberta over the 2001-2009 period. Population growth in rural areas of the Alberta HUB Region are very low (2.8% during the 2001-2009 period) compared to growth in its urban areas (27% during the 2001-2009 period). The median age of the Alberta HUB Region residents (34.4 years) is significantly lower than Canada’s (39.5 years) overall but higher than Canada’s in rural areas (45 years).
Net migration	<ul style="list-style-type: none"> Migration is critical to supplement natural population growth to provide for strong overall population/ labour force growth. Most population growth (60%) is due to net migration and not natural population growth. The majority of Alberta’s immigrants move to Edmonton/ Calgary. Similar to other rural locations in Alberta, the Alberta HUB Region attracts comparatively few immigrants.
First Nations and Métis People	<ul style="list-style-type: none"> Make up approximately 16% of the Alberta HUB Region’s population, is significantly younger (median age of 22.7 years), and is growing at twice the rate of the Alberta HUB Region’s non-city municipalities. The labour force participation rate of 49% and unemployment rate of 21.6% suggest a labour force opportunity.
High school graduates	<ul style="list-style-type: none"> School jurisdictions overlapping the Alberta HUB Region’s boundaries have approximately 3,900 students in grade 12 of which, according to Alberta averages, 60% will enter the labour force full-time upon graduation.
Post-secondary graduates	<ul style="list-style-type: none"> Alberta HUB has 2 comprehensive community colleges and one specialized college with about 3,100 students enrolled and 1,288 graduates in 2008/09.
Trades training trends	<ul style="list-style-type: none"> Strong growth in trade training attendance in the Alberta HUB Region and across the province is positive for the Alberta HUB Region’s labour supply. Lakeland College added 2 new trades programs in 2007/08 demonstrating responsiveness to local labour force needs. Portage College’s reach to smaller communities is crucial in developing the labour force in these centres.

E. Analysis of the Alberta HUB Region’s Labour Demand

E.1 Key Occupations Currently in Demand in the Alberta HUB Region

In the survey of 87 regional businesses, just over half of the survey respondents (52%) indicated that they have current vacancies. These employers reported 115 current vacancies. Most of the current vacancies are concentrated in the Transportation, Energy, and Construction industries. The following figure outlines the number and type of positions that are currently available from the sample.

Figure E.1: Occupations in Demand in the Alberta HUB Region

Current Vacancies	NOC-S ¹ Code	Position Title/ Description
16	H711	Truck Driver
15	H326	Welder
13	I122/32/42	Oil and Gas Operator
10	H121	Carpenter
6	H323	Fabricator
6	E212/4	Community Disability Support Worker
5	G111/21	Salespeople/ Retail Workers
5	Varies	Labourers
3	Varies	Engineers / Engineering Technicians
3	A332	Program Coordinator/ Director
2	H221	Power Engineers
2	J172	Meat Cutters
2	F025	Cultural Interpreters
1	H415	Aircraft Maintenance Engineer
1	H411	Millwright

(1): National Occupational Classification for Statistics.

In addition to interviewing businesses, 34 regional stakeholders were also surveyed and asked for their perceptions of occupations that are currently in demand in the Alberta HUB Region. Stakeholders’ perceptions are shown in the following figure.

Figure E.2: Occupations in Demand in the Alberta HUB Region

Number of Mentions	NOC-S ¹ Code	Position Title/ Description
10	Varies	Trades
8	H711	Truck Driver
8	G111/21	Salespeople/ Retail Workers
8	I122/32/42	Oil and Gas Operator
8	Varies	Hospitality (Hotel/ Restaurant)
5	D011/2	Doctors
5	H326	Welder
5	H221	Power Engineers
4	Varies	Engineers / Engineering Technicians
4	Varies	Labourers
7	B011/112	Accountants/ Financial
4	D112	Nurses
3	Varies	Construction workers/ labourers
2	E131	Public School Teachers
1	Varies	Medical Technician/ Aides

(1): National Occupational Classification for Statistics.

Stakeholders identified most of the same occupations as businesses and added medical professionals, financial professionals, teachers, and hospitality workers to the list.

