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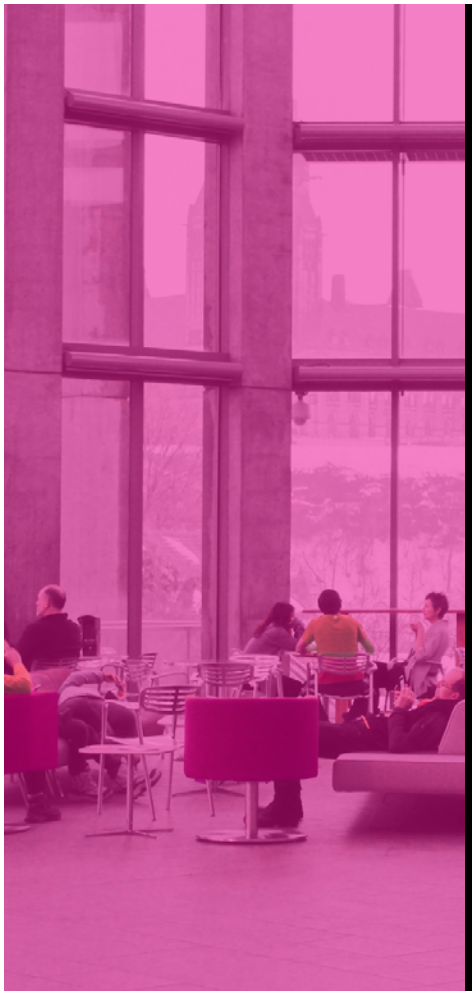
Employment Impacts of Canada's Emission Reduction Plan

Issue briefing | July 8, 2025



Future Skills Centre | Centre des Compétences futures

The Future Skills Centre – Centre des Compétences futures (FSC-CCF) is a forward-thinking centre for research and collaboration dedicated to preparing Canadians for employment success. We believe Canadians should feel confident about the skills they have to succeed in a changing workforce. As a pan-Canadian community, we are collaborating to rigorously identify, test, measure, and share innovative approaches to assessing and developing the skills Canadians need to thrive in the days and years ahead.

The Future Skills Centre was founded by a consortium whose members are Toronto Metropolitan University, Blueprint, and The Conference Board of Canada.

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Key findings

- We estimate that the Emission Reduction Plan (ERP), released by the federal government in March 2022, will slow Canada's long-term growth and lower employment across Canada by 2.6 per cent in 2050, representing a loss of over 712,000 jobs versus our baseline forecast in that year.
- The ERP's negative impact on Canadian economic growth is driven by the redirection of capital from productive capacity toward emissions abatement (e.g., carbon capture, electrification) and a legal cap on upstream oil and gas sector emissions, curbing fossil fuel production that would otherwise occur.
- Industries directly hit by the ERP include oil and gas extraction, for which employment could be 29,000 jobs lower than baseline by 2050.
- We expect lower employment in the industries that are deeply integrated into oil and gas and other extractive industries. For example, employment in support activities to mining and oil and gas could be 49,000 lower by 2050, while professional and scientific services could be 126,000 lower.
- The utilities industry could see stronger growth under the ERP, gaining 24,000 jobs over baseline by 2050, driven by increased investments in electrification, renewable energy infrastructure, and modernization of utility networks.

The bumpy road to net zero

The ERP, released by the federal government in March 2022, establishes greenhouse gas (GHG) emission-reduction targets across nine broad sectors of the economy out to 2030. The goal is to put us on a pathway to a net-zero economy by 2050.[1] Implementing the plan will reduce emissions, but it comes with economic costs.

The ERP will require a sharp redirection of productive capital toward carbon-reducing assets and will hinge upon new hydrogen and carbon capture, utilization, and storage technologies that may take time to develop and adopt on a large scale.

As such, in this report we use a scenario we previously modelled that examines the economic impact of a "realistic" deployment of the ERP. This scenario makes several assumptions that aim to paint a picture of what Canada's net-zero transition could actually look like.[2]

1 Environment and Climate Change Canada, "2030 emissions reduction plan: Canada's next steps for clean air and a strong economy." The ERP references 115 policies, such as funding for various programs, regulations, and a mix of tax incentives, strategies, task forces, or potential future commitments for action.

