POWER SHARE | SHAPING FUTURE WORK

WORKER VOICE AND EFFECTIVE TRANSITIONS FOR FOSSIL FUEL WORKERS IN CANADA

BY JIM STANFORD AND KATHY BENNETT

DECEMBER 2025

CENTRE FOR FUTURE WORK

centreforfuturework.ca/powershare/

PowerShare

Shaping Future Work

This research paper is published by PowerShare, a project to investigate workers' collective voice and agency in the future of work. Work is changing due to many forces: technology, business models, labour regulations and policies, and social attitudes. Will workers have a real say in what work becomes? Will they have the voice and power to meaningfully shape the future of work, and protect their interests?

About The Authors

Dr. Jim Stanford is Economist and Director of the Centre for Future Work. He worked for many years as Economist and Director of Policy for Unifor (and before that the Canadian Auto Workers), and now resides in Vancouver. He is also Harold Innis Industry Professor of Economics at McMaster University, and an Honourary Professor of Political Economy at the University of Sydney.

Kathy Bennett is a long-time labour policy researcher, librarian and archivist. She served for many years as research librarian at Unifor (and before that the Canadian Auto Workers), and now lives in Wasaga Beach.

Acknowledgments

The authors thank the participants in our key informant interviews for generously sharing their time and ideas.

The Centre for Future Work is a progressive labour economics research institute based in Vancouver. Learn more at centreforfuturework.ca.

PowerShare is a partnership between the Centre for Future Work and the Canadian Centre for Policy Alternatives with support from the Atkinson Foundation.

CENTRE FOR FUTURE WORK

ATKINSON
For social and economic justice

CCPA
CANADIAN CENTRE for POLICY ALTERNATIVES
CENTRE CANADIEN de POLITIQUES ALTERNATIVES

Table of Contents

Summary

PROGRESS ON REDUCING GREENHOUSE GAS emissions in Canada regularly confronts concerns about job losses for those who work in fossil fuel industries. A convincing strategy for supporting the employment transitions associated with the phase-out of fossil fuels is essential — not only to make the transition fairer, but also to overcome the political hurdles that fears over fossil fuel job loss place in the way of emissions reduction.

Past experience proves it is possible to phase-out fossil fuel activities without involuntary lay-offs or undue hardship for fossil fuel workers. However, transition planning in Canada to date has been long on aspiration, and short on concrete protections for affected workers. Most policies emphasize consultation and dialogue, not binding agreements and entitlements. And instead of clear guarantees of employment and income for affected workers, workers are typically offered retraining subsidies and career counselling. In a labour market defined by chronic insecurity and fierce competition for decent work, this does not convince fossil fuel workers that their employment and incomes will be protected.

A particular weakness of past transition initiatives in Canada has been the failure to empower fossil fuel workers, and their unions, with guaranteed channels of voice and input into transition policies, backed up with the ability to negotiate binding commitments and protections. This absence of a genuine say in how transition occurs, and how workers are supported through it, undermines the credibility of a fair transition, reinforcing hostility among many fossil fuel workers and communities to the energy transition.

This report addresses the failure of transition planning in Canada to provide fossil fuel workers with genuine voice, bargaining power, and binding protections. Collective worker voice can help to address any workplace challenge — from technological change to racial inequality, health and safety practices to fair compensation. The coming transition away from fossil fuels is another challenge which genuine worker input, representation, and bargaining power can help solve. This paper shows how better transitions can be achieved when fossil fuel workers have genuine voice and power.

The paper starts by providing a comprehensive statistical overview of fossil fuel employment in Canada (accounting for under 1% of national employment), its absolute and relative decline over the last decade, and the various ways the labour market can adjust to falling fossil fuel employment. Then the paper provides quantitative and qualitative data on the opinions of fossil fuel workers about coming changes in their industry, their personal employment security, and how their interests can be best protected as the transition continues. Fossil fuel workers have little confidence that governments and employers will integrate their concerns and interests meaningfully into transition planning; they have much more confidence that trade unions and collective bargaining could meaningfully protect their interests. After reviewing the strengths and weaknesses of past transition policies in Canada, the paper concludes with eight recommendations to empower fossil fuel workers with genuine voice and bargaining power. Those recommendations would help ensure a fairer transition – while neutralizing the false claims of fossil fuel interests that the energy transition threatens Canadians' livelihoods.

Recommendations for Enhancing Worker Voice in Energy Employment Transition Planning
1. Joint Transition Committees.
2. Minimum Notice Requirements.
3. Requirement to Negotiate.
4. Strong Employment and Income Guarantees.
5. On-Site Presence for Transition Support Services.
6. Community Benefit Agreements.
7. Employer Neutrality on Unionization.
8. Industry-Wide Transition Planning Authority.

Introduction

As part of the global Paris Agreement process, Canada has committed to significant reductions in its greenhouse gas emissions by 2030, and to reach a net-zero emissions status for its economy by 2050. Those commitments will ultimately require the phase-out of most uses of fossil fuels. However, actions to fulfil those commitments, and more generally reduce the environmental impact of economic activity in Canada, often spark concerns about the loss of employment opportunities and a reduction in economic growth and incomes. Abundant research shows that thanks to large investments in renewable energy generation and infrastructure, energy efficiency and conservation measures, and non-emitting transportation systems, the transition away from fossil fuels will be associated with more investment and employment, not less.[1] Nevertheless, for those Canadians currently working in fossil fuel-related activities (including the extraction, processing, transportation, and distribution of fossil fuel products), the prospect that their industry will ultimately disappear is understandably daunting. Their concerns have been weaponized by industry interests seeking to prevent or delay policies that reduce fossil fuel production and use.

In this context, the prospects for a supported and fair employment transition, through which current jobs in fossil fuel activities would be phased out over time, replaced by new jobs in other industries (including, but not limited to, renewable energy and other sustainable energy roles), takes on a vital political importance, as well as economic significance. To neutralize efforts by fossil fuel industry interests to stymie cli-

[1] See Bridge and Stanford (2025) for a recent survey of Canadian and international research on the net employment benefits of the energy transition.

mate policies on (false) grounds that they will reduce employment, a convincing strategy for planning and supporting the employment transitions associated with the phase-out of fossil fuels is essential. To that end, trade union and environmental advocates have promoted the idea of a 'just transition',[2] through which the economic interests of current fossil fuel workers could be protected as the energy transition proceeds.[3]

The goal of a fair and gradual transition has received considerable attention in Canadian climate policy debates and policy-making. At the federal level, the government has made commitments to legislation enshrining a fair approach to employment transition, held extensive consultations with affected stakeholders, and eventually implemented in 2024 a Canadian Sustainable Jobs Act to support workers and communities affected by the anticipated phase-out of fossil fuels in certain uses and places. Transition policies attached to specific events (most importantly the closure of coal-fired electricity generation facilities in several provinces) have included measures to support workers affected by those actions. The general principle that fossil fuel workers must have voice, rights, and fair protections as the energy transition proceeds is broadly accepted.

Most of Canada's fossil fuel transition policies to date have emphasized consultation and dialogue, not binding agreements and entitlements.

However, the concrete mechanisms through which a fair transition is pursued leave much to be desired in Canada. Some international examples of planned employment transitions have featured long-term advance planning, firm timetables for phasing out fossil fuel production or use, concrete income protections and alternative employment opportunities, and generous financial supports.[4] In contrast, most of Canada's fossil fuel transition policies to date have emphasized consultation and dialogue, not binding agreements and entitlements. And instead of clear guarantees of employment and income for affected workers, Canadian plans have typically offered retraining supports and career counselling. In a labour market marked by chronic insecurity and fierce competition for scarce decent work, this obviously fails to assuage the fears of fossil fuel workers that their economic prospects are jeopardized by the energy transition.

[2] For various reasons discussed below, this term has fallen out of favour in many constituencies, in favour of terms like 'sustainable jobs strategy' or 'planned and supported transition'.

[3] See Chejfec et al. (2025), Hulse (2023), the International Labour Organization (2015), and Zinecker (2018) for introductions to the ongoing 'just transition' discourse.

[4] Perhaps the 'gold standard' of transition planning in this context (to use a mixed mineral metaphor!) was the phase-out of black coal mining in Germany over a 20-year period concluding in 2019, which phased out some 80,000 mining jobs through a suite of well-resourced support programs (including early retirement, voluntary severance incentives, local economic diversification and job-creation initiatives, and income guarantees) without any involuntary layoffs. See Sheldon et al. (2018) for details.

