Alberta Career and Industry Outlook
Economic and other trends affecting the world of work to 2015

Global trends affecting Alberta’s economy
Outlook for major industries
Occupational projections

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*Alberta Career and Industry Outlook* can help employers, workers in transition or recent graduates make work-related decisions and better prepare for the future. Inside, clients will find:

- global trends affecting Alberta’s economy and society
- provincial labour and industry forecasts affecting occupations
- projections for 130 occupational groups

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Information in this publication was accurate, to the best of our knowledge, at the time of printing. However, legislation, labour market information, websites and programs are subject to change, and we encourage you to confirm with additional sources of information when making career, education, employment and business decisions.

The Province of Alberta is working in partnership with the Government of Canada to provide employment support programs and services.
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Succeeding in the World of Tomorrow

Whether you’re an employer looking for Alberta workforce or industry trends, a worker in transition, a graduate at the beginning of your career or a professional career counsellor, you’ll find value in *Alberta Career and Industry Outlook*.

This publication analyzes the changing economic, social, demographic, technological, workplace and other trends affecting industries and labour markets in Alberta. It also provides an outlook for 18 of Alberta’s major industries and 130 occupational groups. Understanding trends and industry and occupation forecasts can help you better prepare for the future. Is a certain industry’s future bright or not? Will growth in a specific occupation be above or below average? *Alberta Career and Industry Outlook* will help you answer these questions and many others.

Of course, trying to predict the future is a challenge. Nothing is certain. When planning your future, it helps to consult a variety of relevant information sources. This publication is one of them.

About the data in this publication

The economic data and statistics presented in this publication were the most up-to-date available at the time of writing. However, as with any publication, there is a gap between the time the publication is written and the time it is published and read. Please be aware that this time gap will unavoidably date some of the information.

With the exception of forecasts and projections, all economic data describe not what *is* happening, but what *did* happen. And, rarely will any one economic change affect everyone, everywhere, at any given time, in the same way. The economy is multi-faceted and dynamic, which makes it impossible to take one snapshot of an entire economy at any given time.
Trends Affecting Alberta's Economy and Society

No economy can operate in isolation. Alberta’s economy is influenced by events in other parts of Canada, in the United States and around the world. This section briefly discusses some of the international, national and provincial developments that may influence Alberta’s prospects in the years ahead.
The global recession is over—in the United States, for example, it lasted from December 2007 to June 2009—but its residual effects still jeopardize the performance and prospects of countries around the world.

Many governments supported their economies with massive injections of stimulus funding during the recession. A period of restraint and austerity has followed as many nations try to cope with large debts and deficits.

Population demographics are increasingly shaping the outlook, as well. In Canada, more than one in five people will be 65 years of age or over by 2030. And Canada is not alone in experiencing an aging population. Nearly a third of Japan’s population will be 65 or over by 2030, and most countries in Western Europe are also “greying.” In many countries, aging populations will tighten the labour supply, will increase pressures on government resources and may lead to reduced program spending.

The effects, however, are likely to unfold unevenly. Advanced economies were more deeply and enduringly affected by the recession. They are expected to grow at about a third of the rate of emerging and developing economies through 2012. Unemployment is still a concern in the United States, for example, but in several developing nations unemployment rates have long since returned to normal. At the beginning of 2011, the United Nations estimated that 30 million jobs had been lost worldwide because of the recession. It said 22 million jobs had to be created to return global employment to pre-crisis levels—a task that would take at least five years.

Strong growth in Asia

Asia is expected to continue to lead the world in economic growth. The more advanced countries of the Asian region, for example, are expected to post strong growth through 2013 of between eight per cent and nearly 10 per cent.

China and India are expected to lead growth in the region. But prospects are promising elsewhere, as well. South Korea and Singapore, for example, will benefit from strong export performance. And rising domestic demand along with increased consumer income and confidence will help drive growth in other countries in the region. The aftermath of the March 2011 earthquake and tsunami continue to impede Japan’s fortunes, but vigorous reconstruction activity there adds some optimism to the forecast.

Slow growth in Europe

European economies are expected to grow at less than two per cent per year through 2013. This lukewarm economic performance is projected to continue for some time as the population ages and retires and the overall pace of population growth slows. The outlook is also being clouded by serious banking, political and debt problems that continue to jeopardize the prospects of several countries—Greece, Italy and Ireland among them—and to threaten the stability of the entire eurozone.
A slow recovery in the United States

The United States—the epicentre of the Great Recession—has had a slow recovery. A combination of adverse developments, including economic and budgetary challenges, slowed growth through the first half of 2011 and foreshadows fairly weak performance for the year as a whole.

The Conference Board of Canada forecasts relatively slow growth in the United States of 1.5 per cent in 2011. But it expects a fairly solid rebound to 2.5 per cent growth in 2012 and 3.1 per cent growth in 2013. Many businesses have balanced their books and have the capacity to increase their levels of investment, banks are signing more loan agreements with households and small enterprises, and consumers have reduced their debt loads. Exports, too, should contribute to growth as they benefit from a combination of a depressed U.S. dollar and strong overseas demand for American goods and services.

Still, serious risks and challenges remain. Many Americans are still unemployed because job creation has not kept pace with the overall resurgence in the economy. High oil prices—a boon for resource-rich regions—are a drag on the cost of living and economic growth in most other places. And the federal budget deficits posted in 2009 and 2010 were the largest since 1945, as a share of gross domestic product. Also, the country’s debt restructuring plan of 2011 was not sufficient to avoid a serious downgrade in its credit rating.

Improvement will likely be gradual. The U.S. Congressional Budget Office, for example, expects that the unemployment rate will not hit a level considered normal—approximately five per cent—until 2016.
The Canadian economy

Canada is rebounding from the recession, which Statistics Canada says lasted from the fall of 2008 to the summer of 2009. According to the Conference Board of Canada, the economy will continue to shake off the effects of the downturn in the years ahead. It is expected to post moderate growth of between two per cent and three per cent per year through most of the rest of the decade.

Canada’s economic performance is closely tied to the United States. As performance improves in the United States, it will help spur an expansion in Canadian exports, private investment and consumer spending. In general, the private sector is expected to play a more dominant and important role in influencing economic events and outcomes as governments pull back after two years of massive stimulus financing from 2009 to 2010.

The prices for many commodities, such as crude oil and grains, are expected to remain high. They may increase further as the global recovery takes hold and demand rises. These high prices will have mixed effects: they will reduce growth potential in some markets that Canada does business with but will add revenue and opportunity in resource-rich regions like Alberta. Across Canada the mining sector, which has capacity to spare, is well positioned to tap into new export opportunities as they arise.

As in many other countries, there are risks in Canada, as well as opportunities. For example, it may be more difficult to replenish government coffers as the aging population increases demands on health care. Many consumers, too, have overextended themselves and will need to curb spending to rebuild their finances. And Canada is not immune from a host of largely unpredictable international developments, such as civil unrest and economic upheavals, that tend to undermine investor confidence and shake world markets.

Unstable growth in employment

Recessions are sometimes followed by “jobless” recoveries: although the economy grows, there is insufficient demand for goods and services for businesses to justify hiring more people. This fragility and sense of uncertainty seem to have crept into the employment market in the United States. Although Canada has fared better, job creation here has been scattered—both strong and weak—since the end of the recession.

Canada’s baby boomers have begun to retire, and that trend will increase over the next decade and more. Because fewer younger workers are available to replace the baby boomers, these retirements will lead to a decline in labour supply. That decline may aggravate the challenge of labour shortages in sectors like construction and natural resource development. But the lingering effects of the recession may offset shortages in the near term through the reduced demand for labour on the part of employers. In the longer term, increased immigration, increased employment of groups traditionally under-represented in the workforce (Aboriginal Peoples and persons with disabilities, for example) and other factors may temper shortages. Still, the Conference Board of Canada expects Canada’s labour force to grow by only 0.6 per cent between 2025 and 2030, about a third of the rate posted from 2000 to 2005.
An unsteady rebound in consumer demand

Consumer spending, which is an important part of the economy, increased in Canada in 2010. Retail sales in Canada were $438 billion in 2010 compared to $415 billion the year before. But a focus on debt reduction and increasing prices for food, fuel and other products likely hampered consumer spending in 2011. Spending is expected to pick up in 2012 as personal finances solidify and consumer confidence rebounds.

Near-term growth in housing

After a strong showing in 2010, housing starts in Canada are expected to dip in 2011 as consumer debt loads rise, mortgage lending rules become more strict and housing becomes more unaffordable. Starts are expected to regain speed in 2012 and 2013 as new families form new households. The Canadian Mortgage and Housing Corporation pegs Canadian housing starts at 179,500 in 2011 and 185,300 in 2012. These projections are subject to ongoing economic uncertainty, which could produce a slower-than-expected recovery.

Existing homes require maintenance and repair, and renovation expenditures should generate more positive effects for construction investment. But the trend is expected to be a downward one after 2011 as an older and more established population remains rooted in place.

Shifting patterns in international trade

Canada is a trading nation and has long relied on the United States for business. The United States, which is one of the world’s largest markets, will remain Canada’s most important trading partner in the decades ahead. But its somewhat shaky recovery, combined with the effects of a strong Canadian dollar, suggests that Canada will have more to sell than the United States will be able to buy for a few more years to come.

Other trade opportunities should emerge as the developed world loses ground to more rapid growth elsewhere. Trade and other economic relationships with Brazil, Russia, India and China, for example, could strengthen as those countries continue to modernize and build their economies.

The Conference Board of Canada predicts that Canada’s resource sector will contribute to a recovery in exports over the next few years.
Strong demand for commodities

As post-recession economies take shape, demand for energy products and many other commodities is on the rebound. This growth will help spur investment and production in Canada’s resource industries.

