



Nichols
APPLIED MANAGEMENT INC.

The Economic Contribution of Rural Alberta

Submitted to:

The Alberta Association of Municipal Districts and
Counties

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1. Executive Summary

The Alberta Association of Municipal Districts and Counties (AAMDC) is a member-driven organization that advocates for strong, vibrant, and resilient rural communities. In order to better understand the contribution of rural communities to the economies of Alberta and Canada, the AAMDC engaged Nichols Applied Management Inc. (Nichols) to undertake a study of:

- the current contribution of rural Alberta to the broader provincial economy; and
- the future of Alberta's rural economy.

Conceptually, the study approach consisted of:

- collecting the data to generate economic profiles of rural Alberta communities;
- analysing economic data to attribute economic activity to specific communities and develop profiles of different areas of rural Alberta; and
- developing an economic outlook for Alberta's rural economy.

The AAMDC membership consists of 69 municipalities; however, for this report, a broader definition of "rural Alberta" has been adopted to reflect the intertwined nature of the rural economy which includes both rural and small urban communities. For the purpose of this report, "rural Alberta" consists of municipal districts and counties, specialized municipalities, the Special Areas, villages, and summer villages. According to the *Municipal Government Act* (2017), the definitions of these different municipalities are as follows:

- A municipal district is an area in which "a majority of the buildings used as dwellings are on parcels of land with an area of at least 1850 square metres, and there is a population of 1000 or more".
- A specialized municipality is an area whose needs are not met by forming any other type of municipality (i.e., municipal district, village, town or city).
- A village is an area in which "a majority of the buildings are on parcels of land smaller than 1850 square metres, and there is a population of 300 or more".
- A summer village is similar to a village, but with slightly different governance criteria (AMA 2017b).

With a view to acknowledging that groups of communities have similar socio-economic characteristics, the analytical results are presented for areas that align with the provincial economic regions as defined by Statistics Canada. Overall, rural Alberta houses only 18% of the provincial population¹, yet is home to 41% of the public and private

¹ For the purposes of this report, the definition of rural Alberta includes the populations of rural municipalities, specialized municipalities, special areas, villages and summer villages.

investment in the province and 26% of the provincial GDP. The relative contribution of rural Alberta is impressive compared to its population size.

The specific contribution of rural sub-regions is as follows and summarised in Table 1.1:

- In the **south region**, the dominant industry in the labour force is agriculture, far outperforming the provincial average. The dominant industry for both investment and GDP is mining and oil and gas extraction, due largely to expenditures related to maintenance of existing conventional crude oil and natural gas extraction projects. Current and future significant investment in the region is predominantly in wind power and transmission line projects.
- In the **east region**, the dominant industry in the labour force is agriculture, for investment is utilities, and for GDP is mining and oil and gas extraction. Future significant investment is expected to be predominantly in pipeline and industrial projects.
- In the **Calgary region**, the dominant industry in the labour force is construction, closely followed by professional services and agriculture. The dominant industry for investment and GDP is housing and real estate. Future significant investment is anticipated in infrastructure and commercial projects in the region.
- In the **mountain region**, the dominant industry in the labour force is mining and oil and gas extraction. The dominant industry for both investment and GDP is mining and oil and gas extraction, largely due to the maintenance of existing natural gas extraction projects. Future significant investment is expected in pipeline projects.
- In the **central region**, the dominant industry in the labour force is agriculture, and for both investment and GDP is mining and oil and gas extraction. Future significant investment is expected to materialize in the development of power and pipeline projects.
- In the **capital region**, the dominant industry in the labour force is construction, whereas housing and construction are most prevalent in investment and GDP respectively, due to the rapidly growing population of the City of Edmonton and surrounding communities. Future significant investment is expected in the development of oil and gas and power projects.
- In the **northwest region**, the dominant industry in the labour force is agriculture and forestry. The dominant industry for both investment and GDP is mining and oil and gas extraction, largely due to conventional oil and gas projects. Future significant investment is in oil and gas and pipeline projects.
- In the **northeast region**, the dominant industry in the labour force, investment and GDP is mining and oil and gas extraction, far exceeding the provincial average. Future significant investment is heavily focused on oil sands and pipeline projects. Additional investment related to post-fire reconstruction is also anticipated though at the time of this project, the magnitude of that investment is unclear.

Table 1.1 Economic Profile Summary

Region	Population	Investment	GDP	Key Industry
--- Proportion of Provincial Total ---				
South Region	1%	3%	2%	Agriculture Food Processing Conventional Oil and Gas
East Region	2%	3%	2%	Agriculture Conventional Oil and Gas
Calgary Region	2%	2%	2%	Transportation and Warehousing Retail and Entertainment
Mountain Region	1%	2%	2%	Tourism Natural Gas
Central Region	1%	1%	1%	Conventional Oil and Gas
Capital Region	5%	3%	4%	Manufacturing
Northwest Region	3%	4%	4%	Conventional Oil and Gas Forestry
Northeast Region	3%	24%	8%	Oil Sands
Rural Alberta	18%	41%	26%	Oil and Gas Agriculture Forestry

Challenges and limitations on growth in rural Alberta include limited broadband connectivity, required upgrades to roads and municipal infrastructure, market volatility due to heavy reliance on the oil and gas sector, operational efficiencies reducing labour needs, and adverse impacts of domestic and international policy changes (e.g., softwood lumber, carbon tax).

Opportunities for growth include the incorporation of alternative crops (e.g., pulses), value-add agriculture processing, expansion of existing business parks, expansion of local tourism offerings, growth in microbreweries and home-based businesses, the continued strength of key economic features (e.g., Edmonton-Calgary corridor, Alberta's Industrial Heartland) and the return to new investment in the oil and gas sector.

The future of the economy of rural Alberta is largely dependent upon the oil and gas, agriculture, and forestry sectors. The future performance of these industries is tied to the prevailing price market, government policy, cultivating access to new markets and weather conditions. Steady growth is anticipated in the oil and gas and agriculture sectors, whereas a reduction in growth is anticipated in the forestry industry due to the impact of the softwood lumber tariff.



2. Introduction

Rural Alberta's economy is a dynamic and diverse network of economic actors that operate in many different industries including agriculture, oil and gas, and manufacturing. Rural Alberta is generally characterized by low population densities and large geographies which can mean that providing services to rural communities can come with increased costs. This can render them under-served when compared to urban communities where density and economies of scale allow for higher levels of service. Despite this, rural Alberta, continues to play a significant role in Alberta's economy.

With a desire to better understand the contribution of rural communities to the economies of Alberta and Canada, the AAMDC engaged Nichols Applied Management Inc. (Nichols) to undertake a study of:

- the current contribution of rural Alberta to the broader provincial economy; and
- the future of Alberta's rural economy.

The Conference Board of Canada (CBoC) published a report in 2012 with a subsequent update in 2013 highlighting the economic contribution of rural Alberta to the province of Alberta and Canada (CBoC 2012, 2013). Although the definition of rural Alberta and the methodology used in the CBoC report² differs slightly from the definition and methodology presented in the current report, rendering a direct comparison somewhat inappropriate, the results of the two studies generally align.

This report provides an overview of the study methodology, data sources, and key findings related to the current and future contributions of Alberta's rural economy.

² The CBoC's definition of rural Alberta includes all urban centres with population less than 1,000, regardless of classification (i.e. town, village, summer village, etc.). Nichols Applied Management excluded Towns, regardless of size, from the definition of rural Alberta.

3. Study Approach

Conceptually, the study approach consisted of:

- collecting economic data at a provincial or sub-regional level, as available;
- analysing economic data to attribute economic activity to specific communities and develop profiles of different areas of rural Alberta; and
- developing an economic outlook for Alberta's rural economy.

This section provides a detailed discussion of the data used and analysis conducted.

3.1 Data

The study team relied on a number of key indicators and data sources to describe the economic activity occurring in rural communities, specifically:

- population and labour force data;
- public and private investment, including planned industrial projects;
- gross domestic product (GDP);
- agricultural production volumes and values;
- forestry production volumes and values;
- natural gas and crude oil production volumes and values;
- municipal assessment data;
- interviews with representatives of regional economic development areas, and municipal economic development officials; and
- relevant studies produced by various levels of government and related organizations.

The selection of the above-listed indicators and data sources reflects the availability of data and is consistent with how various organizations and levels of government generally describe economic activity.

3.2 Analysis

Identifying the contribution of a specific rural community was challenging, in part, due to the format in which economic data is available. In general, economic data are most often available at a provincial level and economic data for small geographic areas such as rural communities are often not readily available.

An additional complicating factor in allocating economic activity to a specific geography (e.g. a rural municipality) relates to the interconnected nature of markets and of urban and rural communities. A symbiotic relationship exists between urban service centres and nearby rural communities, and distinguishing the urban and rural contributions of a particular industry, such as agriculture, is incongruous with the very nature of a modern economy. For example, crops grown in rural areas have value, in part, because they can

be shipped to other markets for sale. However, the required processing and shipping facilities are often located in urban communities as are other industries that support rural production such as equipment dealers and major suppliers.

The disaggregating of provincial or regional level economic data down to a municipal level for analytical purposes relied on the allocation of economic activity to specific geographies using measures of local activity vis-à-vis the provincial or regional total. Subsequent adjustments were made, as needed and on the basis of other data such as labour force, to reflect linkages between rural and urban communities.

For example, allocating the economic activity associated with the extraction of natural gas was accomplished by subdividing the provincial GDP figure for natural gas production using regional weights. These weights were derived using production volumes collected from Public Service Alliance of Canada (PSAC) which allowed the study team to tie the production of gas volumes to specific geographical areas.

Following the delineation of economic activity into rural communities, the study team then used labour force³, investment, GDP, assessment data, and interviews with key stakeholders to identify key regional industries, as well as constraints to and opportunities for growth.

3.3 Outlook

The economic outlook for rural communities was developed by identifying vulnerabilities and opportunities for growth in the key industries found to be the pillars upon which various rural economies are built. Recent events such as trade restrictions and their direct impact on industries were assessed, as were the indirect impacts expected to ripple through the rural economy as the interlinkages between urban and rural communities experience the expansion or contraction of industries. The study team relied on the Alberta Input-Output model and geography-specific information with respect to labour force, investment, and the location of key suppliers to calculate the broader ripple effects throughout the rural and provincial economy overall.

³ Statistics Canada collects labour force data as part of their national census conducted every five years. The census reflects data obtained at the household level and, therefore, labour force information is based on the permanent place of residence rather than the place of work. Some workers may live in a rural community and work in an urban or vice versa.

4. Economic Profiles

4.1 Overview of Rural Alberta

For the purpose of this report, rural Alberta was defined as: the sum of all municipal districts, counties, specialized municipalities, the Special Areas, villages and summer villages. The findings presented and discussed of this report exclude all cities, towns and First Nation communities.

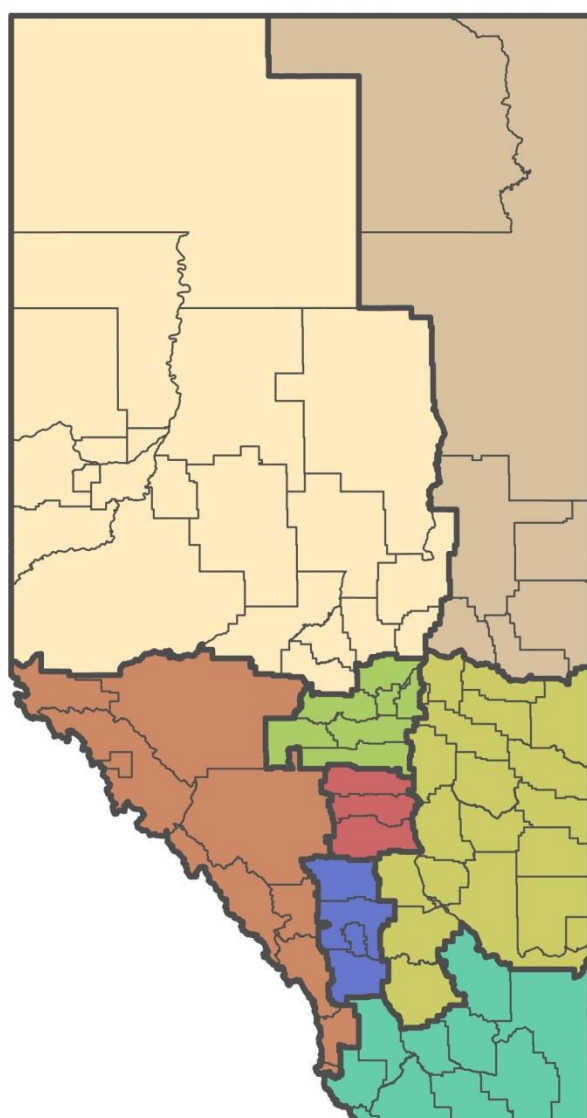
Rural Alberta is geographically diverse and includes communities that vary substantially from one another. However, in general, communities with similar socio-economic characteristics in a similar area of the province engage with the provincial economy in a similar manner and, in order to acknowledge these similarities and in an effort to produce a concise report, the analytical results are presented for areas that align with the economic regions as defined by Statistics Canada. These groupings are illustrated in Figure 4.1 and described in Table 4.1. Table 4.1 presents the municipal districts, counties and specialized municipalities in each economic region; however, the villages and summer villages included in each region, and also included in the analysis, are presented in Appendix A.

This section provides:

- an economic profile of the total rural portion of the province of Alberta; and
- economic profiles of each of the previously described regions and their contributions to the provincial economy overall.



Figure 4.1 Alberta Economic Regions



Economic Regions









	Northwest Region		Central Region
	Northeast Region		Calgary Region
	Mountain Region		East Region
	Capital Region		South Region



Table 4.1 Municipality Groupings

Economic Region	Rural Municipalities and Counties	
South Region (Lethbridge—Medicine Hat Economic Region)	Cypress County County of Forty Mile No. 8 County of Warner No. 5 Lethbridge County M.D. of Taber	Newell County Cardston County M.D. of Pincher Creek No. 9 M.D. of Willow Creek No. 26
East Region (Camrose—Drumheller Economic Region)	M.D. of Acadia No. 34 Special Areas Board Vulcan County Wheatland County Starland County Kneehill County M.D. of Provost No. 52 Paintearth County No. 18 County of Stettler No. 6	Flagstaff County M.D. of Wainwright No. 61 Camrose County Beaver County County of Minburn No. 27 County of Two Hills No. 21 Lamont County County of Vermillion River No. 24.
Calgary Region (Calgary Economic Region)	M.D. of Foothills No. 31 Rocky View County	Mountain View County
Mountain Region (Banff—Jasper—Rocky Mountain House Economic Region)	Clearwater County Yellowhead County Municipality of Crowsnest Pass	M.D. of Bighorn No. 8 Jasper (I.D. 12) M.D. of Ranchland No. 66
Central Region (Red Deer Economic Region)	Red Deer County Lacombe County	Ponoka County
Capital Region (Edmonton Economic Region)	Wetaskiwin County No. 10 Leduc County Brazeau County	Parkland County Strathcona County Sturgeon County
Northwest Region (Athabasca—Grande Prairie—Peace River Economic Region)	Lac Ste. Anne County County of Barrhead No. 11 Westlock County Woodlands County Thorhild County Athabasca County Northern Sunrise County Big Lakes County M.D. of Opportunity No. 17 M.D. Lesser Slave River No. 124 Clear Hills County	County of Northern Lights Mackenzie County M.D. of Greenview No. 16 County of Grande Prairie No. 1 M.D. Smoky River No. 130 Birch Hills County M.D. of Spirit River No. 133 Saddle Hills County M.D. of Fairview No. 136 M.D. of Peace No. 135
Northeast Region (Wood Buffalo—Cold Lake Economic Region)	M.D. of Bonnyville No. 87 County of St. Paul No. 19 Smoky Lake County	Lac La Biche County R.M. of Wood Buffalo

Note that villages and summer villages are also included in the definition of rural Alberta. A complete listing of the communities included in our analysis appears in Appendix A.

4.2 Rural Alberta

This section provides a snapshot of the economy of rural Alberta as a whole.

4.2.1 Population and Labour Force

In 2016, rural Alberta as defined in this report was home to 718,311 people, which is approximately 17.7% of the population of Alberta (Table 4.2).

Table 4.2 Population, Rural Alberta

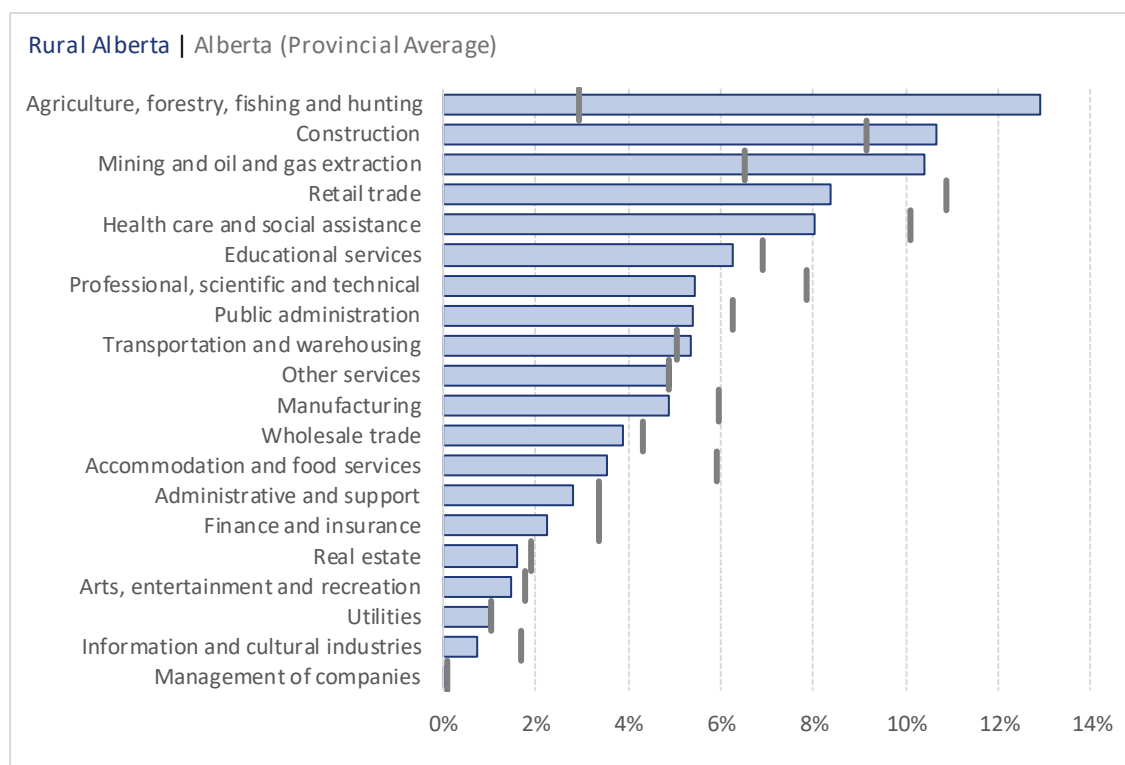
Rural Geography	2016 Population	2011-2016 Growth	Proportion of Alberta
Municipal Districts	479,376	7.9%	11.8%
Special Areas	4,184	-7.0%	0.1%
Specialized Municipalities	190,983	6.9%	4.7%
Villages	38,607	2.7%	0.9%
Summer Villages	5,161	12.1%	0.1%
Rural sub-total	718,311	7.3%	17.7%
Total Alberta	4,067,175	11.6%	100%

Source: Statistics Canada 2016, 2011b.

The labour force in rural Alberta is dominated by the agriculture sector, attributed largely to the southern portion of the province, and the construction, mining and oil and gas extraction, retail trade, and health care and social assistance sectors, the latter of which are largely focused in the municipalities surrounding the major urban centres of Edmonton and Calgary (Figure 4.2).



Figure 4.2 Labour Force by Industry, Rural Alberta



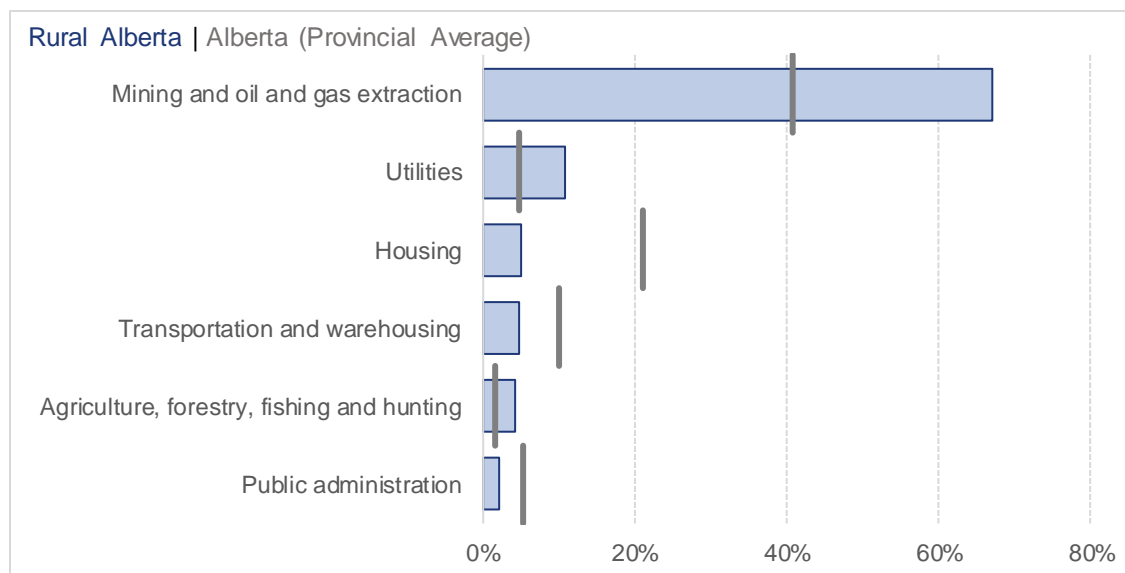
Source: Statistics Canada 2011b.

4.2.2 Investment

Capital investment is important to the development of future productive capacity and is a necessary precondition for economic growth. By extension, an examination of the pattern of capital investment provides great insight into the likely future growth path of the economy.

In 2015, the total new and maintenance investment in the rural portion of Alberta amounted to \$39.0 billion – over 60% of which was focused on mining and oil and gas extraction (Statistics Canada 2017c, 2017d; Nichols Applied Management; Figure 4.3). Investment in housing and transportation infrastructure was considerably less than the provincial level, a result that is fully consistent with low population densities in rural Alberta as compared to the more densely populated urban centres.

Figure 4.3 Investment by Top 6 Industry Categories, Rural Alberta

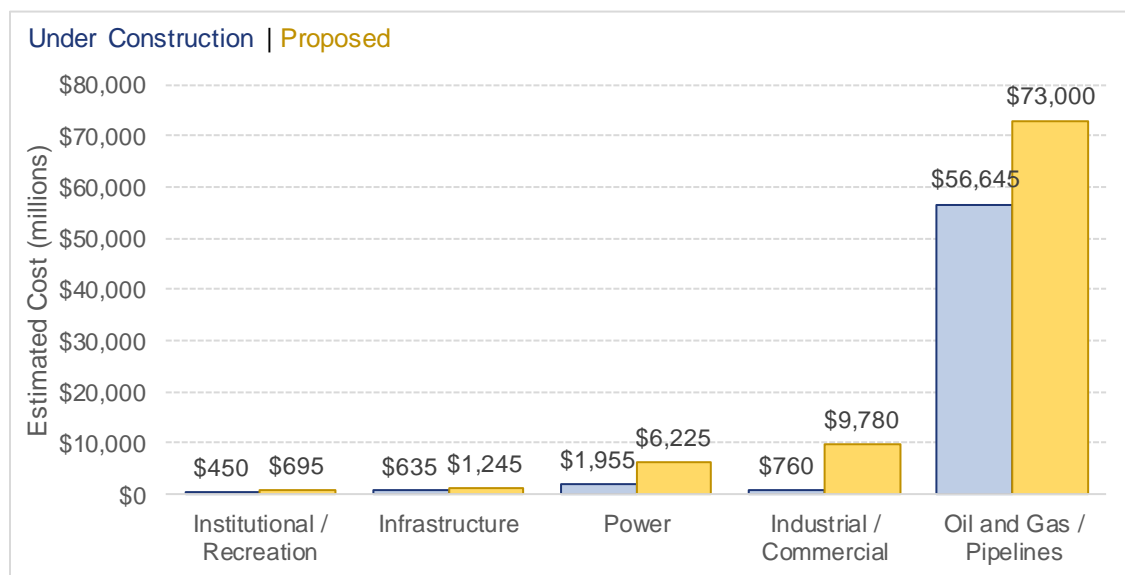


Source: Statistics Canada 2017c, 2017d; Nichols Applied Management.

At the time of writing, new investment in rural Alberta is primarily focused on oil and gas and pipeline projects with approximately \$56 billion in projects currently underway and a further \$73 billion proposed (Alberta Government 2017;

Figure 4.4). This proposed activity includes a number of projects that are subject to regulatory uncertainty and may ultimately prove not to be viable investments.

Figure 4.4 Public and Private Investment, Rural Alberta

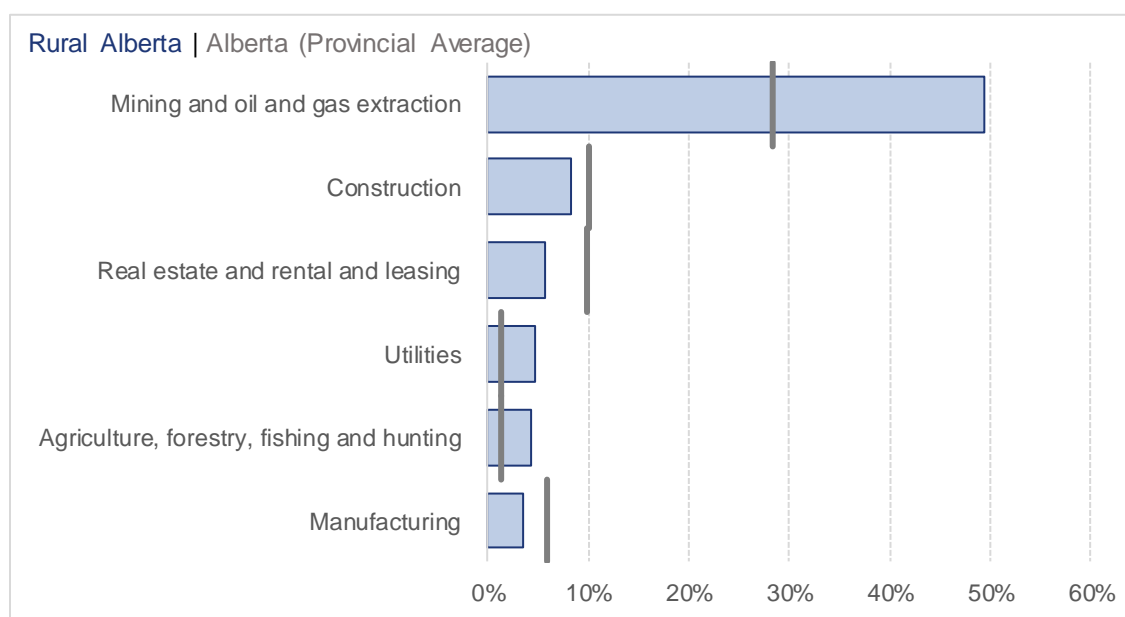


Source: Alberta Government 2017.