There are some examples of successful transition efforts in Canada. The phase-out of coal-fired electricity generation in Ontario between 2005 and 2014 (undertaken by a centrally planned public power company, with a unionized workforce holding enforceable seniority, severance, and job transfer rights) is an example of what is possible. That phase-out occurred without involuntary layoffs. Other transitions offered less comprehensive and reliable supports, including transition plans for workers affected by the closure of coal-fired power (and associated mining) in Alberta, Saskatchewan, New Brunswick, and Nova Scotia. The federal government's Auditor General harshly criticized these programs — which were delivered through a spate of pre-existing federal agencies, with no overarching implementation plan or governance and accountability structure. The Auditor General's report summarized these failure starkly:

> "Natural Resources Canada, working with Employment and Social Development Canada and partners on behalf of the federal government, was not prepared to support workers and their communities for a just transition to a low-carbon economy. Although new legislation had been planned for 2021, no federal implementation plan, formal governance structure, or monitoring and reporting system was in place… We also concluded that in the absence of a federal approach for a just transition to a low-carbon economy, Employment and Social Development Canada, the Atlantic Canada Opportunities Agency, and Prairies Economic Development Canada had not adequately designed the federal programs and benefits to support a just transition for workers and communities affected by the accelerated federal phase-out of coal-fired electricity. In our view, this represents a significant missed opportunity, as the coal phase-out is the first of several transitions to a low-carbon economy facing Canadian workers, communities, and governments." (Office of the Auditor General of Canada, 2022)

That federal initiative, like others invoking the rhetoric of 'just transition', was long on aspiration and consultation, and short on implementation and effective guarantees. Many of those involved in public consultations regarding employment transitions have noted the absence of concrete protections, mechanisms for binding decision-making, and meaningful worker voice in the design and implementation of these programs. Specifically, it is rare that fossil fuel workers have genuine ability to advance concrete and specific demands through the transition process, to ensure that their concerns are given more than lip service. The absence of genuine mechanisms for fossil fuel workers to have an effective say in how transition occurs, and how workers are supported through it, undermines the credibility of the very idea of 'transition' among many fossil fuel workers and communities.

Meanwhile, the nature of transition planning in Canada is made even more nebulous by the fact that no general transition away from fossil fuel production and use is in fact occurring. With the exception of the federally-mandated phase-out of coal-fired

electricity generation by 2030 (still in course in New Brunswick and Nova Scotia, and which the province of Saskatchewan seems to be ignoring[5]), fossil fuel production and consumption do not face direct regulatory constraints and have continued to grow. Policies aimed at reducing their use over time (such as carbon pricing, an emissions cap on petroleum production, and mandates for the adoption of electric vehicles) are fiercely opposed by fossil fuel interests, and (at time of writing) seem politically uncertain. Discussing employment transitions associated with the phase-out of fossil fuels thus seems rather hypothetical at a time when fossil fuel production and use in Canada is growing, not shrinking. As illustrated below (in Figure 3), Canadian oil and natural gas production have continued to expand. Oil output has grown 35% in the last decade (mostly from bitumen projects, mostly destined for exports), while natural gas production grew 24% in the same time. In contrast, coal production fell 38% between 2014 and 2024, in part due to the phase-out of coal-fired electricity generation in Alberta; however, significant coal production in Canada continues.[6]

Ironically, even though oil and gas production has increased, it is clear that an employment transition away from fossil fuel work is nevertheless occurring. As documented below, total direct fossil fuel employment has declined by some 38,000 positions (or 17.6%) since peaking in 2014. That represents a pace of relative decline consistent with the full phase-out of fossil fuel employment by 2050 (in line with Canada's net-zero commitment). That significant decline in fossil fuel employment cannot be attributed to climate policies: as indicated, fossil fuel production has increased. Instead, it represents the impacts of instability in world commodity prices (with oil price collapses in 2014 and again in 2020), disinvestment by petroleum companies (which have distributed most of their profits to shareholders through dividends and share buybacks, rather than reinvesting them[7]), and the adoption of labour-saving technologies in many applications (such as self-driving trucks in bitumen mining projects). Again, with the exception of former workers in coal-fired electricity generation, most of this disemployment occurred without any kind of special 'transition' support (beyond statutory protections like Employment Insurance, or severance and pension entitlements negotiated by unions). In this regard, the reduction of fossil fuel employment that has occurred (by accident more than design) over the past decade is no different from the chronic insecurity facing workers anywhere in Canada's dog-eat-dog labour market.

The conclusion is clear: a transition away from fossil fuel employment is occurring, and will continue to occur, independently of Canada's climate policies. Most jurisdictions in the world (including huge energy-consuming countries like China and India) are taking concerted actions to reduce fossil fuel consumption. Thanks to technological progress and economies of scale, renewable forms of energy (like wind and solar)

[5] See Graney (2025).

[6] Canada produced 42 million tonnes of coal in 2024, mostly metallurgical coal for export (Statistics Canada Table 25-10-0046-01).

[7] See Xuereb (2025) for recent evidence.

are now cheaper on a full-cycle basis than conventional fossil fuel technologies; the same goes for life-cycle costs of electric vehicles compared to internal combustion vehicles.[8] Eventually global competitive, regulatory, and climatic pressures will lead to the phase-out of fossil fuels from most uses, and hence the employment associated with fossil fuels will mostly disappear. That transition can occur in a planned or a chaotic manner, and with or without supports for affected workers. At present, it is occurring in an unplanned, unsupported, and chaotic way, with key disemployment decisions made unilaterally by fossil fuel employers in the interests of maximizing their own profits. Pretending that the employment transition can be stopped does not 'protect' fossil fuel workers; it simply exposes them to more of the unsupported dislocation they have already experienced over the past decade.

Pretending that the employment transition can be stopped does not 'protect' fossil fuel workers; it simply exposes them to more of the unsupported dislocation they have already experienced.

This report aims to address one of the obvious weaknesses in Canadian transition planning: the failure of most contemplated measures to provide fossil fuel workers with genuine voice, bargaining power, and binding protections. Previous research in the Centre for Future Work's PowerShare project has reviewed the benefits of strong collective worker voice (Stanford and Poon, 2021) for addressing a range of topics: including managing technological change in workplaces (Stanford and Bennett, 2021), reducing racial inequality in workplaces (Ng et al., 2024), and other workplace challenges. The employment shifts associated with the energy transition are another workplace challenge amenable to the application of genuine, effective channels for worker input, negotiation, and bargaining power. This paper will review the dimensions of this transition challenge, and identify ways in which better transitions could be achieved if fossil fuel workers have genuine voice and power.

The paper is structured as follows. Part I provides a comprehensive statistical overview of the scale and distribution of direct fossil fuel employment in Canada, how it has changed, and the various channels through which Canada's labour market has adjusted (and will continue to adjust) to the absolute and relative decline in fossil fuel employment. To gather insight on what fossil fuel workers themselves think about the coming transition, Part II reports the findings of a quantitative survey and qualitative interviews with fossil fuel workers. This original research confirms that most fossil fuel workers acknowledge the role of fossil fuels in climate change, and understand that their industry will shrink over time. They feel strongly, however, that the voices and in-

[8] See Dardour et al. (2025) and Lindwall (2025) for cost comparisons of electricity generation and motor vehicle operation, respectively.

terests of fossil fuel workers have not been heard in Canadian discussions about employment transitions. They have little confidence that governments and employers will integrate their concerns and interests meaningfully into transition planning; however, they have more confidence that trade unions and collective bargaining could meaningfully shape the course of the transition in workers' interests. Finally, Part III reviews the current state of transition planning in Canada, highlighting the absence of concrete and binding protections for workers, and the often-superficial nature of consultations with affected workers and communities. It concludes with eight recommendations for providing fossil fuel workers with more genuine and effective voice and bargaining power, as the energy transition continues.

Recommendations for Enhancing Worker Voice in Energy Employment Transition Planning
1. Joint Transition Committees.
2. Minimum Notice Requirements.
3. Requirement to Negotiate.
4. Strong Employment and Income Guarantees.
5. On-Site Presence for Transition Support Services.
6. Community Benefit Agreements.
7. Employer Neutrality on Unionization.
8. Industry-Wide Transition Planning Authority.

Part I: Dimensions and Dynamics of Fossil Fuel Employment in Canada

A THOROUGH UNDERSTANDING OF THE SCALE, COMPOSITION, AND LOCATION of fossil fuel employment is a prerequisite for effective planning of employment transitions as Canada's energy system changes. This section will provide a summary of existing employment in fossil fuel-related industries in Canada. It also reviews the dynamic patterns characteristic of these labour markets, and the complex flux they regularly experience – flux which can facilitate employment adjustment in coming years.

The analysis updates data reported in a previous Centre for Future Work report (Stanford, 2021). It also integrates selected findings from other recent studies of the scale and distribution of fossil fuel employment (including PetroLMI, 2021; Caplan, 2023; and McKenzie and Gordon, 2025).

