

Calgary Economic Development

OCCUPATION REPORT (I): OCCUPATIONS UNIQUE TO PRIMARY INDUSTRY

January 2008

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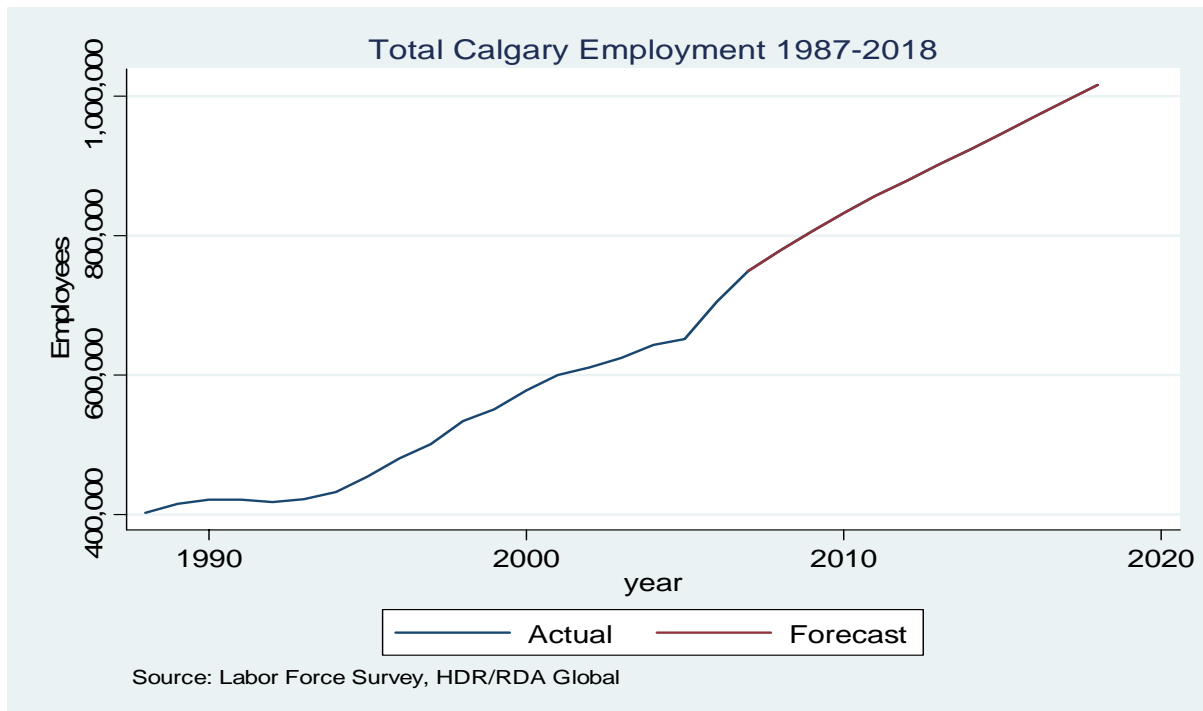
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Figure 1: Total Calgary Employment Forecast (All Industries)



The Calgary economy has seen tremendous growth in labour demand over the previous decade with employment growth reaching an all-time high of 8.1%¹ in 2006. The recent strong growth in the Calgary economy has been driven by a combination of economic factors spurring growth in specific sectors and generally throughout the Calgary economy. Energy prices are a significant driver with West Texas Intermediate oil price rising 17%² in 2006. Investment levels in major construction projects have risen significantly compared to historical levels. Housing starts have risen from 13,700³ starts in 2005 to 17,000 starts in 2006, an increase of 25%. Calgary GDP grew at 7.7% in 2006.

Recent increases in employment levels have been highest in sectors of the Calgary economy which are related to energy, in particular in the professional services sector. However, overall growth has been relatively balanced among industries with significant growth in most sectors of the economy.

As Figure 1 shows, labour demand in the Calgary Economic Region is expected to continue to grow at a healthy rate throughout the forecast, albeit at a lower, more sustainable level. The overall growth in employment in Calgary is expected to decline over the next several years settling at a more sustainable long-term employment growth rate of 2.4%, in line with historical average growth. However, this lower growth rate will continue to result in strong job creation. Over the previous ten years (1996-2006) Calgary employment increased adding 224,000 new

¹ Source: Labor Force Survey

² Source: US Energy Information Administration

³ Source for housing starts statistics and Metro GDP at basic prices was the Conference Board of Canada

jobs. Over the ten year forecast period (2007-2017) Calgary employment growth will result in the creation of an additional 244,000 new jobs. This growth in the Calgary economy will be driven by a number of factors including expectations that oil prices will remain at or near historically high levels. Energy prices are expected to be volatile in the near term, with possible spikes in prices, partially due to the declining value of the US dollar. However, for the long-term forecast, an average annual 1.7% growth rate in oil prices has been forecasted, which is consistent with conservative expectations of energy analysts⁴. Calgary GDP growth will moderate to a strong long term compound annual real growth rate of 3.8%.