4.2.3 Gross Domestic Product

Gross domestic product (GDP) refers to the value of the goods and services produced within a specified geographic area in a given time period. Nichols has estimated that the total GDP produced within rural Alberta was approximately \$89.6 billion in 2015 (Statistics Canada 2017b, Nichols Applied Management). Nearly 50% of all the goods and services produced in rural Alberta is attributed to mining and oil and gas extraction, well above the provincial level of approximately 30% - a finding that is consistent with the location of these resources in rural municipalities (Figure 4.5).

Figure 4.5 GDP by Top 6 Industry Categories, Rural Alberta



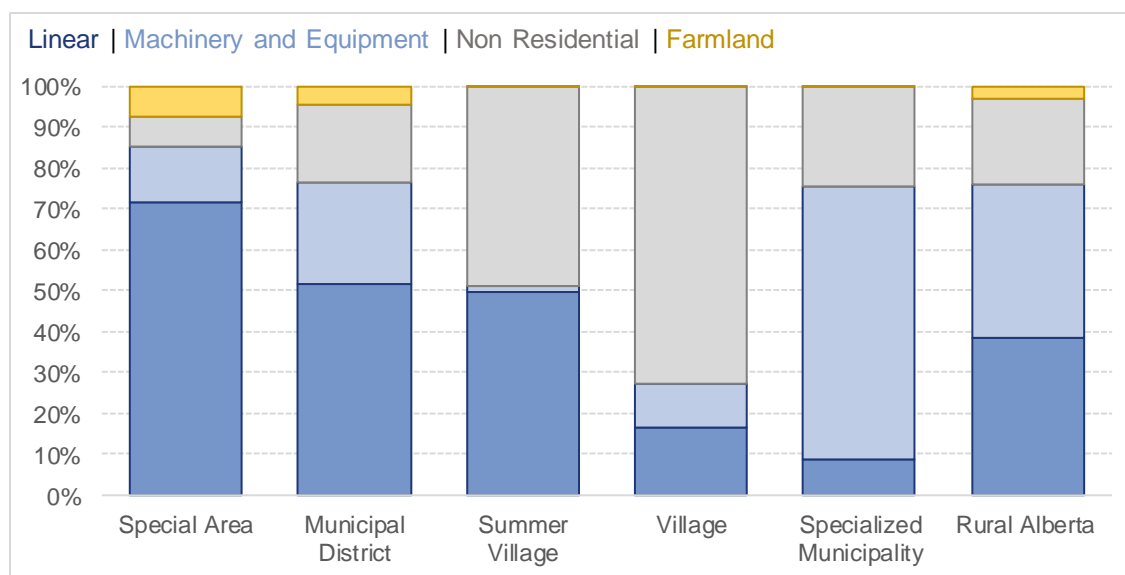
Source: Statistics Canada 2017b, Nichols Applied Management. Data inflated to 2015 dollars.

4.2.4 Municipal Assessment

The nature and composition of the municipal assessment base is the direct result of prior investment and an indicator of the current structure of the local economy. Moreover, the assessment base of a municipality contributes to the local government's ability to provide services to its residents and further support people living and conducting business in the region.

Though the economy across rural Alberta is diverse, some generalized differences exist between rural geographies. The special areas and municipal districts are predominantly based on linear assessments, whereas specialized municipalities are predominantly based on machinery and equipment assessments (Figure 4.6). Villages and summer villages are predominantly based on non-residential assessments. Overall, rural Alberta is predominantly based on both linear and machinery and equipment assessments.

Figure 4.6 Proportion of Non-Residential Equalized Assessment, Rural Alberta



Source: Alberta Municipal Affairs 2017. 2016 data. Non-residential assessment includes industrial and commercial properties.

The following sections of the report provide an economic profile for each of the eight regions defined in Section 4.1. The diversity across the province is reflected in additional sections for each region highlighting key industries as well as opportunities for and challenges to growth.



4.3 South Region

The south region of rural Alberta encompasses an area of 49,000 square kilometres in the southern-most portion of the province. This region includes Cypress County, County of Forty Mile, County of Warner, Lethbridge County, M.D. of Taber, County of Newell, Cardston County, M.D. of Pincher Creek and M.D. of Willow Creek as well as all the villages within their boundaries⁴.

4.3.1 Population and Labour Force

In 2016, the south region was home to 59,561 people, which is approximately 1% of the total population of Alberta (Statistics Canada 2016; Table 4.3). Growth over the 2011 to 2016 period was most pronounced in the villages in the region as well as the municipalities of Cypress County, County of Forty Mile, Cardston County, and County of Newell which grew at a rate below that of the province overall but similar to or above the average for rural communities. One notable exception to the positive growth throughout the region is in the M.D. of Pincher Creek, whose population decreased by 6% over the 2011 to 2016 period.

Table 4.3 Population, South Region

Rural Geography	2016 Population	2011-2016 Growth
Cypress County	7,662	6.2%
County of Forty Mile	3,581	7.3%
County of Warner	3,847	0.2%
Lethbridge County	10,353	3.0%
M.D. of Taber	7,098	3.6%
Newell County	7,524	5.4%
Cardston County	4,481	7.5%
M.D. of Pincher Creek	2,965	-6.0%
M.D. of Willow Creek	5,179	1.4%
Villages	6,871	8.2%
Summer Villages	0	0.0%
Region sub-total	59,561	4.1%
Total Rural Alberta	718,311	7.3%
Alberta	4,067,175	11.6%

Source: Statistics Canada 2016, 2011b.

The labour force participation rate amongst the municipal districts and counties and specialized municipalities ranges from 74% to 76%, which is slightly higher than the provincial average of 73%. The unemployment rate in the municipal districts and counties and specialized municipalities is also similar to the province overall (6%), but is below the provincial average in the M.D. of Taber and Lethbridge County.

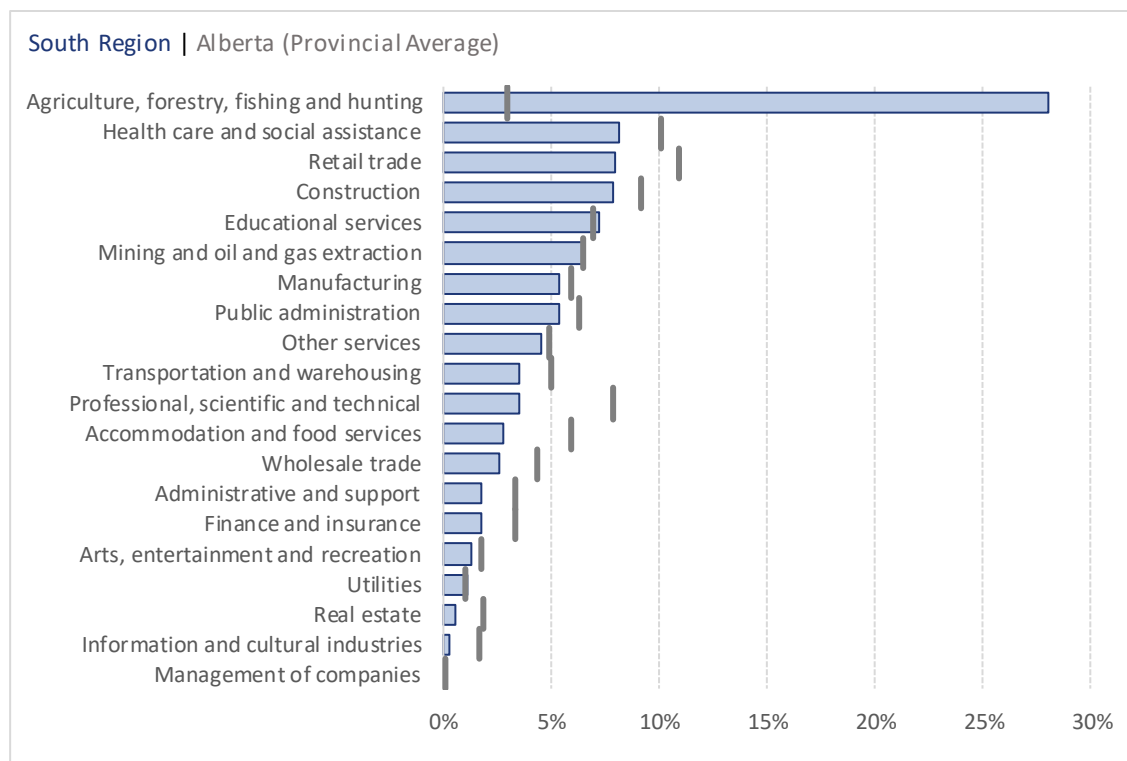
The labour force in the region is dominated by the agricultural sector, far exceeding the provincial average (Alberta Government 2014; Figure 4.7). The labour force employed in many of the less prominent industries is less than the provincial average – largely the

⁴ The complete list of all the villages included in this region is shown in Appendix A. Note that there are no summer villages in the southern region.

result of the prominence of agriculture throughout the region. The south region also employs a slightly larger proportion of educational services than the province overall.

The average employment income in the region ranges from \$43,413 to \$70,266 (2010, latest available) which is generally reflective of the prominence of agriculture in the local economy, an industry where the average annual income of \$37,184 is well below the average across all industries of \$50,410 (Statistics Canada 2011b).

Figure 4.7 Rural Labour Force by Industry, South Region

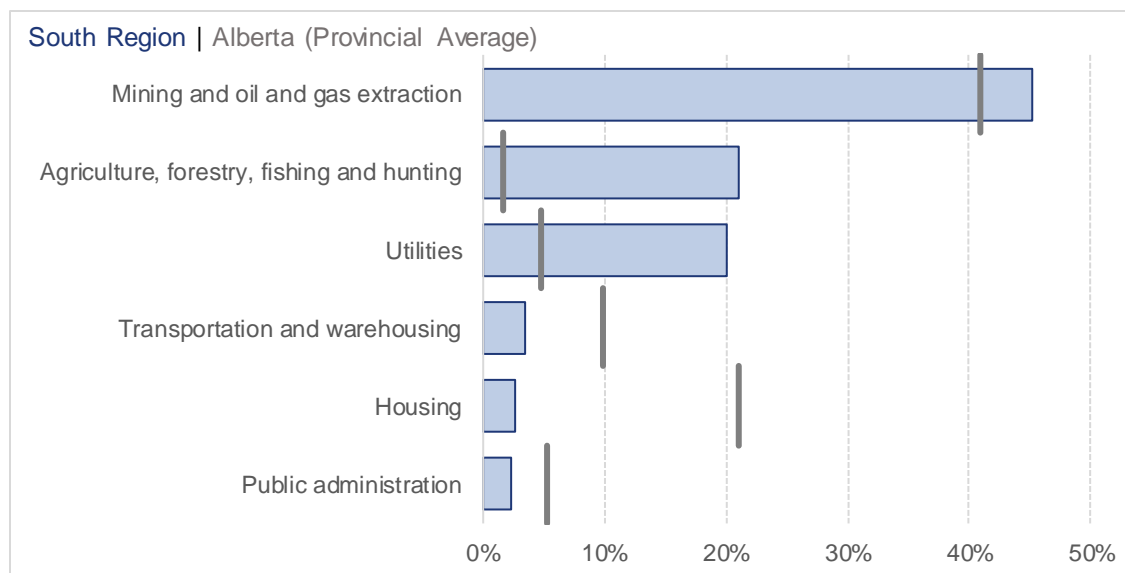


Source: Statistics Canada 2011b.

4.3.2 Investment

In 2015, the total new and maintenance investment in the south region amounted to \$2.4 billion, or approximately 3% of the provincial total (Statistics Canada 2017c, 2017d; Nichols Applied Management). Nearly half of all investment in the region was focused on maintenance and repair in the mining, quarrying, and oil and gas extraction industry (Figure 4.8). In keeping with the prominence of agriculture seen in the labour force, regional investment in agriculture far surpasses that of the province overall. Conversely, the role of housing development in the region's economy is proportionately less than the provincial average, due largely in part to the sparsely populated nature of the region relative to the province overall.

Figure 4.8 Rural Investment by Top 6 Industry Categories, South Region

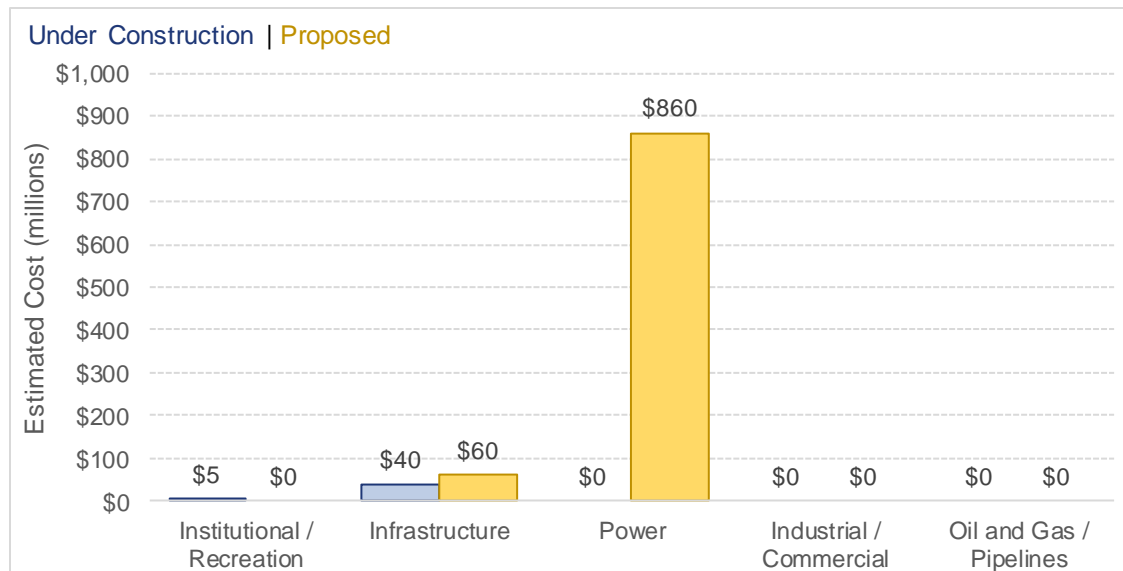


Source: Statistics Canada 2017c, 2017d; Nichols Applied Management.

New investment in the region is primarily focused on infrastructure projects, such as modernization of the Stirling School and construction of a spillway for the Bassano Dam as well as on proposed power projects, such as the Castle Rock Ridge to Chapel Rock transmission line in the M.D. of Pincher Creek and the Peace Butte Wind Farm in Cypress County (Alberta Government 2017; Figure 4.9). Despite the prominence of maintenance and repair investment in the oil and gas sector in 2015, there are no planned projects in the oil and gas and pipelines industries as of late 2017. This dramatic shift likely relates to the recent decline in resource prices that have reduced the relative appeal of new capital-intensive extraction projects.



Figure 4.9 Public and Private Investment, South Region



Source: Alberta Government 2017.

4.3.3 Gross Domestic Product

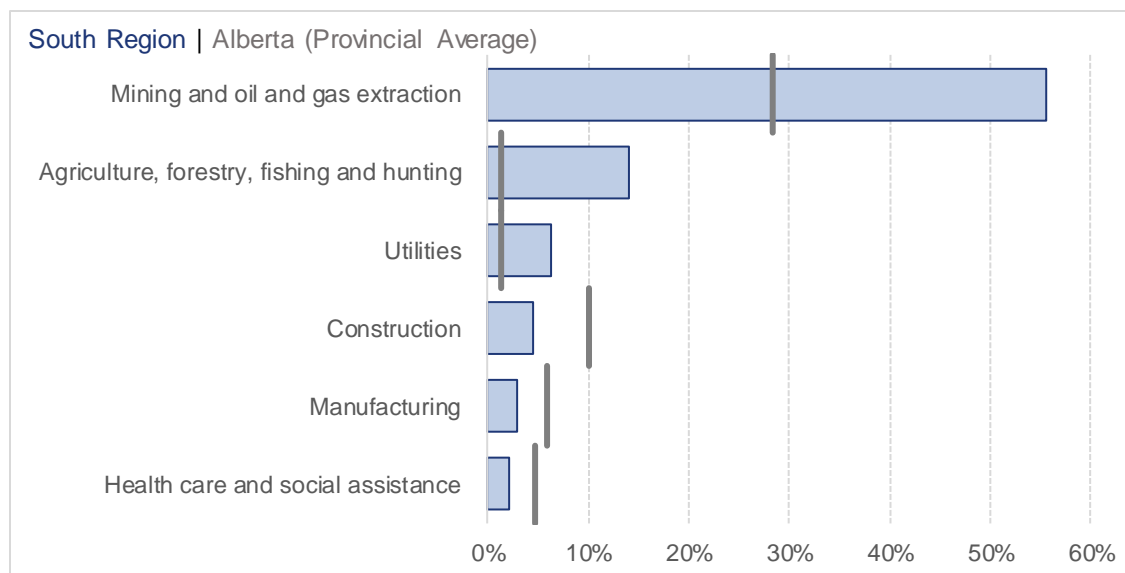
Gross domestic product (GDP) refers to the value of the goods and services produced within a specified geographic area in a given time period. Nichols has estimated⁵ that the total GDP produced within the rural communities of the south region was approximately \$7.9 billion in 2015, roughly 2% of Alberta's total GDP (\$132,000 GDP per capita; Statistics Canada 2017b, Nichols Applied Management).

Of the \$7.9 billion in goods and services produced in the rural south region, roughly 55% can be attributed to the mining, quarrying, and oil and gas sector (Statistics Canada 2017b, Nichols Applied Management) as existing and operating projects continued to recover oil and gas despite the lack of investment in new projects.

In keeping with their prominent role in both the labour force and investment, agriculture, forestry, fishing and hunting is the second-largest contributor to GDP in the region followed by utilities and construction (Statistics Canada 2017b, Nichols Applied Management).

⁵ Estimates based on a series of proxies consisting of oil sands specific knowledge and detailed manufacturing, investment, and labour force statistics.

Figure 4.10 GDP in Rural Alberta by Top 6 Categories, South Region



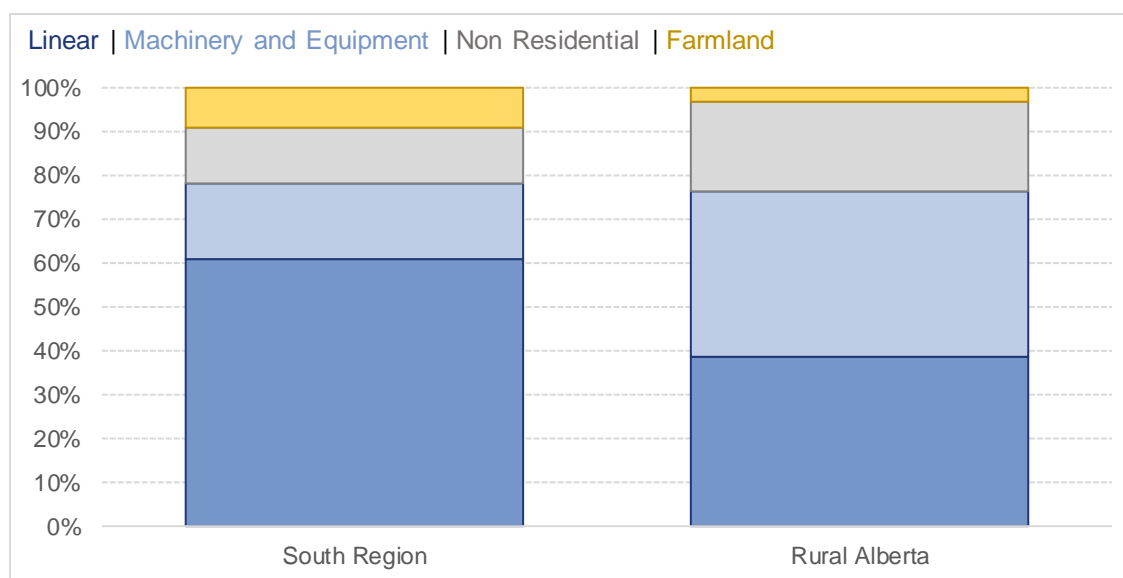
Source: Statistics Canada 2017b, Nichols Applied Management. Data inflated to 2015 dollars.

4.3.4 Municipal Assessment

The prominence of oil and gas wells, transmission lines and agriculture in the local economy is reflected in the fiscal position of rural communities in the region. A proportionally higher amount of assessment in the rural portion of the south region is devoted to linear and farmland than in the rural portion of the province overall (Figure 4.11).



Figure 4.11 Proportion of Rural Non-Residential Equalized Assessment, South Region



Source: Alberta Municipal Affairs 2017. 2016 data. Non-residential assessment includes industrial and commercial properties.

4.3.5 Key Industries

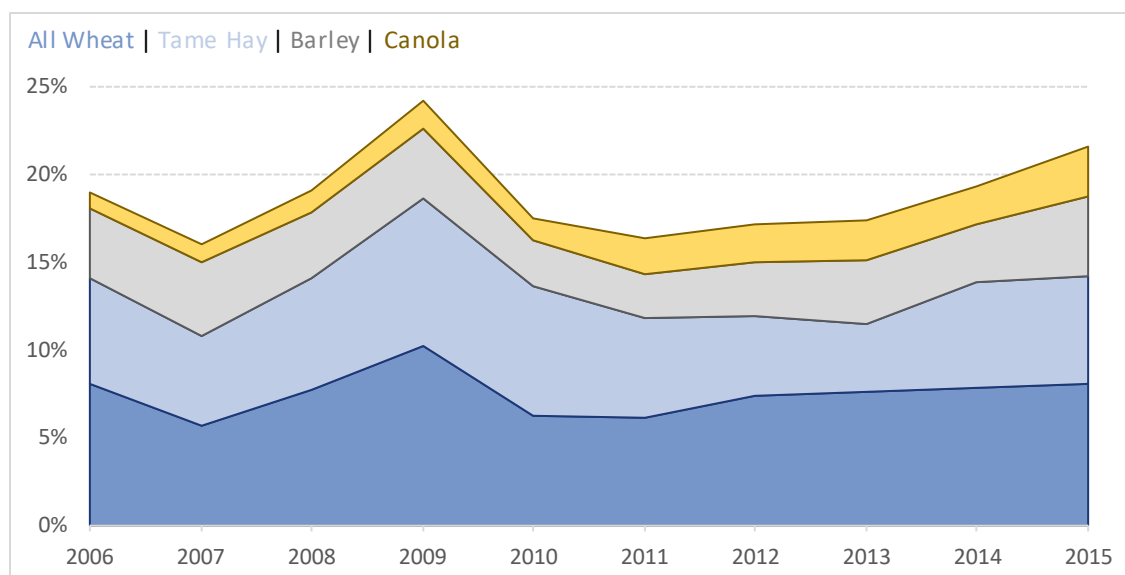
Alberta is a geographically and economically diverse province with different economic regions, and the rural communities within them, differing greatly in terms of the key drivers of economic growth and development. Key industries within a region can be identified based on their relative contribution to employment, GDP, and investment patterns. Within the south region, the agriculture, food processing and oil and gas extraction sectors are fundamental pillars of the local economy.

Agriculture

The rural communities within the south region are home to approximately 14% (5,858) of the total number of farms and approximately 20% (\$19,108 million) of the total farm capital in the province (Statistics Canada 2011c). Correspondingly, total agricultural production in the region has accounted for between 15% and 25% of the provincial total since 2006, coming largely in the form of wheat and tame hay (Figure 4.12).



Figure 4.12 Proportion of Provincial Crop Production, South Region



Source: Alberta Government 2015.

Rural crop production is supported by small urban service centres throughout the region that provide access to service industries, transportation networks, machinery and equipment retailers, and other key inputs required for farm production. The continued prominence and health of rural agricultural production is very much related to an ongoing and synergistic relationship with urban service centres throughout the region and vice versa.

Food Processing

In addition to producing raw agricultural goods, the region is also home to a number of food processing facilities. Approximately 32% (\$77 million) of the GDP generated by food processing in the province occurs in the rural communities of the south region. Processing plants located in the region include Sunrise Poultry, Lilydale, Maple Leaf, ConAgra Specialty Potato Products and McCain Foods (SouthGrow Regional Initiative n.d.).

Conventional Crude Oil and Natural Gas Extraction

Although comparatively small in terms of direct employment, the conventional oil and gas sector of the south region accounts for nearly half of the region's GDP and the ongoing investment required to continue production has played a significant role in the local economy. In 2015, approximately 24% of conventional crude oil production and 27% of natural gas production occurred in the south region (AER 2017, Nichols Applied Management), the majority of which was located in the eastern portion of the region.

4.3.6 Challenges and Opportunities

Challenges to growth in this region are related primarily to information technology and transportation. In particular, limited broadband connectivity in the rural areas, required upgrades to road and bridge infrastructure including Highway 3 and uncertainty around land use allowances in and around the parks and conservation areas are viewed by many to be limiting factors to continued growth in the future.

Opportunities for growth include alternative crops such as pulses, facilitated largely by the region's good access to water. Interest is growing in the Alternative Energy Partnership, a group of municipalities interested in promoting the opportunities for wind, solar and biofuel development in the southern portion of the province (SAAEP 2017). An opportunity exists to expand the use of the municipal airport (in the City of Lethbridge) for the movement of goods and services in the region, as it was originally built to withstand more traffic than it currently is being used for.