Oil

Oil will continue to be the world’s main source of energy for some time to come. Consumption is expected to rise from 84 million barrels a day in 2009 to about 96 million barrels a day in 2030. Emerging economies, particularly China, India and Brazil, will drive much of the increase. Overall, though, oil will account for a smaller share of the global primary energy mix—about 28 per cent in 2030 compared to 33 per cent in 2008.

Canada is home to the third-largest oil reserve on earth. The Canadian Association of Petroleum Producers forecasts that Canadian crude oil production will increase from 2.8 million barrels a day in 2010 to 3.5 million barrels a day in 2015. Nearly two-thirds of that future production will be by Alberta’s oil sands industry. Oil sands companies spent $13 billion on the further development of the resource in 2010 and are expected to spend another $16 billion in 2011.

As conventional reserves are depleted, production of oil from that source has generally made way for more oil sands development. But more advanced recovery technologies, regulatory changes and higher oil prices have sparked something of a resurgence on the conventional side that is expected to last for several years. Still, oil sands production should reach 3.7 million barrels a day by 2025.

Western Canadian oil producers exported nearly 70 per cent of their production in 2010. Almost all of it went to the United States. Canada is the largest exporter of oil to the United States—it supplies a fifth of all U.S. oil imports. Total volumes of exports to the United States are expected to increase in the years ahead, although some new developments, such as increased production of biofuels for domestic consumption in the United States, may limit new opportunities. The Canadian Association of Petroleum Producers predicts that Western Canadian crude shipments to the United States could increase from 1.8 million barrels a day in 2010 to 2.7 million barrels a day by 2015.

Oil prices are expected to rise gradually as worldwide demand increases, particularly in emerging economies. As well, because the discovery of new petroleum fields is becoming increasingly unlikely, the market will continue to be vulnerable to supply shocks. For example, weather events, investor speculation or civil unrest could spur additional price volatility.
Natural gas

Global demand for Canada’s natural gas is strengthening, especially in China, India and the Middle East, but the industry is encountering many challenges. As the productivity of established gas wells declines, costs go up, and the industry competes with oil producers for a pool of labour that may shrink. In addition, the development of very large, new sources of unconventional supply (shale gas) promises to keep the price of natural gas low for many years to come. U.S. imports of natural gas are forecast to decline from 11 per cent of total supply in 2009 to just one per cent by 2035. This reduction is forecast largely because of significant increases expected in the production of shale gas in the United States.

Coal

The use of coal as a fuel source for electricity generation has been on the rise globally. It accounted for about 41 per cent of total global generation in 2008 compared to 38 per cent in 1973. About a third of the more recent total was burned in China; roughly a quarter was burned in the United States.

In the United States, an increased focus on renewable energy sources and the continued affordability of natural gas as a substitute fuel should keep demand for coal in check. Still, coal is likely to remain the most popular fuel for electricity generation through at least 2035 because existing coal-burning power plants and those already under construction will continue to consume large quantities.

Canada produces between 65 million and 75 million tonnes of coal a year, of which about 40 per cent is exported.

Renewable energy

Traditional sources of energy, such as oil and gas, will continue to dominate global consumption choices in the years ahead. However, high prices and concerns with the environmental consequences of extracting and burning fossil fuels are expected to make renewable energy the fastest growing of the available options.

In Canada, renewable energy sources currently provide about 16 per cent of Canada’s total primary energy supply.
Agricultural products

A combination of severe weather events and natural disasters destroyed or compromised farmland across many regions of the globe in 2010 and 2011. These events contributed to a drop in the global production of grain and other staples. The combination of that drop in production with strong demand for food (China, for example, can no longer rely solely on its domestic grain production) led to price increases for grain and other staples.

Farm income in Canada could drop in 2011 if an increase in operating expenses outpaces an anticipated rise in total farm cash receipts. Grain and oilseed prices remain relatively high because of a combination of high oil prices, the substitution of food crops for biofuel crops and increased global demand for food. Increasing worldwide demand for feed grains, the rising price of oil, a strong Canadian dollar and increased domestic demand for food are among the forces expected to affect farm income over the next 10 years.

The domestic demand for food will be influenced by the aging population and its diverse tastes and by food purchases based increasingly on ease of preparation. There is also no indication that the Canadian population will eat less, despite many more jobs and lifestyles becoming less physically active. Among the factors affecting supply are improved farming technologies and enhanced delivery systems. Consumer spending on food should grow modestly through 2013 as consumers increasingly select higher-valued items and as post-recession incomes continue to rise.

High prices for farm products mean higher input costs for food producers. These costs might normally be passed on to the consumer, but intense competition among food retailers suggests that prices will not rise dramatically.

Although it acknowledges the possibility of continued volatility, the International Monetary Fund expects global food production to recover beyond 2011.
Forestry products
The Canadian Forest Products Sector Council documented a severe decline in industry employment since 2001, but it envisions a brighter future that could, in the best case, include hiring 120,000 new workers by 2020. If the economic opportunity to support this employment emerges, it will be accompanied by workforce challenges. These challenges include increased demand by employers for technical skills (at the same time that enrolment in forestry-related programs is declining) and intense competition with other industries for a limited pool of skills and talent.

Canada’s wood products industry did very well in 2010 thanks to a strong showing for housing starts in Canada and fairly robust shipments overseas. But the pace of growth has now become more moderate. As housing activity slowed, the Canadian market simmered in the early part of 2011. In the United States the recession produced a glut of empty homes, many of which still stand vacant. But as the recovery takes hold, incomes should rise and demand for housing can be expected to rebound over the medium term.

With sales and production up, the Canadian paper products industry also posted a good year in 2010, and 2011 may be even better. Beyond that, the industry’s future will likely be marked by significant change and challenge. North American demand for paper products is set to drop as paperless, digital communications become the preferred choice for more and more people. However, new opportunities could arise in emerging economies like China, where demand for traditional products is expected to grow massively.

Metals and minerals
Global metal prices rose substantially through 2010 and early 2011 as consumption of all base metals, but tin, hit new peaks in 2010 and as sources of supply grew more scarce. Much of the demand originated in China. But only moderate growth is expected in the years ahead as priorities in that market shift to other, less metal-intensive economic activities.
The Alberta economy

Alberta’s economy was expected to shift from recovery in 2010 to a strong expansion led by the oil industry in 2011. Between 2012 and 2014, growth is expected to average 3.2 per cent annually.

Strong oil prices and resurgent global demand have spurred investment in Alberta’s oil industry. This activity, although depending heavily on the pace of recovery in the United States, is expected to remain robust in the years ahead. It will drive Alberta’s overall growth and help support related industries like construction and manufacturing. Outside the oil industry business investment has been weak, but it should recover as the rest of the economy grows.

In tandem with growth and the emerging opportunities it brings, employment numbers should improve significantly beginning in 2011. Strong job creation should drive unemployment down: in 2014 the unemployment rate is expected to be 4.9 per cent, compared to 6.5 per cent in 2010. The labour market might even tighten again to the point where certain skills are hard to find. The increased employment and higher wages will help spur consumer spending and retail trade—another boon to overall growth.

Both the Calgary and Edmonton economies are recovering well. Overall economic growth in Calgary should be 3.4 per cent in 2011 and 4.1 per cent in 2012. Edmonton’s economy is forecast to grow by 3.1 per cent in 2011 and by 3.8 per cent in 2012.
Selected indicators of economic performance

The effects of the recession in Alberta could be seen in an annual drop in retail sales of more than $5 billion between 2008 and 2009. The picture improved in 2010, although retail sales still had not returned to pre-recession levels. Over the first nine months of 2011 retail sales in Alberta grew by more than six per cent compared to the same period in 2010. The largest gains were posted in gasoline service station, general merchandise and motor and recreational vehicle sales.

Urban housing starts dropped by close to 8,000 units in 2009 compared to 2008. Much of the loss was recovered in 2010, but because of continued volatility, starts were off by about 1,500 units over the first 11 months of 2011. Alberta’s housing market is forecast to remain healthy but not to return to the exceptionally high levels of the boom years.

The recession shaved about $40 billion off the value of Alberta’s exports between 2008, a year of record international trade for the province, and 2009, a year of general economic downturn. The trend in 2010 was upward, and it gathered steam through the fall of 2011. The value of Alberta’s exports was up by 16 per cent from January to October 2011 compared to the same period the previous year.

Exports of raw metals (such as nickel) more than tripled between 2000 and 2010 to $1.4 billion. After rising from $437 million in 2000 to $2.3 billion in 2007, exports of raw metals declined by more than one-half between 2007 and 2009 to $1.1 billion. The export decline came to an end in 2010: exports increased by 26 per cent to $1.4 billion that year.

Exports of fabricated metals (primarily iron and steel products, such as taps, cocks and valves for oil and gas fields) nearly doubled between 2000 and 2010. After rising from $323 million in 2000 to $795 million in 2007, these exports declined by 27 per cent between 2007 and 2010 to $577 million.
The changing shape of society

In the decades ahead, Alberta’s population will age: almost 18 per cent of the population is expected to be 65 years of age or older in 2030 compared to 10.6 per cent in 2010. This shift will gradually temper demand for consumer goods and housing and act as a brake on economic growth.

Alberta’s population on July 1, 2011, was 3.78 million, up from 3.72 million the year before. Future population growth will be driven mainly by international and interprovincial migration, which is expected to strengthen as Alberta’s labour market heats up. Overall migration is not likely to return to the exceptional levels prevailing during the boom, but the Conference Board of Canada expects Alberta’s population growth rate to lead the country through 2030. By 2050, Alberta’s total population is expected to be about six million people.