The analysis focuses on employment in direct roles associated with the exploration, production, transportation, processing, and distribution of fossil fuels (including oil, bitumen, natural gas, coal, and related refined products). Of course, these activities are related to other employment in the upstream supply chains which provide intermediate products and services to fossil fuel industries. These indirect links are important to consider when contemplating the phase-out of fossil fuel activity, as changes in initiating activities will have repercussions throughout those 'upstream' supply chains. They will also have impacts on 'downstream', or induced, economic activity associated with the personal consumption expenditure of workers employed in fossil

fuel industries and their supply chains.[9] However, ascertaining the scale of indirect employment is subject to well-known theoretical and empirical challenges. Moreover, new investment and production in alternative industries that expand in the course of the energy transition (including sustainable energy systems and related infrastructure and equipment) will also generate indirect and induced (upstream and downstream) linkages, with their own multiplied impacts on final output and employment. So long as the phase-out of fossil fuel production and use occurs alongside the growth of alternative economic activities (in energy-related fields, or other sectors), indirect and induced effects associated with those growing sectors will broadly offset indirect effects associated with the gradual decline of fossil fuel activity.[10] For these reasons, we limit our attention here to the direct employment footprint of fossil fuel industries.

A. Scale, Composition and Quality of Fossil Fuel Employment

We identify seven categories of direct fossil fuel employment, indicated in Table 1. These include oil and gas extraction, services related to oil and gas extraction, coal mining, petroleum refining, generation and distribution of electricity from fossil fuel sources, oil and gas pipelines, and natural gas distribution services. Statistics Canada's monthly survey of employment payrolls (covering waged employees, but excluding self-employment) provides direct data on several of these categories, but not all. The following approach was taken to filling gaps in this survey:

- In its payroll data, Statistics Canada does not disaggregate mining services between oil and gas, coal, and other (non-fossil-fuel) forms of mining. We estimate the proportion of mining services attributable to oil and gas on the basis of employment data published by Statistics Canada in its System of National Accounts.[11] On this basis, we estimate that close to two-thirds of all employment in mining services (or about 52,000 jobs in 2024) can be attributed to oil and gas production; the rest is attributed to other non-fossil-fuel mining activities (including metal ores and non-metallic minerals).
- The use of fossil fuels in electricity generation has diminished over the last decade, due to the ongoing phase-out of coal-fired electricity plants and the growth of renewable generation systems. As of 2024, about 18% of electricity produced in Canada came from

[9] These indirect linkages give rise to 'multiplier' effects, which capture the indirect impact of an initiating or 'base' economic activity on output and employment in upstream supply chains and downstream consumer industries. The size of these multiplier effects depends on assumptions regarding the nature of adjustment in labour and other factor markets, and the level of underutilized economic capacity prevailing at the time of consideration. For an introduction to these issues see Hughes (2003) and Thulin (2015).

[10] The relative scale of indirect effects, both positive and negative, will depend on many factors, including the input-output composition of new industries and macroeconomic conditions at the time of the transition.

[11] We extrapolate the ratio between mining service jobs and petroleum extraction employment in Alberta (where almost all mining involves petroleum and coal) to the level of overall petroleum sector employment in Canada as a whole. Data from Statistics Canada Table 36-10-0489-01.

fossil fuel primary sources (mostly natural gas), down from 27% in 2000.[12] We attribute the proportion of employment in the electricity generation and distribution sector to fossil fuels, based on the proportion of electricity generated from fossil fuels.

- For oil and gas pipelines, confidentiality restrictions prevent publication of monthly data in the Statistics Canada series. However, data on employment in these sectors is published in the census. To estimate employment trends in pipelines, we use census data points (in five-year intervals, the latest being 2021), and then annual employment estimates are interpolated for pipelines in the intervening years (and extrapolated to 2024) on a linear basis.

With these assumptions, we can generate a reasonable estimate of total direct fossil fuel employment in Canada across these seven sub-sectors, summarized in Table 1. As of 2024, we estimate total direct fossil fuel employment of 177,000 positions. Over half of those positions are in the upstream oil and gas industry (including jobs in extraction and services). An estimated 19,000 jobs in Canada's total electricity industry (out of total employment of 106,000 in 2024) are ascribed to fossil fuel generation and distribution. The natural gas distribution system employs close to 17,000 workers, while over 15,000 work in petroleum refining. Coal mining employs over 10,000,[13] with around 8,500 working in oil and gas pipelines.

Table 1.
Direct Fossil Fuel Employment, 2024

Sub-Sector	Level	10-Year Change
Oil and gas extraction	54,192	-10,114
Oil and gas services	52,365	-28,118
Electricity generation (FF share)	19,090	50
Natural gas distribution	16,858	1,216
Refined petroleum products	15,440	-3,662
Coal mining	10,843	1,052
Oil and gas pipelines	8,530	1,710
Total	177,318	-37,865
Share of total employment	0.97%	-0.40%

Source: Calculations from Statistics Canada Table 14-10-0202-01 as described in text.

Relative to total payroll employment in Canada (which averaged 18.2 million in 2024), these direct fossil fuel jobs accounted for just under 1.0% of waged employment. Relative to total employment (including self-employment as well as waged jobs), the share of direct fossil fuel employment is somewhat smaller.[14] Both the absolute scale and relative importance of fossil fuel employment

[12] Calculations from Natural Resources Canada, "Electricity Generation Energy Use and Generation by Energy Source," and Canada Energy Regulator (2023).

[13] A majority of coal mining in Canada in 2022 was metallurgical coal, used as a chemical input in primary metal manufacturing; the share employed in thermal coal mining (used for power generation) has fallen in line with the phase-out of coal-fired electricity generation in Canada and other countries (Natural Resources Canada, 2024). We include all coal mining workers in the estimate of fossil fuel employment in Table 1.

[14] As discussed further below, self-employment is less common in fossil fuel industries, because of the large capital requirements involved in most direct fossil fuel activities. Statistics Canada data does not provide sufficient detail on the sectoral composition of self-employment to conduct a similar breakdown of the relative importance of fossil fuel activities among the self-employed.

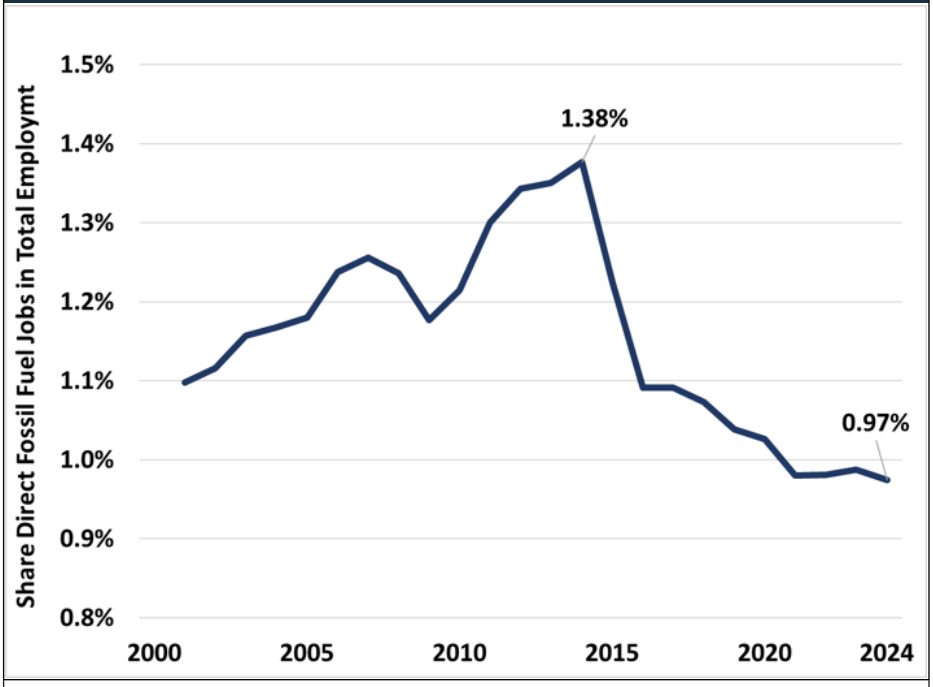
The pace of relative decline experienced by direct fossil fuel employment over the past decade is consistent, if maintained, with the complete phase-out of fossil fuel jobs in time to meet Canada's net-zero commitment by 2050.

have declined notably over the last decade. Close to 38,000 jobs in direct fossil fuel work have disappeared, mostly in upstream oil and gas activity. The other sectors listed in Table 1 experienced a mixture of moderate employment gains and losses, with a net combined change of near zero. Over that decade, direct fossil fuel employment declined by 17.6%.

The combination of falling fossil fuel employment with relatively rapid growth in total employment in Canada caused a doubly-fast decline in the relative importance of fossil fuel jobs. The share of direct fossil fuel work in total payroll employment fell from 1.38% in 2014 to 0.97% by 2024 (Figure 1). At that pace of decline in its relative employment share, direct fossil fuel employment would fall to zero in the next 24 years. In other words, the pace of relative decline experienced by direct fossil fuel employment over the past decade is consistent, if maintained, with the complete phase-out of fossil fuel jobs in time to meet Canada's net-zero commitment by 2050. This reinforces the reality that the employment transition away from fossil fuel work is already happening; the choice for policy-makers, and society, is whether that transition will be planned and supported, or spontaneous and chaotic.