E.2 Challenging Positions to Fill

The hiring challenges faced by employers in key industries represent a valid indicator of occupational supply-demand imbalance. Sixty-nine percent of businesses surveyed indicated they have positions that have been difficult to fill. The list of these positions is very similar to the list of positions outlined in the previous section:

- Trades such as machinists, millwrights, pipefitters, plumbers, and carpenters
- Engineers and power engineers
- Financial professionals (bankers, accountants, account executives)
- Salespeople
- Welders/ fabricators
- Truck drivers
- Engineering technicians
- Field labourers, operators
- Administrative and technical workers

Stakeholders identified many of the same positions as being difficult to fill in their communities but also added medical professionals to the list such as doctors, specialists, nurses, and medical technicians.

When asked why they felt hiring has been challenging business survey respondents mentioned the following reasons:

- Hard to find, insufficient supply in the area, small labour pool to draw from
- Candidates are lacking the experience or qualifications necessary
- We are looking for very specific skills
- Wage/ salary expectations are too high
- Undesirable schedule - night shifts/ seasonal work etc.
- Rural location is hard to attract people to

It is interesting to note that the top three reasons cited for having difficulty hiring relate to a theme of a shortage of skilled labour.

E.3 Demand Mitigation - Recent Layoffs and Labour Surpluses

There is some evidence in the survey to suggest that general unskilled labourers are relatively easy to hire for at the moment but there was no evidence to suggest that a skilled labour surplus exists in any occupational category.

About 40% of businesses surveyed indicated they had to reduce their workforce in the past 6 months. Of these businesses a few stated that they have since hired them back, or have started to hire back employees. The positions reduced were welders, truck drivers, oil field staff, pilots, salespeople, and labourers. The number of employees let go was relatively small and does not suggest that there would be a meaningful surplus of skilled labour in any of these occupational categories.

E.4 Estimated Demand 2010 to 2015

A full 80% of business survey respondents indicated that they expect their business to grow and nearly all (93%) suggested that they would be hiring over the next 5 years. The following figure highlights businesses estimated demand by occupation.

Figure E.3: Occupations in Demand in the Alberta HUB Region - Next 5 Years

Number Expected to Hire over next 5 years	NOC-S¹ Code	Position Title/ Description
57	H326	Welder
57	I122/32/42	Oil and Gas Operator
35	H112	Pipefitter
34	Varies	Labourers
32	H711	Truck Driver
29	G111/21	Salespeople/ Retail Workers
21	H211	Electricians
12	H323	Fabricator
11	Varies	Engineers
11	C111/2	Engineering Technologists
10	E121/31	Teachers and Instructors
9	Varies	Trades (Millwright, Plumber, Sheet Metal Worker/ Fabricator, machinist)
7	H121	Carpenter
6	H221	Power Engineers
6	F025	Cultural Interpreters
6	B011/112	Accountants and Finance Occupations
5	C143	Instrument Technician
5	E212/4	Community Disability Support Worker
4	B211	Administrative / Clerical
4	H412	Heavy Equipment Technician
3	E012	Lawyers
2	A332	Program Coordinator/ Director

(1): National Occupational Classification for Statistics.

Consistent with other data presented in this report, the majority of employment demand is concentrated in Trades such as Welding, Pipefitters, and in the Transportation and Energy industries. General labour also shows up again in this list as a high demand occupation. It is important to consider that these demand figures are derived by talking to 87 businesses in a setting where there are about 3,000 businesses in these sectors in the Alberta HUB Region. Actual demand will therefore be a multiple of the figures above.

Labour demand projections can also be made by extending historical trends in employment growth by industry. The following figure projects the number of jobs created by industry during the 2010 to 2015 period.