Technological trends

People the world over have become more and more reliant on a variety of ever-changing technologies. Many employers look to hire people who know how to use or develop the latest programs, devices and systems. For their part, governments around the world are taking a more active role in attracting and supporting knowledge-based and technology-driven industries. International competition for top talent in support of economic growth and diversification is expected to remain strong in the years ahead.

Information and communications technology (ICT)

Web-based computing methods, such as cloud computing (the increasingly popular use of on-demand, shared Internet resources), data analytics and social networking sites (such as Facebook), are changing the way people approach business, education, communication and social life in general. The development of virtual societies that ignore geopolitical boundaries is creating new economic opportunities and pushing the need for further innovation.

Markets for many recent technologies have generally been growing. Cellphones, for example, were once a luxury item. They now reach larger and more varied markets because of technological advances. From a business perspective, competition has become more intense in these broad markets, known as horizontal markets.
Opportunities to conduct profitable business may shift to smaller, more specialized markets, known as vertical markets. For example, Alberta has had some experience with the core technologies behind energy, resource, land management and, in particular, health-care industries. Opportunities within these areas include geomatics innovation, especially in the resource and environment sectors. They also include technologies and processes that use energy and other resources more efficiently and so produce a smaller environmental impact. Forming part of what is known as a green ICT cluster, initiatives in this area will be focused on alternative energy, such as wind and solar power, and environmental technologies.

Nanotechnology

More and more businesses are attempting to apply nanotechnologies for competitive advantage. They are generally encouraged in these efforts by public support of nanotechnology research capabilities and expanded education and training programs across Alberta. An example of a recent success is the establishment of a nanocrystalline cellulose pilot plant in Edmonton. Nanocrystalline cellulose is a renewable material that adds considerable strength to a variety of other materials—everything from plastics to packaging materials and health-care products.

Clean technologies

Increasing environmental consciousness reinforces the priority of encouraging clean technology and alternative energy. Clean technology includes a broad range of products and services that reduce the use of non-renewable resources and create significantly less waste. For example, clean technologies make efficient use of alternative energy sources, such as biomass, solar, wind and geothermal energies, or improve the management and remediation of Alberta’s water, land and air resources.

Life sciences

The life sciences sector is one of Alberta’s science and technology staples. It employs more than 4,500 workers and generates revenues of nearly $1 billion every year. Pharmaceutical development and the development and practical application of medical devices are among the activities that have shown both established strength and continuing promise. The University of Alberta, for example, has partnered with a private pharmaceutical company to develop new drugs for neurophysiology and respiratory physiology failure. And the Alberta Transplant Institute Applied Genomics Centre is developing diagnosis and monitoring tools for all types of organ transplants.
Environmental trends

Many societies around the world face the challenge of balancing economic opportunity with environmental responsibility, and Alberta is no exception. The development of the province’s oil sands industry, as a prime example, has and will continue to drive a large share of Alberta’s economy. But such a vast amount of industrial activity—valued in the tens of billions of dollars—generates undesirable environmental outcomes, as well.

Industry is increasingly being challenged to conduct its operations in a way that is considered to be sustainable on more than just a business basis. And governments, reflecting increasing public concern about the effects of industrial activity on the land, water and air, are more frequently being called upon to assure responsible environmental operations. This assurance involves improved or stricter regulation and environmental monitoring and support for the development of energy-efficient and environmentally responsible technologies.

As an example, the Alberta government’s climate change plan focuses on the capture and storage of carbon dioxide, conservation and energy efficiency, and the greening of energy production. Through rebate programs, energy-efficiency initiatives, support for renewable and alternative energy sources, investments in clean energy innovation and technology, and mandatory reduction targets, Alberta is expected to deliver a 200-megaton reduction in greenhouse gas emissions by 2050 compared to levels emitted in 2005.
Challenges for the Alberta economy

The downside of a strong dollar

Despite some volatility, the Canadian dollar continues to reach generational highs. While a strong domestic currency reduces the cost of some imports, it is generally not good news for industries that look beyond the domestic market for business. These industries include agriculture, natural resources development and tourism, which are important segments of Alberta’s economy. Profit margins for companies selling outside the country are squeezed when the dollar is strong.

Persistent labour and skills shortages

The boom that preceded the recession was characterized by a shortage of workers in many areas, particularly the trades. While the challenge is not expected to be quite as intense during the recovery and renewed growth, many companies and industries in Alberta will likely continue to have trouble finding and retaining skilled workers. This shortage happens, in part, because the pool of labour shrinks when there are fewer young people entering the workforce than older people retiring from it. As well, there can be a mismatch between what students study and the skills employers are asking for.
Global economic instability
Trying to predict the future always entails risk. But a variety of factors add a particularly high level of uncertainty to forecasts of global economic performance in the near term. Severe debt troubles in some European countries, for example, threaten growth across the region and could undermine investor confidence around the world. Civil unrest in the Middle East, slow growth in the United States and any combination of other events could spread in their effects and dampen economic prospects closer to home.

An aging workforce
Although there are some indications that many baby boomers will work beyond retirement age, a great deal of knowledge and experience may still be lost as retirement rates rise. The effect of this trend is compounded by a skills shortage and a general lack of preparation and succession planning by employers. An aging population may also increase dependency on caregivers, which would place additional strains on those providing home and health care.

Renewed population and price pressures
The recession moderated the inflationary pressures of an increasing population and rapid economic growth. But, as already indicated by rising prices for food and fuel, recovery could place renewed stress on infrastructure and have other costs. These stresses could affect the overall cost of doing business in Alberta and the province’s attractiveness as a place to live and work.

Balancing economic growth and environmental responsibility
Economic development and environmental preservation are often competing objectives. Federal, provincial and regional government policies are usually designed to achieve an appropriate balance between the two. Industry and employment opportunities could be affected by the direction and emphasis these policies take.

Doing business with the United States
The Canadian economy is closely tied to the U.S. economy, and the Alberta economy is even more so. A great deal of American capital helps finance Canadian growth. As the epicentre of the recession beginning in 2007, the United States has had some difficulty recovering. The pace and stability of its growth will affect the performance and prospects of many Alberta businesses.

Risks to oil sands growth
Alberta’s oil sands are widely acknowledged as a petroleum resource nearly on par with Saudi Arabia. But with that opportunity come challenges: price volatility is one; the industry’s environmental record is another. Convincing consumers and policy makers, particularly in the United States, that oil sands oil can be produced in an environmentally responsible way will be a challenge for the industry.
A changing workforce

The pace of change in the workplace continues to accelerate as employers look for ways to remain competitive in the global market. Following is a summary of some of the trends affecting the workplace.

More generations and diversity in the workplace

More generations with different experiences are crossing paths on the job. Workplaces include people with a wide range of attitudes, ethics, values, priorities and behaviours. As well, the ever-changing composition of Canadian society and its shifting values and priorities mean that people of many different ethnic, cultural and other backgrounds are working together. Both of these trends tend to increase the need for greater communication, conflict resolution and productivity.

Increased emphasis on retention

In an effort to retain the knowledge and experience of older workers, some organizations are eliminating mandatory retirement regulations. Some schools, for example, are keeping veteran teachers and professors on staff to teach and mentor students.

Increased workloads

Nearly two million Canadians report that they are working more than 50 hours a week. And Albertans are among those who are working harder than ever. More than 40 per cent of workers in Alberta work more than 40 hours a week. About a quarter have cancelled or postponed vacations because of the demands of work, roughly one-fifth check their messages while on holiday and 12 per cent trade vacation days for money.

Increased focus on globalization, technology, training and learning

Advances in technology and know-how drive change. Although these advances present plenty of opportunity, they force enterprises to keep up to remain competitive. In response, many employers offer enhanced training programs and expect their employees to keep their knowledge and skills up to date. Some traditional jobs have changed into something new or disappeared completely in Canada because of low-wage competition in other countries or the adoption of new technologies and processes in the workplace.
Increased focus on work-life balance

Changing family structures and responsibilities, economic instability and technologies that blur the line between the job and the home are among the forces that shape work-life balance. Many employees must cope with increasing stresses from all directions in their lives: for example, caring for an elderly parent while fielding work issues on a mobile communications device. For their part, employers face the rising challenge of maintaining or improving productivity over the long term: for example, coping with the potentially reduced performance of overstressed employees.

Increased flexibility in the workplace

In an effort to accommodate all other changes in the workplace and to answer increasing demands for a better work-life balance, some employers offer a variety of arrangements for how their employees do their jobs. These include more flexible work arrangements such as telecommuting, job-sharing, part-time work, eldercare initiatives and combination jobs.
Outlook for Alberta’s Major Industries

After a severe economic downturn, the outlook for Alberta’s economy has generally turned positive. A strong rebound is expected to fuel business investment and employment growth in the years ahead.

Alberta’s economic recovery in 2010 was stronger than initially expected. Despite economic growth estimated at 3.7 per cent, weakness early in the year meant employment was down 0.4 per cent in 2010. The unemployment rate averaged 6.5 per cent in 2010, but had declined to 4.9 per cent by December 2011.

Led by a strong oil sector, Alberta’s economy is expected to shift from recovery to expansion in 2011 with economic growth of 3.8 per cent. Annual economic growth is forecast to average 3.2 per cent between 2012 and 2014. That rate of growth is at a sustainable pace that should keep inflation in check and annual employment growth near two per cent. By 2014, Alberta’s unemployment rate is expected to be down to 4.9 per cent.

Almost all of the 18 industries profiled here show signs of recovery and growth.

A note of caution

Occupational and industry outlooks are affected by a variety of factors and will change over time. Alberta’s economy is closely tied to that of the United States, which receives the bulk of Alberta’s exports. Unforeseen changes or developments in the U.S. market could affect the accuracy of these outlooks. Uncertainties in other international economies—including the effects of wars, terrorism, civil unrest, changes to trade or other economic policies, natural disasters or other crises—could also affect these outlooks.