Figure 2 Calgary Job Creation in Each Industry

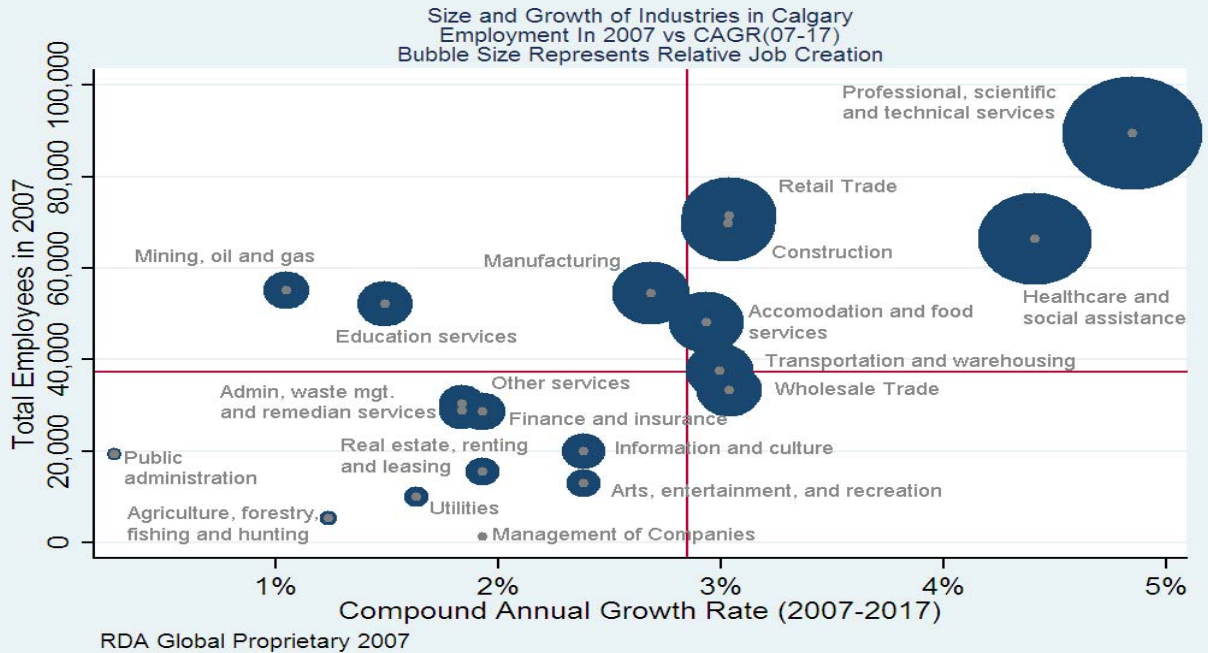


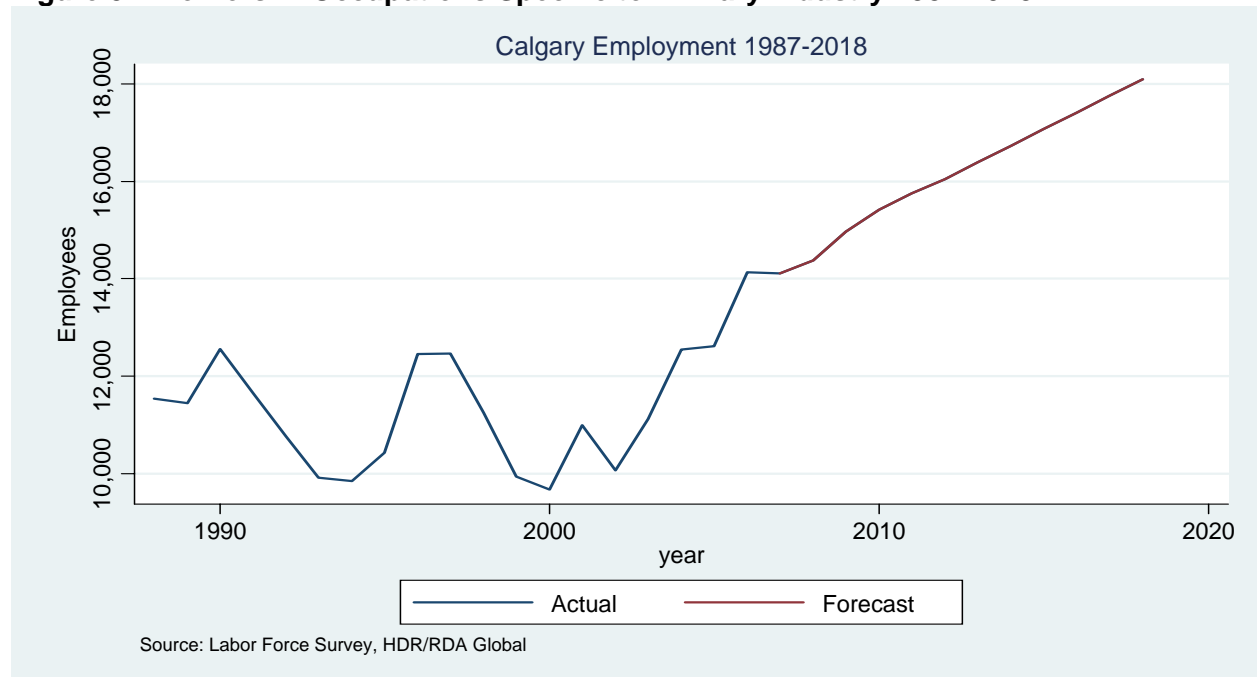
Figure 2 highlights the differences in job creation across industries in Calgary, with the larger circles representing industries with more job creations. Significant gains in employment will be somewhat distributed among economic sectors. However, there will be particularly strong expansion in the professional services sector, which is tied to continued demand for technical and engineering services in the energy sector. There will also be strong job growth in healthcare, driven by overall population growth and growth in the older segments of the population. Job expansion will also continue to be robust in retail, construction, accommodation & food services, transportation, manufacturing, and wholesale. Population growth is expected to drive up demand for education services. Most segments of the economy are expected to continue to see positive growth with employment growth rates in the 1% to 2.5% long-term growth range. However, total job creation in niche industries will be constrained by the relatively smaller size of these segments.

⁴ In development of this forecast, oil price forecasts of the Energy Information Administration and Sproule and Associates were consulted, however, final assumptions in the forecast model were based on a nominal annual growth rate of 1.7%.

OCCUPATIONS SPECIFIC TO PRIMARY INDUSTRY

Workers in this category are primarily composed of agricultural workers, mining and oil and gas drillers, supervisors and other manual labour workers. The category also includes landscaping and building and grounds labourers. Demand for workers with occupations specific to the primary industry is expected to expand at a compound annual growth rate of 2.3% over the next ten years. This growth will be lower than overall employment growth in Calgary of 2.9% over the same forecast period. Growth in demand for these jobs will result in about 3,600 new jobs being created over the forecast period.

Figure 3: Workers in Occupations Specific to Primary Industry 1987-2018



This occupation category is the smallest of the ten occupation groups representing about 14,100 workers in 2007. Historically, demand for workers in this occupational category has been volatile and grown at a slower rate than overall employment growth in the Calgary Economic Region. There is a transition which is occurring among workers in this occupational category with demand for agricultural workers in decline. This decline is being offset by growth in demand for mining and oil and gas labourers. Over 1,600 primary industry jobs were created in the 1997-2007 period and about 3,600 will be created in the 2007-2017 forecast period. Over the forecast period, there will be demand for an additional 700 landscaping and grounds maintenance workers, about 700 supervisors of oil and gas services and about 400 oil and gas drillers, testers and related occupations. Tables 3 and 4 contain additional detail on the outlook for jobs unique to primary industry.