Figure E.4: The Alberta HUB Region Workforce Projections by Industry Group

Industry Group Description and Two-Digit NAICS¹ Code	Projected Average Annual Growth Rate	Projected Jobs Created During 2010-2015
21-Mining, Energy	7.0%	4,981
62-Health Care and Social Assistance	5.5%	2,205
48-49-Transportation and Warehousing	5.0%	1,407
23-Construction	3.5%	1,394
52-53-Finance, Insurance, Real Estate	4.0%	731
92-Public Administration	3.0%	574
54-Professional, Scientific, and Technical Services	4.0%	536
42-45-Wholesale and Retail Trade	1.0%	547

(1): North American Industry Classification System

These projections show a similar trend with occupations related to oil and gas, health care, transportation and warehousing, and construction leading employment growth.

E.5 Alberta Context

To set the stage for estimating demand for labour in the Alberta HUB Region, it is useful to examine projections of occupational supply and demand at the Alberta level. In most cases, there should be a significant correlation between Alberta's labour demand and a region's labour demand particularly when Alberta's key industries are operating in the region. The figure below shows the 20 occupations that have the highest projected shortage to 2019.

Figure E.5: Alberta's Occupational Supply and Demand 2009-2019

Demand/ Supply Index ¹	NOC-S ² Code	Position Title/ Description
1.151	D233	Licensed Practical Nurse
1.121	D044	Other Professional Occupations in therapy and assessment
1.090	J112	Petroleum, gas, and chemical process operators
1.089	H015	Contractors and supervisors, carpentry trades
1.083	D012	General practitioners and family physicians
1.073	H017	Contractors/ supervisors, heavy construction equipment crews
1.054	H019	Contractors/ supervisors, other construction trades, installers, repairers, and service persons
1.054	D011	Specialist physicians
1.045	D112	Registered nurses
1.028	D311	Dental assistants
1.027	I142	Oil and gas well drilling workers and service operators
1.027	I215	Oil and gas well drilling, servicing, and related labourers
1.027	J012	Supervisors, petroleum, gas, and chemical processing and utilities
1.019	D312	Nurse aides, orderlies, and patient service associates
1.019	D313	Other assisting occupations in support of health services
1.017	I122	Supervisors, oil and gas drilling and service
1.016	H012	Contractors and supervisors, electrical trades and telecommunications occupations
1.012	D234	Ambulance attendants and other paramedical occupations
1.011	C164	Construction Inspectors
1.002	H211	Electricians (except industrial and power system)

(1): Ratio of the demand projection to the supply projection for the 2009-2019 period. A number greater than 1 indicates excess of demand over supply.

(2): National Occupational Classification for Statistics.

Source: Government of Alberta, Employment and Immigration: Alberta's Occupational Demand and Supply Outlook 2009-2019

It is instrumental to note that three industries account for all 20 of the occupations in the above figure: Health Care, Energy, and Construction.

F. Occupational Supply-Demand Gaps in the Alberta HUB Region and Strategies for Addressing

F.1 Summary of High Demand Occupations for Key Alberta HUB Region Industries

To identify high demand occupations in the Alberta HUB Region's labour force, we identified the following 5 criteria based on the preceding analysis in Section E. A high demand occupation identified if the occupation meets at least 3 of the 5 criteria below:

1. Identified as currently in demand by employers or stakeholders and outlined in figure E.1 and E.2
2. Identified as a 'challenging to fill' occupation from the employer or stakeholder survey and outlined in Section E.2.
3. Identified by employers as being high in demand over the next 5 years as outlined in figure E.3.
4. Employed in a key Alberta HUB Region industry that is projected to grow significantly over the next 5 years. This is outlined in figure E.4.
5. Listed as a position where demand is projected to exceed supply in Alberta as outlined in figure E.5 Alberta's Occupational Supply and Demand 2009-2019.

The following figure lists the occupations that meet 3 of the 5 criteria in the Alberta HUB Region.