You are encouraged to seek additional sources of information when making plans for your career, education or business.
Accommodation and food services

Profile

This industry includes businesses that provide customers with short-term lodging, such as hotels, resorts and campgrounds, and businesses that prepare meals, snacks and beverages for immediate consumption.

Occupations include bartenders, chefs, desk clerks, restaurant managers and housekeeping attendants.

Performance and outlook

This industry accounted for about 2.4 per cent of Alberta’s economy and 6.2 per cent of total employment in 2010. It employs more women than men, and nearly two-fifths of the workforce is younger than 25. Hourly wages are typically below the provincial average. As an example of salary ranges, a bartender may earn about $14,000 a year (before tips) and a restaurant manager about $39,000 a year.

The accommodation industry has mostly rebounded from the recession, but the outlook is fragile and mixed. Tourism and sales are both up, and there are good prospects for increased visits by travellers from Asia, where wealth is on the rise. As the economy rebounds, business travel should also grow in tandem. But gains might not be sustainable if employment and incomes in Western economies stagnate or grow only marginally. A strong Canadian dollar and high fuel prices make travel to or within Canada fairly expensive relative to other destinations. High consumer debt loads may also limit the ability or willingness of Canadians to travel domestically.

The food services industry is affected by many of the same forces. Weak employment and income growth in the shorter term, for example, decreases the likelihood of dining out. As well, increasing food prices may hurt the viability of various establishments if the increased costs of doing business cannot be passed on.

The number of international travellers entering Alberta during the first 10 months of 2011 decreased by 5.6 per cent compared to the same period in 2010. The declines were particularly marked for visitors from Mexico, Germany and the United Kingdom.

Over the period 2011 to 2015, employment growth above the provincial average is expected for chefs and cooks, managers in food services and accommodation, and food and beverage service personnel. Below-average growth can be expected for tour and recreational guides and casino operators.

About 15,700 new jobs will be created in the industry from 2011 to 2015.
Agriculture

Profile
Businesses in this industry are engaged mainly in growing crops and raising animals. The industry includes farms, orchards, greenhouses and feedlots.

Occupations include farm workers, dairy producers, animal care attendants and beekeepers.

Performance and outlook
This industry accounted for 2.9 per cent of Alberta’s economy and 2.3 per cent of total employment in 2010. It employs more men than women, and the workforce tends to be older than average—more than 40 per cent of employees are 55 years of age or older. Hourly wages are typically below the provincial average. As an example of salary ranges, a specialized livestock worker may earn about $37,000 a year and an agricultural consultant about $61,000 a year.

Farm cash receipts in Alberta dropped by almost four per cent in 2010 compared to 2009. Gains from livestock market receipts were not sufficient to offset greater losses from crop market receipts and lower program payments. Over the first nine months of 2011 total farm cash receipts for the province increased by 15.4 per cent over the same period in 2010. As well, international exports of primary agriculture commodities (crops and livestock) increased by 18.3 per cent over the first 10 months of 2011 compared to the same period in 2010.

The level of total employment in the industry has dropped by more than 23,000 people over the last 10 years, and the workforce has aged considerably. But Alberta’s agriculture industry is still a major presence nationally—in 2010 it accounted for about a fifth of Canada’s total farm cash receipts. Alberta leads all provinces in market receipts from cattle.

Exports of primary agricultural commodities (crops and livestock) showed steady growth from 2006 to 2008, reaching a record $5.1 billion in 2008. High prices and global demand for grains and oilseeds contributed to the growth. These exports declined to $3.3 billion in 2010. Despite the decline, crop and livestock products were the fifth-largest Alberta exports in 2010 as a share of total exports of goods, and signs of a resurgence were evident in an 18.3 per cent gain in primary agriculture exports from January to October 2011 compared to the same period in 2010. Total agri-food exports (crops and livestock combined with processed food and beverages) ranked third in 2010 exports after crude petroleum and gas and gas liquids.

Over the period 2011 to 2015, employment growth below the provincial average is expected for agricultural and horticultural workers, and contractors, operators and supervisors in agriculture, horticulture and aquaculture.

About 1,900 new jobs will be created in the industry from 2011 to 2015.
**Business, building and other support services**

**Profile**

This industry comprises two groups: management and administration. Management companies either manage other companies or own all or part of other companies. Administration companies provide office, business and facilities administration and other support, such as:

- record-keeping, document preparation, collection and employment services
- custodial, pest control, landscaping and cleaning services
- packaging and labelling services
- waste collection, treatment, disposal and remediation services
- investigation and security services
- travel, convention and trade show services
- call centres

Occupations include human resource professionals, locksmiths, pest control professionals, travel consultants and refuse collectors.

**Performance and outlook**

This industry accounted for 4.6 per cent of Alberta’s economy and 3.6 per cent of total employment in 2010. It employs roughly equal numbers of men and women, and more than two-thirds of the workforce is between the ages of 25 and 54. Hourly wages are typically below the provincial average. As an example of salary ranges, a customer service clerk may earn about $29,000 a year and a conference and event planner nearly $54,000 a year.

The fortunes of the industry generally parallel the ups and downs of economic performance. As the economy rebounds and incomes rise, for example, consumers should increase their spending on services like carpet cleaning and landscaping. Some parts of the industry, such as call centres, are particularly sensitive to wage rates and the overall competitiveness of the job market. Given the nature of their businesses, they may relocate fairly quickly if conditions are considered more favourable elsewhere.

Over the period 2011 to 2015, employment growth at or above the provincial average is expected for administrative service managers and administrative support clerks. About 10,700 new jobs will be created in the industry from 2011 to 2015.
Construction

Profile
Businesses in this industry are primarily engaged in constructing buildings or engineering projects. Among other activities, they construct, repair or renovate residential, business, commercial and industrial buildings and design and build highways, bridges and pipelines.

Occupations in the industry include bricklayers, carpenters, electricians, roofers and pipefitters.

Performance and outlook
This industry accounted for 7.9 per cent of Alberta’s economy and 10.2 per cent of total employment in 2010. It employs many more men than women, and almost three-quarters of the workforce is between the ages of 25 and 54. Hourly wages are typically just above the provincial average. As an example of salary ranges, a carpenter may earn about $63,000 a year and a welder or related machine operator about $109,000 a year.

Housing starts in Alberta hit a peak of more than 40,000 in 2006 before falling off to well under 20,000 in 2009. There has been some recovery since—to 23,380 in 2010—but starts dropped by 6.5 per cent over the first 11 months of 2011 compared to the same period in 2010. Residential investment is expected to rise over the next few years and then taper off beginning in 2015 as housing starts begin to drop back.

The scaling back of government stimulus spending will hamper growth in non-residential construction in the near term. For the longer term, the Construction Sector Council (CSC) estimates that thousands of new construction jobs will be created in Alberta over the period 2011 to 2019, largely because of increasing non-residential investment, including oil sands industry expansions.

The CSC estimates that the peak employment levels of 2008 will return to Alberta in 2012. It forecasts tight job markets in the construction industry through 2019—it says the industry will need 40,000 more workers over the period.

Boilermakers, construction millwrights, electricians, ironworkers and welders are among the trades and occupations for which demand should be strong over the years ahead.

About 44,700 new jobs will be created in the industry from 2011 to 2015.
The industry employed about 129,500 people in 2010.

Average annual employment growth rate in the industry for 2011 to 2015 is expected to be 1.5%.

Educational services

Profile

Schools, colleges, universities and training centres in this industry provide instruction and training in a wide variety of subjects. These institutions may be privately or publicly owned and may offer accommodation and food services to their students.

Occupations in the industry include teachers, professors, educational counsellors and teacher assistants.

Performance and outlook

This industry accounted for 4.1 per cent of Alberta’s economy and 6.4 per cent of total employment in 2010. It employs more women than men, and almost three-quarters of the workforce is between the ages of 25 and 54. Hourly wages are typically above the provincial average. As an example of salary ranges, an educational counsellor may earn about $54,000 a year and a school principal just over $97,000 a year.

The student population attending early childhood services through Grade 12 in all Alberta schools has increased from about 592,000 in the 2005 school year to about 609,000 in 2010. Enrolment in Alberta’s post-secondary institutions, such as universities, colleges and polytechnic institutes, has increased steadily from about 140,000 in 2005 to about 154,000 in 2009.

In knowledge-based economies, education plays a more and more important role in determining the quality of life and opportunity for individuals and societies. Some estimates suggest that up to 77 per cent of all new jobs will require a post-secondary education by 2031. In 2010, about 57 per cent of Alberta’s labour force had completed post-secondary school.

Over the period 2011 to 2015, employment growth above the provincial average is expected for university professors and assistants, college and other vocational instructors, secondary and elementary school teachers, and educational counsellors.

About 10,200 new jobs will be created in the industry from 2011 to 2015.
Finance, insurance, real estate and leasing

Profile
Businesses in this industry manage or exchange funds, property or other assets. They include banks, credit unions, mortgage and loan brokers, securities dealers, insurance agencies, pension fund managers, property managers and auto rental firms.

Occupations in the industry include financial analysts, insurance adjusters, real estate agents, financial planners, patent and trademark specialists, and building superintendents.

Performance and outlook
This industry accounted for 14.6 per cent of Alberta’s economy and 5.2 per cent of total employment in 2010. It employs more women than men, and close to three-quarters of the workforce is between the ages of 25 and 54. Hourly wages are slightly below the provincial average. As an example of salary ranges, a banking clerk may earn about $39,000 a year and a finance and investment analyst just over $100,000 a year.