Figure 1.

Direct Fossil Fuel Jobs as Share Total Payroll Employment, 2001-2024



Source: Calculations from Statistics Canada Table 14-10-0202-01 as described in text.

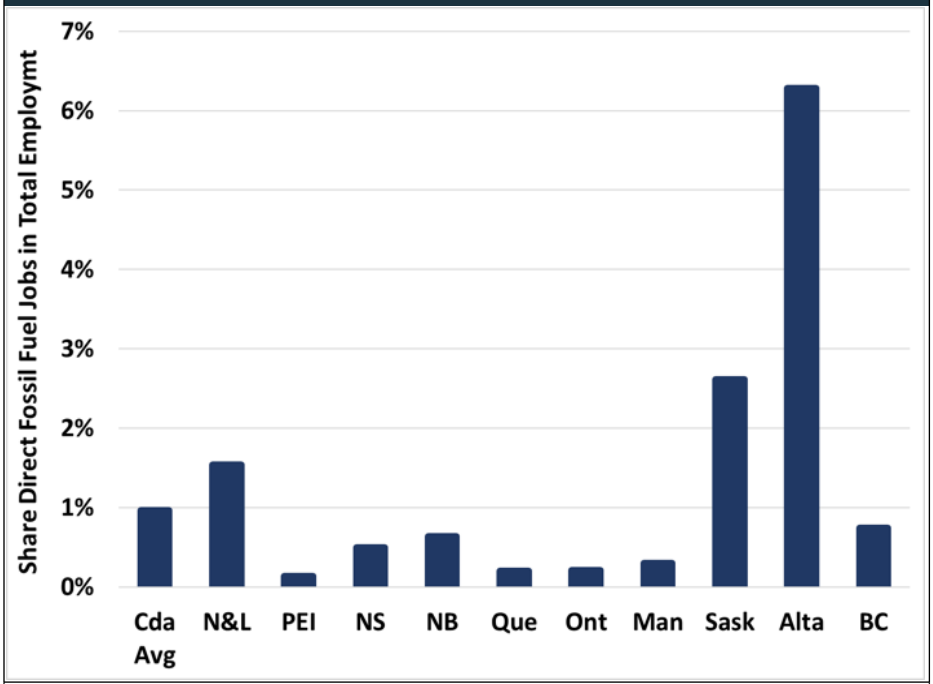
Our estimates of both the level and the trend of fossil fuel employment are broadly consistent with other published estimates of fossil fuel-related employment. Most other published reports focus primarily

or solely on petroleum-related jobs, a narrower scope than we have adopted. PetrolLMI (2021) estimated 168,000 direct jobs in petroleum activities in Canada in 2020. Kaplan (2023) reported just 147,000 petroleum jobs in 2021. McKenzie and Gordon (2025) estimate that direct oil and gas employment (including refining and pipelines) declined by 35,000 positions in the ten years ending in 2023 – although their estimate of the remaining level of employment (184,000 in 2023) is higher than the other reports (perhaps because of the broader sectoral scope they adopted). The Canadian Association of Petroleum Producers (CAPP, 2025) claims 140,000 jobs existed in oil and gas extraction and services in 2023, also reflecting a significant decline over the previous decade.[15] Across these varied sources, then, the conclusion reported above that direct fossil fuel employment (and petroleum-related employment in particular) represents a small (around 1%) and shrinking share of total employment in Canada is robust.

The relative importance of fossil fuel jobs varies widely across different parts of Canada, in line with the uneven distribution of fossil fuel resources. Figure 2 illustrates the proportion of employment attributable to direct fossil fuel activities by province. Alberta is the most dependent on direct fossil fuel activity, which accounts for over 6% of all payroll employment in that province. The other major oil-producing provinces (Saskatchewan and Newfoundland and Labrador) also have fossil fuel employment shares higher than the 1% national share. Other provinces have lower reliance on direct fossil fuel work (including B.C., despite its gas industry). The regional concentration of fossil fuel jobs in particular parts of Canada obviously complicates both the economics and the politics of energy and climate policies.

Figure 2.

Fossil Fuel Employment Shares by Province, 2024



Source: Calculations from Statistics Canada Tables 14-10-0202-01 and 36-10-0489-01.

[15] The CAPP (2025) report also claims that a total of 900,000 jobs in Canada's economy in total "were a result of the oil and gas extraction industry," based on application of a simplistic (and unbelievable) 6-to-1 employment multiplier to reflect indirect and induced jobs related to petroleum production.

On the basis of detailed 2016 census data, previous analysis (Stanford, 2021) considered the extent to which direct fossil fuel employment is clustered in particular communities. Of 152 census-defined communities (including both Census Metropolitan Areas, CMAs, and Census Agglomerations, CAs), direct fossil fuel employment accounted for over 5% of total employment in just 18 communities. The most fossil-fuel-dependent communities were Wood Buffalo, Alta. (including Fort McMurray), where 32% of jobs were in direct fossil fuel roles, and Estevan, Sask., where direct fossil fuel work made up 21% of local employment. Another interesting finding of this community disaggregation is that over half of direct fossil fuel jobs in Canada are located in larger cities. This will facilitate future transitions since cities have more diverse labour markets, allowing current fossil fuel workers to more easily find alternative roles (if needed) consistent with their skills and experience.

Consistent results are reported by Chejfec, Samson, and Jackson (2025), who evaluate the economic vulnerability of 293 different communities (including CMAs, CAs, and smaller communities) to energy transitions. On the basis of multiple criteria, including the concentration of large polluting facilities, reliance on emissions-intensive industries, and sensitivity to shifts in export markets, they identified 68 communities, representing 10% of the Canadian population, that are especially susceptible to risks from greenhouse gas emissions policies and the energy transition. Their definition of 'susceptibility' includes industries (such as manufacturing and transportation) not directly within the scope of fossil fuel employment, and hence their analysis captures a larger variety of potential future transitions. Nevertheless, similar to Stanford (2021), this report concludes that the number of communities highly exposed to the effects of energy transitions and greenhouse gas policies is relatively small. This suggests that through concentrated attention and supports (hopefully drawing on a national commitment to supporting smooth transitions), potential disruptions in these relatively vulnerable communities can be mitigated.

Several demographic features of the fossil fuel workforce are also relevant to transition planning. The average age of fossil fuel workers is higher than the average for the overall economy: about 41 years old on average in 2021, compared to 38.6 years for the overall workforce (see Table 2). Some 58% of direct fossil fuel workers were over 40 years of age in 2021, and will thus reach normal retirement age within the next 25 years. In other words, most workers in direct fossil fuel

Table 2.

Average Age of Direct Fossil Fuel Workers, 2021

Sector	Average Age	Share Over 40
Oil and gas extraction	43.6	60.1%
Oil and gas services	39.6	54.7%
Electricity generation (FF share)	41.7	59.1%
Natural gas distribution	41.7	58.4%
Refined petroleum products	41.2	58.9%
Coal mining	41.3	58.8%
Oil and gas pipelines	40.8	54.8%
Total Fossil Fuel	41.1	58.1%
Total Economy	38.6	54.7%

Source: Calculations from Statistics Canada Table 98-10-0448-01.

roles will retire before the transition to Canada's net-zero target in 2050 is completed.

The fossil fuel industry is highly skewed in gender terms. Over 80% of workers in direct fossil fuel jobs are male, although the proportion of women employees has grown gradually in recent years. There has also been growth in the proportion of racialized and Indigenous workers. Kaplan (2023) reports that 22% of oil and gas workers identified as "visible minority" in 2021 (versus about one-third for the overall labour force in Canada), and 7% as Indigenous (twice as high as the 3.5% Indigenous share of the overall labour force). The fossil fuel workforce thus has a smaller proportion of racialized workers, but a higher proportion of Indigenous workers, than the overall labour force.[16]

While the quantity of direct fossil fuel jobs is small as a share of total employment in Canada, the quality of these positions is better-than-average, offering superior earnings potential and stability. Only 6% of direct fossil fuel workers are self-employed, compared to 15% of total employment in Canada. 9% are employed in temporary positions, compared to 13% in the overall labour force. Only about 3% of fossil fuel workers are employed part-time, compared to 18% in the overall labour market.[17]

Average earnings are much higher in direct fossil fuel roles than economy-wide averages. The upstream oil and gas industry is one of the highest-paying sectors in Canada's economy, with average weekly earnings of close to $3000 in 2024, more than twice the average in the broader labour market (Table 3). Earnings in other fossil fuel sub-sectors range between $2100 and $2300 per week, also significantly higher than economy-wide averages. High earnings reflect both higher hourly wages, less incidence of part-time work, and long hours of work for full-time employees.