4.4 East Region

The east region of rural Alberta encompasses an area of 56,000 square kilometres in the east portion of the province. This region includes the M.D. of Acadia, Special Areas Board, Vulcan County, Wheatland County, Starland County, Kneehill County, M.D. of Provost, County of Paintearth, Stettler County, Flagstaff County, M.D. of Wainwright, Camrose County, Beaver County, County of Minburn, County of Two Hills and Lamont County as well as all the villages and summer villages within their boundaries⁶.

4.4.1 Population and Labour Force

In 2016, the east region was home to 92,406 people, which is approximately 2% of the total population of Alberta (Statistics Canada 2016; Table 4.4). Growth in the rural communities over the 2011 to 2016 period was most pronounced in the M.D. of Wainwright, Wheatland County, and the County of Vermilion River - despite growing at levels slightly below rural Alberta overall (Table 4.4). The M.D. of Acadia, the Special Areas Board, the M.D. of Provost, the County of Minburn and the villages in the region had negative growth rates from 2011 to 2016. The summer villages of White Sands and Rochon Sands grew at a rate of approximately 32% over that same time period.

Table 4.4 Population, East Region

Rural Geography	2016 Population	2011-2016 Growth
M.D. of Acadia	493	-0.4%
Special Areas Board	4,184	-7.0%
Vulcan County	3,984	2.8%
Wheatland County	8,788	6.1%
Starland County	2,066	0.4%
Kneehill County	5,001	1.6%
M.D. of Provost	2,205	-3.6%
County of Paintearth	2,102	3.6%
Stettler County	5,322	4.3%
Flagstaff County	3,738	4.1%
M.D. of Wainwright	4,479	8.2%
Camrose County	8,458	5.7%
Beaver County	5,905	3.8%
County of Minburn	3,188	-5.8%
Two Hills County	3,322	5.1%
Lamont County	3,899	0.7%
County of Vermilion River	8,267	4.6%
Villages	16,799	-0.2%
Summer Villages	206	32.1%
Region sub-total	92,406	2.4%
Total Rural Alberta	718,311	7.3%
Alberta	4,067,175	11.6%

Source: Statistics Canada 2016, 2011b.

The labour force participation rate in the municipal districts and counties and specialized municipalities ranges from a high of 80% to a low of 71%, generally aligning with the provincial rate of 73%. The unemployment rate in the municipal districts and counties

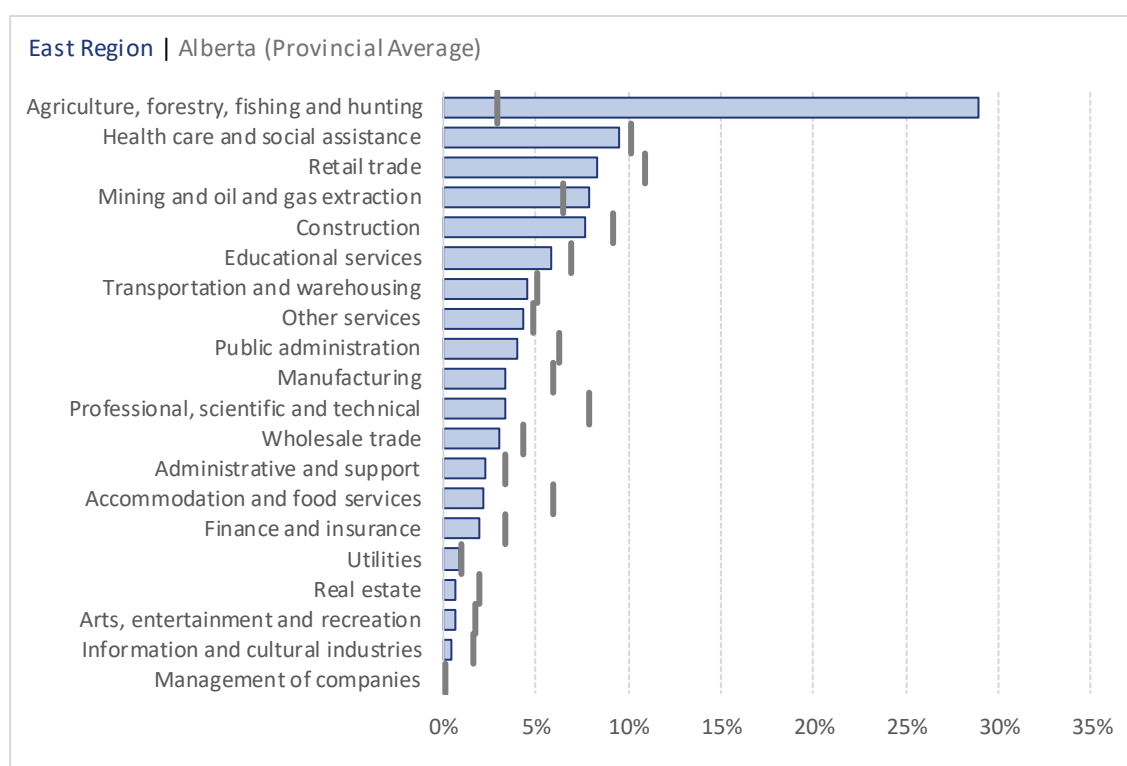
⁶ The complete list of all the villages and summer villages in this region is shown in Appendix A.

and specialized municipalities ranges from 2% to 6%, which is at or below the provincial average of 6%.

The labour force in the region is dominated by the agricultural sector, far outperforming the provincial average (Alberta Government 2014; Figure 4.13). The labour force for many of the less prominent industries is less than the provincial average, which is largely the result of the prominence of agriculture throughout the region. The region also employs a slightly larger proportion of mining and oil and gas extraction than the province overall.

The average employment income in the region ranges from \$26,682 to \$83,724 (2010 latest available) which is generally reflective of the prominence of agriculture in the local economy, an industry where the average annual income of \$37,184 is well below the average across all industries of \$50,410 (Statistics Canada 2011b).

Figure 4.13 Rural Labour Force by Industry, East Region



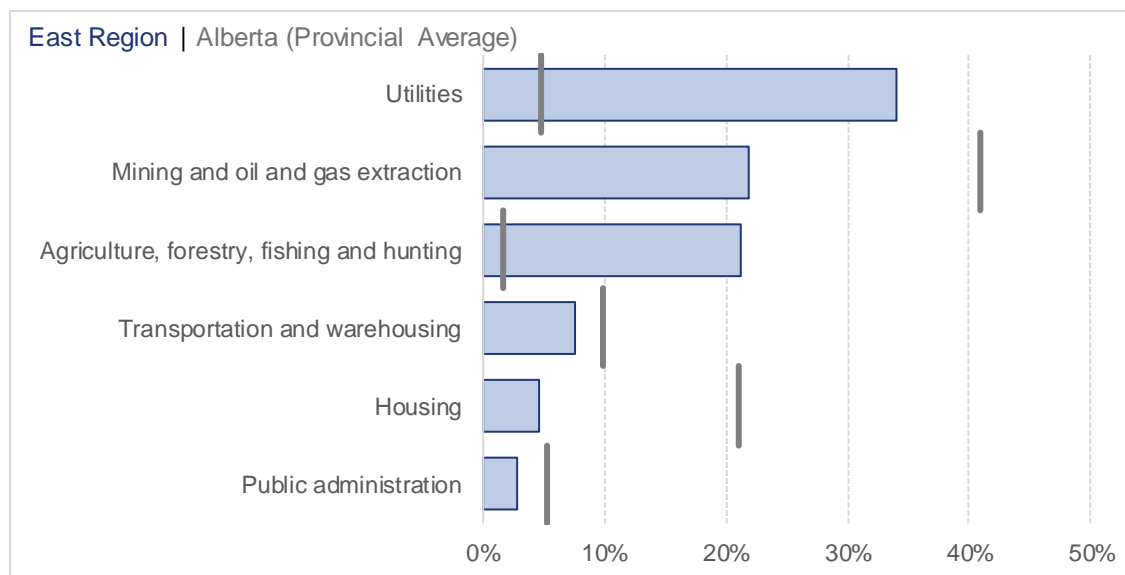
Source: Statistics Canada 2011b.

4.4.2 Investment

In 2015, the total new and maintenance investment in the rural portion of the east region amounted to \$2.5 billion, or approximately 3% of the provincial total (Statistics Canada 2017c, 2017d; Nichols Applied Management). About a third of all investment in the region was focused on the utilities industry and nearly a quarter in the agriculture industry, far exceeding the provincial average in both cases (Figure 4.14). Conversely,

investment in mining and oil and gas extraction, transportation, housing and public administration is below that of the province overall.

Figure 4.14 Rural Investment by Top 6 Industry Categories, East Region



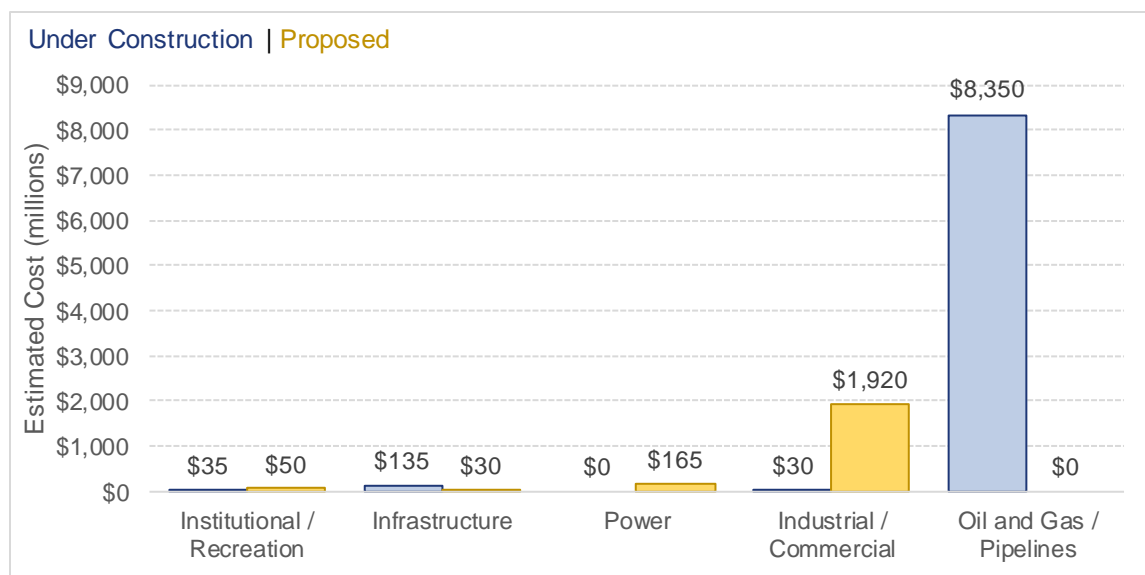
Source: Statistics Canada 2017c, 2017d; Nichols Applied Management.

New investment in the region is primarily devoted to pipeline projects, including Enbridge's Line 3 Pipeline Replacement and portions of TransCanada's Heartland Pipeline and TC Terminal and Enhance Energy's Alberta Carbon Trunk Line (Alberta Government 2017; Figure 4.15).

Aside from pipeline projects, proposed future investment includes construction of a bio-diesel refinery in Lamont County and construction of a solar project in Vulcan County (Alberta Government 2017; Figure 4.15).



Figure 4.15 Public and Private Investment, East Region



Source: Alberta Government 2017.

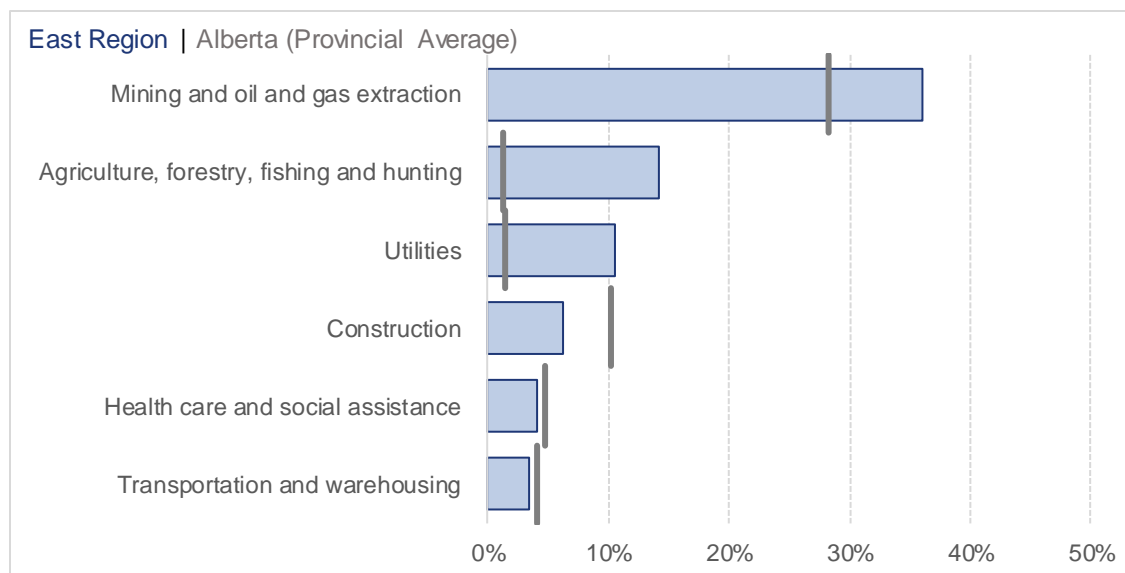
4.4.3 Gross Domestic Product

Gross domestic product (GDP) refers to the value of the goods and services produced within a specified geographic area in a given time period. Nichols has estimated that the total GDP produced within the rural portion of the east region was approximately \$8.1 billion in 2015, roughly 2% of Alberta's total GDP (\$87,000 GDP per capita; Statistics Canada 2017b, Nichols Applied Management).

Of the \$8.1 billion in goods and services produced in the rural areas of the east region, roughly 36% can be attributed to the mining, quarrying, and oil and gas sector (Statistics Canada 2017b, Nichols Applied Management).

In keeping with their relative importance in the composition of the labour force, agriculture, forestry, fishing and hunting as well as utilities contribute the second and third most to economic activity in the region, far more than the proportion at a provincial level. The proportion of GDP generated by the construction, health care and transportation industries are below the provincial average (Statistics Canada 2017b, Nichols Applied Management).

Figure 4.16 GDP in Rural Alberta by Top 6 Categories, East Region

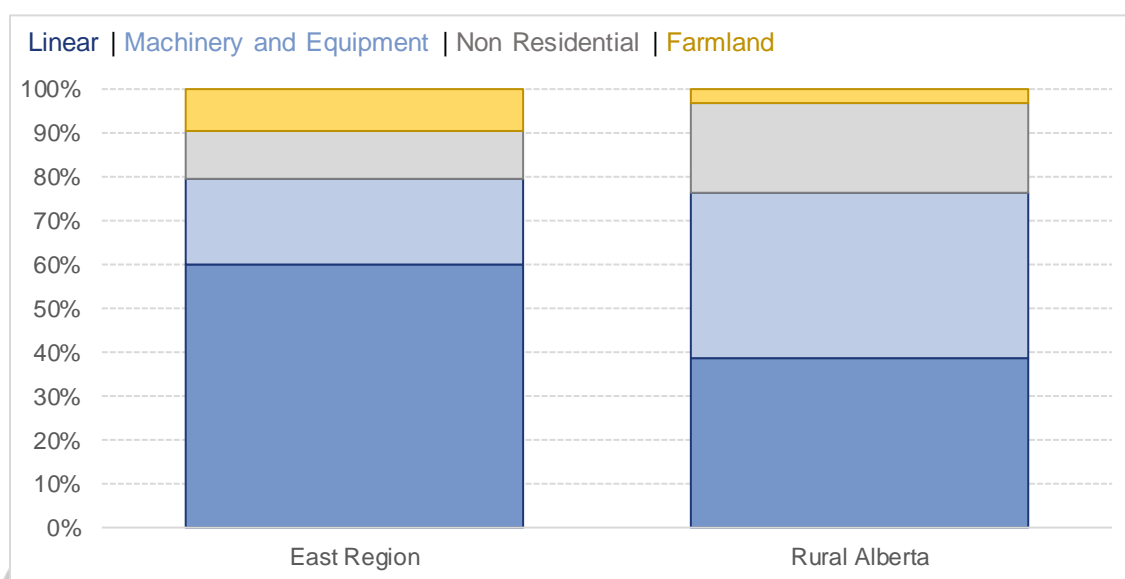


Source: Statistics Canada 2017b, Nichols Applied Management. Data inflated to 2015 dollars.

4.4.4 Municipal Assessment

The prominence of pipeline infrastructure and agriculture in the local economy is reflected in the fiscal position of rural communities in the region. A proportionally higher amount of assessment in the rural portion of the east region is devoted to linear and farmland than in the rural portion of the province overall (Figure 4.17).

Figure 4.17 Proportion of Rural Non-Residential Equalized Assessment, East Region



Source: Alberta Municipal Affairs 2017. 2016 data. Non-residential assessment includes industrial and commercial properties.

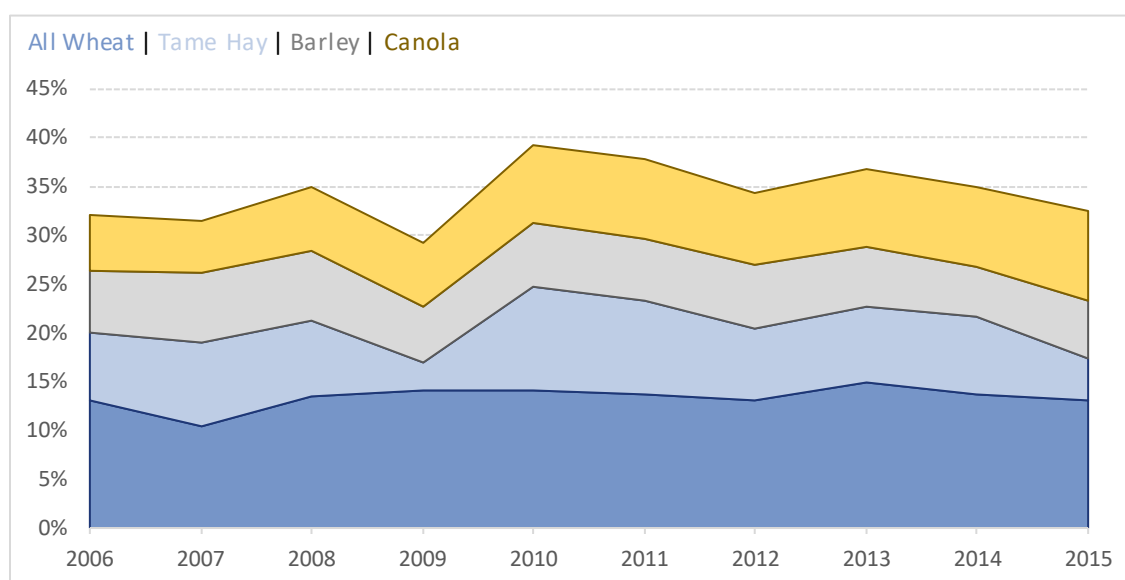
4.4.5 Key Industries

Within the east region, the agriculture and oil and gas extraction sectors are fundamental pillars of the local economy.

Agriculture

The rural communities within the east region are home to approximately 25% (10,904) of the total number of farms and approximately 27% (\$26,051 million) of the total farm capital in the province (Statistics Canada 2011c). Correspondingly, total agricultural production in the region has accounted for between 30% and 40% of the provincial total since 2006, coming largely in the form of wheat and tame hay (Figure 4.18).

Figure 4.18 Proportion of Provincial Crop Production, East Region



Source: Alberta Government 2015.

As in all regions, rural crop production in the east region is supported by small urban service centres throughout the region that provide access to service industries, transportation networks, machinery and equipment retailers, and other key inputs required for farm production. The continued prominence and health of the rural agricultural production is very much related to an ongoing and synergistic relationship with urban service centres throughout the region and vice versa.

Conventional Crude Oil Extraction

The oil and gas sector of the east region accounts for nearly half of the region's GDP and the ongoing investment required to continue production has played a significant role in the local economy. In 2015, approximately 17% of conventional crude oil production occurred in the east region (AER 2017, Nichols Applied Management), the majority of which was located in the western portion of the region.

4.4.6 Challenges and Opportunities

Similar to the south region, a constraint to growth in the east is limited broadband access and cell phone reception. In an effort to capitalize on the prominence of local agriculture, the region is looking to expand their value-added agriculture processing as well as growing more protein-based crops although no concrete plans appear to be publicly available. Additionally, the east region is part of the Eastern Alberta Trade Corridor which seeks to promote investment and economic diversity in its member municipalities (EATC 2017).



4.5 Calgary Region

The Calgary region encompasses an area of 11,000 square kilometres in the central portion of the province. This region includes the M.D. of Foothills, Rocky View County, and Mountain View County, as well as all the villages within their boundaries⁷.

4.5.1 Population and Labour Force

In 2016, the Calgary region was home to 76,817 people, which is approximately 2% of the total population of Alberta (Statistics Canada 2016; Table 4.5). Growth in the rural communities was strongly positive over the 2011 to 2016 period, particularly in Rocky View County where growth exceeded 10%. Villages in the region also grew at a positive rate of approximately 1.4% over the same period.

Table 4.5 Population, Calgary Region

Rural Geography	2016 Population	2011-2016 Growth
M.D. of Foothills	22,766	7.1%
Rocky View County	39,407	10.2%
Mountain View County	13,074	5.8%
Villages	1,570	1.4%
Summer Villages	0	0.0%
Region sub-total	76,817	8.3%
Total Rural Alberta	718,311	7.3%
Alberta	4,067,175	11.6%

Source: Statistics Canada 2016, 2011b.

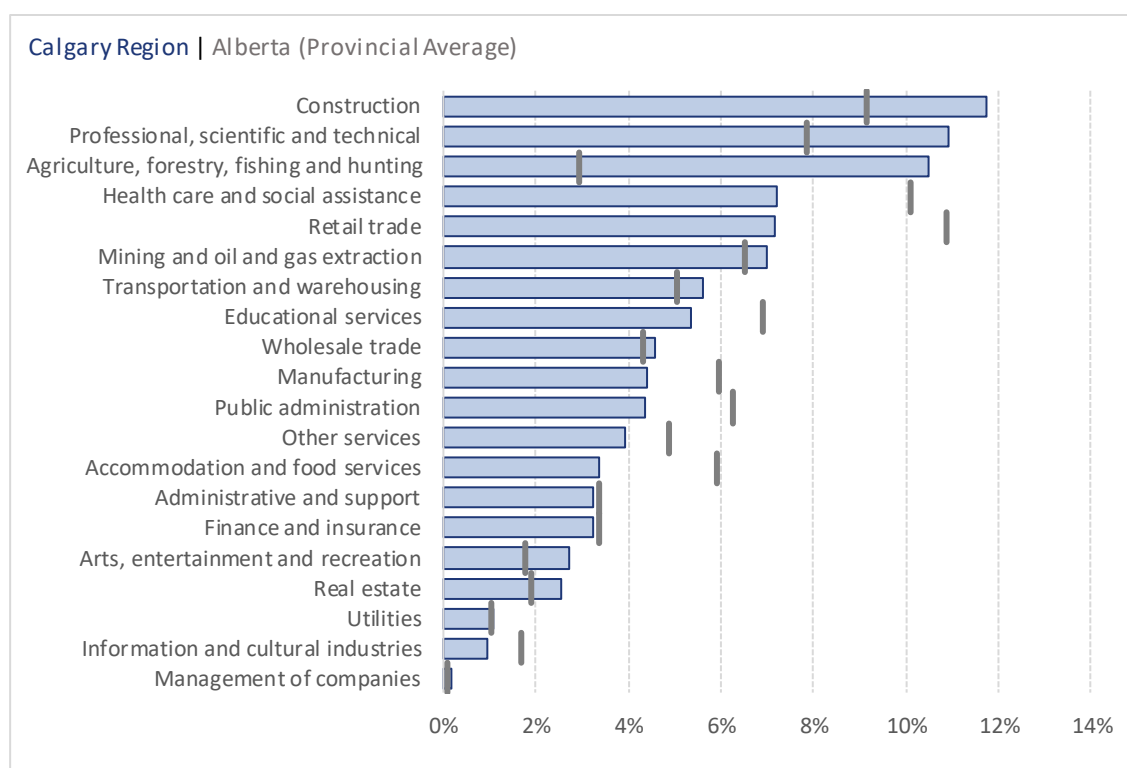
Employment conditions in the municipal districts and counties and specialized municipalities in the Calgary region are particularly favourable with a labour force participation rate that ranges from 73% to 77%, which is equal to or higher than the provincial rate of 73%. The unemployment rate is similarly favourable and ranges from 3% to 5%, which is less than the provincial rate of 6%.

⁷ The complete list of all the villages included in this region is shown in Appendix A. Note that there are no summer villages in the Calgary region.

The labour force in the region is dominated by the construction and professional sectors, each outperforming the provincial average by approximately a third. (Alberta Government 2014; Figure 4.19). The composition of the labour force in the rural portion of the Calgary region is heavily influenced by the proximity to Calgary as individuals living in rural communities can commute to employment opportunities in the City, thus supporting a labour force that includes industries not generally prominent in remote rural settings. Other prominent industries include agriculture, health care and social assistance, and retail trade.

The average employment income in the region ranges from \$53,051 to \$142,893 (2010 latest available; Statistics Canada 2011b), extending well above the average across all industries of \$50,410 (Statistics Canada 2011b). The high incomes found in the region likely relate to employees of high-paying sectors, such as oil and gas, who are employed in Calgary but live in the surrounding rural communities in order to take advantage of the rural lifestyle.