According to the Canada Mortgage and Housing Corporation, housing starts in Alberta will hold steady in 2011 before regaining ground in 2012 as economic growth spurs greater demand and reduces the inventory of existing homes for sale.

Over the past 10 years, Alberta’s financial services sector has experienced exceptional growth, which has been fuelled by high levels of capital investment in Alberta’s energy sector. With almost $74 billion of capital investment estimated for Alberta in 2010, this sector is expected to undergo additional growth.

Over the period 2011 to 2015, employment growth above the provincial average is expected for insurance and real estate salespeople and for managers in finance and business services.

About 10,200 new jobs will be created in the industry from 2011 to 2015.
Forestry and logging, with support activities

Profile
This industry includes businesses that produce seedlings in specialized nurseries, grow or harvest timber on a long production cycle of 10 years or more, or provide related support services.

Occupations include forest technicians, foresters, logging equipment operators and park wardens.

Performance and outlook
This industry accounted for 0.2 per cent of Alberta’s economy and 0.2 per cent of total employment in 2010. It employs a great many more men than women, and more than three-quarters of the workforce is between the ages of 25 and 54. Hourly wages are much higher than the provincial average. As an example of salary ranges, a conservation officer may earn about $51,000 a year and a forestry professional nearly $68,000 a year.

About 58 per cent or 38 million hectares of Alberta is forested. Of the forested area, about 60 per cent or 22.5 million hectares are considered suitable for harvest. Alberta’s commercially productive timber land base includes in excess of 2.2 billion cubic metres of growing stock. Annually, Alberta allows 29.7 million cubic metres to be harvested.

Over the last several years, the invasion of the mountain pine beetle had represented a serious threat to the health of Alberta’s forests and forestry industry. But an aggressive eradication approach appears to be working: recent aerial surveys have confirmed a decline in the number of new trees attacked by the beetle.

Shipments of manufactured wood products increased by five per cent while shipments of paper and related products dropped by nearly six per cent through October 2011 compared to the same 10 months in 2010. Over the same period exports of paper and wood products declined.

The Forest Products Sector Council estimates that about 30 per cent of current forest industry product workers in the three prairie provinces will retire by 2020. Combined with increased employment demand, that trend could produce a shortage of between 9,100 and 20,800 workers. Occupations expected to be in demand include skilled tradespeople, forest technologists and technicians, harvesting machinery operators and process operators.

About 100 new jobs will be created in the industry from 2011 to 2015.
Health care and social assistance

Profile
This industry includes health-care services provided at hospitals, auxiliary hospitals, nursing homes and long-term care facilities, ambulatory outpatient care centres, medical and diagnostic laboratories, community health centres and the offices of dentists, doctors, optometrists, chiropractors and other health practitioners. Home care services and ambulance services are also part of this industry. Social assistance services include

- individual and family services (for children, youth and the elderly)
- community food, housing and emergency relief services
- vocational rehabilitation services
- daycare services

Occupations include physicians, nurses, pharmacists, occupational therapists, dental hygienists, child and youth care workers, and emergency medical technicians.

Performance and outlook
This industry accounted for 5.2 per cent of Alberta’s economy and 10.9 per cent of total employment in 2010. It is Alberta’s second-largest industry by employment. It employs more women than men, and almost three-quarters of the workforce is between the ages of 25 and 54. Hourly wages are about the same as the provincial average. As an example of salary ranges, a cardiology technologist may earn about $62,000 a year and a general practitioner physician about $265,000 a year.

Between 2009 and 2010 employment in health occupations increased by 11,000, which was the largest increase among all occupations. As the recovery takes hold, job creation will continue to be largely driven by the health-care administration and social assistance sectors.

Over the period 2011 to 2015, employment growth above the provincial average is expected for managers in health, education, social and community services.

About 28,900 new jobs will be created in the industry from 2011 to 2015.
Information, culture and recreation

Profile
The information and culture industry includes businesses engaged in

- publishing (including software publishing, traditional print publishing and publishing on the Internet)
- broadcasting (including traditional radio and television broadcasting and broadcasting over the Internet)
- film, television and digital media production and sound recording
- the performing arts, libraries and archives
- telecommunications
- Internet services, web search portals, data processing and information services

The recreation industry includes businesses and organizations that operate facilities or provide services to meet the cultural, entertainment and recreational interests of their patrons.

Occupations include librarians, cinematographers, reporters, museum curators and professional athletes.

Performance and outlook
This industry accounted for 2.9 per cent of Alberta’s economy and 3.8 per cent of total employment in 2010. It employs slightly more women than men, and about 60 per cent of the workforce is between the ages of 25 and 54. Hourly wages are a little lower than the provincial average. As an example of salary ranges, a kinesiologist may earn about $29,000 a year and a cinematographer about $67,000 a year.

In the telecommunications segment, consumer demand was tempered by declining incomes during the recession. Worries over finances and earning potential may continue to cause consumers to make fewer new purchases or upgrades. Businesses, though, have been increasing their investment, and mobile telecommunications services remain popular. Overall, growth is expected to improve in the years ahead as new technologies are developed and demand rebounds.

Over the period 2011 to 2015, employment growth above the provincial average is expected for librarians, archivists, conservators and curators; professionals in writing, translating and public relations; technical occupations in libraries, archives, museums and art galleries; creative and performing artists; and athletes, coaches and referees.

About 8,400 new jobs will be created in the industry from 2011 to 2015.
Manufacturing

Profile
This industry consists of businesses that add value to products or materials through mechanical, physical or chemical processes—turning lumber into furniture, for example. It includes businesses involved in manufacturing food, beverages, chemicals, textiles, petroleum and coal products, plastics and electronic equipment.

Occupations include meat cutters, machinists, manufacturing engineers, sawmill machine operators and instrument technicians.

Performance and outlook
This industry accounted for eight per cent of Alberta's economy and 6.2 per cent of total employment in 2010. It employs many more men than women, and almost three-quarters of the workforce is between the ages of 25 and 54.

Hourly wages are about the same as the provincial average. As an example of salary ranges, a plastic products assembler may earn about $32,000 a year and an industrial engineer about $87,000 a year.

In terms of output, the largest manufacturing sectors are food products, chemicals, industrial machinery and fabricated metal products. Between 2000 and 2010, the value of Alberta's manufacturing shipments increased by 35 per cent to $60.1 billion. Shipments were strong in 2010, particularly of petroleum and coal-related products. A resurgence in 2011 is evident—shipments rose by 17.2 per cent from January to October compared to the same period in 2010.

Exports of manufactured goods grew by 32 per cent between 2000 and 2008. In 2009 the value of these exports fell by 24 per cent to a level only marginally higher than the 2000 value. This drop was due to the global recession, which reduced both export volumes and commodity prices. Manufacturing exports rebounded by 12 per cent in 2010 to $20 billion (13 per cent higher than the 2000 level). With gains already posted through the first 10 months of 2011, manufactured exports are expected to continue gaining strength as the global economy moves into an expansion.

Over the period 2011 to 2015, employment growth above the provincial average is expected for supervisors in assembly and fabrication; machine operators and related workers in fabric, fur and leather products; mechanical, electrical, electronics and other assemblers; and labourers in processing and manufacturing.

About 15,400 new jobs will be created in the industry from 2011 to 2015.
Mining and oil and gas extraction

Profile
This industry includes companies that explore for and produce crude petroleum and natural gas, drill and equip wells, mine for coal or metal ore and perform other preparation activities associated with mining operations.

Occupations include mining engineers, blasters, drilling and service rig managers, petroleum engineers and drilling floorhands.

Performance and outlook
This industry accounted for 19.1 per cent of Alberta’s economy and seven per cent of total employment in 2010. It employs many more men than women, and more than three-quarters of the workforce is between the ages of 25 and 54. Hourly wages are well above the provincial average. As an example of salary ranges, a truck driver may earn about $64,000 a year and a petroleum engineer about $125,000 a year.

In 2010, Alberta produced 73 per cent of Canada’s crude oil and 75 per cent of its natural gas. In the same year, Alberta’s energy resource exports, at $53.9 billion, accounted for almost 70 per cent of Alberta’s total exports. Over the first nine months of 2011, the production of natural gas in Alberta dropped by 3.5 per cent compared to the same period in 2010 while production of crude oil and equivalents increased by 7.2 per cent over the same period.

The Canadian Association of Petroleum Producers forecasts that Canadian crude oil production will increase from 2.8 million barrels a day in 2010 to 3.5 million barrels a day in 2015. Nearly two-thirds of the 2015 production will come from Alberta’s oil sands, which is the third-largest oil reserve on earth. Oil sands companies spent $13 billion on the development of the resource in 2010, and they are projected to spend another $16 billion in 2011.

Exports of refinery products rose 165 per cent between 2000 and 2010 to a record $2.1 billion. Most of the increase was the result of higher prices, although volumes have also increased, especially during the past few years. The global recession and concurrent decline in refined petroleum prices caused the value of these exports to decline by 11 per cent between 2008 and 2009 even though export volumes continued to rise. In 2010, the export value rose 68 per cent on higher export prices and higher volumes of diesel fuel, aviation turbine fuel and residual/bunker fuel oils.

Over the period 2011 to 2015, employment growth below the provincial average is expected for supervisors, underground miners, oil and gas drillers and related workers, mine service workers, operators in oil and gas drilling and labourers in primary production.

About 15,800 new jobs will be created in the industry from 2011 to 2015.
Other services

Profile
This industry includes

- automotive repair and maintenance
- electronic and precision equipment repair and maintenance
- commercial and industrial equipment repair and maintenance
- personal care services (such as hair care and aesthetic services)
- civic, social and religious organizations
- pet care, photofinishing, funerals and other personal services
- social advocacy organizations
- business, professional, labour and other membership organizations and private household services

Occupations include automotive service technicians, jewellers, massage therapists, hair stylists and fundraisers.