Table 3.
Average Weekly Earnings

Sector	2024	10-Year Change	
		Nominal	Real
Oil and gas extraction	$2,964	11.0%	-13.7%
Mining Services	$2,268	26.1%	-1.9%
Electricity Generation	$2,204	19.3%	-7.2%
Natural Gas Distribution	$2,105	19.6%	-6.9%
Petroleum Refining	$2,106	10.0%	-14.4%
Total Economy	**$1,261**	**34.8%**	**4.9%**

Source: Calculations from Statistics Canada Table 14-10-0204-01.

However, earnings across fossil fuel industries have weakened in real terms in the last decade, reflecting the impacts of industry downsizing and restrictive compensation policies. Nominal earnings growth in upstream oil and gas extraction and petroleum refining averaged just 1% per year over the last decade: less than one-third the pace of wage growth in the overall economy. Nominal wage gains for petro-

[16] Labour force averages for employment by visible minority and Indigenous status from Statistics Canada Tables 14-10-0438-01 and 14-10-0365-01.

[17] Calculations in this paragraph from Statistics Canada Tables 98-10-0448-01 and 36-10-0489-01.

leum workers lagged far behind inflation over this period, resulting in a substantial decline in real weekly incomes — which fell by 14% in both sectors. Real earnings declined in other fossil fuel sectors, as well. In contrast, average real earnings in the overall labour market grew by almost 5% in the same period.

The higher average quality of most jobs in direct fossil fuel work makes employment transitions more challenging. It is not sufficient to ensure that existing fossil fuel workers are able, if necessary, to find alternative employment.[18] They are equally concerned about the quality of replacement jobs: including job security and compensation.[19] This concern is evident in the quantitative and qualitative survey data discussed in following sections.

Union representation varies widely across different sub-sectors of direct fossil fuel work. Union density is high in the utility sector, including electricity generation and natural gas distribution; over 60% of employees in utilities are covered by a union contract. Union representation is also relatively strong in petroleum refining. Union coverage is lower in upstream petroleum extraction. Average union density in Canada's broader mining sector equals about 20% — and is lower still in the petroleum extraction sector. Union density in both utilities and mining has declined by about 10 percentage points over the last two decades, attesting to an erosion of organized voice for fossil fuel workers at a moment in history when it is especially important.[20]

B. Dynamic Channels of Adjustment in Fossil Fuel Employment

The preceding data highlights two aspects of direct fossil fuel employment in Canada, that will be surprising to many observers. First, the share of direct fossil fuel employment in overall employment in Canada is low: now below 1%. That stands in contrast to overstated claims from industry advocates that the industry plays a much larger role in employment opportunities for Canadian workers. Second, the relative importance of direct fossil fuel employment is falling steadily, due both to declining absolute fossil fuel employment and to growth in the broader labour market. The erosion of the relative employment share over the past decade is consistent with the complete phase-out of direct fossil employment in the next quarter-century — and

[18] As discussed below, in a planned gradual transition most of the reduction in direct fossil fuel employment would be achieved through retirements, rather than through transfer to alternative employment.

[19] Evidence on income losses experienced by workers displaced from fossil fuel jobs (for various reasons, mostly unrelated to climate policy) confirm that this concern is justified. Chen and Morissette (2020) review the income trajectory for workers laid off from coal mining jobs between 1995 and 2015, and find that while a large majority found new work within one year of layoff, the median decline in real incomes after one year of layoff was 32%. Mehdi and Chan (2025) report that workers affected by mass layoffs in high-emissions industries (including manufacturing and transportation sectors, as well as fossil fuel sectors) experienced a 20% decline in real earnings three years after layoff. In both studies proportionate income losses for the selected sample were comparable to income declines experienced by displaced workers in other industries, indicating that the problems of fair transitions for laid-off workers are not unique to the energy industry, but rather are faced by workers in any industry experiencing layoffs.

[20] Statistics Canada data on union representation is published only at the two-digit level of sectoral disaggregation (in Table 14-10-0070-01), and hence estimates are not available for the specific fossil fuel sub-sectors described above.

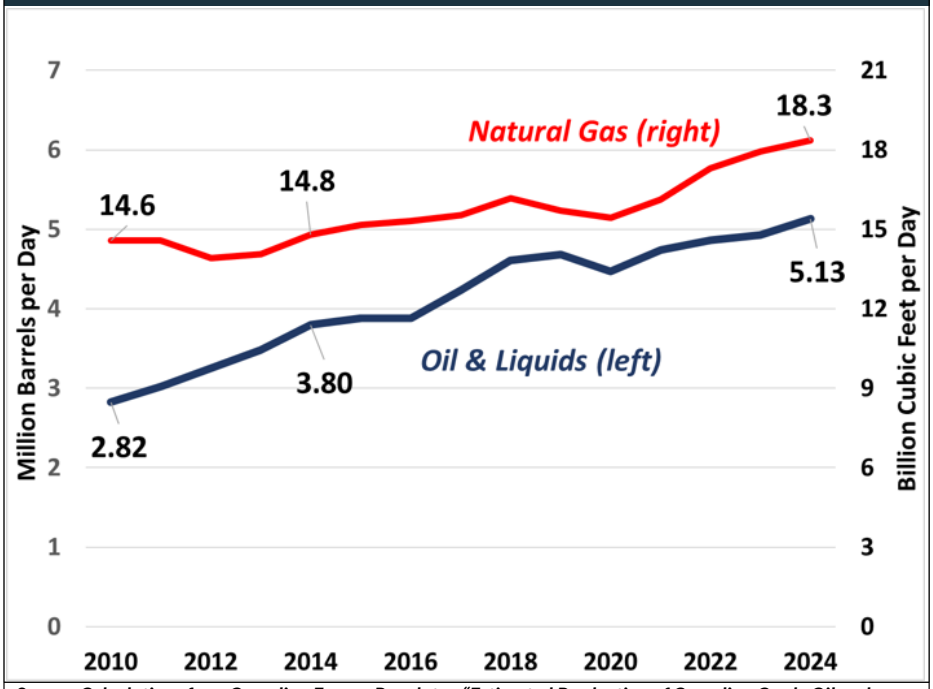
hence compatible with the goal of reaching a net-zero emissions status by 2050.

The decline in fossil fuel employment over the past decade cannot be attributed to climate policy.

The decline in direct fossil fuel employment over the last decade is also instructive in contemplating how the gradual phase-out of fossil fuel work might occur (alongside the phase-out of most fossil fuel production and consumption). First, it is important to note that the decline in fossil fuel employment over the past decade cannot be attributed to climate policy. It has occurred even though the total amount of fossil fuel production and consumption has continued to grow in Canada (see Figure 3). Canada's total oil production increased 35% between 2014 (the peak of Canadian fossil fuel employment) and 2024. Natural gas production increased 24% in the same time.[21] The industry is producing more output, with less employment. This has enhanced profitability in the petroleum industry, but reduced the importance of the industry in overall employment in Canada.[22]

Figure 3.

Canadian Production of Oil and Gas, 2010-2024



Source: Calculations from Canadian Energy Regulator, "Estimated Production of Canadian Crude Oil and Equivalent" and "Marketable Natural Gas Production in Canada."

The employment losses in fossil fuel industries in Canada (coincident with increased production) resulted from the industry's own choices about employment, not from climate policy. They reflect the falling labour intensity of production techniques in petroleum extraction – including the shift from conventional oil production to bitumen mining and processing, the

[21] That statistic measures marketable gas production only, and does not include flared and fugitive gas (which contribute disproportionately to greenhouse gas emissions due to the high warming properties of methane).

[22] The petroleum extraction and refining sectors generated gross operating profits of $192 billion from 2021 through 2024, smashing previous records for industry profitability; calculations from Statistics Canada Table 33-10-0225-01.

use of more automated technologies (such as self-driving trucks in bitumen mining), and general cost-cutting by the industry. For the most part, this downsizing occurred in an unplanned, decentralized, and unsupported way. With the exception of transition plans applied to the phase-out of coal-fired electricity generation, workers affected by the decline of direct fossil fuel employment over the last decade have had to fend for themselves, supported only by general programs (such as conventional Employment Insurance benefits).

This unplanned, unsupported dislocation of petroleum workers has had especially negative ramifications for the overall labour market in Alberta. That province has experienced unemployment higher than the national average every year since 2016, and has also experienced by far the slowest wage growth of any province in that period.[23] This reflects both the loss of relatively higher-paying petroleum jobs, and the general tendency toward wage-suppressing policies and practices in Alberta in recent years.[24]

The fact that overall labour market performance remained strong as fossil fuel employment declined in both absolute and relative terms, confirms that the Canadian labour market is not very dependent on this relatively small source of employment.