Figure 4.19 Rural Labour Force by Industry, Calgary Region



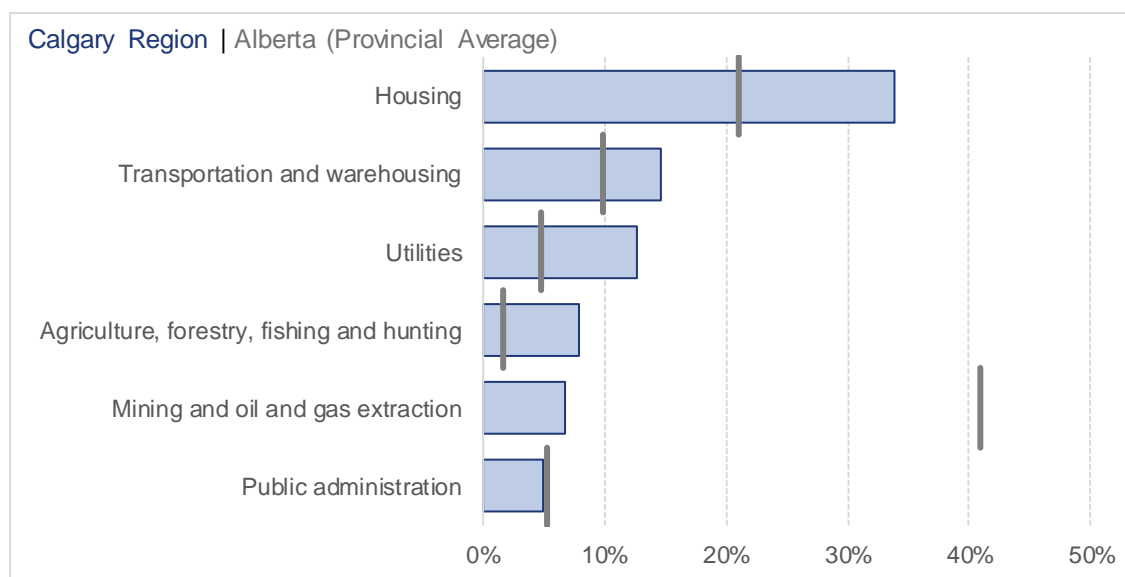
Source: Statistics Canada 2011b.

4.5.2 Investment

In 2015, the total new and maintenance investment in the rural portion of the Calgary region amounts to \$1.5 billion, or approximately 2% of the provincial total (Statistics Canada 2017c, 2017d; Nichols Applied Management). Investment in housing accounts for approximately 34% of total investment, greatly surpassing the provincial average of

21% (Figure 4.20) and driven largely by the rapid population growth outlined in Section 4.5.1. Investment in transportation, utilities and agriculture are also major components of investment in the region and similarly outstrip the provincial average.

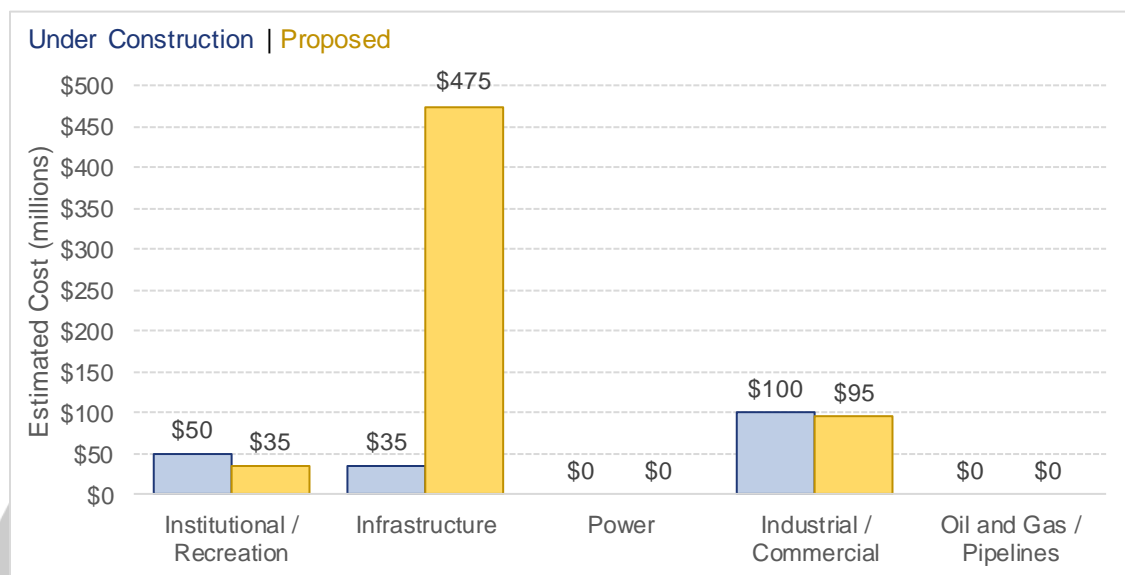
Figure 4.20 Rural Investment by Top 6 Industry Categories, Calgary Region



Source: Statistics Canada 2017c, 2017d; Nichols Applied Management.

Future investment in the region is primarily in proposed infrastructure and commercial projects, such as the construction of a dry reservoir and a distribution centre in Rocky View County (Alberta Government 2017; Figure 4.21). Additionally, a number of private developers are contemplating mixed residential development projects throughout the region.

Figure 4.21 Public and Private Investment, Calgary Region



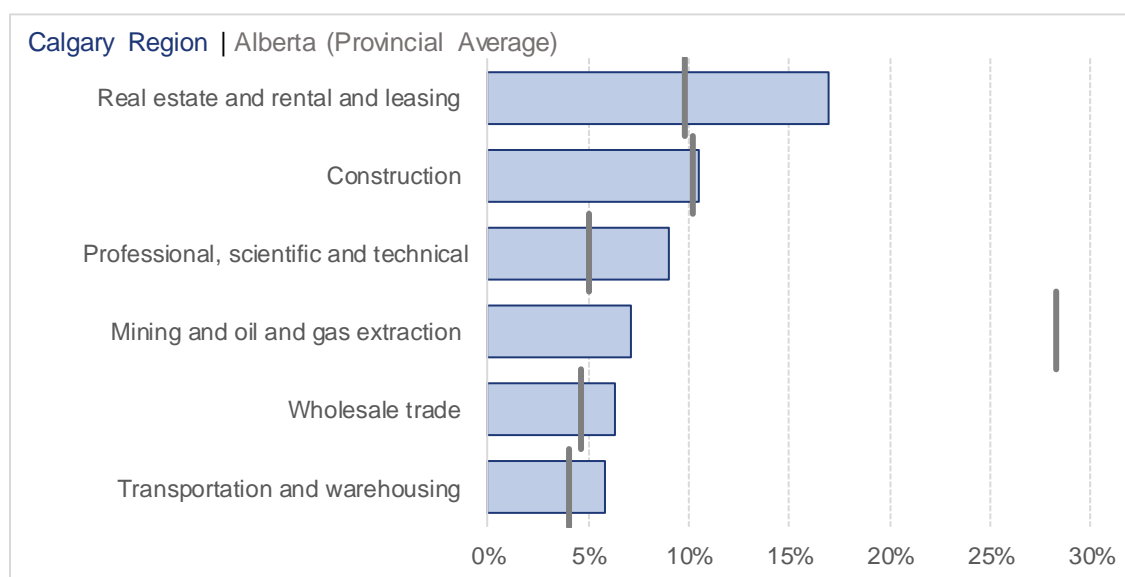
Source: Alberta Government 2017.

4.5.3 Gross Domestic Product

As noted above, gross domestic product (GDP) refers to the value of the goods and services produced within a specified geographic area in a given time period. Nichols has estimated that the total GDP produced within the rural portion of the Calgary region was approximately \$5.5 billion in 2015, roughly 2% of Alberta's total GDP (\$71,000 GDP per capita; Statistics Canada 2017b, Nichols Applied Management).

The GDP generated in the region is driven primarily by the real estate, construction and professional sectors whose relative contributions are above provincial levels (Statistics Canada 2017b, Nichols Applied Management; Figure 4.22).

Figure 4.22 GDP in Rural Alberta by Top 6 Categories, Calgary Region



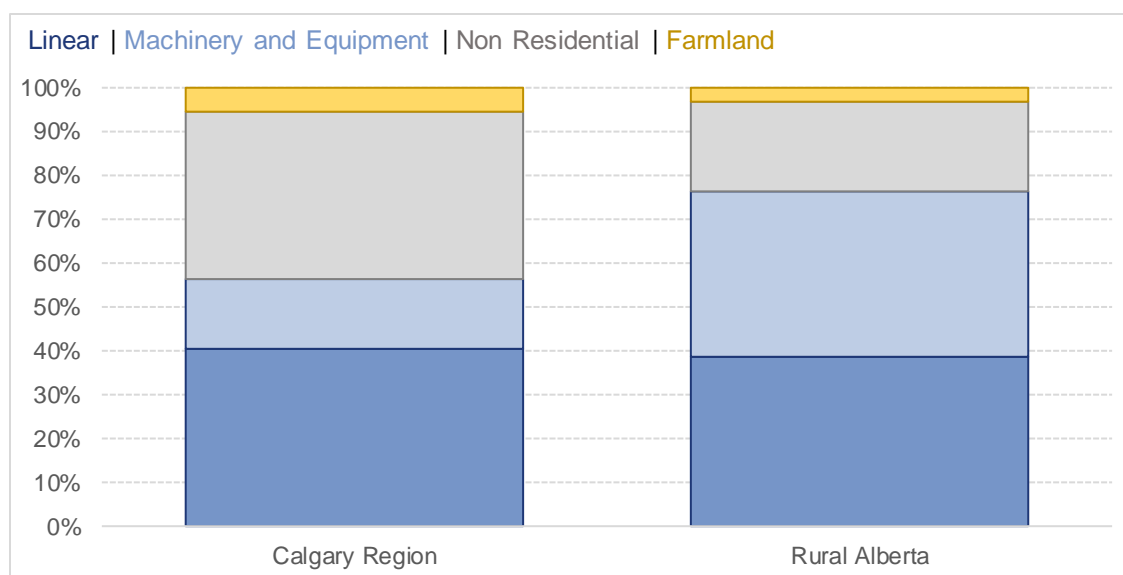
Source: Statistics Canada 2017b, Nichols Applied Management. Data inflated to 2015 dollars.

4.5.4 Municipal Assessment

The prominence of institutional and industrial infrastructure such as warehousing in the local economy is reflected in the fiscal position of rural communities in the region. A proportionally higher amount of assessment in the rural portion of the Calgary region is devoted to linear and non-residential assessments than in the rural portion of the province overall (Figure 4.23).



Figure 4.23 Proportion of Rural Non-Residential Equalized Assessment, Calgary Region



Source: Alberta Municipal Affairs 2017. 2016 data. Non-residential assessment includes industrial and commercial properties.

4.5.5 Key Industries

Within the Calgary region, the transportation, warehousing and retail industries are significant contributors to the regional economy.

Transportation and Warehousing

An important sector in this region historically has been in the transportation and warehousing industries as it serves as an inland port, storing goods in large distribution centres from all over the world before they are sent to communities across Western Canada (Calgary Logistics Council 2017a). Major transportation infrastructure serving the region includes the Calgary International Airport, the Springbank Airport, Queen Elizabeth Highway II, Calgary ring-road, the Trans-Canada Highway, rail service by both CN Rail and Canadian Pacific Railway (Rocky View County 2017b). Rocky View County is home to several large warehouses, such as the \$115 million Walmart Food Distribution Centre (Rocky View County 2017).

Retail and Entertainment

CrossIron Mills is a 1.4 million square foot shopping destination located on Highway 2 just north of Calgary within Rocky View County. This shopping mall is one of the largest in Alberta and was an investment of approximately \$800 million and continues to draw shoppers from well beyond the immediate communities.

4.5.6 Challenges and Opportunities

Challenges and opportunities for growth vary throughout the rural communities in the Calgary region. Reliable and affordable access to broadband networks is a limiting factor in the more remote rural communities in the region. Additional challenges in the region include inadequate water and sewer services, ongoing flood recovery efforts from 2013, limited access to serviced land and market volatility due to the region's heavy reliance on the oil and gas sector.

The large population and inland port designation of the Calgary region makes it an attractive place for future investment. The amount of rail traffic in the region, served by intermodal facilities with both CN and Canadian Pacific Railway, provides an opportunity to increase the capacity for exports from the region. Balzac in Rocky View County is home to a number of business parks with room for expansion (Rocky View County 2017a). Home-based businesses have also seen recent growth in the region, and there is potential for the expansion of local tourism in the rural communities south of Calgary. Additionally, recent provincial government programs supporting microbreweries have taken root in the region and these small-scale facilities are rapidly increasing in number.



4.6 Mountain Region

The mountain region of rural Alberta encompasses an area of 46,000 square kilometres in the west portion of the province. This region includes Clearwater County, Yellowhead County, the Municipality of Crowsnest Pass, the M.D. of Bighorn and the M.D. of Ranchland as well as all the villages and summer villages within their boundaries⁸. This region also includes the Municipality of Jasper which is technically designated as a specialized municipality and as such, is included in the analysis of this report.

4.6.1 Population and Labour Force

In 2016, the mountain region was home to 35,190 people, which is approximately 1% of the total population of Alberta (Statistics Canada 2016; Table 4.6). The population of the region overall grew at approximately 1.1% between 2011 and 2016, ranging from a high of 16.5% in Ranchland to a low of -5.8% in the summer villages.

Table 4.6 Population, Mountain Region

Rural Geography	2016 Population	2011-2016 Growth
Clearwater County	11,947	-2.7%
Yellowhead County	10,995	5.0%
Municipality of Crowsnest Pass	5,589	0.4%
M.D. of Bighorn	1,334	-0.5%
S.M. of Jasper	4,590	3.6%
M.D. of Ranchland	92	16.5%
Villages	512	2.2%
Summer Villages	131	-5.8%
Region sub-total	35,190	1.1%
Total Rural Alberta	718,311	7.3%
Alberta	4,067,175	11.6%

Source: Statistics Canada 2016, 2011b.

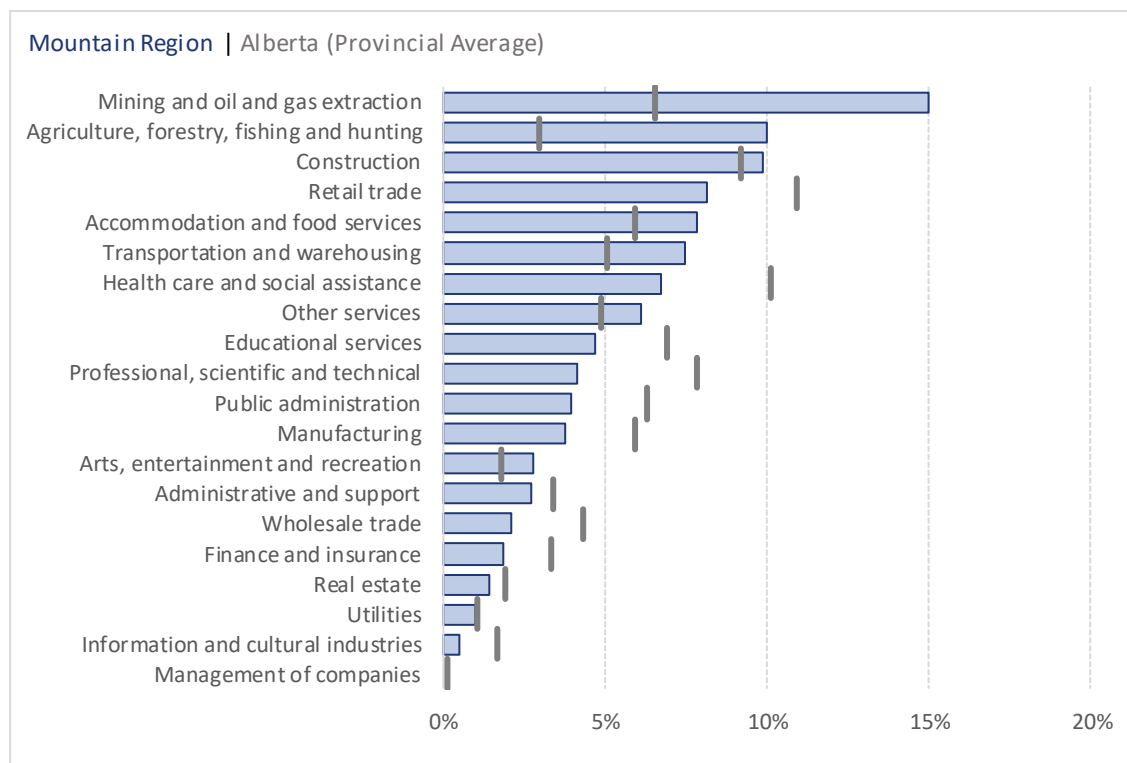
The labour force participation rate varies amongst the municipal districts and counties and specialized municipalities, from a high of 84% in the Municipality of Jasper to a low of 60% in the Municipality of Crowsnest Pass. The Municipality of Jasper attracts a number of people who aim to work and live actively in a national park for a defined period of time whereas the Crowsnest Pass region is emerging as a home to a number of retirees.

The labour force in the region is dominated by the mining and oil and gas extraction, agriculture and construction sectors, which are above provincial averages (Alberta Government 2014; Figure 4.24). The region surpasses the provincial average in the accommodation, transportation and arts sectors – a result driven largely by the tourism related to Jasper National Park and other natural areas in the region.

⁸ The complete list of all the villages and summer villages in this region is shown in Appendix A.

The average employment income in the region ranges from \$46,072 to \$76,149, a range that encompasses the provincial average of \$50,410 (2010 latest available; Statistics Canada 2011b).

Figure 4.24 Rural Labour Force by Industry, Mountain Region



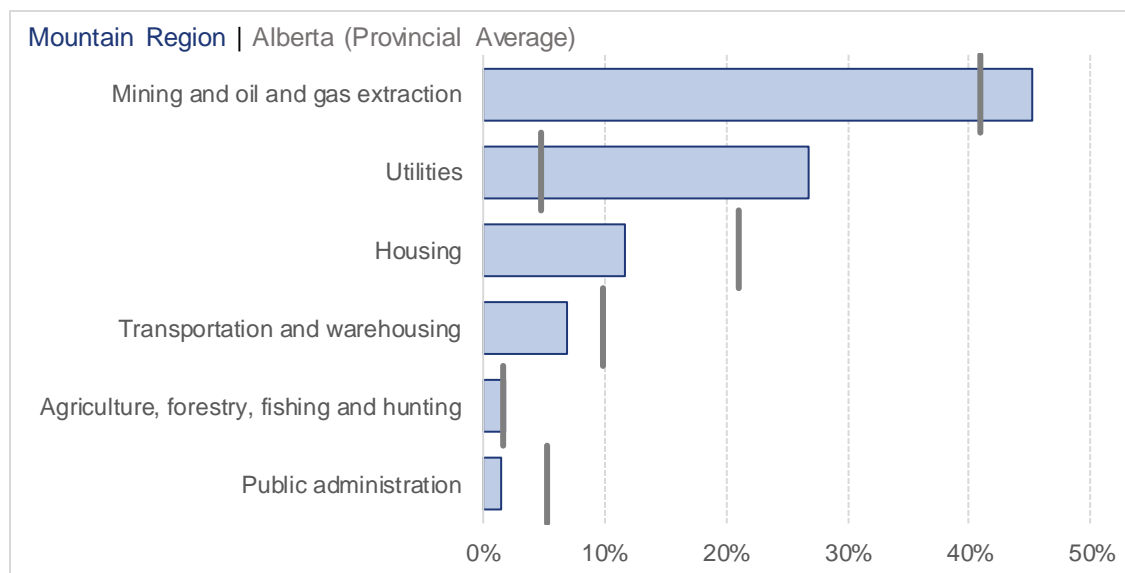
Source: Statistics Canada 2011b.

4.6.2 Investment

In 2015, total new and maintenance investment in the mountain region amounted to \$1.9 billion, or approximately 2% of the provincial total (Statistics Canada 2017c, 2017d; Nichols Applied Management). Investment in mining and oil and gas extraction accounts for approximately 45% of total investment, which is above the provincial average of 41% (Figure 4.25). Investment in utilities represents the next most prominent industry, which is also above the provincial average. Housing and transportation are below the provincial average.



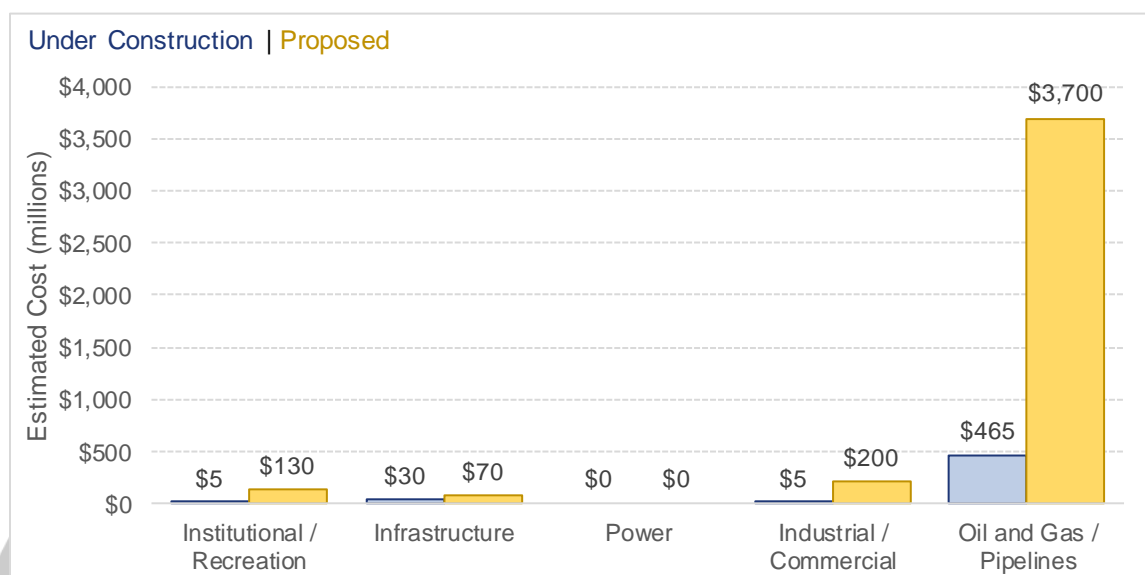
Figure 4.25 Rural Investment by Top 6 Industry Categories, Mountain Region



Source: Statistics Canada 2017c, 2017d; Nichols Applied Management.

New investment in the region includes portions of TransCanada's 2017 NGTL System Expansion Project and Pembina Pipeline Corporation's Edson pipeline project (Alberta Government 2017; Figure 4.26). Proposed future investment includes pipeline and industrial projects in Yellowhead County, including a portion of the TransMountain Pipeline Expansion and the Canyon Creek Pumped Hydro Energy Storage Project in Yellowhead County (Alberta Government 2017; Figure 4.26). The TransMountain project is subject to a number of sources of uncertainty, including legal challenges. As of late 2017, it is not clear if this project will proceed.

Figure 4.26 Public and Private Investment, Mountain Region



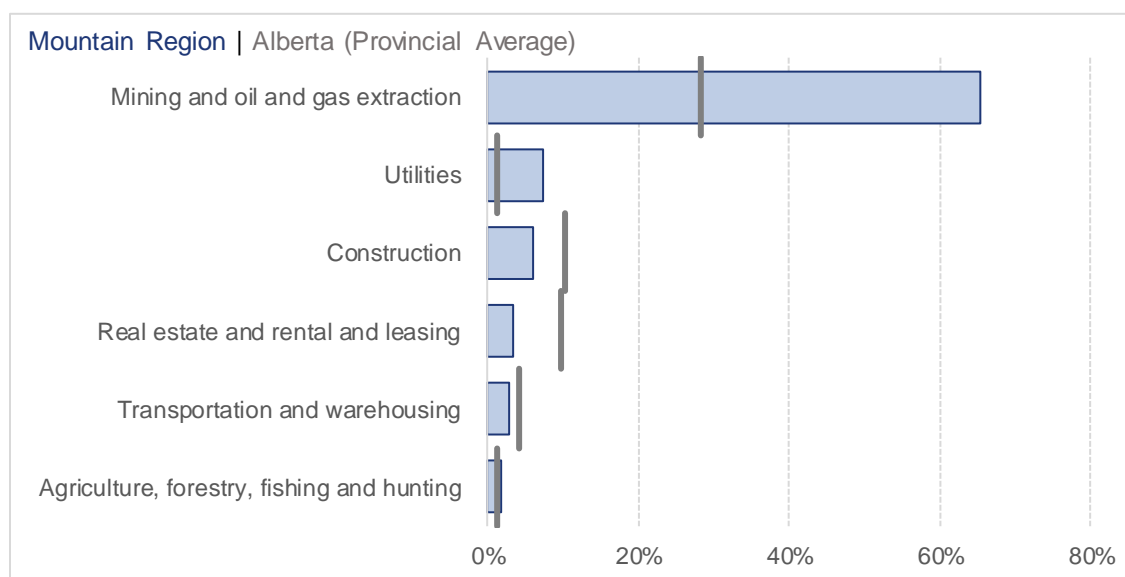
Source: Alberta Government 2017.

4.6.3 Gross Domestic Product

Nichols has estimated that the total GDP produced within the mountain region was approximately \$7.0 billion in 2015, roughly 2% of Alberta's total GDP (\$199,000 GDP per capita; Statistics Canada 2017b, Nichols Applied Management).

Of the \$7.0 billion produced in the mountain region, roughly 65% can be attributed to the mining and oil and gas sector, surpassing the provincial average of 28% (Statistics Canada 2017b, Nichols Applied Management). This significant role of extractive industries is related in large part to a number of mining operations outside of national parks as well as natural gas recovery in the foothills region.

Figure 4.27 GDP in Rural Alberta by Top 6 Categories, Mountain Region



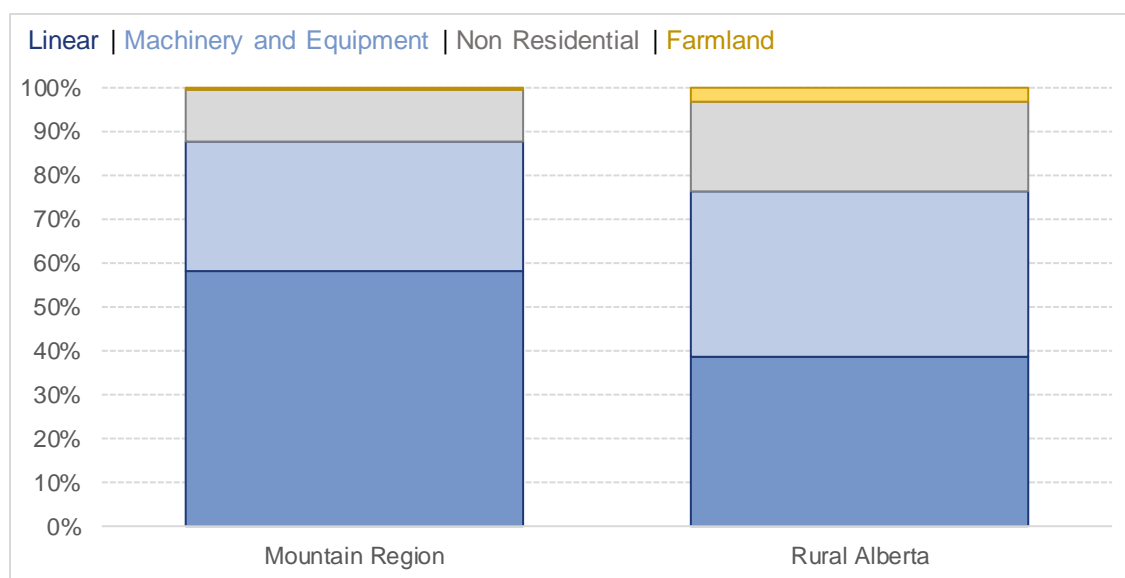
Source: Statistics Canada 2017b, Nichols Applied Management. Data inflated to 2015 dollars.

