

Industrial Manufacturing Sector Outlook

Manufacturing GDP

Nova Scotia's Industrial Manufacturing Sector in 2017 is expected to post the most significant contribution to GDP since 2010. Growth, driven primarily by an acceleration in shipbuilding activity, is also bolstered by a rise in food manufacturing, aerospace and other manufacturing sectors. The pace of growth is expected to be moderate in 2018 and 2019 before the second wave of the Federal shipbuilding programs bolsters growth between 2020 and 2023. Spill over effects of the shipbuilding programs, together with a favourable exchange rate with the United States, are expected to see manufacturing continue as the leading driver of modest economic growth in the Province.

Overall, employment in this sector is expected to grow at a moderate annual growth rate of 0.5% to 1.5% between 2017 and 2021, with the largest employment gains in transportation equipment (shipbuilding) and wood product manufacturing. Employment gains are anticipated in 2020 and 2021 with the start of the Royal Canadian Navy's shipbuilding program.

Demands from Outside Manufacturing

Growth in other sectors in Nova Scotia, outside of the Industrial Manufacturing Sector, is expected to be constrained over the next 5 years due to limited population growth. Negative natural population growth and out-migration will continue to contribute to this constraint, with the average age of the population rising and the retirement-age population (65+) increasing to nearly 25% over the next decade.

- The aging demographic dampens consumer spending and reduces government tax revenues, thus lowering government sector employment.
- Declines in oil and gas exports are also likely to lower exports and government revenues.
- Nova Scotia's Construction Sector, which hires the largest share of Industrial Manufacturing Sector trades, is expected to continue on a modestly downward trend over the next five years.

Replacing Nova Scotia's Aging Workforce

Replacement demands over the next 5 years for the 11 Industrial Manufacturing Sector trades which are tracked are estimated to be close to 900. Significant numbers of retirements are anticipated for Industrial Mechanic (Millwrights), Machinists, Power Engineers and Welders. Table 1 shows the anticipated change in employment, retirements, and total hiring requirements for the tracked Industrial Manufacturing Sector trades in Nova Scotia, between 2017 and 2022.

Table 1-Change in Employment and Net-Hiring Requirements for Nova Scotia Industrial Sector Trades 2018-2022

Industrial Trades	Employment Growth		Replacement Demand	Total Hiring Requirements
	% Chg.	#	#	#
Partspersons and storekeepers	2.1%	28	158	186
Machinists and machining and tooling inspectors	7.0%	66	164	230
Structural metal and plate work fabricators and fitters	3.4%	6	1	1
Welders and related machine operators	1.0%	20	30	36
Industrial electricians	-3.7%	-33	308	328
Telecommunications line and cable workers	0.0%	0	171	138
Cabinetmakers	-7.7%	-30	50	50
Construction millwrights and industrial mechanics	-15.8%	-270	60	30
Oil and gas well drillers, servicers, testers and related workers	-98.6%	-508	311	41
Power engineers and power systems operators	-3.4%	-36	18	-490

Source: Provincial Occupational Modelling System (POMS), Stokes Consulting

As journeypersons progress through their careers many go on to work in other, often “related”, occupations thereby taking their Certificate of Qualification (CofQ) with them. Table 2 maps program specific trade certifications to the trades and occupations in which workers also hold those certifications. Trades with a significant estimated percentage of certified workers in a particular trade are defined as “related trades and occupations”.

Estimates of the percentage of individuals working in a particular trade or occupation and that have a CofQ in a specific trade are shown in the following table. The source for new hires for these trades and occupations are existing journeypersons and hence present an important additional source of demand for apprenticeship training and certification.

For Industrial Manufacturing Sector trades, contractors and supervisors working in machining and metal forming and mining and chemical processing present an important draw on certification demands. It is particularly important to track demands for contractor and supervisor occupations because individuals in these roles tend to be older and more experienced, therefore creating larger replacement demands.

Demands for mechanical engineering and industrial engineering technologists and technicians present another important demand on journeypersons, in particular industrial mechanics and machinists.

Table 2 – Estimate of Trades Certification and Related Occupations

Tracked Program Groups		Machinist	Welder	Industrial Electrician	Industrial Mechanic (Millwright)	Power Engineer	Other Programs
Related Occupations	% of LF with CofQ	● 55%	● 42%	● 76%	● 43%	● 48%	
Contractors and supervisors, machining, metal forming	51%	● 14%	● 24%				14%
Supervisors, mining and quarrying	36%				● 31%		5%
Mechanical engineering technologists and technicians	32%	● 10%			● 17%		4%
Supervisors, petroleum, gas and chemical processing and utilities	35%			● 20%			15%
Industrial engineering and manufacturing technologists and technicians	29%	● 5%	● 9%	● 6%			9%
Non-destructive testers and inspection technicians	44%	● 4%	● 6%	● 4%		● 4%	27%
Electrical power line and cable workers	59%			● 9%		● 8%	42%
Engineering inspectors and regulatory officers	28%	● 3%	● 5%		● 4%		17%
Machine fitters	31%	● 3%	● 4%		● 4%		20%
Drillers and blasters - surface mining, quarrying and construction	38%				● 10%		27%
Residential and commercial installers and servicers	13%	● 4%	● 6%				4%
Contractors and supervisors, electrical trades and telecommunication	54%			● 9%			45%
Motor vehicle body repairers	41%				● 8%		33%
Motorcycle, all-terrain vehicle and other related mechanics	34%				● 7%		27%
Contractors and supervisors, mechanic trades	39%				● 7%		33%
Construction inspectors	33%	● 2%	● 3%	● 2%			26%
Electrical and electronics engineering technologists and technicians	22%			● 3%		● 3%	16%
Construction estimators	27%	● 1%	● 2%	● 1%		● 1%	21%
Telecommunications line and cable workers	17%			● 2%		● 2%	12%
Manufacturing managers	13%	● 1%	● 1%	● 1%	● 1%	● 1%	9%
Heavy equipment operators (except crane)	11%	● 1%	● 2%		● 2%		7%
Senior managers - construction, transportation, production and utilities	14%	● 1%	● 1%	● 1%		● 1%	10%
Janitors, caretakers and building superintendents	12%	● 1%	● 2%				8%
Other automotive mechanical installers and servicers	15%				● 3%		12%
Bus drivers, subway operators and other transit operators	16%				● 3%		13%
Storekeepers and partpersons	10%				● 2%		8%
Civil engineers	12%					● 2%	10%
Mechanical engineers	6%				● 1%	● 1%	4%

The CANTRAQ system, developed by Prism Economics, tracks requirements for apprenticeship qualifications for individual trade programs in every province across Canada. The system translates employment and replacement demands across principle trades and the related occupations which draw on the specific trade certifications. The analysis tracks anticipated changes in employment, replacement demands, apprenticeship registrations and completions, levels of trade certification and completion rates.