While acknowledging the economic and social repercussions of these job losses, it is also important to note that the elimination of close to one-fifth of direct fossil fuel jobs in Canada over the past decade occurred alongside a general strengthening of the broader labour market in the same period. Indeed, in the years leading up to the COVID pandemic in 2020, Canada's labour market demonstrated robust job-creation and wage growth. By 2019, the national unemployment rate declined to its lowest rate in the history of modern labour force statistics. The COVID pandemic, of course, shocked labour markets considerably — yet national employment recovered rapidly (again, despite continuing job losses across the broader fossil fuel sector), achieving still lower unemployment rates in 2022 and 2023. Unemployment has increased in the last two years as a result of high interest rates, and tariff attacks from U.S. President Trump. Nevertheless, the fact that overall labour market performance remained strong as fossil fuel employment declined in both absolute and relative terms, confirms that the Canadian labour market is not very dependent on this relatively small source of employment. It also highlights the importance of broader labour market conditions to achieving successful employment transitions. When overall employment conditions are robust, and the labour market is generating abundant new openings, concerns about employment transitions are naturally mod-

[23] Calculations from Statistics Canada Table 14-10-0464-01.

[24] For more details on wage trends in Alberta compared to other provinces, see Stanford (2025).

erated. Workers know there are opportunities in other firms, industries, or communities. Labour mobility and voluntary severance increase when employment conditions are robust, since workers have more options (and more confidence) when risks of disemployment are moderate.

We have shown that the scale of the employment transition associated with the gradual phase-out of fossil fuel production and use over an extended (25-year) period is not large by historical standards. The relative decline in direct fossil fuel employment over the last decade (amidst overall labour market conditions that, absent the pandemic and its aftermath, were historically strong) has been consistent with the pace of phase-out required to meet net-zero targets by 2050. Moreover, there are numerous channels through which labour market adjustment continually occurs. While business headlines are usually dominated by net changes in top-line employment or unemployment, under this visible 'surface' of the labour market occur large changes in labour supply and employment patterns that are rarely seen or appreciated. Like a swimming duck that appears calm on the surface, but whose legs are paddling madly under the water, the labour market is always in motion, adjusting and readjusting employment in ways that will be very helpful in adjusting to the gradual elimination of fossil fuel work. Some of the most important of these channels of labour market adjustment are discussed below:

Retirement: As noted above in Table 2, workers in direct fossil fuel work are older than the average of the Canadian workforce. Fifty-eight percent were over 40 years of age in 2021, and hence will reach normal retirement age before the 2050 net-zero deadline. In a planned, supported transition plan, most of these workers could complete their careers before their industry reaches net-zero production levels. To make the most of this potential channel of adjustment, retirements need to occur gradually over time and across different workplaces, and retiring workers should not be replaced by younger workers (recruited into an industry that has little future). Offering incentives for earlier retirement can amplify the effectiveness of this channel of adjustment, especially when specific actions (such as workplace closures) require a faster employment reduction than could be absorbed through normal demographic ageing. Ideally, these incentives could be offered across multiple facilities (not just facilities that are closing), thus opening up positions in still-operating workplaces that could be filled by younger workers transferring from closing facilities. By the same token, in some cases workers may need to be encouraged to stay past planned retirement dates to ensure closing facilities have enough staff to continue operating until scheduled closure. With proper planning and inter-facility mobility, normal retirement can do most of the heavy lifting associated with a phase-out of direct fossil fuel jobs.

Normal Job Churn: The extent to which labour supply and employment outcomes constantly change is underappreciated in conventional statistical and media reporting. In a typical month, the total amount of employment in Canada changes by a modest amount: over the last year, by an average of about 30,000 positions (up or

down) per month. The net change in employment, therefore, is very small relative to the overall size of the labour market: over the last year, employment changed each month (up or down) by an average of about 0.15%.[25] However, that net change represents the balance between much larger gross changes in employment, with hundreds of thousands of jobs created, and hundreds of thousands eliminated, each month. Like that paddling duck, under the surface the labour market is continually adjusting as individual workers and employers make decisions about their labour supply and demand preferences.

Unfortunately, Statistics Canada does not publish regular data on these gross labour market flows: that is, describing the total number of changes occurring in the labour market each month.[26] Occasional studies, however, confirm the impressive scale of regular month-to-month shifts. For example, Bourbeau (2019) found that over 6% of Canadian workers change their employment status every month. At present population levels, this represents a gross monthly churn of 1.25 million people — seven times larger than the total stock of direct fossil fuel jobs. In this context, facilitating a net sectoral shift in employment of under 1% of total employment over a 25-year period is very much a non-event in macroeconomic terms. This huge monthly churn includes people moving into and out of the labour force, moving from employment to unemployment (or vice versa), moving from one job to other, or changing employment status (eg. part-time to full-time, or from temporary to permanent, or vice versa). All of these dimensions of adjustment endow the labour market with an impressive flexibility to respond to economic changes. This is not to downplay the hardship experienced as a result of involuntary displacements — such as mass lay-offs, the avoidance of which should be a central goal of transition planning. Rather, we merely wish to highlight the huge scale of normal, mostly voluntary changes in employment that occur every single month in Canada's economy. Harnessing those regular channels of mobility could assist mightily in achieving the phase-out of fossil fuel work without involuntary displacement.

Other sources of data attest to the surprising extent of ongoing job churn in Canada's labour market — and the higher-than-average mobility demonstrated by Canadian fossil fuel workers (especially those in upstream petroleum extraction). Figure 4 illustrates a measure of job churn generated from Statistics Canada's annual survey of business dynamics in Canada (which reports how businesses adjust over time through entry, growth, shrinkage, or exit). This data provides a useful perspective on gross job-creation and job-destruction by industry. On average, private sector firms in Canada experience a combined rate of job churn (counting gross job-creation and gross job-destruction) of almost 20% per year. In other words, almost one job in five in Canada is created or destroyed each year. The combined churn rate is higher in the broader mining and oil and gas sector[27] — with a churn rate of almost 23% per year

[25] Calculations from Statistics Canada Table 14-10-0287-01.

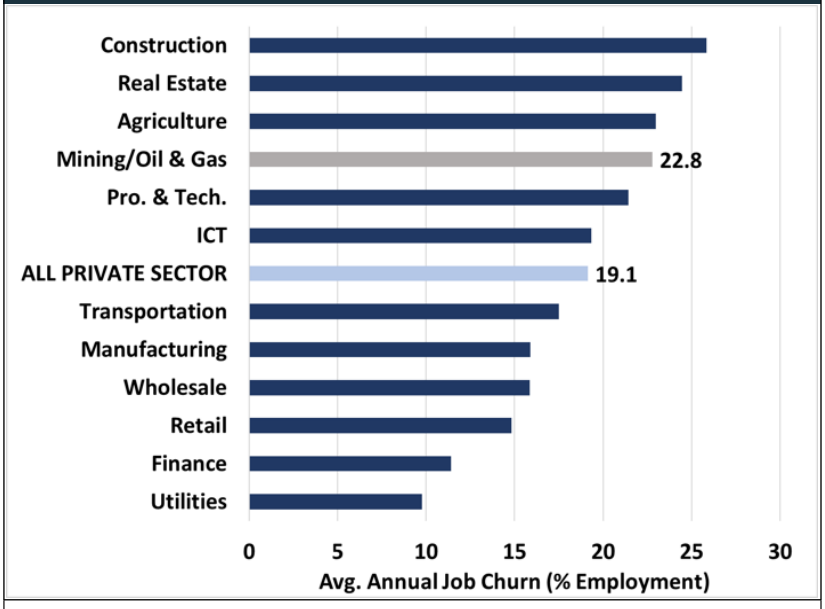
[26] Statistical agencies in some other countries (including the U.S. and Australia) do publish regular gross market flow data.

[27] The data from this survey are not disaggregated further than the two-digit industry level.

over the last decade, comparable to construction and agriculture. However, other fossil fuel sectors experience lower-than-average job churn. Notable in this context are jobs in the utility sector (including electric and natural gas utilities), which have the lowest job churn of any sector — reflecting their relatively unionized and superior compensation conditions. Certainly for upstream oil and gas production, which accounts for 60% of direct fossil fuel employment, it is clear that rapid changes in employment are a normal feature of working life. Again, this is not to downplay the hardships associated with involuntary displacement, but rather to emphasize that if these normal dimensions of rapid labour force adjustment can be harnessed and directed toward an end-goal of gradually phasing out fossil fuel employment, then that transition will be all the more achievable without painful displacement.

Figure 4.

Average Annual Job Churn by Sector, 2013-2022



Source: Calculations from Statistics Canada Table 33-10-0164-01.