4.6.4 Municipal Assessment

The prominence of industrial, commercial and pipeline infrastructure in the local economy is reflected in the fiscal position of rural communities in the region. A proportionally higher amount of assessment in the rural portion of the mountain region is devoted to linear assessments than in the rural portion of the province overall (Figure 4.28 and **Error! Reference source not found.**).



Figure 4.28 Proportion of Rural Non-Residential Equalized Assessment, Mountain Region



Source: Alberta Municipal Affairs 2017. 2016 data. Non-residential assessment includes industrial and commercial properties.

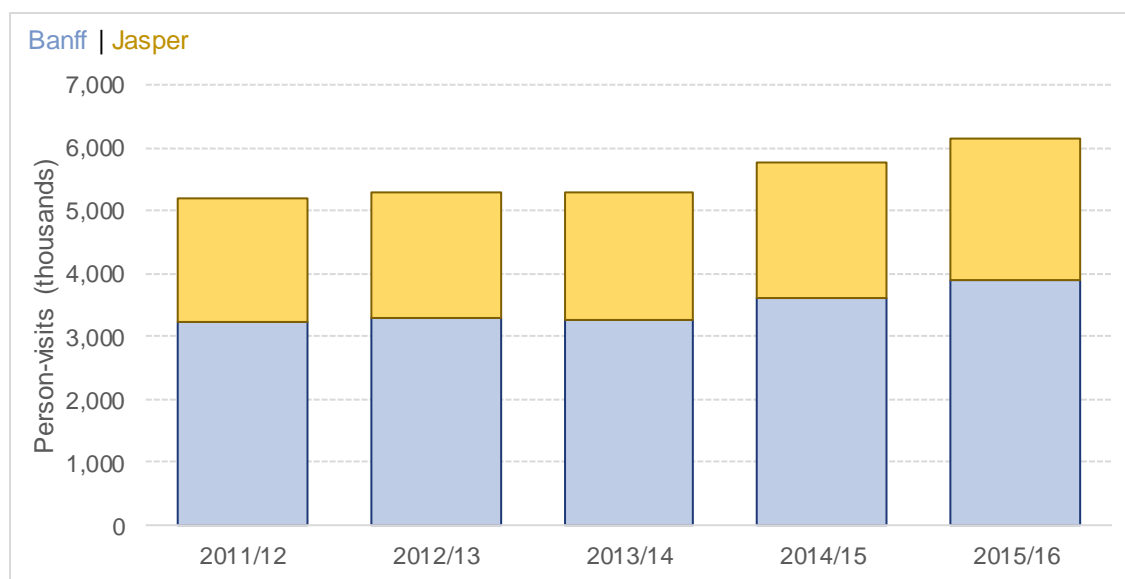
4.6.5 Key Industries

Alberta is a geographically and economically diverse province with different economic regions, and the rural communities within them, differing greatly in terms of the key drivers of economic growth and development. Key industries within a region can be identified based on their relative contribution to employment, GDP, and investment patterns. Within the mountain region both tourism and natural gas extraction play large roles in the local economy.

Tourism

Banff and Jasper National Parks are world-class tourist attractions and, in the 2015/16 fiscal year saw over 6 million visitors, an increase of approximately 7% over the previous year (Parks Canada 2017; Figure 4.29). Banff Park Museum and the Cave and Basin National Historic Site saw approximately 174,000 visitors in the same year, an increase of approximately 50% over the previous year. Economic activity driven by tourism includes not only the expenditures related to travelling to an attraction, but also those made to stay, eat, and otherwise engage with nearby communities. A recent study commissioned on behalf of Banff, Jasper, and Canmore estimates that tourism to the Rocky Mountains generated over a billion dollars in direct expenditures in 2012. In total, the direct, indirect, and induced impact of tourism to the Rockies is estimated to have contributed nearly \$1.8 billion to Alberta's economy in 2012.

Figure 4.29 Parks Canada Attendance



Source: Parks Canada 2017

Natural Gas Extraction

The conventional oil and gas sector of the mountain region accounts for approximately 15% of the region's employment, 65% of the region's GDP and 45% of the region's investment indicating that production has played a significant role in the local economy. In 2015, approximately 18% of natural gas production occurred in the eastern portion of the mountain region (AER 2017, Nichols Applied Management).

4.6.6 Challenges and Opportunities

The region is constantly seeking to balance the development of new attractions while retaining the integrity of the natural setting. Most recently, a \$78.8 million investment has been announced to improve infrastructure in Jasper National Park, including road and highway reconstruction, fire restoration and upgrades to the water treatment plant at the Miette Hot Springs (Government of Canada 2017). Furthermore, in celebration of Canada's 150th anniversary, admission for 2017 to the national parks was free, which increased the amount of visitors travelling to these parks and further increase the spending levels articulated in the preceding section.



4.7 Central Region

The central region of rural Alberta encompasses an area of nearly 6,000 square kilometres in the central portion of the province. This region includes Red Deer County, Lacombe County and Ponoka County as well as all the villages and summer villages within their boundaries⁹.

4.7.1 Population and Labour Force

In 2016, the central region was home to 43,384 people, which is approximately 1% of the total population of Alberta (Statistics Canada 2016; Table 4.7). The population of the rural municipal districts and counties was positive over the 2011 to 2016 period, ranging from a high of 10.7% in Ponoka County to a low of 0.3% in Lacombe County; however, growth in villages in the region are experiencing a net-loss in population at -0.3%.

Table 4.7 Population, Central Region

Rural Geography	2016 Population	2011-2016 Growth
Red Deer County	19,541	6.7%
Lacombe County	10,343	0.3%
Ponoka County	9,806	10.7%
Villages	2,639	-0.3%
Summer Villages	1,055	17.2%
Region sub-total	43,384	5.7%
Total Rural Alberta	718,311	7.3%
Alberta	4,067,175	11.6%

Source: Statistics Canada 2016, 2011b.

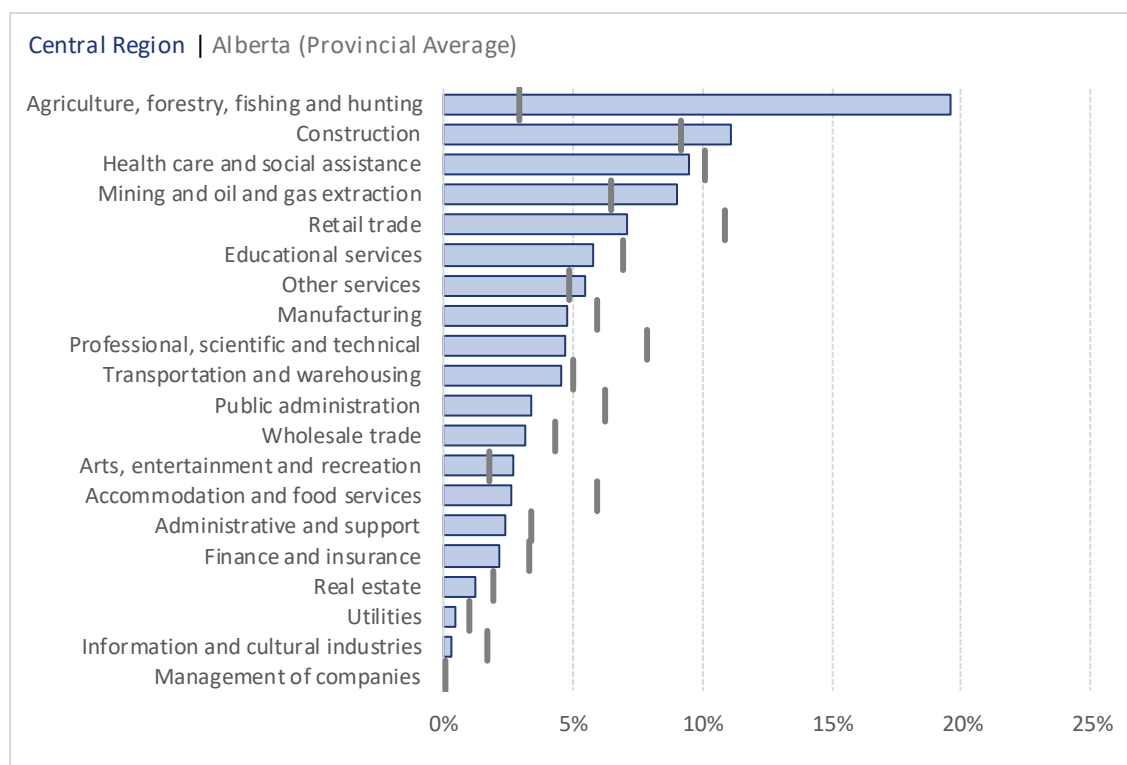
In the municipal districts and counties and specialized municipalities specifically, the labour force participation rate ranges from 71% to 77% and the unemployment rate ranges from 4% to 5%, which is generally in line with the provincial average of 73% and 6%, respectively.

Although relatively diversified compared to other economic regions, the labour force in the region is dominated by the agricultural sector, far exceeding the provincial average (Alberta Government 2014; Figure 4.30). The region is also highly focused on the construction, health care and mining and oil and gas extraction sectors.

The average employment income in the region ranges from \$34,178 to \$67,336 - a range that encompasses the provincial average of \$50,410 (2010 latest available; Statistics Canada 2011b).

⁹ The complete list of all the villages and summer villages in this region is shown in Appendix A.

Figure 4.30 Rural Labour Force by Industry, Central Region

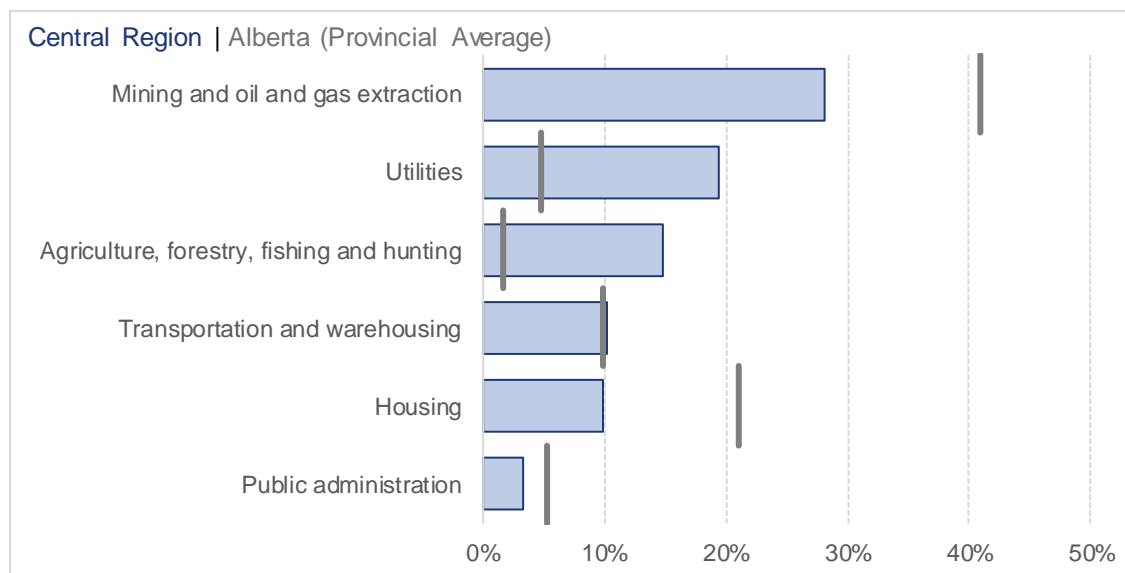


Source: Statistics Canada 2011b.

4.7.2 Investment

In 2015, the total new and maintenance investment in the rural portion of the central region amounts to \$920 million, or approximately 1% of the provincial total (Statistics Canada 2017c, 2017d; Nichols Applied Management). Investment in mining and oil and gas extraction accounts for approximately 28% of total investment, less than the provincial average of 41% (Figure 4.31). The relative investment in utilities, agriculture and transportation outstrips that of the province overall.

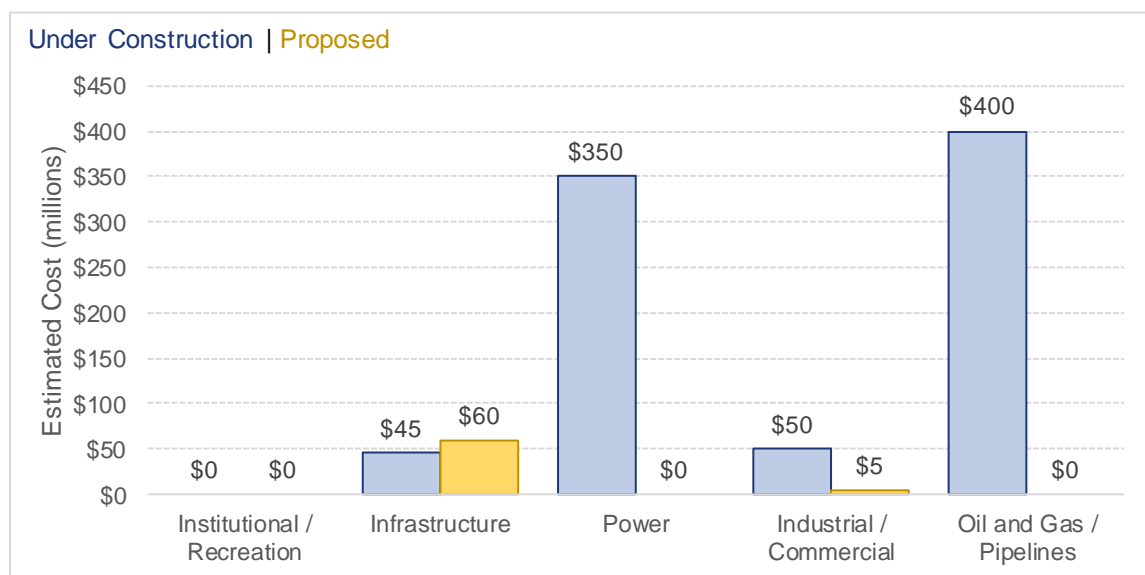
Figure 4.31 Rural Investment by Top 6 Industry Categories, Central Region



Source: Statistics Canada 2017c, 2017d; Nichols Applied Management.

New investment in the region is primarily devoted to power and pipeline projects, including a portion of Enhance Energy's Alberta Carbon Trunk Line and transmission development in Red Deer County (Alberta Government 2017; Figure 4.32). Proposed investment is primarily focused on infrastructure projects, including development of municipal and road infrastructure in Red Deer County and Lacombe County (Alberta Government 2017; Figure 4.32).

Figure 4.32 Public and Private Investment, Central Region



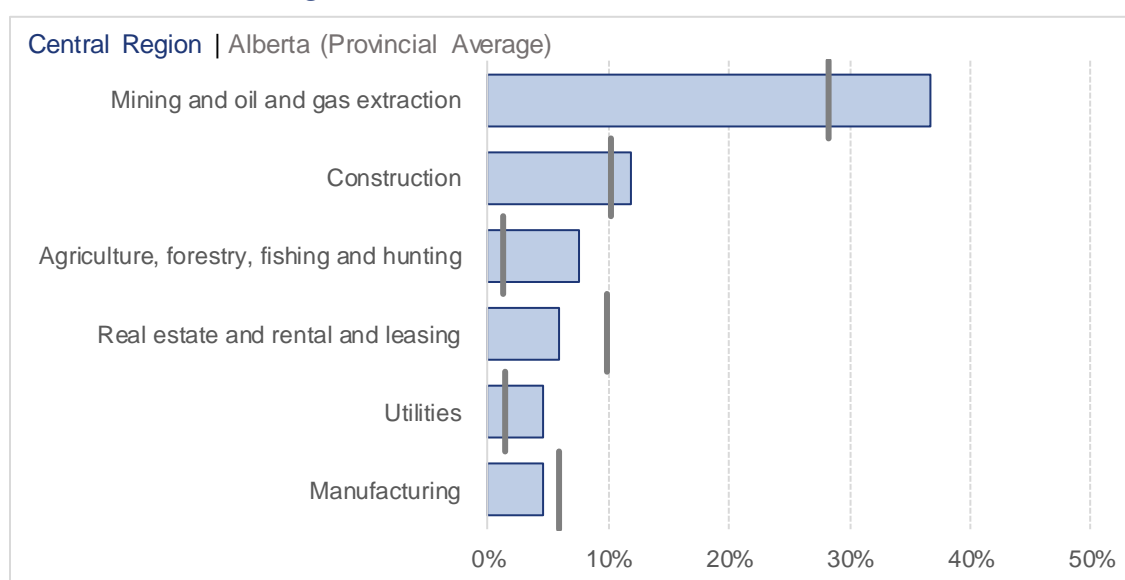
Source: Alberta Government 2017.

4.7.3 Gross Domestic Product

Nichols has estimated that the total GDP produced within the rural portion of the central region was approximately \$3.9 billion in 2015, roughly 1% of Alberta's total GDP (\$90,000 GDP per capita; Statistics Canada 2017b, Nichols Applied Management).

Of the \$3.9 billion produced in the rural central region, roughly 37% can be attributed to the mining and oil and gas sector (Statistics Canada 2017b, Nichols Applied Management). Other key industries include construction, agriculture, real estate, utilities and manufacturing.

Figure 4.33 GDP in Rural Alberta by Top 6 Categories, Central Region



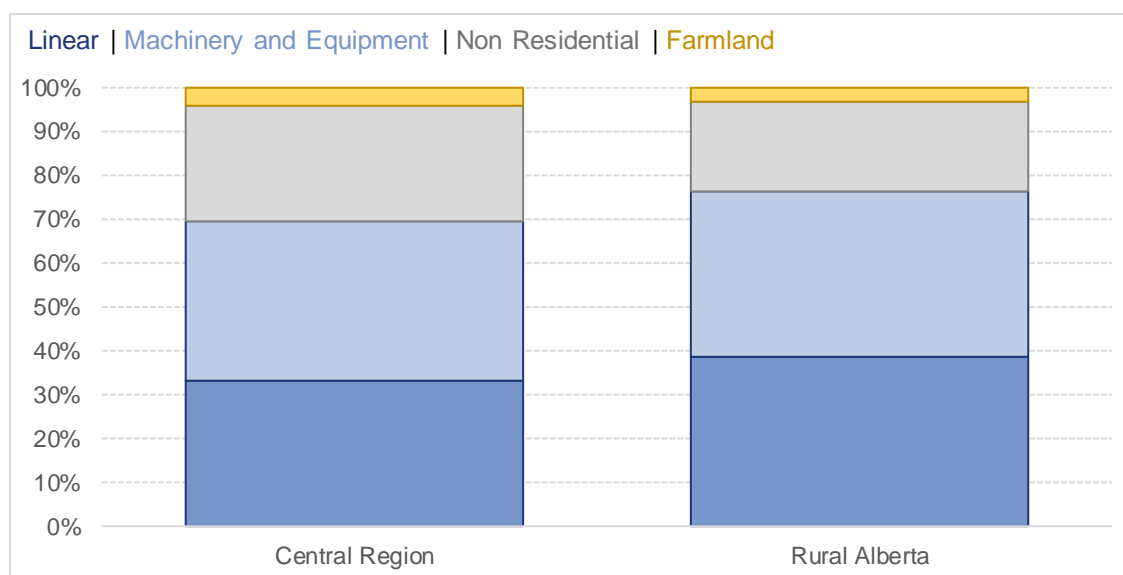
Source: Statistics Canada 2017b, Nichols Applied Management. Data inflated to 2015 dollars.

4.7.4 Municipal Assessment

The prominence of industrial infrastructure in the local economy, especially along the Highway 2 corridor, is reflected in the fiscal position of rural communities in the region. A proportionally higher amount of assessment in the rural portion of the central region is devoted to non-residential assessments than in the rural portion of the province overall (Figure 4.34).



Figure 4.34 Proportion of Rural Non-Residential Equalized Assessment, Central Region



Source: Alberta Municipal Affairs 2017. 2016 data. Non-residential assessment includes industrial and commercial properties.

4.7.5 Key Industries

As with other regions in the province, the oil and gas sector accounts for a large share of GDP and investment due to its capital-intensive nature although it contributes relatively less by way of direct employment. Setting aside oil and gas, a single industry does not stand out as being the dominant force within the central region. A number of communities in the region do benefit from their positioning along the Edmonton-Calgary corridor – the major economic corridor within the province that plays a fundamental role in the movement of goods and people between Alberta’s two largest cities.

4.7.6 Challenges and Opportunities

Ongoing opportunities in the central region are tied to the importance of the Highway 2 corridor between Edmonton and Calgary and the economic diversity of the region. There is room for expansion in the petrochemical manufacturing presence beyond the plant at Joffre. The central region has also partnered with Alberta Culture and Tourism to review potential investment opportunities given its unique location in the province (CAEP 2017). A barrier to growth in the region is limited highspeed internet in the more remote areas of the region.

4.8 Capital Region

The capital region of rural Alberta encompasses an area of approximately 13,000 square kilometres in the central portion of the province. This region includes the County of Wetaskiwin, Leduc County, Brazeau County, Parkland County and Sturgeon County as well as all the villages and summer villages within their boundaries¹⁰. This region also contains the specialized municipality of Strathcona County.

4.8.1 Population and Labour Force

In 2016, the capital region was home to 188,073 people, which is approximately 5% of the total population of Alberta (Statistics Canada 2016; Table 4.8). Between 2011 and 2016, the rural communities together grew at a rate of 5.4%, ranging from a high of 9.0% in Brazeau County to a low of 2.1% in Leduc County. Villages and summer villages are experiencing strong positive growth as well at 8% and 5%, respectively.

Table 4.8 Population, Capital Region

Rural Geography	2016 Population	2011-2016 Growth
County of Wetaskiwin	11,181	2.9%
Leduc County	13,780	2.1%
Brazeau County	7,771	9.0%
Parkland County	32,097	5.0%
Strathcona County ¹	98,044	6.0%
Sturgeon County	20,495	4.7%
Villages	3,706	8.0%
Summer Villages	999	5.0%
Region sub-total	188,073	5.4%
Total Rural Alberta	718,311	7.3%
Alberta	4,067,175	11.6%

Source: Statistics Canada 2016, 2011b.

¹ The Hamlet of Sherwood Park makes up the majority of the population of Strathcona County, and though closer to an urban area in size, is considered rural in this report in keeping with the definition of rural outlined in Section 4.1 and the difficulties in disentangling rural from urban discussed in Section 3.2.

Specialized municipalities are a hybrid of both urban and rural areas, typically taking on characteristics of both. Strathcona County was one of the first specialized municipalities in the province, and was formed in order to more evenly disperse the petroleum processing revenue generated from within its boundaries (AAMDC 2015). Strathcona County is home to the hamlet of Sherwood Park, which houses over 70% of the municipality's population. Although the size and character of this hamlet implies that it is an urban community, Strathcona County, including Sherwood Park, is considered rural for the purposes of this report, both to ensure consistency with the definition of rural Alberta outlined in Section 4.1 and due to difficulties in disentangling rural from urban areas discussed in Section 3.2.

The labour force participation rate in the municipal districts and counties and specialized municipalities of this region ranges from 72% to 78%, encompassing the provincial

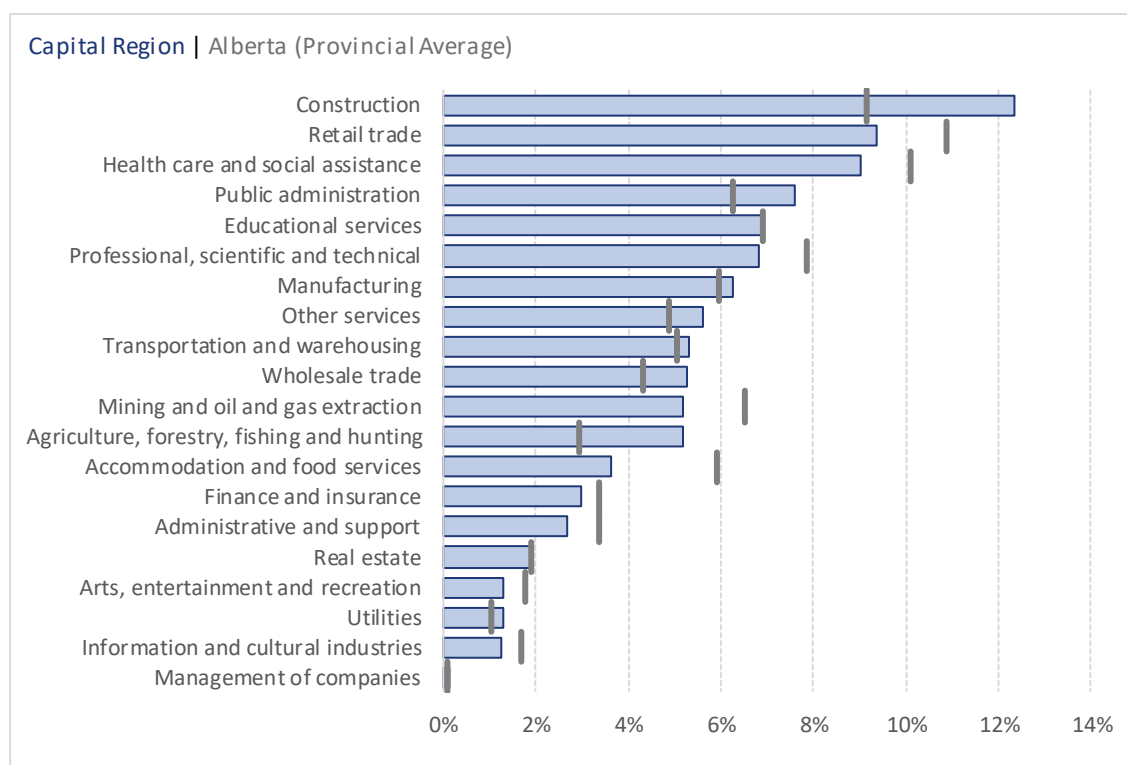
¹⁰ The complete list of all the villages and summer villages included in this region is shown in Appendix A.

average of 73%. The unemployment rate ranges from 2% to 5%, lower than the provincial average of 6%.

