

Canada's oil and gas workforce skills and occupations are shifting, says PetroLMI report

NEWS RELEASE

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CALGARY – As the Canadian oil and gas industry adapts and changes its business to remain globally competitive, new skills and job opportunities are emerging and replacing more traditional occupations, according to the latest report released today by PetroLMI, a division of Energy Safety Canada.

The report [*A Workforce in Transition: Oil and Gas Skills of the Future*](#), examines the shifting skills and occupations in Canada's energy industry based on three key trends: federal and provincial government current and proposed regulatory changes; the adoption of automation and data analytics technologies; and, the implementation of advanced manufacturing processes in the development of resources.

"This report examines where the exciting opportunities lie for new and interesting careers, and those occupations that will be on the decline, if not eliminated, because of these changes to the oil and gas business," said Carol Howes, Vice President of Communications and PetroLMI for Energy Safety Canada.

Continued efforts by both industry and governments to make oil and gas development economically and environmentally sustainable are changing the skill requirements of the energy sector. Occupations not traditionally considered oil and gas jobs will be more in demand – those such as data management and analytics specialists, instrumentation technologists and software engineers. Increasing numbers of natural science professionals and environmental service workers will also be required. Meanwhile, field workers will be expected to have both mechanical and digital skills, as they use increasing amounts of data analytics for decision-making.

New government regulations governing major energy project approvals will require a greater need for expertise in Indigenous traditional knowledge, public health specialists, biologists and economic development specialists, says the report. Meanwhile, communications and consulting abilities will be heavily relied on to earn and maintain public support for these projects.

A new climate strategy agreed to by the federal and most provincial and territorial governments that includes a reduction in carbon dioxide and methane emissions will increase demand for skills in measurement, mitigation and reporting requirements. There will also be a requirement for expertise in other forms of power, as the industry looks to reduce its emissions by adding battery technology, wind or solar to its own energy needs.

The adoption of automation and data analytics technologies is already improving Canada's oil and gas industry's productivity, safety and profitability. As a greater number of tasks are automated, however, more of the workforce will need to be digitally literate as well as more innovative and creative in looking for productivity improvements. While data scientists are not new to the oil and gas industry, their role will increase as analytics are applied to more data streams across the industry.

Shifting to an operationally intensive, advanced manufacturing model for resource development is also already generating more demand for geotechnical, engineering, project management and supply chain expertise.

"With all of this change comes both challenges and exciting opportunities for Canadians working in the oil and gas industry and for those who are looking to become part of it," said Howes. "Like other industries, the oil and gas industry is adapting and evolving and its workforce will need to do so also."

Additional quotes from the report:

“Many of the new or emerging opportunities will be appealing to workers who are seeking challenging, technology-driven occupations, such as directing automated rig equipment, mapping paths for autonomous trucks or managing large amounts of technical data. Workers will be required to support energy diversification and efficiencies, designing and building wind or solar installations. Meanwhile, strong communications and stakeholder relations skills will be essential for consulting with the public or working with Indigenous partners to create economic development plans.” - Carol Howes, Vice President of Communications and PetroLMI, Energy Safety Canada

“With these new regulations and the need for compliance, we’re going to need expertise on water technology, wildlife like caribou, and on entire ecosystems.” - Gary Leach, President, Explorers & Producers Association of Canada

“The expertise that will be required will predominately come from science or engineering trained individuals with excellent computer and analytic skills. These individuals will be required to analyze large amounts of raw data using specialized software that transforms, organizes and models the data in order to draw conclusions and support decision-making.” - David Humphreys, Vice President of Operations, Birchcliff Energy

“The driller of tomorrow will have tremendous leadership capabilities, and will be able to mentor, coach and motivate his crew.” - Mark Scholz, President, Canadian Association of Oilwell Drilling Contractors

PetroLMI’s reports are available at CareersinOilandGas.com.

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The Petroleum Labour Market Information (PetroLMI) Division of Energy Safety Canada is a leading resource for labour market information and trends in the Canadian oil and gas industry. PetroLMI specializes in providing labour market data, analysis and insights, as well as occupation profiles and other resources for workforce and career planning.

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