A corollary to the rapid job churn that normally characterizes many fossil fuel activities (especially upstream oil and gas), is the fact that average job tenure in these industries tends to be lower than most other sectors. Across Canada's workforce, about 17% of employed workers have been in their job less than one year.[28] That is the flip side of the finding that average churn (counting gross job-creation and job-destruction) in private sector workplaces is about 20% per year. While these two statistics are not precisely related in arithmetic terms,[29] they both attest to the rapid turnover and flux in employment patterns that is a regular feature of Canada's labour market. Job tenure is shortest in high-turnover low-wage industries such as hospitality (where over 30% of workers had been in their jobs less than one year in 2024, with average tenure for hospitality employees of only 53 weeks). Tenure is longest in more stable, higher-wage industries, where workers tend to stay in their roles for longer — such as utilities, public administration, education, manufacturing and finance (all with average tenure over two years, and relatively low proportions of newly-hired workers). The

[28] Calculations from Statistics Canada Table 14-10-0054-01.

[29] The two statistics measure slightly different phenomena. For example, a worker can move to a job that is new for them even if that job existed previously. For this reason, the share of workers with less than one year of tenure is greater than the gross ratio of jobs created per year..

broad resources sector (which in this database includes forestry, fishing, mining, and upstream oil and gas[30]) has job tenure outcomes broadly consistent with labour market averages: average tenure of 103 weeks, and 16.4% of workers with less than one year of service.

Another dimension of ongoing churn in the pattern of employment is the prevalence of temporary employment in Canada. In many cases employers prefer to hire staff on a temporary basis to better align employment with fluctuating production schedules, or to reduce the cost of certain benefits and entitlements (like pension contributions) that come with permanent staff. Over the last decade, temporary employment has averaged some 12.7% of total employment in Canada.[31] Temporary employment in the broad resources sector (once again, including forestry, fishing, mining, and upstream oil and gas) has been similar: 12.5% over the last ten years. Temporary employment is less common in utilities and manufacturing.

Across all of these dimensions, it is clear that Canada's labour market is in constant motion — and fossil fuel labour markets in even faster motion. Given such a rapid pace of turnover in employment, a planned and gradual transition is made more feasible by harnessing normal turnover and attrition patterns (so long as voluntarily vacated positions are not backfilled with new recruits).

Interregional and Interprovincial Migration: Many fossil fuel jobs (especially those in remote regions, such as the bitumen cluster in northeastern Alberta) are filled by workers who have traveled from other provinces to fill those jobs. Some regularly commute long distances to perform the work (including fly-in-fly-out systems[32]), while others establish semi-permanent residences in the region where they work, while retaining more permanent home and family ties wherever they came from.[33] In addition, Canada regularly experiences relatively large interprovincial and interregional population flows. In the last five years, over 1.5 million Canadians (close to 4% of the national population) migrated to another province.[34] These interregional and interprovincial flows constitute another important channel of adjustment to changes in the structure of employment. Workers who migrated to certain fossil-fuel-dependent regions (such as northeastern Alberta) may choose to relocate back to their provinces and communities of origin, either on retirement or in the event that appealing alternative employment opportunities become available.[35] This reversal of previ-

[30] No more detailed sectoral breakdown is available in this dataset.

[31] Calculations from Statistics Canada Table 14-10-0072-01.

[32] Research by the Oil Sands Community Alliance (2018) indicated that some 15 oil sands facilities in northeastern Alberta relied on fly-in-fly-out staffing arrangements, operating out of 7 private airports. Fly-in-fly-out workers also accounted for an estimated 40% of all traffic through the Fort McMurray commercial airport.

[33] Using matched employment and tax data files, Laporte, Lu and Shellenberg (2013) estimated there were 100,000 'inter-provincial' workers in Alberta in 2008 who lived in another province.

[34] Calculations from Statistics Canada Table 17-10-0021-01.

[35] Savoie (2024) reports that the Maritime provinces are recording their fastest population growth since the 1950s, fueled by both international immigration and returning interprovincial migrants.

ous internal commuting and migration flows would provide added impetus to economic growth in the receiving regions (the converse of the challenges caused by outmigration in earlier periods). By the same token, of course, the outmigration of population would create additional economic and social challenges for remote fossil-fuel-dependent communities; with smaller and less diverse local labour markets to generate alternative employment opportunities, they will require targeted support to maintain the economic and social viability of the community. Whichever direction they are flowing, Canada's strong internal migration patterns constitute another powerful source of flexibility and adaptation whenever employment patterns change.

Retraining for Other Jobs: By some indicators, Canadian workers are the best trained in the world.[36] Moreover, their appetite for further training and skills acquisition continues through their working lives. More than half of Canadian workers report they have participated in some form of training in the past 12 months (Future Skills Centre, 2023). Close to one-third of Canadian workers participate in job-related training or skills programs each year, outside of conventional post-secondary education institutes (Statistics Canada, 2023). Apart from the inherent value of lifelong training for workers' productivity and enjoyment at work, it also provides workers with additional mobility when contemplating future career paths. Workers with more up-to-date training and qualifications are better positioned to access alternative jobs, in the event their previous role was eliminated. Survey data indicates that 61% of participants in training expect it will enhance their chances for promotion, or getting hired into a better job (Future Skills Centre, 2023). Empirical research on the impacts of training and retraining programs on future employability of participants confirms that training (especially when tailored around demonstrated employer needs) contributes to greater labour mobility across industries and occupations, and enhances employability for those seeking new work (Myers, Harding and Passoli, 2021). Stronger training opportunities of all kinds — from incremental on-the-job training opportunities throughout workers' careers, to more formal and longer-term programs through vocational and post-secondary institutions — are thus an important determinant of labour market adjustment.

Inter-Industry Mobility: Canadian workers change their industry relatively frequently. Based on longitudinal labour force data, Chen and Fougère (2010) show that over 10% of workers typically move from one industry to another in any given year. Inter-industry mobility is stronger when labour market conditions are strong — allowing workers to feel more confident to voluntarily leave one job for another. This is thus another important channel for adjustment as the energy transition proceeds.

In contemplating the prospects for movement into other industries for workers leaving a position in the fossil fuel sector, it is important to consider the full range of inter-industry mobility that is possible as the labour market adjusts to this gradual

[36] According to OECD data, a higher share of Canadian adults have received tertiary education (63.3% in 2023) than any other OECD country; see OECD Data Explorer, "Adults' educational attainment distribution, by age group and gender."

change. The phase-out of fossil fuel production and use will occur contemporaneously with the expansion of renewable energy systems, so there is a natural tendency to want to directly connect these two labour market changes. And indeed, ample evidence confirms that the shift to renewable energy will have a net positive impact on employment, since renewable energy systems in general are more labour-intensive than most fossil fuel activities (which support very few jobs per unit of output due to very capital-intensive production techniques).[37]

Emphasizing the positive employment prospects in renewable energy and related industries helps counter false claims that the transition away from fossil fuels will jeopardize Canada's overall labour market performance. However, planning for off-fossil-fuel transitions should take a broader view of the inter-industry alternatives available – rather than assuming transitioning fossil fuel workers would naturally move toward jobs in other energy-related activities. After all, direct fossil fuel jobs account for under 1% of total employment; as renewable energy systems grow, they will account for a slightly larger share (given their greater labour inputs), but still small relative to the overall breadth of the labour market. Options for transitioning fossil fuel workers are much more expansive in other sectors of the economy, many of which (such as non-fossil resources, construction, manufacturing, and transportation) embody similar skills and working conditions. Many fossil fuel workers in rural regions work in agricultural operations (many owned by themselves) on a part-time basis (Velo et al., 2025), so transitional support for expanding that aspect of their work, or other forms of self-employment, could also be effective in those regions.

* * * * *

Through all of these channels, therefore, Canada's labour market demonstrates a ready and continuing capacity to adapt to change. Millions of individual decisions are made every year, by both employers and workers, that impart an ongoing dynamism and flexibility to the labour market that serves it well in the face of ongoing technological and economic change. People enter and exit the labour force; they change jobs and industries; they move across regions and provinces; they learn new skills; and eventually they retire. All of these dimensions of flexibility allow employment to adjust to changes that, in the past, have been much larger in relative terms than the coming phase-out of direct fossil fuel work.[38] The point here is not that the labour market, even with this flexibility, can autonomously handle anything thrown at it. Rather, the key lesson is that the labour market is a complex and dynamic part of the economy — in which change occurs constantly, and across many dimensions. Planning an employment transition, that we know must happen, over an extended period of time, can harness these dimensions of change to lubricate and support transition

[37] Evidence that new employment in renewable energy, energy conservation, and emissions-reduction initiatives will outweigh jobs lost from the phase-out of fossil fuels is provided by: C40 Cities Climate Leadership Group (2021), International Energy Agency (2021), Clean Energy Canada (2021), and Bridges and Stanford (2025).