Performance and outlook
This industry accounted for 2.6 per cent of Alberta's economy and 4.9 per cent of total employment in 2010. It employs roughly equal numbers of women and men, and two-thirds of the workforce is between the ages of 25 and 54. Hourly wages are below the provincial average. As an example of salary ranges, an automotive service technician may earn about $23,000 a year and a heavy-duty equipment mechanic about $58,000 a year.

Demand for services should rise as consumer income picks up, and this industry should post gains in output.

Over the period 2011 to 2015, employment growth below the provincial average is expected for automotive service technicians, technical occupations in personal services, upholsterers, tailors, shoe repairers and jewellers.

About 8,400 new jobs will be created in the industry from 2011 to 2015.
Professional, scientific and technical services

Profile
This industry includes businesses that make knowledge and skills available to other organizations or to the public, often on a project basis. Services provided include legal, accounting, architectural, engineering, surveying and mapping, industrial or computer system design, research and development, scientific and technical consulting, advertising and public relations, translation and veterinary.

Occupations include accountants, architects, civil engineers, graphic designers and lawyers.

Performance and outlook
This industry accounted for 5.3 per cent of Alberta’s economy and 7.5 per cent of total employment in 2010. It employs more men than women, and almost three-quarters of the workforce is between the ages of 25 and 54. Hourly wages are above the provincial average. As an example of salary ranges, a graphic designer may earn about $49,000 a year and a lawyer about $99,000 a year.

Strong demand for commercial and professional services can be expected as high oil prices bolster corporate profit margins.

About 21,200 new jobs will be created in the industry from 2011 to 2015.
Public administration

Profile
This industry consists of government agencies that manage public programs. These agencies also set policy, create laws, settle civil and criminal legal cases and provide for public safety and national defence. The industry typically organizes and finances the production of public goods and services.

Occupations include correctional officers, firefighters, occupational health and safety inspectors, customs inspectors and judges.

Performance and outlook
This industry accounted for 4.1 per cent of Alberta's economy and 4.3 per cent of total employment in 2010. It employs slightly more women than men, and three-quarters of the workforce is between the ages of 25 and 54. Hourly wages are higher than the provincial average. As an example of salary ranges, a personnel and recruitment officer may earn about $57,000 a year and a firefighter about $71,000 a year.

Employment within the industry has been volatile, generally rising and falling with the overall economy. Employment reached a peak in 2006 as all levels of government attempted to meet the service needs of a growing population and a booming economy. In response to the recession, the Government of Alberta implemented a hiring restraint in the fall of 2009.

Over the period 2011 to 2015, employment growth above the provincial average is expected for managers in public administration, police officers and firefighters, other protective services, judges and lawyers, policy and program officers, and researchers and consultants.

About 6,000 new jobs will be created in the industry from 2011 to 2015.
Retail trade

Profile

This industry includes businesses engaged in selling products directly to the public and providing services that accompany the sale of products. The industry includes enterprises engaged in the sale of food, beverages, drug products, shoes, clothing, household furniture and appliances, automobiles, department store merchandise and after-sales services, such as repair and installation.

Occupations include cashiers, direct distributors, opticians, pharmacists and retail store managers.

Performance and outlook

This industry accounted for 5.2 per cent of Alberta's economy and 11.5 per cent of total employment in 2010. It is Alberta's largest industry by employment. It employs slightly more women than men, and just over half of the workforce is between the ages of 25 and 54. Hourly wages are below the provincial average. As an example of salary ranges, a retail salesperson may earn about $24,000 a year and a pharmacist about $94,000 a year.

The value of retail trade in Alberta hit peaks above $61 billion in both 2007 and 2008 before falling by a little more than $5 billion in 2009. An upswing began in 2010 and continued through the first nine months of 2011 with sales of $47.2 billion, up more than six per cent compared to the same period the previous year. Sales growth was particularly strong in the gasoline service station, general merchandise and motor and recreational vehicle sales categories.

Strong employment and wage growth in Alberta in the years ahead should boost consumer spending on goods and, to a lesser extent, services.

Over the period 2011 to 2015, employment growth below the provincial average is expected for cashiers, retail salesperson and sales clerk occupations.

About 20,600 new jobs will be created in the industry from 2011 to 2015.
Transportation and warehousing

Profile
This industry includes businesses that transport passengers and cargo (including oil and gas), warehouse and store goods, and provide support activities related to modes of transportation.

Occupations include airline pilots, taxi drivers, warehousing professionals, letter carriers and truck drivers.

Performance and outlook
This industry accounted for 5.5 per cent of Alberta's economy and 5.2 per cent of total employment in 2010. It employs many more men than women, and nearly three-quarters of the workforce is between the ages of 25 and 54. Hourly wages are about the same as the provincial average. As an example of salary ranges, a taxi driver may earn about $37,000 a year and a transportation manager about $79,000 a year.

Some segments of the transportation industry benefited from more manageable operating costs during the recession. Looking forward, this industry will be among those that benefit from strong investment in the resource sector.

Over the period 2011 to 2015, employment growth below the provincial average is expected for motor vehicle and transit drivers, transportation officers and controllers, and train crew operators. Above-average growth is expected for managers in construction and transportation.

About 11,100 new jobs will be created in the industry from 2011 to 2015.
Utilities

Profile
Businesses in this industry are engaged in electric power generation, transmission and distribution, natural gas distribution and the building, operation and maintenance of water, sewer and irrigation systems.

Occupations include gas utility operators, utility clerks, water and wastewater treatment plant operators, power linemen and power system electricians.

Performance and outlook
This industry accounted for two per cent of Alberta’s economy and 0.9 per cent of total employment in 2010. It employs many more men than women, and more than three-quarters of the workforce is between the ages of 25 and 54. Hourly wages are well above the provincial average. As an example of salary ranges, a waterworks and gas maintenance worker may earn about $66,000 a year and a utilities manager about $101,000 a year.

Employment growth within the industry has been strong over the last decade. Demand for electricity by industrial, commercial, farm and household users will continue to increase with growth in economic activity and population. Since 1998, for example, during a period of relative prosperity in Alberta, more than 6,400 megawatts (MW) have been added to the Alberta power supply. At present, Alberta has more than 13,500 MW of generating capacity. Over 8,800 MW of thermal power and over 7,900 MW of renewable power have been proposed by industry for future development. Since a great deal of Alberta’s electricity is generated by coal and other fossil fuels, environmental considerations will affect the scope and direction of future development.

Over the period 2011 to 2015, employment growth below the provincial average is expected for stationary engineers, power station and system operators, and managers in manufacturing and utilities.

About 1,600 new jobs will be created in the industry from 2011 to 2015.
Wholesale trade

Profile

Businesses in this industry purchase merchandise for resale to retailers or to commercial, industrial, institutional, farm and professional service customers, such as dentists and doctors. The wholesaling process is an intermediate step in distributing merchandise.

This industry includes wholesale distributors, agents and brokers of goods such as

- farm products
- petroleum products
- food, beverage and tobacco products
- personal and household goods
- motor vehicles and parts
- building materials and supplies
- machinery and equipment

Occupations include shippers and receivers, technical sales representatives, truck drivers, direct distributors and auctioneers.

Performance and outlook

This industry accounted for 5.3 per cent of Alberta’s economy and 3.7 per cent of total employment in 2010. It employs many more men than women, and more than three-quarters of the workforce is between the ages of 25 and 54. Hourly wages are below the provincial average. As an example of salary ranges, a shipper and receiver may earn about $35,000 a year and a sales, marketing and advertising manager about $74,000 a year.

The value of wholesale trade in Alberta peaked at just over $66 billion in 2008, before dropping by more than $10 billion the following year. But the recovery was swift, with most of the losses regained through 2010. Over the first 10 months of 2011, sales picked up by 14.6 per cent compared to the same period the previous year. This industry will be among those that benefit as a strong job market and increases in consumer income drive demand and as resource sector investment drives overall economic growth.

Over the period 2011 to 2015, employment growth below the provincial average is expected for sales representatives and technical sales specialists.

About 9,700 new jobs will be created in the industry from 2011 to 2015.
Alberta Occupational Projections to 2015

What are the prospects for these and other occupations in the years ahead?

The estimates in this section address that question. They are based on information published in 2011 in the *Alberta Regional Occupational Demand Outlook, 2011–2015*.

Demand for occupations changes according to a variety of factors, including the business environment, overall level of economic activity, changes in consumer behaviour and, perhaps most importantly, growth in specific industrial areas. The projections presented here are based on an analysis of these and other factors. This analysis considered

- the outlook for global, Canadian and Albertan business environments
- the major forces of change affecting economic performance and prospects
- the evolving world of work
- the trends in Alberta industries, including growth projections to the year 2015

Knowing what is going on in these four major areas is critical to understanding which occupations are likely to be more, or less, in demand. It also helps determine future employment trends.

**General employment trends**

Showing the effects of the recession, Alberta’s unemployment rate increased from 3.6 per cent in 2008 to 6.6 per cent in both 2009 and 2010. Although the unemployment rate is still relatively high, it dropped to 4.9 per cent by December 2011. Alberta’s unemployment rate remains among the lowest in Canada.

In 2008, an average of 2.05 million Albertans were employed. That figure dropped slightly during the recession and the early months of recovery—to 2.03 million in 2009 and 2.02 million in 2010. Employment growth in Alberta has improved significantly in 2011. Indeed, by December 2011, employment in Alberta, at 2.1 million, exceeded pre-recession levels.