Figure F.1: Summary of High Demand Occupations in the Alberta HUB Region

Broad Occupational Category/ Industry	NOC-S¹ Code	Position Title/ Description
Energy	H221	Power engineers
	J112	Petroleum, gas, and chemical process operators
	I142	Oil and gas well drilling workers and service operators
	I215	Oil and gas well drilling, servicing, and related labourers
	J012	Supervisors, petroleum, gas, and chemical processing and utilities
	I122	Supervisors, oil and gas drilling and service
	C111/2	Engineering technologists
	Varies	Engineers
Construction and Trades	H326	Welder
	H112	Pipefitter
	H211	Electrician
	H323	Fabricator
	H015	Contractors and supervisors, carpentry trades
	H017	Contractors/ supervisors, heavy construction equipment crews
	H019	Contractors/ supervisors, other construction trades, installers, repairers, and service persons
	H012	Contractors and supervisors, electrical trades and telecommunications occupations
	C164	Construction inspectors
	H412	Heavy equipment technician
	C143	Instrument technician
	H821	Construction labourer and helper
H711	Truck operator	
Health Care and Related	D233	Licensed Practical Nurse
	D112	Registered Nurse
	D012	General practitioners and family physicians
	D011	Specialist physicians
	D312	Nurse aides, orderlies, and patient service associates
	D234	Ambulance attendants and other paramedical occupations
	E212/4	Community disability support worker
Other	G111/21	Salespeople and retail workers
	B011/112	Accountants and other financial professionals

(1): National Occupational Classification for Statistics.

F.2 Occupational Supply-Demand Gaps for Key Alberta HUB Region Industries

F.2.1 Energy Industry

The 22 companies surveyed in the Energy industry identified 13 current vacancies for oil and gas operators and an additional demand of 57 operators over the next 5 years. Demand was also high for field labourers, power engineers, engineers and technologists, and a variety of trade occupations crucial for the Energy industry. There are approximately 435 companies in the Energy industry in the Alberta HUB Region suggesting the total demand is a significant multiple of the sample result.

In terms of labour force supply, Lakeland College has several programs to supply the energy industry such as:

- Gas Process Operator - 23 graduates in 2008/09
- Heavy Oil Operations Technician - 29 graduates in 2008/09
- Petroleum Industry Supervisor - New program in 2007/08
- Power Engineering - 72 enrolled in 2008/09

There are several organizations that provide safety ticket and other related Energy industry training in the Alberta HUB Region. Extensive trades training is also available in the Alberta HUB Region as outlined in the next section. The Alberta Apprenticeship and Industry Training Board has several designated occupations related to the industry

- Oil and Gas Transportation Services designated occupation
- Rig Technician Trade
- Snubbing Services designated occupation

Despite the progressive steps taken to supply the Energy industry with skilled employees, the Alberta HUB Region will likely be in a shortage situation over the next 5 years.

- The Energy industry is projected to grow significantly in the Alberta HUB Region and will need approximately 5,000 new employees by 2015 (see figure E.4).
- The occupation Petroleum, gas, and chemical process operator is projected to have the third highest supply demand imbalance in Alberta in the 2009-2019 period (see figure E.5).
- Safety training and related tickets as a category was the second most frequently mentioned training need in Alberta HUB Region.
- Engineers, power engineers, field labourers and operators were identified by Alberta HUB businesses as challenging positions to fill.

F.2.2 Construction and Trade Occupations

Quantifying labour supply-demand imbalances related to trades is difficult since the supply relies on a number of factors such as the number of apprenticeship jobs/ placements made available by industry, the number of registered trades persons that will take an apprentice, the supply of people interested in the trade, the availability and location of technical training attendance, and other factors.

Alberta HUB Region’s colleges have had impressive growth in trade training attendance. They have also been very responsive to the market place by having the trade training available that is expected to be in high demand over the next 5 years, and by adding new trades training for high-demand trades.

It is likely that the growth will need to continue and even accelerate in order to meet the projected demand for key trades. For example, the survey of 87 businesses suggested there was a current demand for 15 welders and businesses are expecting to hire 57 more over the next 5 years. Projecting this sample result on to all of the 1,494 goods producing businesses in the Alberta HUB Region in the sectors sampled from is statistically challenging since the sample is small and not randomly drawn. However, the total demand would likely be at least a multiple of 10 (570 welders).