2 Conference Board of Canada, The, *Assessing the socio-economic impacts of Canada's 2030 Emissions Reduction Plan*. The results presented in this study reflect the difference between CBoC's baseline long-term national economic forecast and various ERP deployment scenarios,including the realistic scenario used in this report.

We estimate that the realistic implementation of the ERP will put Canada on track to reduce emissions by about 65 per cent to 245 million metric tons (Mt) of carbon dioxide–equivalent (CO_2e) emissions in 2050. However, in achieving these emissions reductions, Canada's real GDP would be 3.8 per cent lower, employment would be 2.6 per cent lower, and consumer prices would be 2.5 per cent higher versus a world without the ERP. As a result, there will be 712,000 fewer jobs in Canada in 2050 than would otherwise be the case, and there will be substantial changes in industry mix. Mitigating these impacts will require retraining workers who are displaced in service of the broader environmental good and potentially changing immigration levels to prevent an unnecessary rise in unemployment.

Much of the negative economic impacts stem from the necessary redirection of capital from productive capacity toward investments that reduce emissions. This would include things like carbon capture and storage and the replacement of fossil fuel use with electrification. The result is a tempering of the long-term growth trajectory for Canada's economy.

The largest economic consequences come from the ERP's implementation of a legal cap on GHG emissions in the upstream oil and gas sector that is assumed to come into force in 2030. This cap imposes constraints on production in that year and beyond.[3] Under the ERP, the oil and gas sector's GDP will be about 37 per cent below our baseline forecast by 2050.[4]

More broadly, the structural shift in economic activity away from high-emitting industries would create ripple effects across supply chains and service-oriented industries. On one hand, negative impacts would arise from the declining demand seen in businesses that depend on fossil fuel activity, such as transportation, engineering services, and logistics. This would lead to widespread additional employment losses beyond primary extraction industries.

On the upside, higher demand for some products and services, such as non-emitting electricity and critical mineral mining as well as their supply chains, will see higher employment in 2050 as a result of the net-zero transition.

The result is major changes in Canada's industrial mix, with implications for employment levels in different sectors and occupations.

3 Another recent study by CBoC, commissioned by the Saskatchewan Economic Impact Tribunal in 2024, estimates output constraints on oil and gas that ERP measures would have on Saskatchewan's production. The Tribunal's public release and report can be found here: https://www.saskatchewan.ca/government/news-and-media/2024/september/24/government-of-saskatchewan-rejects-federal-oil-and-gas-emissions-cap-and-methane-75-regulations.

4 In our analysis, we assume that the cap on oil and gas emissions would come into effect in 2030 and that it would be complied with immediately. We also assume the cap on GHG emissions declines linearly from 109 Mt CO2e in 2030 toward a net-zero target by 2050. The full report is available here: https://www.conferenceboard.ca/product/impacts-of-canadas-2030-emissions-reduction-plan_apr2025/.

Most industries will see negative impacts

The ERP will cause a restructuring of the Canadian labour market. In aggregate, employment will be 712,000 lower in 2050 across industries that experience lower employment. (See Appendix A for more details.)

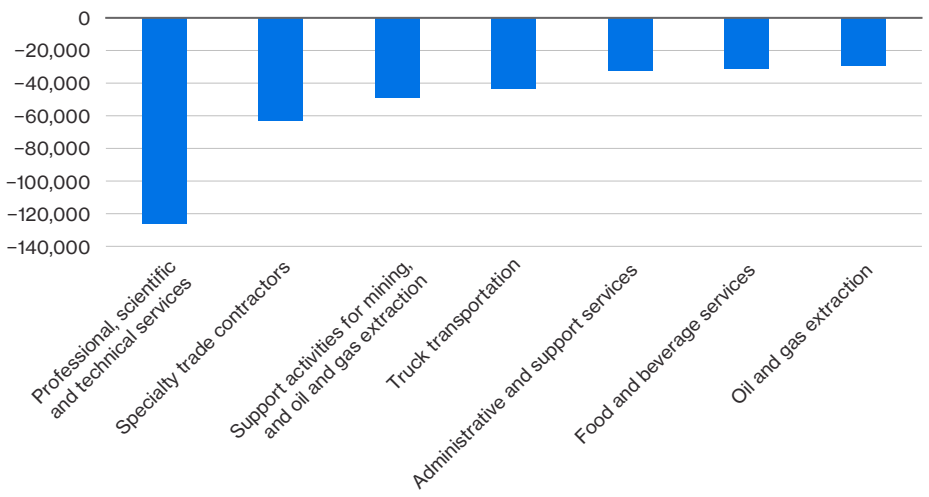
Industries that are major sources of emissions are among the most impacted, including:

- oil and gas extraction (–30,000);
- support services to oil and gas and mining (–49,000);
- agriculture, forestry, fishing and hunting (–27,500);
- support activities for agriculture and forestry (–13,000).

However, some of the largest employment drops occur in secondary industries. (See Chart 1.) This is the result of reduced business activity in high-emitting sectors and reduced economic potential due to the changes in business investment. For example, the most impacted industry is professional services, where employment is 126,000 lower. This labour-intensive industry includes businesses like consulting, engineering, and IT services, all of which would see reduced demand. Other examples include:

- truck transportation, which would be hit both directly by carbon pricing mechanisms as well as downstream supply chain impacts seeing less merchandise being transported across the entire economy (–43,000);
- administrative services and support services, as these sectors would feel the reduced demand for their services due to the overall economic slowdown (–32,000);
- specialty trade contractors and heavy and civil engineering construction, which include construction services related to large-scale fossil fuel infrastructure (–66,000);
- publicly provided services, which will also suffer from the lower tax revenues arising from slower economic growth combined with the need to bolster support for direct air capture technology and equipment;
- food services and drinking places, which depend upon worker wages across the economy for final consumption expenditures (–30,000).

Chart 1
Carbon-intensive industries and their supply chains face largest decline under ERP
(job losses relative to Baseline by 2050, by industry)



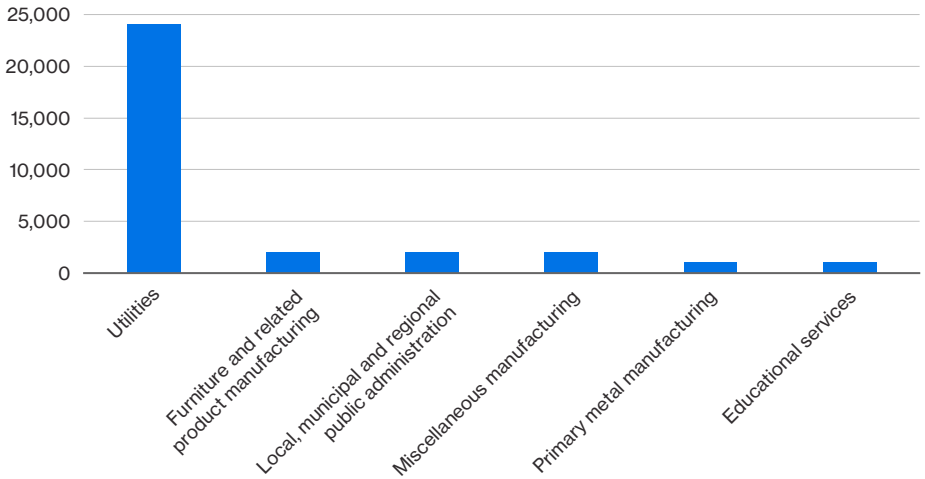
Source: The Conference Board of Canada.

Power generation is the main beneficiary

Some industries do see higher employment in 2050 as a result of the ERP, but the gains are modest relative to the declines. While declining industries will see 756,000 fewer jobs in 2050, industries with gains see an aggregate increase of only 44,000 positions. The result is that Canadian employment will be lower by 712,000 jobs in 2050.

One of the top beneficiaries is the utilities industry, which includes electric power generation, transmission and distribution. Growing investments in infrastructure required for electrification and renewable energy projects leads to employment being 24,000 higher by 2050 as a result of the ERP. (See Chart 2.) This represents a gain of over 14 per cent above baseline. Other beneficiaries include manufacturing segments, such as primary metal products, driven by growing demand for renewable energy products like electric vehicle batteries.