Strong employment growth is expected to continue through 2014 at an annual average of just under two per cent. The unemployment rate is expected to average 5.5 per cent in 2011 and drop to 4.5 per cent by 2014. This decrease in the unemployment rate could lead to labour shortages in specific high-growth industries and occupations.
Broad occupational groups

This section takes a brief look at forecast trends in 10 broad occupational groups or skill types. For information about specific occupational groups, see page 45.

The following key trends were found for broad occupational groups:

- Employment gains are expected in all occupational groups over the forecast period. However, a small decline in health occupations is expected at the beginning of the period.
- Over the entire forecast period, about 277,000 jobs will be created across all the occupational groups. The largest increase will be in sales and service (about 65,000 new jobs created between 2010 and 2015), followed by trade and transport (58,000 new jobs) and business and finance (51,000 new jobs).
- Primary industry occupations are slated to post the slowest growth over the period, although 7,500 jobs will still be created by 2015.

### Employment growth for broad occupational groups

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Management occupations</td>
<td>162.5</td>
<td>167.7</td>
<td>172.1</td>
<td>176.7</td>
<td>181.0</td>
<td>186.2</td>
</tr>
<tr>
<td>% change</td>
<td>3.2</td>
<td>2.6</td>
<td>2.7</td>
<td>2.4</td>
<td>2.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Business, finance and administrative occupations</td>
<td>354.4</td>
<td>364.5</td>
<td>375.1</td>
<td>384.5</td>
<td>394.6</td>
<td>405.2</td>
</tr>
<tr>
<td>% change</td>
<td>2.9</td>
<td>2.9</td>
<td>2.5</td>
<td>2.6</td>
<td>2.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Natural and applied sciences and related occupations</td>
<td>156.5</td>
<td>161.4</td>
<td>166.4</td>
<td>170.3</td>
<td>174.3</td>
<td>178.3</td>
</tr>
<tr>
<td>% change</td>
<td>3.2</td>
<td>3.1</td>
<td>2.4</td>
<td>2.4</td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>Health occupations</td>
<td>122.0</td>
<td>121.5</td>
<td>123.7</td>
<td>126.3</td>
<td>129.9</td>
<td>133.7</td>
</tr>
<tr>
<td>% change</td>
<td>-0.5</td>
<td>1.8</td>
<td>2.1</td>
<td>2.9</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td>Occupations in social science, education, government service and religion</td>
<td>157.9</td>
<td>161.3</td>
<td>167.1</td>
<td>171.6</td>
<td>177.3</td>
<td>182.6</td>
</tr>
<tr>
<td>% change</td>
<td>2.2</td>
<td>3.6</td>
<td>2.7</td>
<td>3.4</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Occupations in art, culture, recreation and sport</td>
<td>44.4</td>
<td>45.6</td>
<td>47.0</td>
<td>48.2</td>
<td>49.5</td>
<td>50.7</td>
</tr>
<tr>
<td>% change</td>
<td>2.7</td>
<td>3.0</td>
<td>2.5</td>
<td>2.8</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Sales and service occupations</td>
<td>478.6</td>
<td>492.3</td>
<td>504.3</td>
<td>517.3</td>
<td>528.6</td>
<td>543.5</td>
</tr>
<tr>
<td>% change</td>
<td>2.9</td>
<td>2.4</td>
<td>2.6</td>
<td>2.2</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>Trade, transport and equipment operators and related occupations</td>
<td>373.2</td>
<td>386.2</td>
<td>395.7</td>
<td>406.8</td>
<td>418.1</td>
<td>430.7</td>
</tr>
<tr>
<td>% change</td>
<td>3.5</td>
<td>2.4</td>
<td>2.8</td>
<td>2.8</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Occupations unique to primary industry</td>
<td>106.7</td>
<td>108.0</td>
<td>109.9</td>
<td>111.2</td>
<td>112.5</td>
<td>114.2</td>
</tr>
<tr>
<td>% change</td>
<td>1.2</td>
<td>1.8</td>
<td>1.2</td>
<td>1.1</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Occupations unique to processing, manufacturing and utilities</td>
<td>60.4</td>
<td>62.4</td>
<td>64.3</td>
<td>65.8</td>
<td>67.3</td>
<td>68.8</td>
</tr>
<tr>
<td>% change</td>
<td>3.3</td>
<td>3.1</td>
<td>2.4</td>
<td>2.3</td>
<td>2.2</td>
<td></td>
</tr>
</tbody>
</table>
Occupational minor groups

This section provides projections for 130 occupational minor groups from the National Occupational Classification system.

How to read the chart

<table>
<thead>
<tr>
<th>Occupational Minor Group</th>
<th>Projected Growth</th>
<th>Number of People in This Group in Alberta (2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human resources and business service professionals</td>
<td></td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>College and other vocational instructors</td>
<td></td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Retail salespeople and sales clerks</td>
<td></td>
<td>More than 40,000</td>
</tr>
</tbody>
</table>

Occupational minor groups

Occupational minor groups are listed alphabetically.

Projected Growth

An annual growth rate is calculated for each listed occupational minor group. This rate is compared to the overall annual growth for all occupations combined. The three categories are:

- ** ABOVE-AVERAGE GROWTH: more than 2.7 per cent **
- ** AVERAGE GROWTH: 2.7 per cent **
- ** BELOW-AVERAGE GROWTH: less than 2.7 per cent **

Number of people in this group in Alberta (2010)

This column gives an estimate of the number of Albertans working in the occupational minor group in 2010. The five categories are:

1. more than 40,000
2. 30,000–40,000
3. 20,000–30,000
4. 10,000–20,000
5. less than 10,000

For detailed information about specific occupations, including duties, wage and salary ranges, and related education and training, visit [alis.alberta.ca/occinfo](http://alis.alberta.ca/occinfo).

1 Occupational minor groups are the third level of classification in the National Occupational Classification, a system for describing occupations in Canada. To learn more, visit [www.hrsdc-rhdcc.gc.ca/noc](http://www.hrsdc-rhdcc.gc.ca/noc).
# Employment Growth for Occupational Minor Groups to 2015

<table>
<thead>
<tr>
<th>Occupational Minor Group</th>
<th>Projected Growth</th>
<th>Number of People in This Group in Alberta (2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative and regulatory occupations</td>
<td>🟢</td>
<td>More than 40,000</td>
</tr>
<tr>
<td>Administrative services managers</td>
<td>🟢</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Administrative support clerks</td>
<td>🟢</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Agriculture and horticulture workers</td>
<td>🔴</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Announcers and other performers</td>
<td>🔴</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Architects, urban planners and land surveyors</td>
<td>🔴</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Assisting occupations in support of health services</td>
<td>🔴</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Athletes, coaches, referees and related occupations</td>
<td>🟢</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Auditors, accountants and investment professionals</td>
<td>🟢</td>
<td>More than 40,000</td>
</tr>
<tr>
<td>Automotive service technicians</td>
<td>🔴</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Butchers and bakers</td>
<td>🔴</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Carpenters and cabinetmakers</td>
<td>🟢</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Cashiers</td>
<td>🔴</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Central control and process operators in manufacturing and processing</td>
<td>🔴</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Chefs and cooks</td>
<td>🟢</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Childcare and home support workers</td>
<td>🟢</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Civil, mechanical, electrical and chemical engineers</td>
<td>🔴</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Cleaners</td>
<td>🟢</td>
<td>More than 40,000</td>
</tr>
<tr>
<td>Clerical occupations, general office skills</td>
<td>🟢</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Clerical supervisors</td>
<td>🟢</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>College and other vocational instructors</td>
<td>🟢</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Computer and information systems professionals</td>
<td>🟢</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Contractors and supervisors, trades and related workers</td>
<td>🟢</td>
<td>More than 40,000</td>
</tr>
<tr>
<td>Contractors, operators and supervisors in agriculture, horticulture and aquaculture</td>
<td>🔴</td>
<td>More than 40,000</td>
</tr>
<tr>
<td>Crane operators, drillers and blasters</td>
<td>🟢</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Creative and performing artists</td>
<td>🟢</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Creative designers and craftspeople</td>
<td>🟢</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Electrical trades and telecommunications occupations</td>
<td>🟢</td>
<td>20,000–30,000</td>
</tr>
</tbody>
</table>

**Legend**

- 🟢: Above-Average Growth
- 🟠: Average Growth
- 🔴: Below-Average Growth
### Alberta Occupational Projections to 2015

<table>
<thead>
<tr>
<th>Occupational Minor Group</th>
<th>Projected Growth</th>
<th>Number of People in This Group in Alberta (2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility operation and maintenance managers</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Finance and insurance administrative occupations</td>
<td>↑</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Finance and insurance clerks</td>
<td></td>
<td>More than 40,000</td>
</tr>
<tr>
<td>Food counter attendants, kitchen helpers and related occupations</td>
<td>↑</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Heavy equipment operators</td>
<td>↑</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Human resources and business service professionals</td>
<td></td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Insurance and real estate sales occupations and buyers</td>
<td>↑</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Judges, lawyers and Quebec notaries</td>
<td></td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Labourers in processing, manufacturing and utilities</td>
<td></td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Legislators and senior management</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Librarians, archivists, conservators and curators</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Library, correspondence and related information clerks</td>
<td></td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Life science professionals</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Longshore workers and material handlers</td>
<td>↓</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Machine operators and related workers in chemical, plastic and rubber processing</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Machine operators and related workers in fabric, fur and leather products manufacturing</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Machine operators and related workers in food, beverage and tobacco processing</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Machine operators and related workers in metal and mineral products processing</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Machine operators and related workers in pulp and paper production and wood processing</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Machinery and transportation equipment mechanics</td>
<td></td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Machining, metalworking, woodworking and related machine operators</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Machinists and related occupations</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Mail and message distribution occupations</td>
<td>↓</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Managers in construction and transportation</td>
<td>↑</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Managers in engineering, architecture, science and information systems</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Managers in financial and business services</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
</tbody>
</table>
# Employment Growth for Occupational Minor Groups to 2015