Figure F.2: Supply of Trades

Growth in Technical Training Attendance at Alberta HUB Region Colleges during the 5-year period 04/05 to 08/09 (see figure D.12)	
Trade	
Welder	160 students. Estimate that growth will need to increase significantly to meet anticipated demand.
Pipefitter- Steamfitter	26 students. Estimate growth will need to increase significantly to meet anticipated demand.
Electrician	55 students. Estimate that growth will need to increase significantly to meet anticipated demand.
Heavy Equipment Technician	132 students. Estimate that this rate of growth will need to continue to meet anticipated demand.
Instrument Technician	7 students. Estimate that growth will need to increase significantly to meet anticipated demand.

Corroborating these findings is fact that in the business survey, businesses identified apprenticeship training as one of the highest training needs in the Alberta HUB Region. Also, businesses identified trades as the most challenging positions to fill vacancies.

In addition to trades, the demand for truck operators is also likely to exceed supply in next 5 years. This occupation is currently the second highest in demand in the Alberta HUB Region, is listed as ‘challenging to fill’ occupation, and the sample of businesses interviewed is expecting to hire 32 drivers over the next 5 years.

F.2.3 Health Care and Related Occupations

Shortage of health care professionals in the Alberta HUB Region was a recurring theme throughout this research:

- Nurses, doctors, medical technicians, and aides were listed by stakeholders as occupations currently in demand in the Alberta HUB Region.
- Health professionals were cited by stakeholders as positions that are difficult to recruit for in their communities.
- In Alberta, 9 health care occupations including physicians, nurses, aides, ambulance attendants, and 5 others are in the list of 20 occupations projected to have the largest demand and supply imbalance to between 2009 and 2019 (see figure E.5).
- As an industry, Health Care and Social Assistance is expected to create about 2,200 new positions in the Alberta HUB Region by 2015.

In the Alberta HUB Region, Lakeland College and Portage College have several programs that offer health care related training such as:

- Emergency Medical Responder. This program was introduced at Lakeland College in 2007/08 and graduated 28 students in 2008/09.
- Emergency Medical Technician. Graduated 30 students in 2008/09.
- Health Care Aide.
- Practical Nurse Certificate.
- Practical Nurse Diploma.
- Pre-Medicine university transfer.

Indications are that health care related occupation demand will out-strip supply in the Alberta HUB Region. This will become particularly acute when aging of baby boomers begin to require additional health care services at about the same time that retirements of health care professionals will be increasing in record numbers.

F.2.4 Other Occupations

Several communities in the Alberta HUB Region have undergone rapid expansion of their retail sectors creating a need for workers in this sector. In the survey of 87 businesses, 29 salespeople and retail workers are expected to be hired over the next 5 years. This occupation was the sixth highest in the Alberta HUB Region in terms of forecasted demand. Considering that there are more retail and wholesale establishments than there are in any other single industry in the Alberta HUB Region, the seemingly small sample demand of 29 translates into a significant number when projected to the population of 860 retail and wholesale establishments in the Alberta HUB Region. A couple of other factors noted in the research suggesting a high demand versus supply were:

- Salespeople were also near the top of the list of challenging positions to fill as mentioned by the survey respondents.
- The industry is expected to add about 550 new positions in the 2010 to 2015 period based on historical growth in this sector.

Similar to the retail sector, the same pattern of demand exceeding supply was observed with respect to accountants, bankers and other financial professionals:

- Financial professionals were near the top of the list of challenging positions to fill as mentioned by the survey respondents.
- The industry is expected to add about 731 new positions in the 2010 to 2015 period based on historical growth in this sector.
- Financial professionals were mentioned as being high in demand currently and over the next 5 years the businesses surveyed mentioned that they plan to hire for 6 positions.

Based on comments from survey respondents, there are particular recruiting challenges for middle to senior occupations in the financial industry such as branch and loans managers, financial administrators, and certified accountants.