Chart 2
Electrification demand benefits the power gen industry
(job gains relative to Baseline by 2050, by industry)

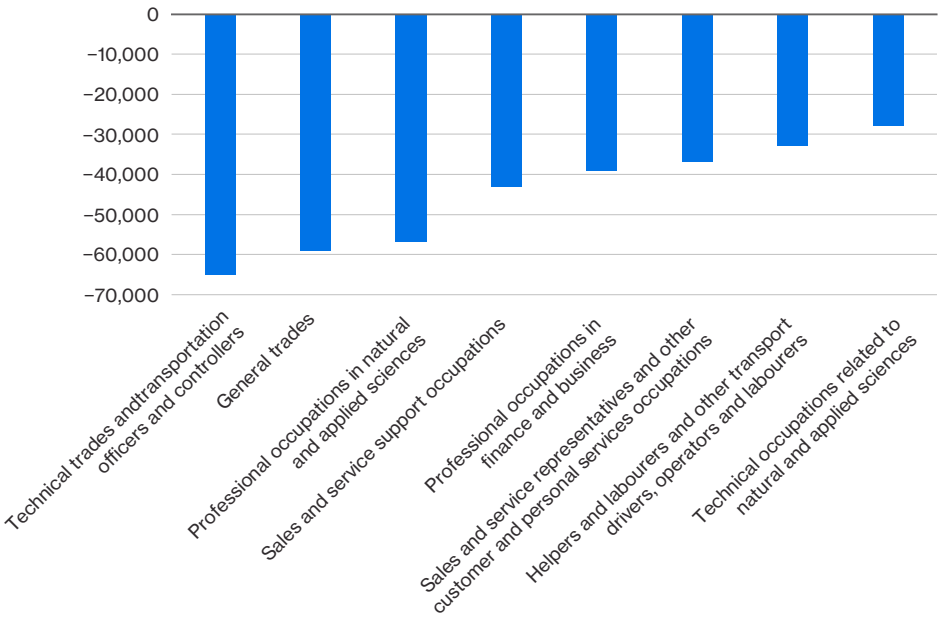


Source: The Conference Board of Canada.

Occupational impacts track broader industry impacts

Among occupations, it is no surprise that the most impacted jobs would be those heavily represented in the most vulnerable industries. Many skilled trades, industrial technicians, and transportation-related roles are among the most affected. As well, many professional roles, particularly among those providing services to vulnerable sectors, would also see a slowdown in demand for their occupations. (See Chart 3.)

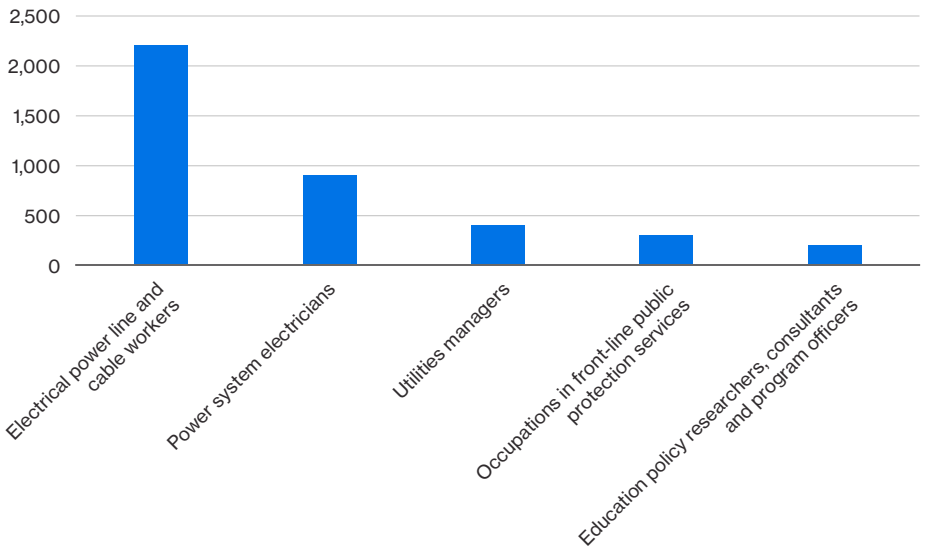
Chart 3
Manual workers and professional services occupations hardest hit under the ERP
(job losses relative to Baseline by 2050, by occupation)



Source: The Conference Board of Canada.