<table>
<thead>
<tr>
<th>Occupational Minor Group</th>
<th>Projected Growth</th>
<th>Number of People in This Group in Alberta (2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers in food service and accommodation</td>
<td>↑</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Managers in health, education, social and community services</td>
<td>↑</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Managers in manufacturing and utilities</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Managers in other services</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Managers in primary production (except agriculture)</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Managers in public administration</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Managers in retail trade</td>
<td>↓</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Masonry and plastering trades</td>
<td>↑</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Mechanical, electrical and electronics assemblers</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Medical technologists and technicians (except dental health)</td>
<td>↓</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Metal forming, shaping and erecting trades</td>
<td>↑</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Mine service workers and operators in oil and gas drilling</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Motor vehicle and transit drivers</td>
<td>↓</td>
<td>More than 40,000</td>
</tr>
<tr>
<td>Nurse supervisors and registered nurses</td>
<td>↓</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Occupations in food and beverage services</td>
<td>↑</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Occupations in travel and accommodation</td>
<td>↓</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Office equipment operators</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Other assembly and related occupations</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Other construction trades</td>
<td>↑</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Other elemental service occupations</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Other engineers</td>
<td>↓</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Other installers, repairers and servicers</td>
<td>↑</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Other mechanics</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Other occupations in personal service</td>
<td>↓</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Other occupations in protective service</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Other occupations in travel, accommodation, amusement and recreation</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Other sales and related occupations</td>
<td>↓</td>
<td>20,000–30,000</td>
</tr>
</tbody>
</table>

**Legend**
- **↑**: Above-Average Growth
- **↓**: Below-Average Growth
- **•**: Average Growth
<table>
<thead>
<tr>
<th>Occupational Minor Group</th>
<th>Projected Growth</th>
<th>Number of People in This Group in Alberta (2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other technical inspectors and regulatory officers</td>
<td>🟢</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Other technical occupations in health care (except dental)</td>
<td>🟡</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Other transport equipment operators and related workers</td>
<td>🟢</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Paralegals, social services and occupations in education and religion, not elsewhere classified</td>
<td>🟡</td>
<td>More than 40,000</td>
</tr>
<tr>
<td>Pharmacists, dietitians and nutritionists</td>
<td>🟡</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Photographers, graphic arts technicians and technical and co-ordinating occupations in motion pictures, broadcasting and the performing arts</td>
<td>🟡</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Physical science professionals</td>
<td>⬛</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Physicians, dentists and veterinarians</td>
<td>🟡</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Plumbers, pipefitters and gas fitters</td>
<td>🟢</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Police officers and firefighters</td>
<td>🟢</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Policy and program officers, researchers and consultants</td>
<td>🟢</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Primary production labourers</td>
<td>🟡</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Printing machine operators and related occupations</td>
<td>🟡</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Printing press operators, commercial drivers and other trades and related occupations, not elsewhere classified</td>
<td>🟡</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Psychologists, social workers, counsellors, clergy and probation officers</td>
<td>🟡</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Public works and other labourers, not elsewhere classified</td>
<td>⬛</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Recording, scheduling and distributing occupations</td>
<td>🟡</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Retail salespeople and sales clerks</td>
<td>🟡</td>
<td>More than 40,000</td>
</tr>
<tr>
<td>Sales and service supervisors</td>
<td>🟡</td>
<td>30,000–40,000</td>
</tr>
<tr>
<td>Sales representatives, wholesale trade</td>
<td>🟡</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Sales, marketing and advertising managers</td>
<td>🟡</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Secondary and elementary school teachers and educational counsellors</td>
<td>🟢</td>
<td>More than 40,000</td>
</tr>
<tr>
<td>Secretaries, recorders and transcription counsellors</td>
<td>⬛</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Security guards and related occupations</td>
<td>🟡</td>
<td>Less than 10,000</td>
</tr>
</tbody>
</table>
## Employment Growth for Occupational Minor Groups to 2015

<table>
<thead>
<tr>
<th>Occupational Minor Group</th>
<th>Projected Growth</th>
<th>Number of People in This Group in Alberta (2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stationary engineers and power station and system operators</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Supervisors, assembly and fabrication</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Supervisors, logging and forestry</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Supervisors, mining, oil and gas</td>
<td>↓</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Supervisors, processing occupations</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Supervisors, railway and motor transportation occupations</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Technical occupations in architecture, drafting and surveying</td>
<td></td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Technical occupations in civil, mechanical and industrial engineering</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Technical occupations in computer and information systems</td>
<td></td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Technical occupations in dental health care</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Technical occupations in electronics and electrical engineering</td>
<td></td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Technical occupations in libraries, archives, museums and art galleries</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Technical occupations in life sciences</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Technical occupations in personal service</td>
<td>↓</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Technical occupations in physical sciences</td>
<td></td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Technical sales specialists, wholesale trade</td>
<td>↓</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Therapy and assessment professionals</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Tour and recreational guides and casino occupations</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Trades helpers and labourers</td>
<td>↑</td>
<td>20,000–30,000</td>
</tr>
<tr>
<td>Train crew operating occupations</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Transportation officers and controllers</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Underground miners, oil and gas drillers and related workers</td>
<td>↓</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>University professors and assistants</td>
<td>↑</td>
<td>10,000–20,000</td>
</tr>
<tr>
<td>Upholsterers, tailors, shoe repairers, jewelers and related occupations</td>
<td>↓</td>
<td>Less than 10,000</td>
</tr>
<tr>
<td>Writing, translating and public relations professionals</td>
<td>↑</td>
<td>Less than 10,000</td>
</tr>
</tbody>
</table>

**Legend**
- **Above-Average Growth**
- **Average Growth**
- **Below-Average Growth**
Baby boom
Between 1945 and 1966, there was a significant increase in the number of babies born in Canada. The period was one of relative peace and prosperity following the Second World War. People born during those years are called baby boomers, and they still make up the largest share of the Canadian population. The baby boom was followed by a “baby bust”—a period characterized until recently by a relatively low number of births.

Demand
Generally, demand is the amount of something that a person or group of people wants or needs. In a market economy, the price of product is likely to rise if demand for it is high but supply is low.

Demographics
Demographics describe various features of a population, such as its age structure, education, employment, gender and average family size. “The average age of working Canadians is X years,” is a demographic statement. Typically very statistical in their focus, demographics provide valuable insight into the size, structure and other important aspects of a population.

Economic indicators
Unemployment rates, the gross domestic product, housing starts, building permits and interest rates are some of the statistics known generally as economic indicators. Analyzed individually and together, they provide important information on the health and direction of the overall economy or its component parts. They help guide investment, business and other day-to-day workplace decisions.

Employment growth versus employment share
If total employment in an industry increases from 100 to 110 over a particular period of time, it may be said that employment has grown by 10 per cent. If that industry is part of a larger economy consisting of 10 industries that all employ the same number of people, each industry has a 10 per cent share of total employment. Over time, the employment shares will stay the same as long as all industries continue to employ the same number of people and grow at the same rate. But if employment in some industries grows faster or slower than in other industries, or shrinks or doesn’t grow at all, then each industry will have a different share of overall employment: some will have a higher share than before, some a lower share. Therefore, an industry can experience employment growth even though its share of total employment has fallen.

Employment rate
The employment rate is the number of people employed expressed as a percentage of the working age population (persons 15 years of age and over). The employment rate, to a certain extent, reflects the state of the whole economy. A high employment rate indicates that the economy can create jobs and employ a large percentage of its working-age population.

Exports
Exports are goods and services sold outside the country. Alberta’s economy relies on exports to make it strong. A drop in exports can affect many industries, including manufacturing, transportation and any others that rely on foreign markets for sales. Exports are affected by changes in the overall economy, including interest and exchange rates.
Gross domestic product
The monetary value of all goods and services produced in a certain region over a given period of time makes up that region’s gross domestic product. Comparing GDP from one period to the next provides an indication of whether an economy is growing or contracting.

Horizontal market
All kinds of goods and services are sold to various kinds of customers who, all together, make up a market. A service or product has a horizontal market if almost everybody uses it. But if only a select group of people use the product or service, its market is called vertical. Haircuts are an example of a service that appeals to a horizontal market (lots of people). Laser hair therapy is an example of a service that targets a vertical market (a specific group of people).

Industry
For purposes of classification and to simplify analysis, an industry is defined as a group of establishments engaged in similar types of economic activities to produce goods or services. A company that makes potato chips, for example, will be classified as belonging to the same industry—manufacturing—as one that makes chairs.

Inflation
Inflation is the increase in the amount of money and credit circulating in an economy because of a general rise in prices. Statistics Canada produces the monthly Consumer Price Index, which is an indicator of the rate of price changes for goods and services bought by consumers.

Occupation
An occupation is a group of jobs that have similar responsibilities and require a common set of skills. For example, “computer programmer” is an occupation. Computer programmers may have permanent or temporary jobs with specific employers, work on a freelance or contract basis, be self-employed, work full time or part time, or be paid for their work or volunteer their services. They may change jobs or hold several jobs at one time. But because they have the same type of duties or tasks, they share the occupation of computer programmer.

Productivity
Productivity is the level of output produced per unit of input. A more productive labour force, for example, would make more cars during a given period than a less productive one during the same length of time.

Recession
A recession is a sustained drop in economic activity. Specifically, it is two consecutive three-month periods of decline in the gross domestic product.

Supply
Generally, supply is the amount of something available for sale. In a market economy, the price of product is likely to rise if demand for it is high but supply is low.

Vertical market
(See horizontal market)
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