Table 1: Comparison of Job Occupation Categories in Calgary

National Occupational Classification	Total Employment				Compound Annual Growth			Jobs Added		
	1987	1997	2007	2017	1987-97	1997-07	2007-17	1987-97	1997-07	2007-17
A Management occupations	36,858	55,680	74,819	98,676	4.2%	3.0%	2.8%	18,822	19,138	23,857
B Business, finance and administration occupations	90,639	104,579	156,889	189,868	1.4%	4.1%	1.9%	13,940	52,310	32,978
C Natural and applied sciences and related occupations	39,436	51,764	86,925	128,173	2.8%	5.3%	4.0%	12,329	35,160	41,249
D Health occupations	18,121	23,096	38,007	59,079	2.5%	5.1%	4.5%	4,975	14,910	21,072
E Occupations in social science, education, government service and religion	26,756	38,502	61,698	83,847	3.7%	4.8%	3.1%	11,746	23,196	22,149
F Occupations in art, culture, recreation and sport	10,467	14,573	18,889	25,844	3.4%	2.6%	3.2%	4,106	4,316	6,955
G Sales and service occupations	88,787	108,383	163,524	211,685	2.0%	4.2%	2.6%	19,596	55,141	48,161
H Trades, transport and equipment operators and related occupations	54,521	74,654	108,860	141,739	3.2%	3.8%	2.7%	20,133	34,206	32,879
I Occupations unique to primary industry	10,779	12,465	14,111	17,751	1.5%	1.2%	2.3%	1,686	1,646	3,640
J Occupations unique to processing, manufacturing and utilities	13,435	17,002	25,646	36,636	2.4%	4.2%	3.6%	3,567	8,644	10,990
Grand Total	389,800	500,700	749,368	993,298	2.5%	4.1%	2.9%	110,900	248,668	243,930

Table 2: 10-Year Forecast of Occupations Unique to Primary Industry 2007-2017

National Occupational Classification	Total Employment										CAGR 2007-2017	Jobs Added 2007-2017	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016			2017
I01 Contractors, operators and supervisors in agriculture, horticulture and aquaculture	4,876	5,001	5,195	5,337	5,443	5,540	5,634	5,719	5,800	5,878	5,956	2.0%	1,080
I02 Agriculture and horticulture workers	1,075	1,108	1,144	1,171	1,191	1,206	1,220	1,230	1,240	1,248	1,256	1.6%	180
I12 Supervisors, mining, oil and gas	2,482	2,517	2,619	2,707	2,770	2,821	2,885	2,960	3,037	3,113	3,190	2.5%	708
I13 Underground miners, oil and gas drillers and related workers	1,708	1,735	1,807	1,865	1,905	1,939	1,984	2,034	2,087	2,139	2,192	2.5%	484
I14 Mine service workers and operators in oil and gas drilling	495	501	522	539	550	560	573	588	603	618	634	2.5%	139
I15 Logging machinery operators	32	33	34	35	36	37	38	39	40	41	42	2.8%	10
I21 Primary production labourers	3,444	3,482	3,649	3,763	3,852	3,944	4,052	4,157	4,264	4,371	4,482	2.7%	1,038
Grand Total	14,111	14,377	14,971	15,417	15,747	16,047	16,384	16,727	17,070	17,408	17,751	2.3%	3,640

Table 3: Top 50 Occupations Adding Jobs From 2007-2017⁵

Rank	Occupation (4 Digit NOC)	Employees				Jobs Created 2007-2017	CAGR 2007-2017
		1987	1997	2007	2017		
1	I212 Landscaping and grounds maintenance labourers	571	1,495	2,272	2,993	721	2.8%
2	I122 Supervisors, oil and gas drilling and service	741	1,213	2,406	3,091	685	2.5%
3	I132 Oil and gas well drillers, servicers, testers and related workers	497	792	1,553	1,994	441	2.5%
4	I011 Farmers and farm managers	5,404	4,675	2,769	3,203	434	1.5%
5	I215 Oil and gas drilling, servicing and related labourers	340	543	1,059	1,360	300	2.5%
6	I015 Landscaping and grounds maintenance contractors and managers	156	475	786	1,056	270	3.0%
7	I016 Supervisors, landscape and horticulture	177	415	585	770	184	2.8%
8	I021 General farm workers	1,716	1,509	974	1,137	162	1.6%
9	I142 Oil and gas well drilling workers and services operators	159	253	495	634	139	2.5%
10	I012 Agricultural and related service contractors and managers	191	261	446	573	127	2.5%
11	I013 Farm supervisors and specialized livestock workers	278	297	269	330	61	2.1%
12	I131 Underground production and development miners	49	77	155	198	43	2.5%
13	I121 Supervisors, mining and quarrying	22	37	76	98	23	2.6%
14	I022 Nursery and greenhouse workers	197	171	101	119	18	1.6%
15	I211 Harvesting labourers	232	199	112	129	17	1.4%
16	I151 Logging machinery operators	8	16	32	42	10	2.8%
17	I014 Nursery and greenhouse operators and managers	41	36	21	25	4	1.7%
18	Grand Total	10,779	12,465	14,111	17,751	3,640	2.3%

⁵ Note that these job creations in Table 3 capture only jobs unique to primary industry and do not represent total job creations for all of Calgary.