Conversely, occupations that would be higher under the ERP include workers in fields related to power systems and distribution, reflecting the large growth in employment in the utilities sector. (See Chart 4.)

Chart 4
Occupations in electrical power sector grows under the ERP
(job gains relative to Baseline by 2050, by occupation)



Source: The Conference Board of Canada.

Actionable insights

If fully implemented in its current form, the ERP would cause major changes in Canada's industrial mix. These changes would greatly reduce GHG emissions, though our assessment is that we would fall short of our net-zero targets, with net GHG emissions reaching 245 Mt CO2e in 2050.

The economic shifts brought about by the ERP will have an outsized impact on several industries and the demand for their corresponding occupations. Workers seeing a large decrease in demand for their occupation will need to reorient their career, whether by changing industries, switching occupations, or moving to areas experiencing job growth.

The shifts in industrial structure and labour market demands are likely to introduce large labour market frictions as employment demand booms in some areas while declining precipitously in others. The declines far outweigh the gains. Without additional investments to offset the expected losses, the ERP implementation will mean fewer Canadian jobs. Canada needs to act now to mitigate these impacts.

If the ERP is implemented as currently envisioned, leaders concerned about the potential impacts presented in this study should consider the following actions:

For university and college leaders

1. Expand select programs to meet future demand in careers related to occupations expected to grow under the ERP, such as in electrical engineering and power systems technicians, or in secondary sectors that are expected to grow, such as the manufacturing of direct air capture equipment and other clean technologies.
2. Progressively reduce enrollment and training programs for careers that are in decline, such as oil and gas occupations.
3. Deliver new programs tailored to retraining specific workers from industries highly impacted by the ERP, particularly oil and gas. These programs should be tailored to reskilling workers and leveraging their work experience to transition into similar roles that are growing (e.g., oil and gas drilling workers may shift toward mining labour or to residential and industrial construction). Wherever possible, these reskilling programs should require minimal time for program completion and be flexible enough in delivery to accommodate people who want to transition before they may lose their jobs.

For the federal government

1. Create dedicated funds to support workers transitioning out of affected industries, such as temporary income support and training benefits to redeploy displaced workers to growing sectors. This could be administered through an expansion of the Employment Insurance program.
2. Launch a marketing and public awareness campaign to put the spotlight on occupations that will be in high demand, such as in clean energy and residential construction, and on options that are offered to those who are vulnerable.
3. Introduce new funding for initiatives to incentivize young people to pursue training in fields likely to benefit from the ERP, such as occupations in fields tied to electrical power generation and distribution.
4. Adjust immigration rates to accommodate lower employment levels and prevent rising unemployment.

Appendix A

Detailed results

Table 1
Job gains and losses relative to Baseline by 2050, by industry

Industry (2-digit NAICS)	Job gains/losses
Professional services	–125,661
Transportation and warehousing	–90,761
Mining and oil and gas extraction	–85,490
Construction	–83,613
Health services	–62,973
Retail trade	–45,808
Accommodation and food services	–35,700
Administrative services, and waste management and remediation services	–34,863
Finance and insurance	–30,128
Agriculture, forestry, fishing and hunting	–27,384
Wholesale trade	–26,769
Personal services	–24,668
Manufacturing	–24,041
Information services	–17,569
Real estate and rental and leasing	–14,267
Arts, entertainment and recreation	–6,751
Public administration	–272
Management of companies and enterprises	–91
Educational services	577
Utilities	23,808
Total	**–712,425**

Source: Conference Board of Canada.

Appendix B

Methodology

To assess the labour force impacts of the ERP, we considered two future emissions scenarios and deployed advanced forecasting tools. These are described in greater detail below.