In the Alberta HUB Region, Lakeland College and Portage College have several programs that offer related training such as:

- Bachelor of Commerce/ Management Degrees
- Bachelor of Applied Business Degree
- Business administration diplomas and certificates
- Accounting and office administration programs
- Financial services programs
- Agribusiness

F.3 Recommended Strategies to Address Occupational Supply-Demand Gaps for Key Alberta HUB Region Industries

These recommendations follow from this study and are considered within the realistic resources of Alberta HUB's member communities their potential partners and are presented for consideration:

1. Communicate the findings of this study. Circulate this report to all stakeholders in the Alberta HUB Region including but not limited to Alberta HUB members, colleges, Employment and Immigration offices, and other organizations/ individuals involved in labour force development. The report should also be made available on the Alberta HUB website.
2. Support initiatives to increase labour force participation by First Nations and Métis people. Initiatives may include but are not limited to:
 - Continue to foster relationships with all First Nations and Métis communities in the Alberta HUB Region and encourage active participation in the Alberta HUB Partnership.
 - Continue work on programs like the Aboriginal Community Enterprise (ACE) that bring groups together to cooperate on improving readiness for economic development.
 - Work jointly to develop programs that reduce barriers to employment such as transportation, education, training and job skills, and child care.
 - Work with one or more large regional employers to create specific programs, policies, and procedures that target employment for First Nations and Métis people. Programs may include cultural awareness/sensitivity training, job skills training, trades training support, language support, promotional efforts, or other initiatives.
3. Take the lead on initiatives that will stimulate immigration and improve Alberta HUB communities' readiness to support immigrants. These initiatives could include:
 - Welcoming communities' initiative to encourage the development of resources to help successfully settle new immigrants.
 - Promote programs such as Provincial Nominee Program, the Canada-Germany Youth Worker Exchange Program (YWEP), skilled worker immigration, the Temporary Foreign Worker Program, and other programs that stimulate immigration to the Alberta HUB Region.
 - Collaborate with other organizations and government departments on existing/ new initiatives that market and promote Canada to immigrants.

4. Form a labour force development action committee with the three regional colleges and businesses from the Alberta HUB Region's key sectors to jointly address an occupational supply-demand gap identified in this report. The action taken may include:
 - Collaborate with colleges on instigating the feasibility of expanding trades training by increasing the current programs or by offering new programs.
 - Collaborative research on training needed by the business community.
 - Joint lobbying for additional funding/ permission to expand other key training programs such as Energy and Health Care industry related occupations.
 - Support initiatives that increase access post secondary education in rural communities.

References

- Alberta Apprenticeship and Industry Training Board, 2008 - 2009 Annual Report.
- Alberta Advanced Education and Technology, FLE Enrolment by Sector and Institution.
- Alberta Advanced Education and Technology, Parchments Awarded by Sector and Institution.
- Alberta Education, Accountability Pillar Report for Annual Education Results Report, October 2009
- Alberta Employment and Immigration, Alberta's Aging Labour Force and Skill Shortages February 2009.
- Alberta Employment and Immigration, Alberta's Supply Outlook Model, 2009 - 2019 Education and Skills
- Alberta Employment and Immigration, Alberta's Supply Outlook Model, 2009 - 2019 Visible Minorities, Aboriginals, and People with Disabilities.
- Alberta Employment and Immigration, Alberta Labour Force Profiles: Aboriginal People, 2009.
- Alberta Employment and Immigration, Alberta Labour Force Profiles: Immigrants in the Labour Force, 2008.
- Alberta Employment and Immigration, Retention Rates of Migrants to Alberta, August 2009.
- Alberta Employment and Immigration, Alberta Labour Market Outlook, March 2010.
- Alberta Employment and Immigration, Alberta's Occupational Demand and Supply Outlook 2009 - 2019.
- Alberta Employment and Immigration, 2009 Annual Alberta Labour Market Review.
- Alberta Education, Post-Secondary Transitions in Alberta, Educational Outcomes of 1999/2000 Grade 12 Students.
- Alberta Finance and Enterprise, Inventory of Major and Regional Projects for April 2010
Government of Alberta, Finance and Enterprise, Quarterly Population Report, March 25, 2010.
- Government of Alberta, Regional Economic Indicators North East Region, July 2009.
- Service Alberta, Alberta Vital Statistics Annual Review 2007.
- Dr. Marianne Sorenson, The 'Class of 2000' Two Years after Graduation, Results From the 2002 Alberta Universities and University Colleges' Graduate Employment Survey, November 2002.