The labour force in the region is dominated by the construction sector, surpassing the provincial average, as well as the retail trade and health care sectors (Alberta Government 2014; Figure 4.35).

The average employment income in the region ranges from \$49,676 to \$84,655 - a range that includes the average across all industries of \$50,410 (2010 latest available; Statistics Canada 2011b).

Figure 4.35 Rural Labour Force by Industry, Capital Region

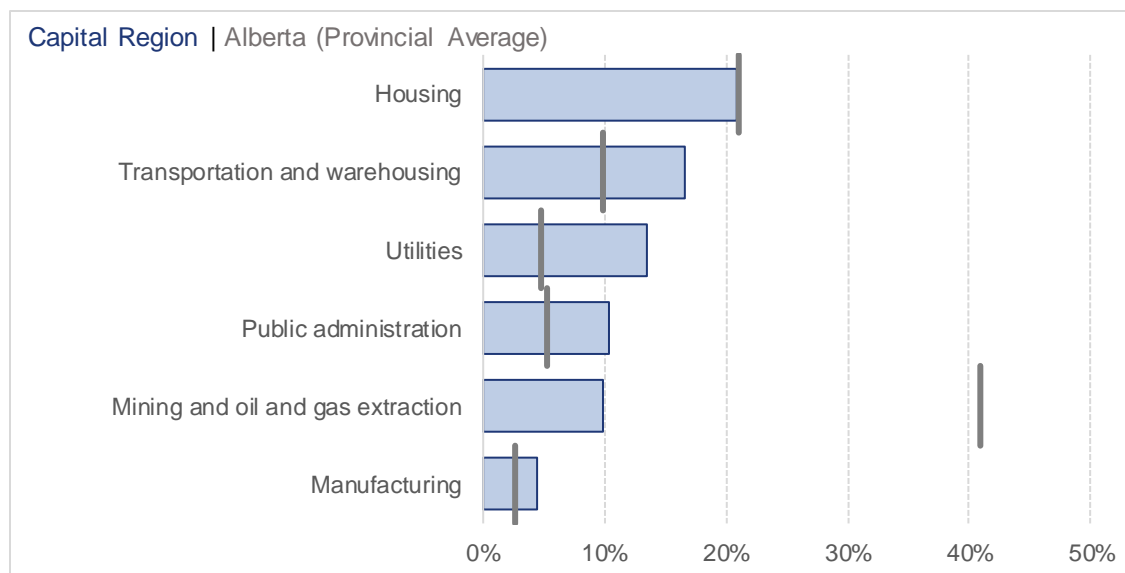


Source: Statistics Canada 2011b.

4.8.2 Investment

Total new and maintenance investment in the rural portion of the capital region amounts to \$3.1 billion, or approximately 3% of the provincial total (Statistics Canada 2017c, 2017d; Nichols Applied Management). This \$3.1 billion is focused primarily on investment in housing, transportation, utilities and public administration at relative levels which either equal or surpass that of the province overall (Figure 4.36). The investment in housing is driven largely by the rapidly growing population in the City of Edmonton and surrounding communities which are growing at some of the highest rates in the country and more than double the provincial average.

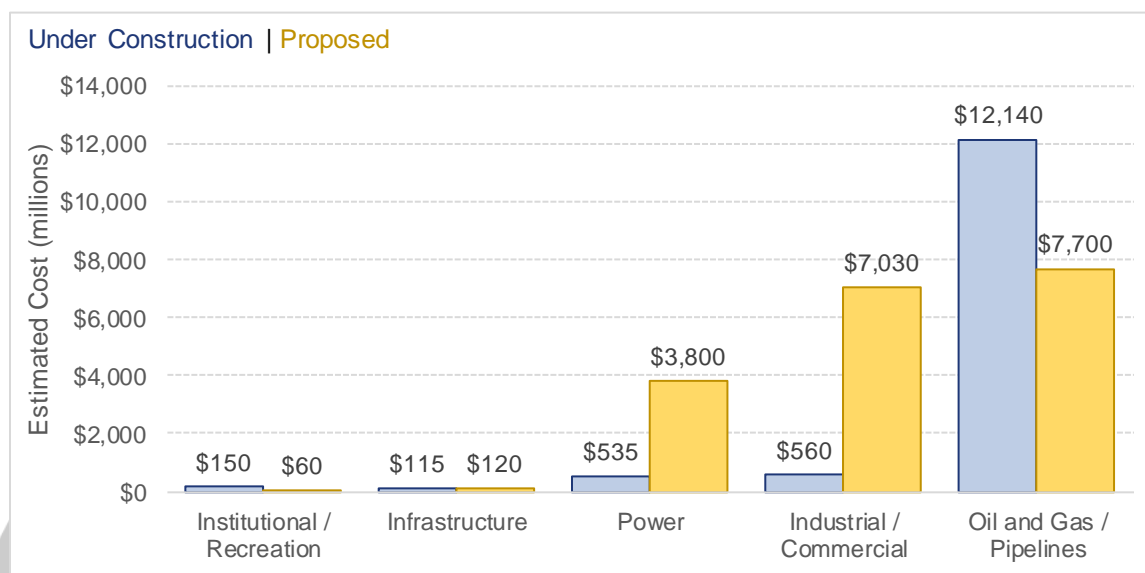
Figure 4.36 Rural Investment by Top 6 Industry Categories, Capital Region



Source: Statistics Canada 2017c, 2017d; Nichols Applied Management.

In 2015, new investment in the region was focused largely on oil and gas and power projects, including construction of the refinery in Sturgeon County, a portion of the Grand Rapids Pipeline Project, Keyera and Kinder Morgan's Baseline Terminal in Strathcona County and a portion of the Fort McMurray West Transmission Line (Alberta Government 2017; Figure 4.37). Future proposed investment is similarly focused and includes the development of natural gas and propane dehydrogenation facilities as well as a portion of Kinder Morgan's Trans Mountain Pipeline Expansion (Alberta Government 2017; Figure 4.37).

Figure 4.37 Public and Private Investment, Capital Region



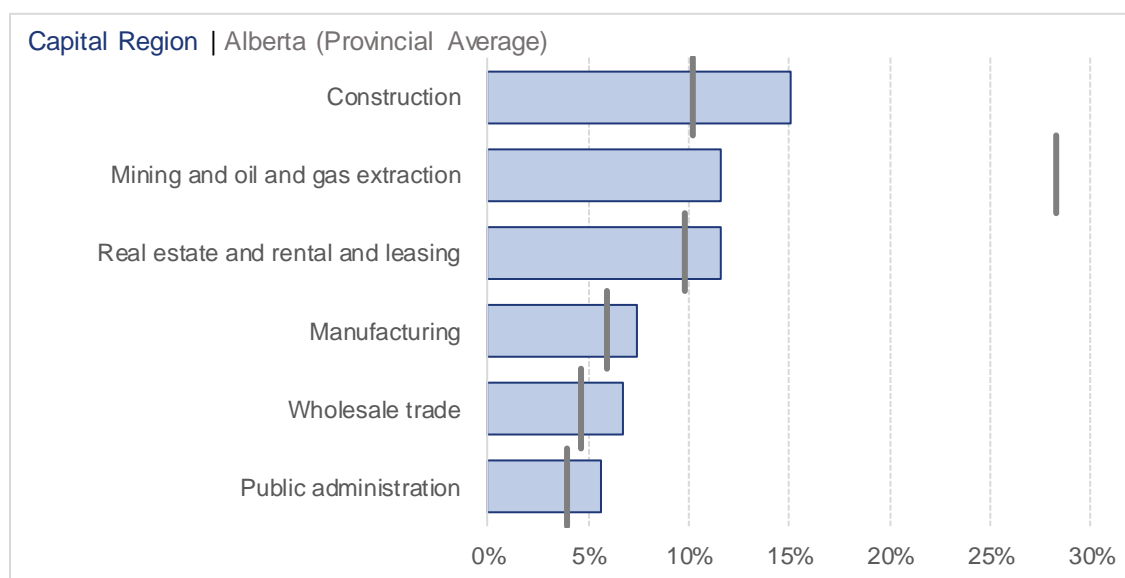
Source: Alberta Government 2017.

4.8.3 Gross Domestic Product

Nichols has estimated that the total GDP produced within the rural portion of the capital region was approximately \$14.6 billion in 2015, roughly 4% of Alberta's total GDP (\$78,000 GDP per capita; Statistics Canada 2017b, Nichols Applied Management).

Of the \$14.6 billion produced in the rural capital region, roughly 15% can be attributed to the construction sector (Statistics Canada 2017b, Nichols Applied Management). Other key industries include mining and oil and gas extraction, real estate, manufacturing, wholesale trade and public administration. The proportion of GDP generated directly by the mining and oil and gas industry is well below the provincial level although the Edmonton area is home to a number of industries who are engaged in the oil sands supply chain as the providers of good and services to projects in northern Alberta or as purchasers of crude for upgrading and refining (Statistics Canada 2017b, Nichols Applied Management).

Figure 4.38 GDP in Rural Alberta by Top 6 Categories, Capital Region

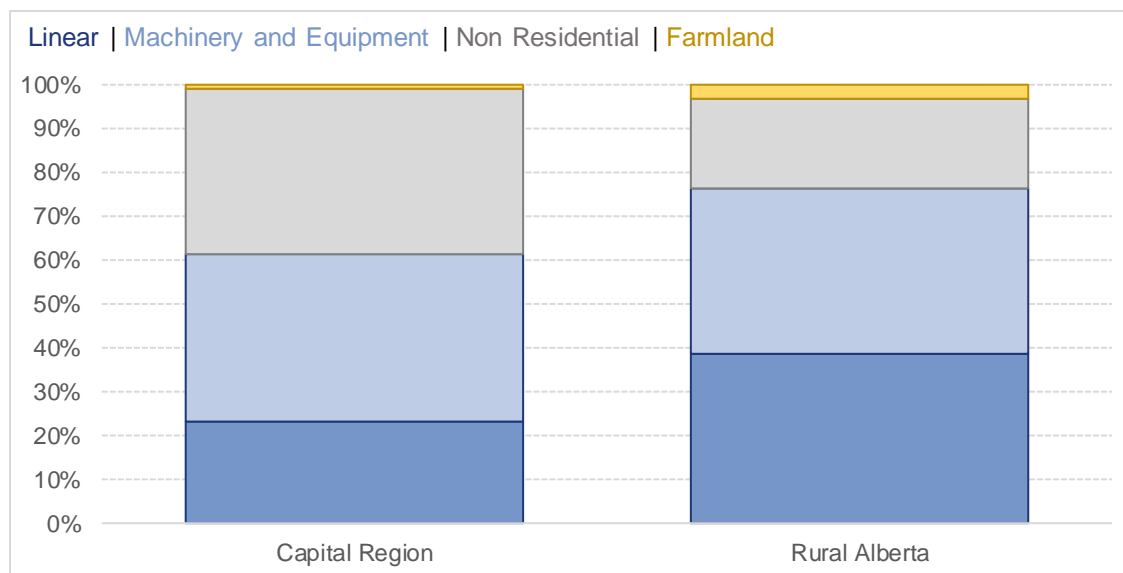


Source: Statistics Canada 2017b, Nichols Applied Management. Data inflated to 2015 dollars.

4.8.4 Municipal Assessment

The prominence of industrial and commercial investment in the local economy is reflected in the fiscal position of rural communities in the region. A proportionally higher amount of assessment in the rural portion of the capital region is devoted to non-residential assessment than in the rural portion of the province overall (Figure 4.39 and **Error! Reference source not found.**).

Figure 4.39 Proportion of Rural Non-Residential Equalized Assessment, Capital Region



Source: Alberta Municipal Affairs 2017. 2016 data. Non-residential assessment includes industrial and commercial properties.

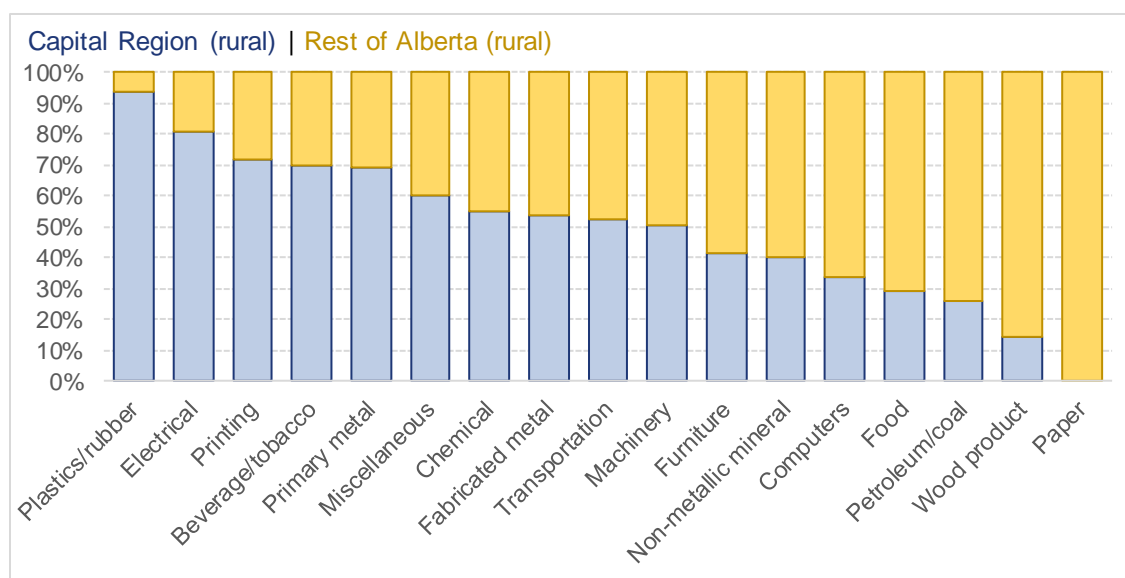
4.8.5 Key Industries

Key industries within a region can be identified based on their relative contribution to employment, GDP, and investment patterns. Within the capital region manufacturing is well above its relative provincial level.

Manufacturing

Of the approximately \$3.2 billion in GDP generated by rural Alberta's manufacturing industry, approximately 38% (\$1.2 billion) is attributed to the rural areas of the capital region (Statistics Canada 2017b, Nichols Applied Management). In particular, the capital region contributes the greatest share of plastics and rubber products, primary metal, electrical equipment, printing and related activities, miscellaneous, fabricated metal products, chemical, machinery and transportation equipment manufacturing (Figure 4.40). This result is largely related to the role of the region as a supplier to major industrial projects in northern Alberta.

Figure 4.40 Proportion of GDP Generated by the Manufacturing Industry, Capital Region



Source: Statistics Canada 2017b, Nichols Applied Management.

The capital region is also home to Alberta's Industrial Heartland (AIH) that is an association of five municipal partners including the City of Fort Saskatchewan, Lamont County, Strathcona County, Sturgeon County and the City of Edmonton. The AIH specializes in value-added processing related to the oil and gas industry. Canada's largest hydrocarbon processing cluster is located in Alberta's Industrial Heartland, and it contributes a substantial portion of the provincial revenue from the chemical and petroleum refining sectors (AIH 2017).

4.8.6 Challenges and Opportunities

Challenges in the region include land shortages for both residential and industrial purposes, especially for small-scale industrial uses; required road infrastructure upgrades to keep up with industrial traffic; and a lack of a unified plan that ties rural tourism offerings with those in the urban areas.

4.9 Northwest Region

The northwest region of rural Alberta encompasses an area of approximately 188,000 square kilometres in the northwest portion of the province. This region includes Lac Ste. Anne County, Barrhead County, Westlock County, Woodlands County, Thorhild County, Athabasca County, Northern Sunrise County, Big Lakes County, the M.D. of Opportunity, the M.D. of Lesser Slave River, Clear Hills County, Northern Lights County, the M.D. of Greenview, County of Grande Prairie, the M.D. of Smoky River, Birch Hills County, the M.D. of Spirit River, the M.D. of Fairview and the M.D. of Peace as well as all the villages and summer villages within their boundaries¹¹. The region is also home to the specialized municipality of Mackenzie County.

4.9.1 Population and Labour Force

In 2016, the northwest region was home to 117,990 people, which is approximately 3% of the total population of Alberta (Statistics Canada 2016; Table 4.9). Between 2011 and 2016, the rural communities together grew at a rate of 4.0%, ranging from a high of 20.8% in the M.D. of Peace to a low of -5.5% in Westlock County. Villages experienced a net decline in population from 2011 to 2016, whereas summer villages grew by approximately 16% over that same time period.

¹¹ The complete list of all the villages and summer villages included in this region is shown in Appendix A.

Table 4.9 Population, Northwest Region

Rural Geography	2016 Population	2011-2016 Growth
Lac Ste. Anne County	10,899	6.2%
County of Barrhead	6,288	3.1%
Westlock County	7,220	-5.5%
Woodlands County	4,754	10.4%
Thorhild County	3,254	-4.8%
Athabasca County	7,869	2.7%
Northern Sunrise County	1,891	5.6%
Big Lakes County	5,672	-4.1%
M.D. of Opportunity	3,181	3.5%
M.D. of Lesser Slave River	2,803	-4.3%
Clear Hills County	3,023	7.9%
County of Northern Lights	4,200	2.0%
Mackenzie County	11,171	2.2%
M.D. of Greenview	5,583	5.4%
County of Grande Prairie	22,303	13.1%
M.D. of Smoky River	2,023	-4.8%
Birch Hills County	1,553	-1.8%
M.D. of Spirit River	700	-1.8%
Saddle Hills County	2,225	-2.8%
M.D. of Fairview	1,604	-4.1%
M.D. of Peace	1,747	20.8%
Villages	5,541	-0.5%
Summer Villages	2,486	15.8%
Region sub-total	117,990	4.0%
Total Rural Alberta	718,311	7.3%
Alberta	4,067,175	11.6%

Source: Statistics Canada 2016, 2011b.

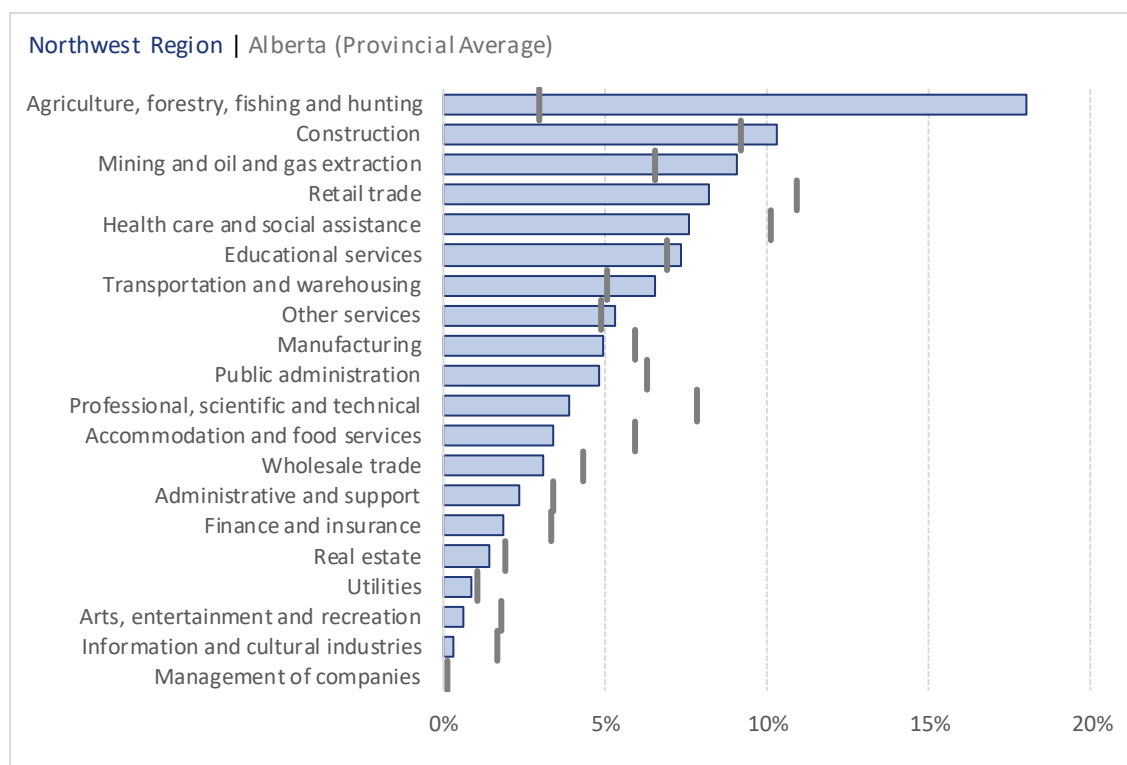
The labour force participation rate in the municipal districts and counties and specialized municipalities varies substantially about the provincial average of 73% from a high of 79% to a low of 63%. The unemployment rate also varies dramatically from a high of 17% in the M.D. of Opportunity to a low of 2% in Athabasca County, with the provincial average being 6%.

The labour force in the region is dominated by the agriculture and forestry sector, far outweighing the provincial average (Alberta Government 2014; Figure 4.41). Setting aside the large role of agriculture and forestry, the labour force in the region is relatively well diversified despite the relative proportion of many of the less prominent industries being nominally above or below the provincial average.

The average employment income in the region ranges from \$45,606 to \$95,268 – a range that encompasses the provincial average across all industries of \$50,410 (2010 latest available; Statistics Canada 2011b).



Figure 4.41 Rural Labour Force by Industry, Northwest Region

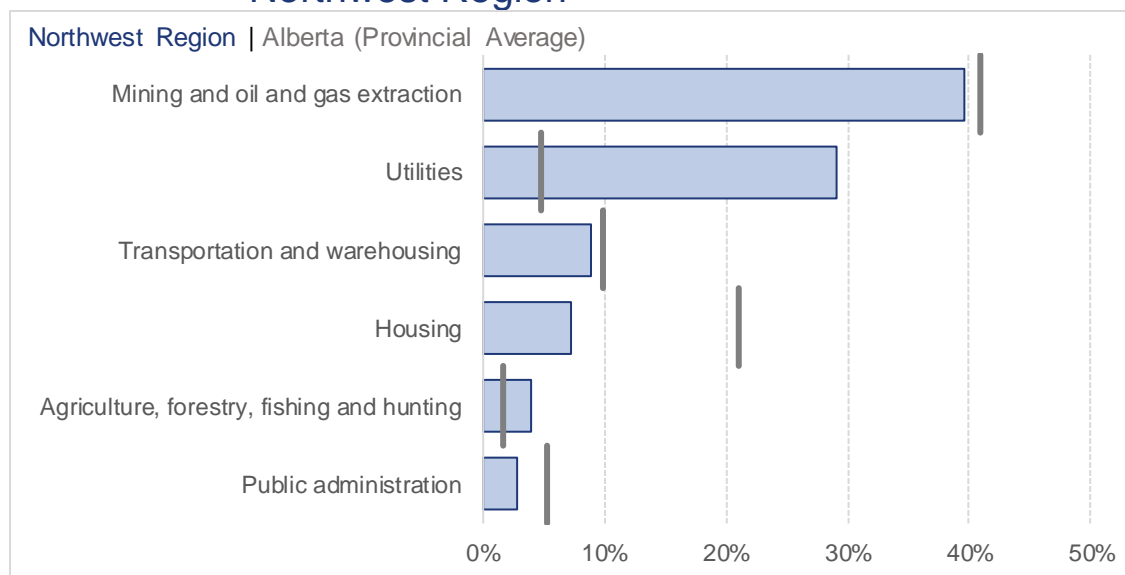


Source: Statistics Canada 2011b.

4.9.2 Investment

In 2015, the total new and maintenance investment in the rural portion of the northwest region amounts to \$4.0 billion, or approximately 4% of the provincial total (Statistics Canada 2017c, 2017d; Nichols Applied Management). Investment in mining and oil and gas extraction accounts for approximately 40% of total investment, slightly less than the provincial average of 41% (Figure 4.42). The relative proportion of investment in utilities and agriculture and forestry outstrips that of the province overall.

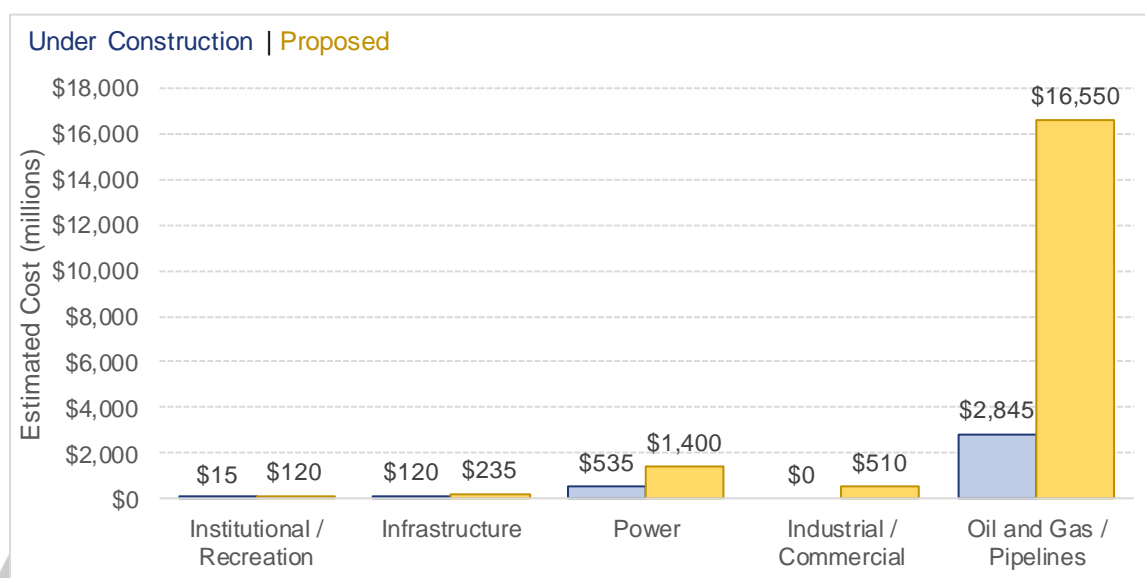
Figure 4.42 Rural Investment by Top 6 Industry Categories, Northwest Region



Source: Statistics Canada 2017c, 2017d; Nichols Applied Management.