Scenario descriptions

The Baseline scenario reflects the long-term national economic outlook forecast by The Conference Board of Canada (CBoC) as of December 2023. This baseline includes carbon pricing. No additional ERP or Canada Net-Zero 2050 policies, goals, or technological adoption rates are included in this forecast. Baseline GHG emissions intensities are forecast based on the historical pace of emissions intensity growth, validated against the current inventory of intensity-improving projects (e.g., carbon capture, utilization, and storage projects).

The ERP scenario assumes that proposed policies from Canada's ERP are implemented as intended but that they do not meet Canada's GHG targets by the year 2050 given the likely responses that ERP policies would generate among businesses and consumers. In this scenario, emissions targets are not reached for several reasons, including a lack of or delay in funding for large abatement projects as well delays in development and construction; abatement technologies are less efficient at reducing GHG emissions intensities than expected; the cost of abatement technologies is too high to implement fully; and households purchase key lower-emitting heating appliances and vehicles at a slower pace than is needed due to high costs and uncertainty around new technologies.

The difference between the Baseline and ERP scenarios in terms of employment indicates the estimated impact of the ERP on these metrics.

For more details on the ERP scenario, see our full report commissioned by the Government of Alberta.[1]

1 Conference Board of Canada, The, (2025). *Assessing the socio-economic impacts of Canada's 2030 Emissions Reduction Plan: final report*.

National model

The Conference Board of Canada's Long-Term Forecasting Model (LTFM) was used to conduct the analysis on the Canadian economy. The LTFM is a quarterly macroeconomic model that emphasizes factors important for forecasting the long-term prospects for the economy. These factors include a detailed consideration of population and its age structure as well as a disaggregated modelling of prices, employment, and investment expenditures. The government sector is also treated in detail in LTFM and reflects the most recent institutional environment. Projections of potential output allow the model to be used for long-term analysis.

There are about 1,700 variables in the model, of which 600 are behavioural equations. The variables refer to many of the variables in the National Income and Expenditure Accounts as well as related indicators for productivity, wages, prices, financial markets, international capital flows, and exchange rates. Over 900 of these variables form a single simultaneous block in the model, reflecting the important interdependence of its various sectors. The most important of the 600 exogenous variables in the model are foreign economic indicators and variables relating to government expenditures and revenues and demographic characteristics of the population.

The model is based on the neoclassical synthesis and thus possesses many of the properties associated with such models. The national model is a multi-sector model with wages and prices driven by sector-specific production functions. Investment expenditure is based on the capital stock solved as a factor in a constant elasticity of substitution (CES) production function. An effort is made to ensure that the rate of capital-labour substitution implicit in the investment equations is also reflected in the employment equations. Output is largely expenditure determined in the model, but there are supply-side feedbacks through sector capacity measures that influence prices, imports, and exports, and thus, in turn, output.

Model of Occupations, Skills, and Technology

The Model of Occupations, Skills, and Technology (MOST) was used to estimate employment impacts at a more detailed level. MOST is a tool developed by CBoC in partnership with Future Skills Centre.[2] The MOST differs from traditional labour market models in its innovative approach and exceptionally detailed labour market outlook. It provides granularity by categorizing occupations into five-digit NOCs[3] and industries into four-digit NAICS,[4] while also offering insights at the provincial and territorial levels. It also provides comprehensive and forward-looking analysis, with projections extending years into the future.

The MOST forecasts equilibrium employment conditions and labour market frictions for each year. A key innovation in the model is the ability to estimate labour market transitions based on the degree of skill matching on both sides of the market. This simulation not only identifies labour market inefficiencies but also serves as a powerful analytical tool for policy evaluation, shedding light on unmet labour demand and supply.

Drawing on multiple regularly updated data sources, including the Census of Population, the Labour Force Survey, the Job Vacancy and Wage Survey, Vicinity Jobs, and CBoC's employment and demographic projections, the MOST provides a comprehensive and detailed view of the labour market.

2 Conference Board of Canada, The, *The Model of Occupations, Skills and Technology (MOST)*.
3 The National Occupational Classification (NOC) is a system used in Canada to classify and organize occupations based on skill type and skill level.
4 NAICS stands for North American Industry Classification System, which is used in Canada, the United States, and Mexico to classify businesses and industries based on similar economic activities.

Appendix C

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