New investment in the region is primarily devoted to pipeline and power projects, including portions of Grand Rapids Pipeline Project and the Fort McMurray West Transmission Line as well as Sunshine's West Ells' Oil Sands Project (Alberta Government 2017; Figure 4.43). Proposed investment is primarily focused on several pipeline and power projects, including the Mackenzie Gas Pipeline Project; which, although still technically a proposed project, has seen decades of regulatory delays, as well as expansion of the HR Milner Generating Station in Greenview (Alberta Government 2017; Figure 4.43).

Figure 4.43 Public and Private Investment, Northwest Region



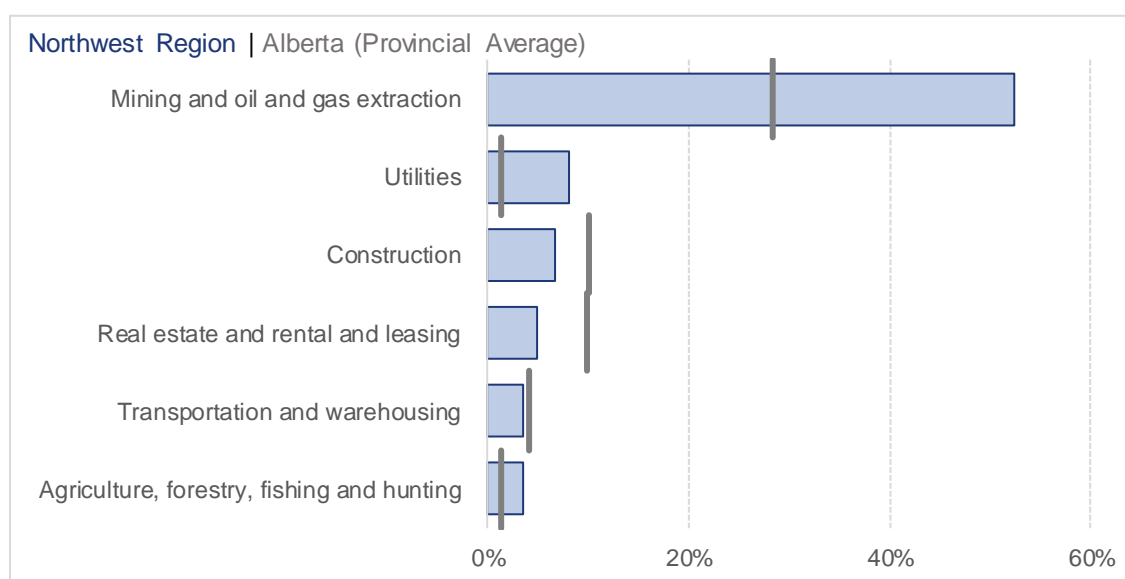
Source: Alberta Government 2017. Includes the Mackenzie Gas Pipeline Project; which, although still a proposed project, has seen decades of regulatory delays.

4.9.3 Gross Domestic Product

Nichols has estimated that the total GDP produced within the rural portion of the northwest region was approximately \$14.5 billion in 2015, roughly 4% of Alberta's total GDP (\$123,000 GDP per capita; Statistics Canada 2017b, Nichols Applied Management).

Of the \$14.5 billion produced in the rural northwest region, roughly 52% can be attributed to the mining and oil and gas sector (Statistics Canada 2017b, Nichols Applied Management). Although nominal in comparison to mining and oil and gas extraction, the proportion of GDP generated by the utilities industry surpasses that of the province overall (Statistics Canada 2017b, Nichols Applied Management).

Figure 4.44 GDP in Rural Alberta by Top 6 Categories, Northwest Region



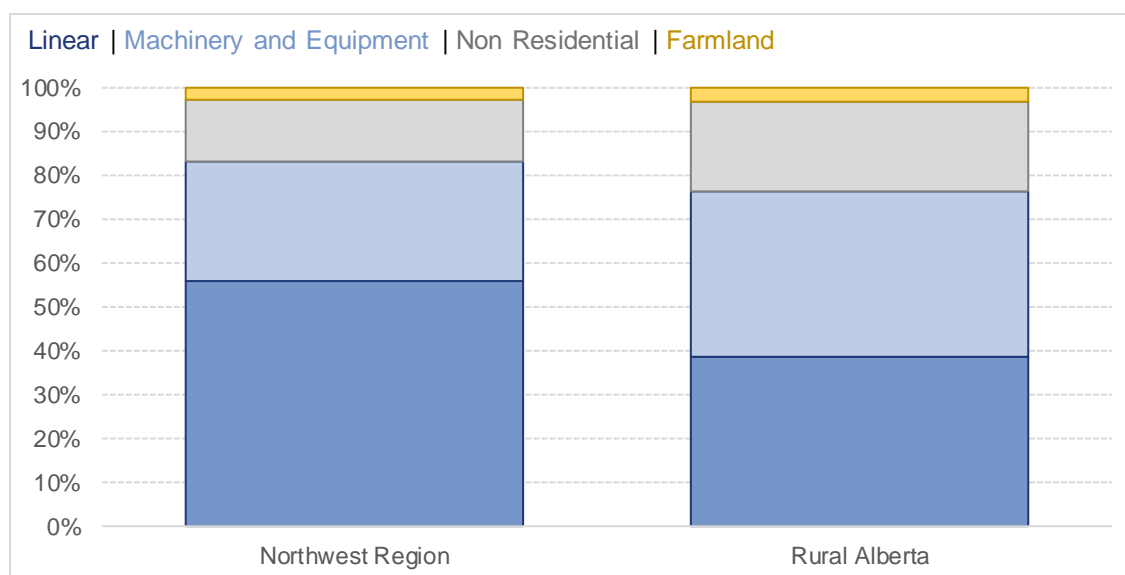
Source: Statistics Canada 2017b, Nichols Applied Management. Data inflated to 2015 dollars.

4.9.4 Municipal Assessment

The prominence of oil, gas, pipeline and power infrastructure in the local economy is reflected in the fiscal position of rural communities in the region. A proportionally higher amount of assessment in the rural portion of the northwest region is devoted to linear assessments than in the rural portion of the province overall (Figure 4.45 and **Error! Reference source not found.**).



Figure 4.45 Proportion of Rural Non-Residential Equalized Assessment, Northwest Region



Source: Alberta Municipal Affairs 2017. 2016 data. Non-residential assessment includes industrial and commercial properties.

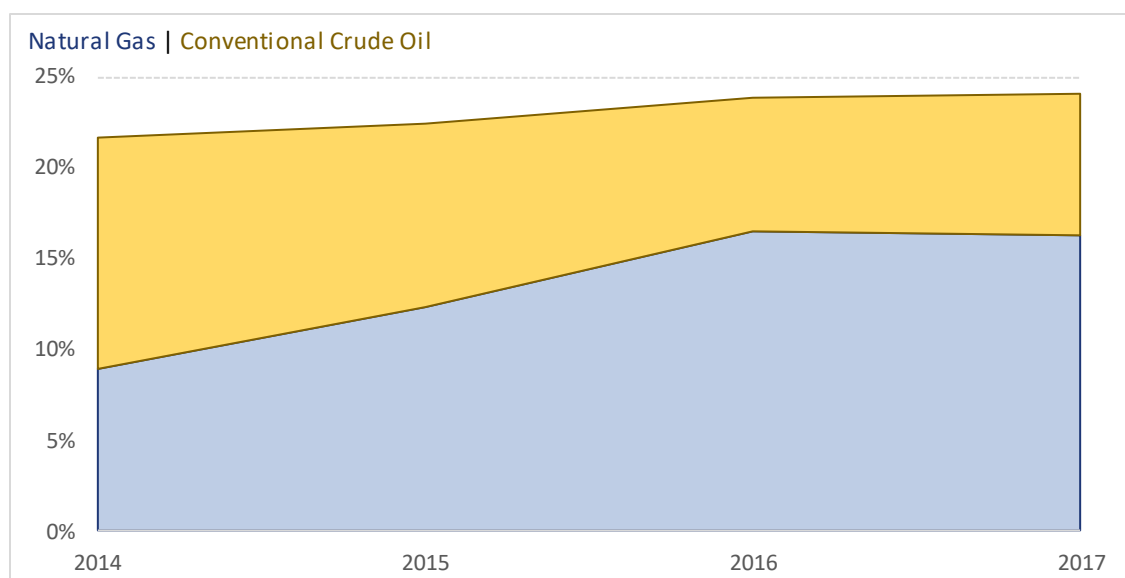
4.9.5 Key Industries

On a value basis, the region's economy is dominated by mining and oil and gas. However, when considered in terms of labour force, the agriculture and forestry sector is a major contributor to this region's economy.

Conventional Oil and Gas

The northwest region contributes between 20% and 25% of the total natural gas and conventional crude oil wells placed on production in Alberta (AER 2017, Nichols Applied Management; Figure 4.46). The proportion of gas wells is anticipated to increase in the short term as the development of the Montney Formation is anticipated to bring a wealth of additional natural gas infrastructure, as well as the subsequent processing and servicing spin-off industries.

Figure 4.46 Proportion of Provincial Wells Placed on Production, Northwest Region



Source: AER 2017, Nichols Applied Management. 2017 data was estimated.

Forestry

The rural areas of the northwest region contribute approximately 60% of the total timber volume harvested in the province (Alberta Agriculture and Forestry 2016, Nichols Applied Management). The rural areas of the northwest region are also leaders in forestry and logging; approximately 32% (\$152 million) of the \$468 million in GDP generated by Alberta's forestry and logging industry is attributed to the northwest region (Statistics Canada 2017b, Nichols Applied Management).

4.9.6 Challenges and Opportunities

Challenges to and opportunities for growth vary throughout the rural communities in the northwest region.

In the past, the eastern portion of the northwest region has largely been driven by both the forestry and conventional oil and gas industries (LSLEA 2013). Currently, diversification efforts have largely focused on increasing the manufacturing presence and promoting local tourism. Additionally, service provision in urban centres is improving as a new hospital has been built in High Prairie. Tolko Industries Ltd., a Canadian forest products' company based in Vernon, British Columbia, has also opened the Athabasca pulp and paper mill in Slave Lake bringing new jobs to the region (Tolko 2014).

The southeast portion of the northwest region is known for its forestry and oil and gas sectors. Activity in the Duvernay Formation near Fox Creek is proceeding, and the nearby rural communities are seeing a slow recovery of investment in the oil and gas industry following the recent drop in commodity prices.

Millar Western and Alberta Newsprint Company are major forestry employers in the region producing both lumber and pulp and paper (AFPA 2017). Although forestry has historically been an important driver for the economy in this region, uncertainty due to potential forest management agreement (FMA) boundary changes and the ongoing softwood lumber dispute have created a cautious investment environment. Potential exists to expand eco-tourism in the region and road infrastructure improvements over the past couple of years have ensured the effective transport of goods and services to northern Alberta.

Similar to other rural communities, a lack of broadband network connectivity is currently a barrier to development in the central portion of the northwest region – especially in the remote areas of the region.



4.10 Northeast Region

The northeast region of rural Alberta encompasses an area of approximately 25,000 square kilometres in the northeast portion of the province. This region includes the M.D. of Bonnyville, County of St. Paul, Smoky Lake County and Lac La Biche County as well as the Regional Municipality of Wood Buffalo (RMWB), which includes the urban service area of Fort McMurray. The region also includes all the villages and summer villages within its boundaries¹².

4.10.1 Population and Labour Force

In 2016, the northeast region was home to 104,890 people, or approximately 3% of the provincial population – approximately 66,573 of which resides in Fort McMurray which is estimated to have grown at roughly 9.9% over the 2011 to 2016 period (Statistics Canada 2016; Table 4.10). The population of the rural areas together grew by approximately 9.1% between 2011 and 2016, less than the province overall. Villages and summer villages experienced a net decline in population over the same time period.

The determination of the resident population of the RMWB is difficult estimate due to the following factors:

- the presence of a relatively sizeable mobile workforce (i.e. shadow population)¹³;
- enumeration challenges related to the 2016 Fort McMurray wildfire; and
- recent changes in regional workforce requirements as a result of economic conditions (e.g. lower oil prices driving a move towards operational efficiencies, attrition).

Recent population projections developed for the RMWB that take into account these factors, estimates the post-wildfire population of Fort McMurray in 2016 at roughly 72,000 to 74,000. A further 3,600 people are estimated to reside in rural communities in the Wood Buffalo region.

Looking forward, population growth in the RMWB will continue to be influenced by:

- the 2016 wildfire, via returning residents and in-migration to support rebuild activities;
- ongoing workforce adjustments being made in the oil sands industry; and
- anticipated oil sands project activity as some projects enter into and/or ramp up construction and operations.

Taking these factors into consideration, the RMWB is estimated to grow at an annual rate of approximately 3% from 2016 to 2020, although there is considerable variability from year-to-year over this timeframe.

¹² The complete list of all the villages and summer villages included in this region is shown in Appendix A.

¹³ The Statistics Canada Federal Census, for example, does not capture persons residing in rental or owned housing who also maintain a residence elsewhere.

Along with the resident population, the RMWB is also home to a number of oil sands related work camps. The camp-based workforce in the region was last estimated in 2015 at just over 38,000 (RMWB 2015). The camp-based workforce can fluctuate considerably during the year based on the seasonality of certain work activities and the construction and maintenance schedules of individual projects.

Table 4.10 Population, Northeast Region

Rural Geography	2016 Population	2011-2016 Growth
M.D. of Bonnyville	13,575	21.3%
County of St. Paul	6,036	3.6%
Smoky Lake County	4,107	5.0%
Lac La Biche County	8,330	-0.9%
RMWB (excluding Fort McMurray)	5,016	9.2%
Fort McMurray ¹	66,573	9.9%
Villages	969	-2.1%
Summer Villages	284	-3.4%
Region sub-total	104,890	9.1%
Total Rural Alberta	718,311	7.3%
Alberta	4,067,175	11.6%

Source: Statistics Canada 2016, 2011b.

- 1 Despite having many of the characteristics of an urban center, Fort McMurray is considered rural in this report in keeping with the definition of rural outlined in Section 4.1 and the difficulties in disentangling rural from urban discussed in Section 3.2.

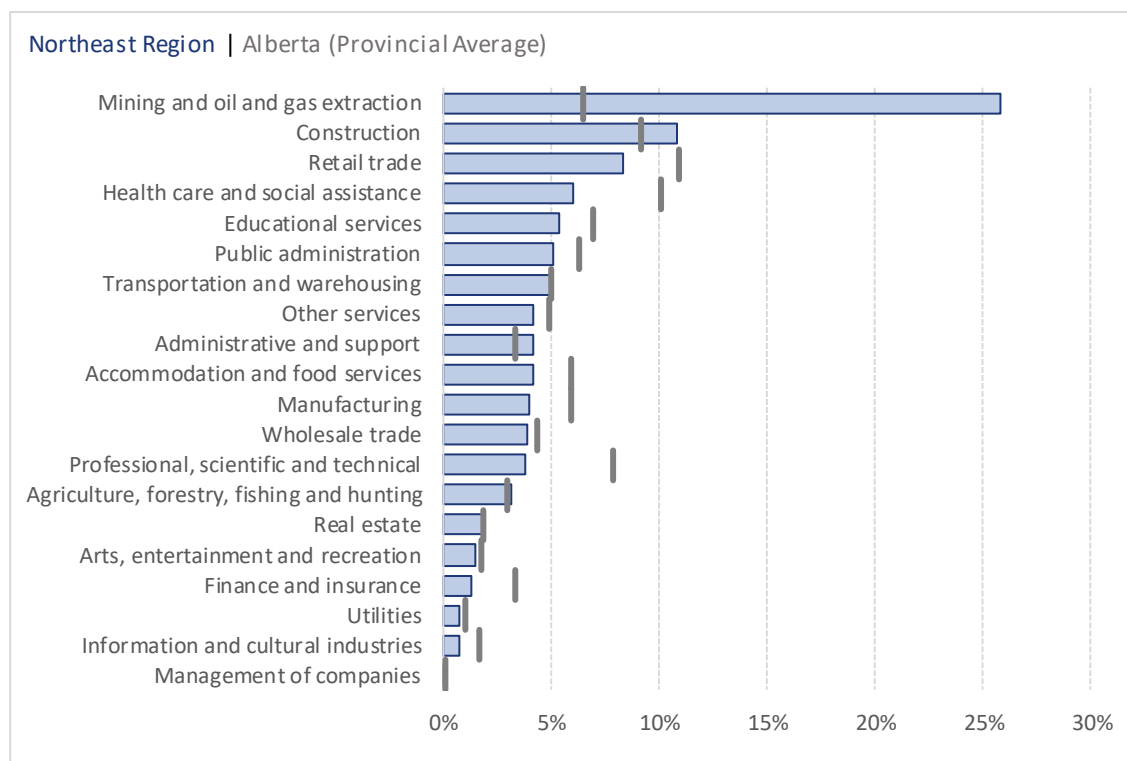
Specialized municipalities, such as the RMWB, are a hybrid of both urban and rural areas, typically taking on characteristics of both. The RMWB was one of the first specialized municipalities in the province, and similar to Strathcona County, it was formed in order to ensure revenues generated by the resource development industry within its boundaries would be used for local development (AAMDC 2015). The RMWB is home to the population centre of Fort McMurray, which houses over 90% of the municipalities population. Although the size of this population centre implies that it has urban characteristics, the RMWB including Fort McMurray, is considered rural for the purposes of this report, both to ensure consistency with the definition of rural Alberta outlined in Section 4.1 and due to the difficulties in disentangling rural from urban areas discussed in Section 3.2.

The labour force participation rate varies amongst the municipal districts and counties and specialized municipalities, with a high of 83% the RMWB and a low of 59% in Smoky Lake County, with the provincial average being 73%. The unemployment rate is either equal to or below the provincial average (6%) for all municipal districts and counties and specialized municipalities.

The labour force in the region is dominated by the mining and oil and gas extraction sector, far outperforming the provincial average largely owing to the ongoing development and maintenance of oil sands facilities that employ large mobile workforces from both within and outside the region (Alberta Government 2014; Figure 4.47). The labour force for many of the less prominent industries is either nominally above or less than the provincial average – largely the result of the prominence of oil and gas activities throughout the region.

The average employment income in the region varies from \$51,232 to \$115,657 – a range that largely surpasses the provincial average across all industries of \$50,410 (2010 latest available; Statistics Canada 2011b). This finding is driven almost entirely by the high-paying industrial employment related to the plethora of oil sands development in the northeast region.

Figure 4.47 Rural Labour Force by Industry, Northeast Region

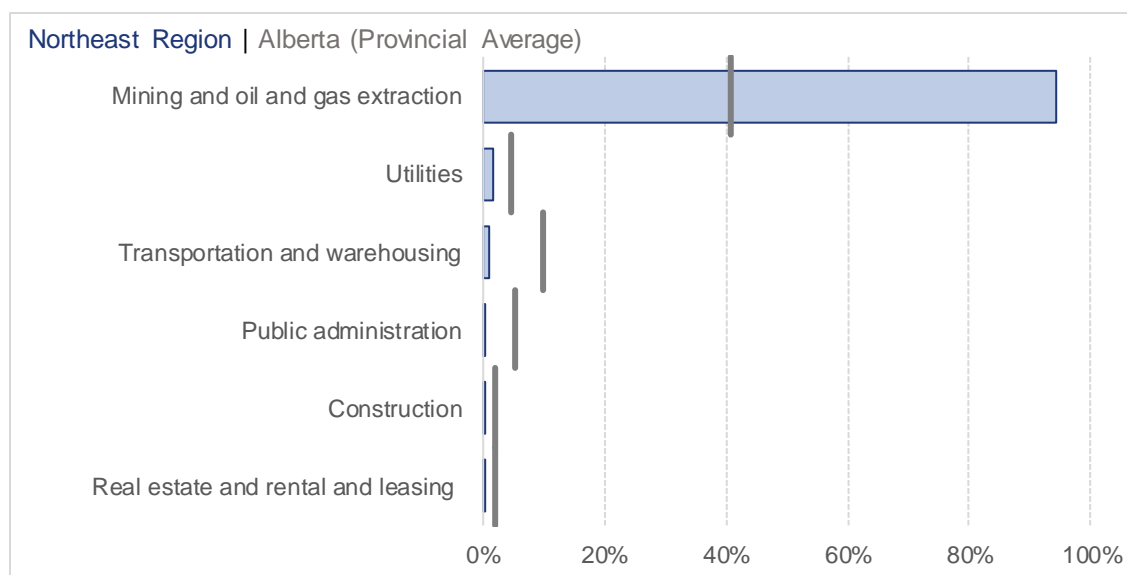


Source: Statistics Canada 2011b.

4.10.2 Investment

In 2015, the total new and maintenance investment in the rural portion of the northeast region amounts to \$22.7 billion, or approximately 24% of the provincial total – a rate driven almost entirely by investment in the capital-intensive oil sands (Statistics Canada 2017c, 2017d; Nichols Applied Management). Investment in mining and oil and gas extraction accounts for approximately 94% of total investment, far surpassing the provincial average of 41% (Figure 4.48). Conversely, investment in all other sectors is less than the relative proportions in the province overall.

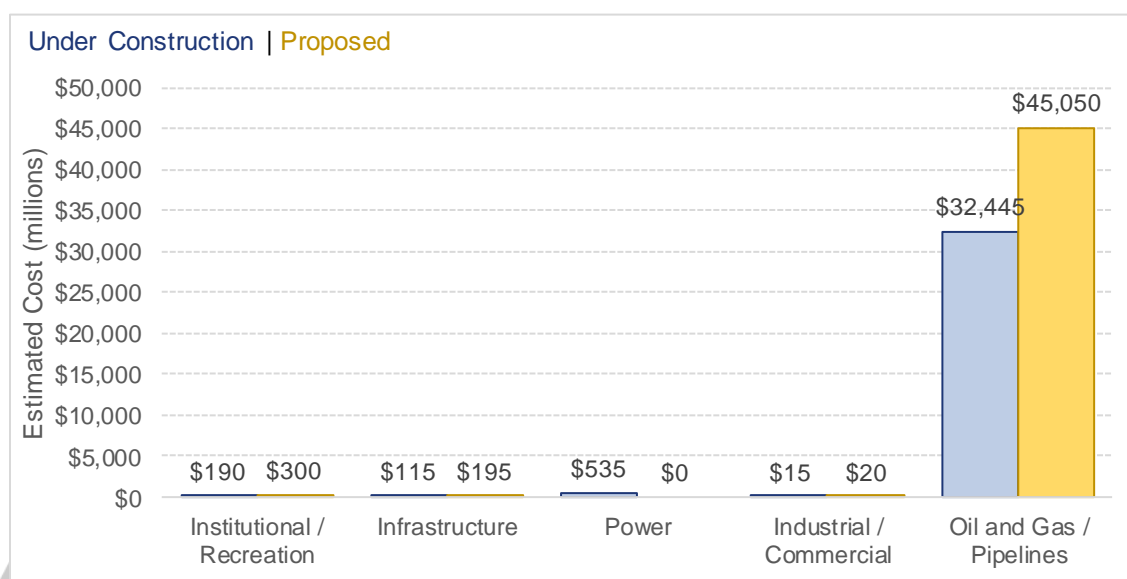
Figure 4.48 Rural Investment by Top 6 Industry Categories, Northeast Region



Source: Statistics Canada 2017c, 2017d; Nichols Applied Management.

New current and future investment in the region is also dominated by oil and gas and pipeline projects, including construction of the Fort Hills oil sands mine and expansion of the Horizon Oil Sands Project which are multi-billion dollar projects in their own right (Alberta Government 2017; Figure 4.49). Non-oil sands investment in the region includes a portion of the Fort McMurray West Transmission Line and municipal infrastructure upgrades. Future planned projects include the Frontier oil sands mine, the MEG May River Project and other oil sands projects.

Figure 4.49 Public and Private Investment, Northeast Region



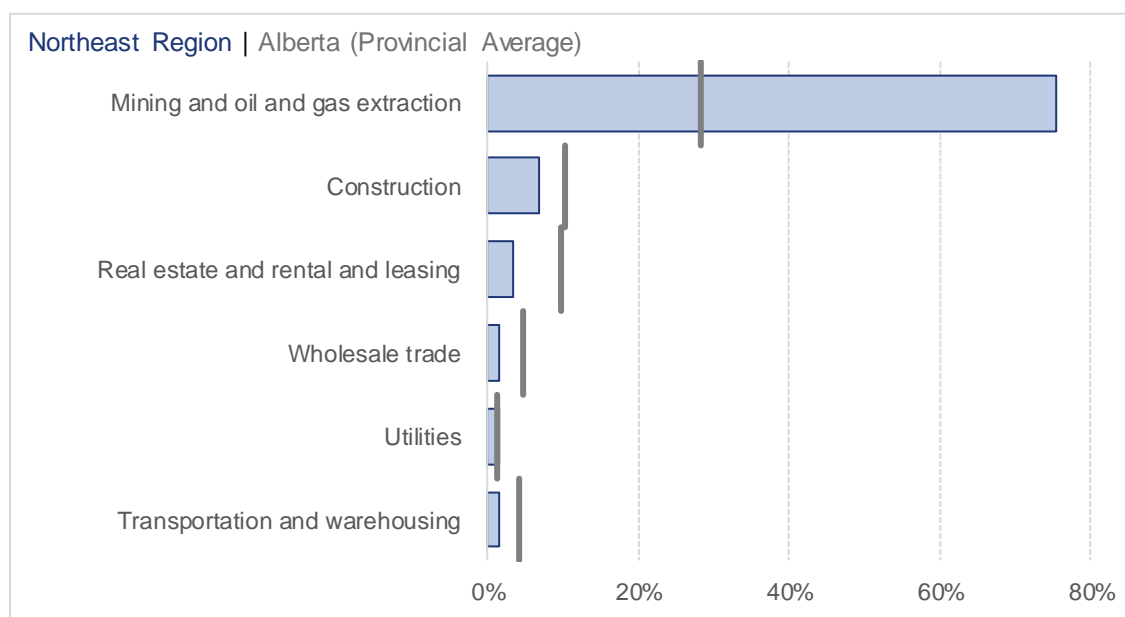
Source: Alberta Government 2017.

4.10.3 Gross Domestic Product

Nichols has estimated that the total GDP produced within the rural portion of the northeast region was approximately \$28.1 billion in 2015, roughly 8% of Alberta's total GDP (\$268,000 GDP per capita; Statistics Canada 2017b, Nichols Applied Management).

Of the \$28.1 billion produced in the rural northeast region, roughly 75% can be attributed to the mining and oil and gas sector (Statistics Canada 2017b, Nichols Applied Management). The proportion of GDP generated in all other sectors is less than that of the province overall (Statistics Canada 2017b, Nichols Applied Management).

Figure 4.50 GDP in Rural Alberta by Top 6 Categories, Northeast Region



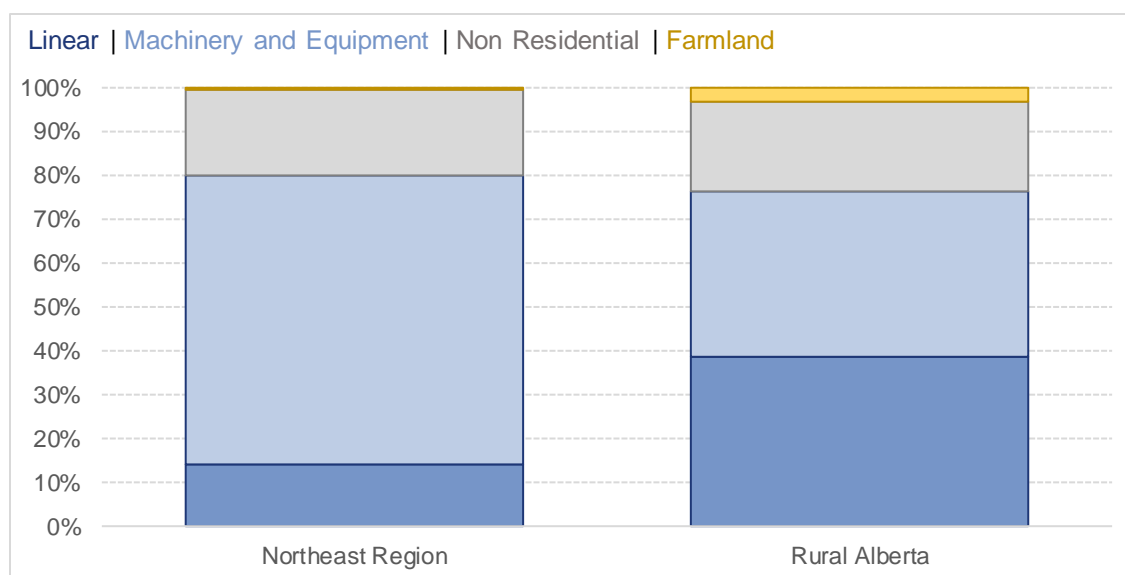
Source: Statistics Canada 2017b, Nichols Applied Management. Data inflated to 2015 dollars.

4.10.4 Municipal Assessment

The prominence of oil and gas and pipeline projects in the local economy is reflected in the fiscal position of rural communities in the region. A proportionally higher amount of assessment in the rural portion of the northeast region is devoted to machinery and equipment than in the rural portion of the province overall (Figure 4.51 and **Error! Reference source not found.**).



Figure 4.51 Proportion of Rural Non-Residential Equalized Assessment, Northeast Region



Source: Alberta Municipal Affairs 2017. 2016 data. Non-residential assessment includes industrial and commercial properties.

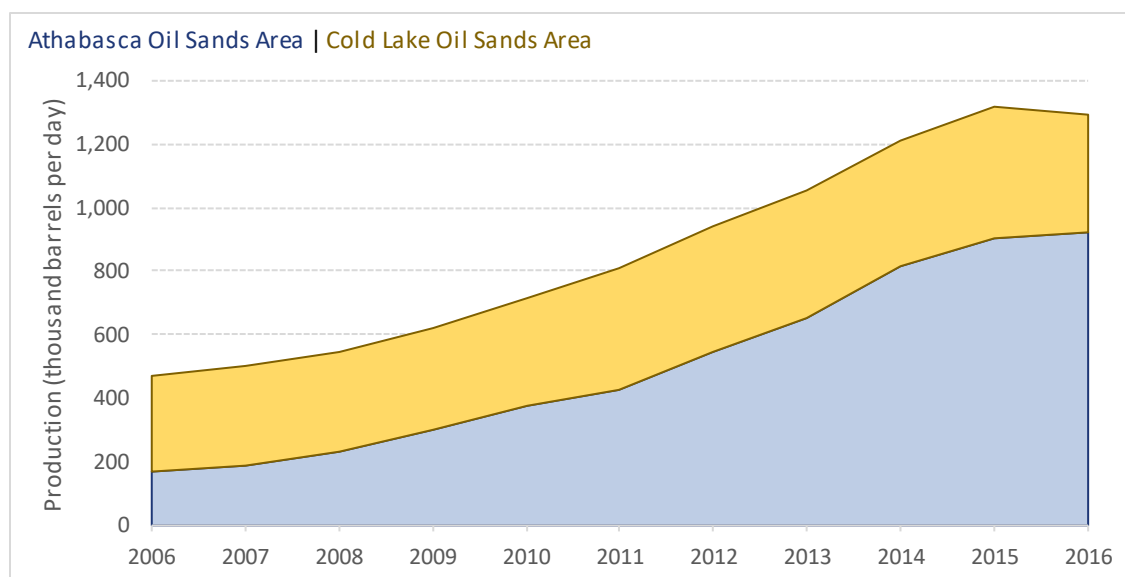
4.10.5 Key Industries

The key industries within a region can be identified based on their relative contribution to employment, GDP, and investment patterns and in the northeast region, the mining and oil and gas sector is a fundamental pillar of the local economy.

Oil Sands

Over the past 10 years, total oil sands production in the northeast region has accounted for between 93% and 97% of the provincial total; in 2016, approximately 1,290,000 barrels per day was produced in the region (AER 2017; Figure 4.52).

Figure 4.52 In Situ Bitumen Production



Source: AER 2017

Oil sands production is supported by urban service centres throughout the region that provide access to service industries, transportation networks, machinery and equipment retailers, and other key inputs required for mining and oil and gas production. The continued prominence and health of oil sands production is very much related to the ongoing relationship with urban service centres throughout the region and vice versa.

4.10.6 Challenges and Opportunities

Throughout the northeast region, challenges and opportunities for growth in rural communities vary. The southern portion of the northeast region lacks investment in road and bridge infrastructure, and the recently imposed carbon tax has increased the cost of doing business with local freight companies. Given the large presence of both oil sands and conventional oil and gas in the region, the recent downturn in the economy has provided some challenges, but investment opportunities are slowly returning as existing operators work to realize efficiencies and operate in a low-price environment. Opportunities in the region include the contribution of the Cold Lake Air Weapons Range to aerospace and defense research and development.

In general, the rapid expansion of the oil sands experienced in the 2006 to 2015 period is coming to an end. Operational efficiencies driven by a low-price environment coupled with technological advances such as automated (i.e. self-driving) truck technology are reducing labour needs in the region and thereby slowing the rate of population growth in centres such as Fort McMurray. Additionally, policies from higher levels of government with respect to greenhouse gas emissions and environmental protection in general may present further barriers to oil sands development.

The regional economy is highly dependent upon the oil sands and a sudden halt to the continued operation of several large projects would likely plunge the region, and indeed much of Alberta, into a period of significant economic contraction. Opportunities to re-purpose capital currently deployed in the oil sands do not exist on a meaningful scale anywhere in Alberta.



4.11 Summary

Rural and urban communities have evolved to work together in order to allow both types of communities to make the most of their relative strengths and contribute to the provincial economy in tandem. The resource-driven activities in rural areas are supported by urban service centres just as the urban centres rely on rural producers to purchase inputs and services from their residents. As such, any distinction between the relative contributions of one must not be confused as a statement of something that can be accomplished in the absence of the other.

Using the methodology outlined in Section 3, the relative contribution of rural Alberta as measured in GDP is approximately \$89.6 billion, or 26% of Alberta's GDP (real 2015 dollars). When considered relative to its population, which numbers approximately 718,000 or 18% of Alberta's total, rural Alberta is contributing on an impressive scale.



5. Rural Alberta's Economic Outlook

As articulated in the preceding section, Alberta's rural economy is driven primarily by resource industries; namely the oil and gas, agriculture, and forestry sectors. Developing an outlook for rural Alberta is then akin to understanding how each of these industries is expected to perform in the coming years. Economic forecasting is subject to a great deal of uncertainty which is amplified as the length of the forecast period increases. The economic outlook for rural Alberta presented hereafter is therefore confined to the 2017 to 2020 period, and highlights only the dominant drivers of future development.

5.1 Oil and Gas Extraction

As illustrated in Section 4, the oil and gas sector is a pillar of rural Alberta's economy – representing 48%, 62%, and 10% of GDP, capital investment, and employment respectively. The outlook for the industry will drive not only Alberta's rural economy, but that of the province overall. The study team has relied on the following sources to develop a plausible medium-term outlook for the oil and gas sector in Alberta:

- The 2017 Canadian Association of Petroleum Producers (CAPP) Crude Oil Forecast;
- The 2017 U.S Energy Information Administration (EIA) Annual Energy Outlook;
- The 2016 International Energy Agency World Energy Outlook (November 2016); and
- Nichols Applied Management Inc. proprietary oil sands forecasting models.

In general, the outlook for global energy prices is heavily reliant on assumptions with respect to future taxes or limitations on greenhouse gas emissions. As such, many forecasting agencies have developed scenario-based projections to reflect the uncertainty with respect to new emission policies. In summary, the benchmark price of crude oil WTI (West Texas Intermediate) denominated in U.S. dollars is expected to reach between \$70 and \$85 per barrel (Real 2015\$) by 2020. This price increase over the next three years represents an increase of between 50% and 80% above the prevailing market price of approximately \$46 per barrel (as of May 2017). Furthermore, the benchmark price of natural gas (Henry Hub) is expected to rise from the current price of approximately \$2.90 per MMBtu to \$4.00 and \$4.50 (Real 2015\$) over the same timeframe.

These price levels are expected to support continued investment in both conventional oil and gas plays across Alberta as well as in the oil sands, albeit at a more modest pace than was experienced in the previous decade. Although investment in new oil sands projects and the continued reinvestment needed to support existing projects is expected to persist, the nature of crude oil recovery in Alberta's oil sands is shifting. The rapid price adjustment in 2014 necessitated that existing producers realize efficiencies in order to remain competitive in a low-price environment. As such, the labour intensity of the

industry has already been reduced and further efficiencies are expected to materialize over the next five years. Overall, labour force reductions totaling between 15% and 20% of 2014 levels are expected to be realized as firms move towards automation (e.g.. self-driving mining trucks) and generally improve their production processes.

Analysis carried out by Nichols Applied Management reveals that, through to 2020, new operational jobs associated with the completion of major projects will marginally offset the continued labour efficiencies being realized across the oil sands sector. Additionally, there will continue to be a need for the mobile construction workforces who build large oil sands projects across the province – particularly towards late 2019 and early 2020 as the construction of a major mining project, the TECK Frontier Mine, is expected to begin in approximately that timeframe and require an estimated 33,000 person-years¹⁴ of construction labour. In summary, through to 2020, the relative contribution of the oil and gas sector to both the rural and overall economy of Alberta is expected to be unchanged from the levels articulated in Section 4 of this report.

5.1.1 Petrochemical Manufacturing

Downstream industries affected by the oil and gas sector include petrochemical manufacturing. Recognizing the importance of this industry, the provincial government is offering the Petrochemicals Diversification Program which consists of a \$500 million investment in royalty credits to encourage diversification (Alberta Government 2017c). This program is expected to support up to 3,000 new jobs during construction, and a further 1,000 jobs during operations.

The impact of this program over the next few years will likely be due to the construction phase only and occur in the manufacturing sector, including petroleum and coal products, chemical, plastic product and machinery, among others. The program is expected to drive economic expansion, resulting in direct, indirect and induced impacts to GDP, employment income and total employment as outlined in Table 5.1.

Table 5.1 Estimated Impacts of the Construction Phase of the Petrochemical Diversification Program

Economic Impact	Direct	Indirect	Induced	Total
GDP	\$958,000,000	\$2,075,000,000	\$323,000,000	\$3,356,000,000
Labour income	\$197,000,000	\$571,000,000	\$107,000,000	\$875,000,000
Employment	3,000	8,000	3,000	14,000

The total impact of the construction phase on GDP represents approximately 3% of the provincial total for the mining, quarrying, and oil and gas industry, the majority of which is expected before 2020. The direct employment impact felt in Alberta is approximately 9% of the total employment in the petroleum and coal products, chemical, plastic product

¹⁴ One person year (PY) of labour is the equivalent of one person working full-time for one year. For example, one PY could be comprised of two people working full-time for six months or one person working full-time for a full year.

and machinery manufacturing sectors. Given the tendency of suppliers to locate close to urban centres to take advantage of access, existing infrastructure including transportation infrastructure and labour force, most of the indirect and induced impacts are anticipated to be felt in and around cities and towns. For example, the Edmonton Energy and Technology Park, one of the City of Edmonton's prominent industrial areas, has dedicated a portion of its land to heavy industrial uses and is positioned to access both the amenities within the City of Edmonton as well as the existing infrastructure in Alberta's Industrial Heartland. Many of the aforementioned impacts are anticipated to occur in Alberta's Industrial Heartland in the capital region.

5.2 Agriculture and Forestry

The agriculture, forestry, fishing and hunting industry contributed approximately \$4.0 billion to provincial GDP and approximately \$1.7 billion to provincial investment in 2015 (Statistics Canada 2017b, Nichols Applied Management). Major employers in the forestry industry include Northland Forest Products, Tolko Industries, Millar Western Forest Products, West Fraser Mills and Foothills Forest Products. Major agri-business employers include Agrium and United Farmers of Alberta.

The growth of the agriculture sector is largely dependent upon weather conditions, and the growth of the forestry sector is largely dependent upon both the future of softwood lumber and mountain pine beetle populations. Nichols has relied on the following sources to develop a plausible outlook for the agriculture and forestry sectors in Alberta:

- Recent news articles and government publications;
- Alberta Treasury Board and Finance's Input-Output (IO) model; and
- Statistics Canada 2011 census and related data series.

5.2.1 Agriculture

The agriculture sector in Alberta continues to be one of the key industries in terms of labour, investment and GDP, especially in southern Alberta. A large land base, favorable climatic conditions, and access to a local, skilled labour force ensure this industry will continue to be an important driver of the economy. In addition, the recent dampening of investment in the oil and gas sectors has renewed the importance of diversification in the agriculture sector.

Overall, growth in the agriculture sector is anticipated to be modest, and reflective of the prevailing seasonality in temperature and precipitation patterns. However, potential exists for diversification in regard to alternative crop production, such as pulses, and expansion of existing food processing capabilities in the province. The provincial government is focused on diversification and trade access in the agriculture sector, as highlighted in the following examples:

- the Agrivalue Processing Business Incubator and Food Processing Development Centre in Leduc offering a platform for product development and marketing on a national and global scale (Alberta Government 2017a and 2017b; Alberta Government 2017e); and
- the Growing Forward 2 framework providing research and market development in order to establish the agriculture and agri-food sectors as both productive and profitable sectors in the province (Alberta Government 2017d).

A recent area of growth linked to the agricultural sector is in the local brewery and distillery business. The Alberta Small Brewers Development Program allocates grants to Alberta-made beer in the more than 40 small breweries currently operating in the province (Alberta Government 2017c).

Future growth over the next few years in the agriculture industry will be tied to cultivating access to new markets, especially on a global scale.

5.2.2 Forestry

Softwood lumber is primarily used in construction and is a fundamental component of the forest industry in Canada (NRC 2017). As the majority of softwood lumber produced in Canada is exported to the United States, the announced 20% increase in duties by the Department of Commerce will significantly impact the viability of this industry across the country (NRC 2017).

The impact of the tariff on the forestry sector will be to increase the cost of exporting lumber to the United States rendering the industry less competitive overall. Nichols used the IO model to determine the impact to GDP, employment income and total employment on the forestry industry as a result of the tariff.

In Alberta, impacts of the tariff will likely occur in the forestry and logging, wood products manufacturing and paper manufacturing industries. These impacts will result in direct, indirect and induced impacts to GDP, employment income and total employment as outlined in Table 5.2.

Table 5.2 Estimated Impacts of the Softwood Lumber Tariff

Economic Impact	Direct	Indirect	Induced	Total
GDP	\$37,200,000	\$31,400,000	\$13,300,000	\$81,900,000
Labour income	\$45,200,000	\$34,400,000	\$10,800,000	\$90,300,000
Employment	700	600	300	1,600

The total impact on GDP represents approximately 2% of the provincial total for the agriculture, forestry, fishing and hunting industry. The direct employment impact which will occur in Alberta is approximately 6% of the total employment in the forestry and wood and paper manufacturing industries. Given the tendency of suppliers to locate near

urban centres, most of the indirect and induced impacts will occur in cities and towns. The majority of the impacts will occur in the northwest and mountain regions.

Although the population of mountain pine beetles in Alberta continues to rise and expand eastward, signifying an ongoing potential threat to the forestry industry (Alberta Government 2016), this impact is considered to be long-term in nature and therefore is not discussed in detail in this report.

5.3 Summary

The future of the economy of rural Alberta is largely dependent upon the oil and gas, agriculture and forestry sectors. Through to 2020:

- The relative contribution of the oil and gas sector to both the rural and overall economy of Alberta is expected to remain unchanged from current levels.
- Growth in downstream industries impacted by the oil and gas sector, such as the petrochemical manufacturing sector, is anticipated due to the stimulus from the Diversification Program, and will be felt largely in the northeast, northwest and south regions of the province. Due to the tendency of suppliers to locate in urban centres, most of the impacts are expected to occur in cities and towns.
- Growth in the agriculture and forestry sectors will depend on cultivating access to new markets and on the softwood lumber tariff.

In brief, rural Alberta has and will continue to support the raw production and extraction of resources whose contribution, in conjunction with the complementary sectors in urban centres will serve to drive the provincial economy forward for the foreseeable future.



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A. Appendix A: Rural Alberta Community List

This list is based on the Statistics Canada 2011 Census subdivision categories and uses the geographical names and levels as stated by Statistics Canada.

Table A.1 Rural Alberta Community List

Report Region	Community Name	Geography Level
Northwest Region	Lac Ste. Anne County	Municipal District
Northwest Region	Nakamun Park	Summer Village
Northwest Region	Val Quentin	Summer Village
Northwest Region	West Cove	Summer Village
Northwest Region	Yellowstone	Summer Village
Northwest Region	Ross Haven	Summer Village
Northwest Region	Silver Sands	Summer Village
Northwest Region	Sunset Point	Summer Village
Northwest Region	Alberta Beach	Village
Northwest Region	Sandy Beach	Summer Village
Northwest Region	Sunrise Beach	Summer Village
Northwest Region	Barrhead County No. 11	Municipal District
Northwest Region	Westlock County	Municipal District
Northwest Region	Woodlands County	Municipal District
Northwest Region	Clyde	Village
Northwest Region	Larkspur	Summer Village
Northwest Region	Thorhild County	Municipal District
Northwest Region	Athabasca County	Municipal District
Northwest Region	Boyle	Village
Northwest Region	Sunset Beach	Summer Village
Northwest Region	Island Lake	Summer Village
Northwest Region	Bondiss	Summer Village
Northwest Region	West Baptiste	Summer Village
Northwest Region	Whispering Hills	Summer Village
Northwest Region	Northern Sunrise County	Municipal District
Northwest Region	Big Lakes County	Municipal District
Northwest Region	Opportunity No. 17	Municipal District
Northwest Region	Lesser Slave River No.124	Municipal District
Northwest Region	Nampa	Village
Northwest Region	Clear Hills	Municipal District
Northwest Region	Hines Creek	Village
Northwest Region	Northern Lights County	Municipal District
Northwest Region	Mackenzie County	Specialized Municipality

Northwest Region	Greenview No. 16	Municipal District
Northwest Region	Grande Prairie County No. 1	Municipal District
Northwest Region	Hythe	Village
Northwest Region	Smoky River No. 130	Municipal District
Northwest Region	Donnelly	Village
Northwest Region	Girouxville	Village
Northwest Region	Birch Hills County	Municipal District
Northwest Region	Spirit River No. 133	Municipal District
Northwest Region	Rycroft	Village
Northwest Region	Saddle Hills County	Municipal District
Northwest Region	Fairview No. 136	Municipal District
Northwest Region	Peace No. 135	Municipal District
Northwest Region	Berwyn	Village
Mountain Region	Clearwater County	Municipal District
Mountain Region	Caroline	Village
Mountain Region	Yellowhead County	Municipal District
Mountain Region	Crowsnest Pass	Specialized Municipality
Mountain Region	Bighorn No. 8	Municipal District
Mountain Region	Ghost Lake	Summer Village
Mountain Region	Improvement District No. 9 Banff	Improvement District
Mountain Region	Jasper	Specialized Municipality
Mountain Region	Ranchland No. 66	Municipal District
Calgary Region	Foothills No. 31	Municipal District
Calgary Region	Longview	Village
Calgary Region	Rocky View County	Municipal District
Calgary Region	Beiseker	Village
Calgary Region	Mountain View County	Municipal District
Calgary Region	Cremona	Village
East Region	Acadia No. 34	Municipal District
East Region	Special Area No. 2	Special Area
East Region	Empress	Village
East Region	Special Area No. 3	Special Area
East Region	Cereal	Village
East Region	Youngstown	Village
East Region	Special Area No. 4	Special Area
East Region	Veteran	Village
East Region	Consort	Village
East Region	Vulcan County	Municipal District
East Region	Carmangay	Village
East Region	Champion	Village
East Region	Lomond	Village

East Region	Milo	Village
East Region	Arrowwood	Village
East Region	Wheatland County	Municipal District
East Region	Hussar	Village
East Region	Standard	Village
East Region	Rockyford	Village
East Region	Starland County	Municipal District
East Region	Delia	Village
East Region	Munson	Village
East Region	Morrin	Village
East Region	Kneehill County	Municipal District
East Region	Carbon	Village
East Region	Acme	Village
East Region	Linden	Village
East Region	Provost No. 52	Municipal District
East Region	Czar	Village
East Region	Hughenden	Village
East Region	Amisk	Village
East Region	Paintearth County No. 18	Municipal District
East Region	Halkirk	Village
East Region	Stettler County No. 6	Municipal District
East Region	Big Valley	Village
East Region	Botha	Village
East Region	White Sands	Summer Village
East Region	Rochon Sands	Summer Village
East Region	Donalda	Village
East Region	Flagstaff County	Municipal District
East Region	Alliance	Village
East Region	Galahad	Village
East Region	Forestburg	Village
East Region	Heisler	Village
East Region	Strome	Village
East Region	Lougheed	Village
East Region	Wainwright No. 61	Municipal District
East Region	Chauvin	Village
East Region	Edgerton	Village
East Region	Irma	Village
East Region	Camrose County	Municipal District
East Region	Rosalind	Village
East Region	Ferintosh	Village
East Region	Edberg	Village

East Region	New Norway	Village
East Region	Bawlf	Village
East Region	Bittern Lake	Village
East Region	Hay Lakes	Village
East Region	Beaver County	Municipal District
East Region	Ryley	Village
East Region	Holden	Village
East Region	Minburn County No. 27	Municipal District
East Region	Innisfree	Village
East Region	Mannville	Village
East Region	Vermilion River County	Municipal District
East Region	Paradise Valley	Village
East Region	Kitscoty	Village
East Region	Marwayne	Village
East Region	Dewberry	Village
East Region	Two Hills County No. 21	Municipal District
East Region	Myrnam	Village
East Region	Willingdon	Village
East Region	Lamont County	Municipal District
East Region	Andrew	Village
East Region	Chipman	Village
Capital Region	Wetaskiwin County No. 10	Municipal District
Capital Region	Grandview	Summer Village
Capital Region	Poplar Bay	Summer Village
Capital Region	Norris Beach	Summer Village
Capital Region	Ma-Me-O Beach	Summer Village
Capital Region	Leduc County	Municipal District
Capital Region	Sundance Beach	Summer Village
Capital Region	Thorsby	Village
Capital Region	Golden Days	Summer Village
Capital Region	Warburg	Village
Capital Region	Breton	Village
Capital Region	Brazeau County	Municipal District
Capital Region	Parkland County	Municipal District
Capital Region	Seba Beach	Summer Village
Capital Region	Wabamun	Village
Capital Region	Spring Lake	Village
Capital Region	Strathcona County	Specialized Municipality
Capital Region	Sturgeon County	Municipal District
South Region	Cypress County	Municipal District
South Region	Forty Mile County No. 8	Municipal District

South Region	Foremost	Village
South Region	Warner County No. 5	Municipal District
South Region	Coutts	Village
South Region	Warner	Village
South Region	Stirling	Village
South Region	Lethbridge County	Municipal District
South Region	Nobleford	Village
South Region	Barons	Village
South Region	Taber	Municipal District
South Region	Barnwell	Village
South Region	Newell County	Municipal District
South Region		Village
South Region	Duchess	Village
South Region	Rosemary	Village
South Region	Cardston County	Municipal District
South Region	Improvement District No. 4 Waterton	Improvement District
South Region	Glenwood	Village
South Region	Hill Spring	Village
South Region	Pincher Creek No. 9	Municipal District
South Region	Cowley	Village
South Region	Willow Creek No. 26	Municipal District
Central Region	Red Deer County	Municipal District
Central Region	Elnora	Village
Central Region	Delburne	Village
Central Region	Jarvis Bay	Summer Village
Central Region	Norglenwold	Summer Village
Central Region	Lacombe County	Municipal District
Central Region	Birchcliff	Summer Village
Central Region	Half Moon Bay	Summer Village
Central Region	Sunbreaker Cove	Summer Village
Central Region	Gull Lake	Summer Village
Central Region	Clive	Village
Central Region	Alix	Village
Central Region	Ponoka County	Municipal District
Central Region	Parkland Beach	Summer Village
Northeast Region	Bonnyville No. 87	Municipal District
Northeast Region	Bonnyville Beach	Summer Village
Northeast Region	Glendon	Village
Northeast Region	Pelican Narrows	Summer Village
Northeast Region	St. Paul County No. 19	Municipal District
Northeast Region	Smoky Lake County	Municipal District

Northeast Region	Vilna	Village
Northeast Region	Waskatenau	Village
Northeast Region	Lac la Biche County	Municipal District
Northeast Region	Wood Buffalo	Specialized Municipality





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