[38] Stanford (2021) surveys several previous examples of major changes in employment patterns that were proportionately larger than the coming phase-out of fossil fuel work: including the decline in Canadian manufacturing after 2001, and the crises in the Atlantic cod fishery and the B.C. forestry sector.

with an eye to minimizing or even eliminating involuntary displacement and hardship. Ample advance notice; encouraging retirements; encouraging voluntary severance; encouraging geographic mobility; encouraging occupational and sectoral mobility; and encouraging retraining — these are all actions, building on the demonstrated flexibility of Canada's labour market, that would facilitate a gradual, supported, and fair transition away from fossil fuel work.

Part II: Fossil Fuel Workers' Preferences and Priorities

Part I of this report documented that the scale of employment transition associated with the eventual phase-out of most uses of direct fossil fuels (in line with Canada's commitment to reach a net-zero economy by 2050) is smaller than often assumed. Less than 1% of employment in Canada today is located in direct fossil fuel activities, and that share has been falling over the past decade at a pace consistent with its ultimate phase-out by 2050. Moreover, Canada's labour market demonstrates an underappreciated capacity to adapt to change — at all times, and in response to the full range of economic, demographic, and personal determinants. Indeed, 6% of Canadian workers change their employment status in any given month. Normal job churn (the creation and destruction of jobs) affects one job in five every year, and 17% of Canadian workers have been in their current job less than a year. Canadians move to other regions or provinces frequently, and move between industries even more frequently. With demographic ageing, most existing workers in fossil fuel jobs will retire before the date for Canada's net-zero target is reached. Canadians are highly skilled, yet continually invest in attaining further knowledge and qualifications, and this further enhances their mobility and employability. All these forces help explain how fossil fuel employment could decline so significantly after 2014, concurrent with labour market indicators that (with the exception of the COVID pandemic) remained historically strong.

These findings provide cause for optimism regarding the feasibility of a gradual, planned transition away from direct fossil fuel work. Phasing out 175,000 jobs over a 25-year period implies a shift of some 7000 jobs per year — one-thirtirtieth of one percent of current employment. Moreover, over half of that phase-out can be readily managed through gradual retirement of the existing workforce (since most fossil fuel

workers will reach retirement age before 2050). That implies something in the order of 3000 employment relocations per year, to absorb those fossil fuel workers whose jobs could conceivably end before they retire. In gross job-creation terms, the Canadian labour market produces that many new jobs in less than one-half of a typical working day. Even in net terms (measuring the balance between gross job-creation and job-destruction), it typically produces that many net new jobs every four days. Macroeconomically, spread evenly over a long gradual timeline, replacing 175,000 jobs in Canada is a non-event. The path of a gradual transition would be further smoothed with a suite of support measures, enlisting all the channels of labour market adjustment noted above.

However, what is a non-event in macroeconomic terms may nevertheless constitute a momentous challenge at the individual level, for workers facing the possibility that their own job might disappear because of the phase-out of the industry in which they work. Given the preponderance of business, political, and media commentary highlighting the purported risks climate policy poses to employment and prosperity, these concerns are understandable. To better understand how fossil fuel workers confront these challenges, we delved further into their attitudes regarding the likely future trajectory of their industry, their personal job prospects, and the sorts of employment and income supports they view as most useful in helping to navigate the changes that are coming. This section of the report summarizes the findings of original quantitative and qualitative research into fossil fuel workers' opinions regarding the challenges of the future transition.[39]

A. Quantitative Survey Data

Most respondents accept that climate change is human-caused, and that fossil fuel use must diminish.

This section reports results from an online survey tool to investigate Canadian energy workers' attitudes towards the coming changes in the sector. The intended sample for the survey was workers and former workers in any direct fossil fuel sector in Canada, including the sub-sectors listed above: oil and gas extraction, oilfield services, bitumen production, petroleum refining, pipelines, natural gas distribution, coal mining, and the portion of electricity generation corresponding to fossil fuel combustion. Among the topics surveyed were:

- attitudes about climate change and fossil fuels;
- attitudes towards coming changes in employment;
- opinions regarding various transition mechanisms and funding;
- whether (and how) fossil fuel workers felt they had meaningful input into the design and implementation of transition plans and supports.

[39] A similar project to measure opinions and attitudes among energy workers in the U.S. about the coming energy transition, and how to support workers through it, is described by Cha et al. (2021). For perspectives of highly qualified workers, Doyle (2021) reports on a survey of petroleum engineers regarding their attitudes to the energy transition and their future employability. Attitudes of trade unionists in Norway to transition challenges and opportunities are analyzed in Houeland and Jordhus-Lier (2022).

The survey used the Qualtrics platform, and consisted of 29 questions. The complete set of questions is provided in Appendix A. It was initially promoted to prospective respondents through the Centre for Future Work website and newsletter in December 2022.[40] Invitations to participate were also distributed via email lists and social media streams from a number of sources, including research centres, trade unions and federations, and personal accounts. Banner ads on Facebook inviting participation were also used to promote the survey.

Table 4.
Composition of Online Sample

Gender		Age	
Male	71	Under 30	33.6%
Female	6	30-39	29.8%
Non-binary	2	40-49	26.3%
Not disclosed	2	50-59	25.3%
		60-65	22.3%
		Over 65	21.4%
Province		**Years Of Service**	
British Columbia	5	Less than 5 years	8
Alberta	62	5-9 years	14
Saskatchewan	2	10-19 years	32
Manitoba	1	20-29 years	10
Ontario	7	30 years and more	4
Quebec	0	No answer	13
Maritimes	2		
Newf.& Lab.	2		
Current or Past Sector of Employment[1]			
Conv. oil and gas	21	Coal mining	5
Oil and gas services	15	Electricity gen.	8
Bitumen	15	Natural gas dist.	8
Petroleum refining	43	Pipelines & other	8
Total Sample		**81**	

Source: Original survey data as described in text.

[1] *Multiple responses possible so total exceeds 81.*

Since it was based on voluntary choices to participate, the survey was non-random, and its results should be interpreted accordingly. A total of 90 responses were recorded. Nine respondents did not work in the fossil fuel sector and hence were directed to the end of the survey, leaving a total of 81 responses for analysis. Table 4 provides a breakdown of responses by gender, age, job tenure, and sector. The sample was diversified across all these dimensions, although relative to real-world employment data the sample was overweight in men, respondents from Alberta, and people who work in petroleum refining. There were no respondents from Quebec. Over 80% of the respondents were members of a union; this is a large overrepresentation, and reflects the channels used for distributing survey invitations (which relied in part on outreach through unions).

The following discussion summarizes notable findings from the quantitative survey.

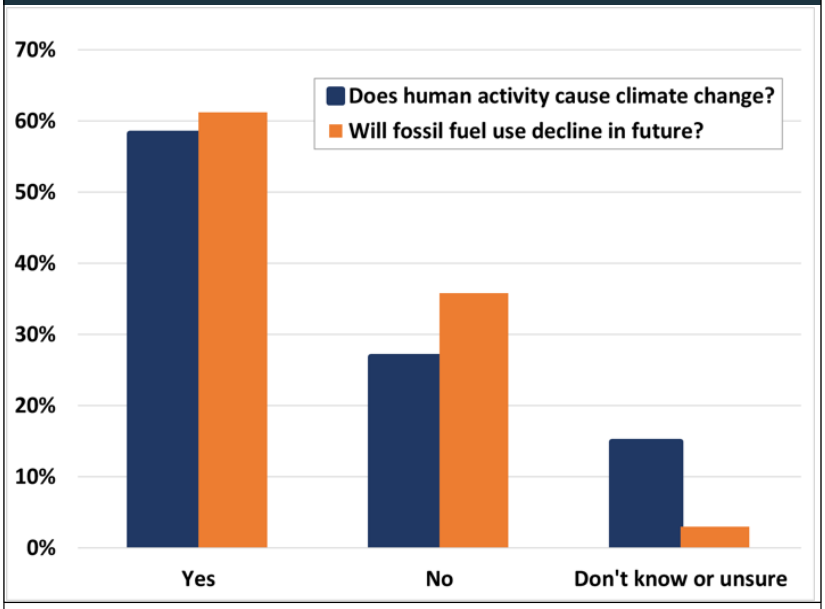
Climate Change and Fossil Fuels: Most respondents accept that climate change is human-caused, and that fossil fuel use must diminish. However, a significant minority deny that human activity and pol-

[40] See Centre for Future Work (2022).

lution is contributing to climate change, and/or believe that fossil fuel production and use can continue unabated in the future. As indicated in Figure 5, about 60% of respondents agree that human activity (and fossil fuel use in particular) is causing climate change, and that fossil fuel use will be reduced in the future (10% of respondents said fossil fuel use will decline quickly, 50% said it will decline gradually). However, 27% of respondents deny that human activity and pollution are causing climate change, and 36% believe that fossil fuel use will continue as at present. The significant presence of climate change denial among fossil fuel workers perhaps reflects the prevalence and impact of industry-led efforts to undermine or diminish awareness of climate change, its causes, and its consequences – efforts which are often targeted at fossil fuel workers.

Figure 5.

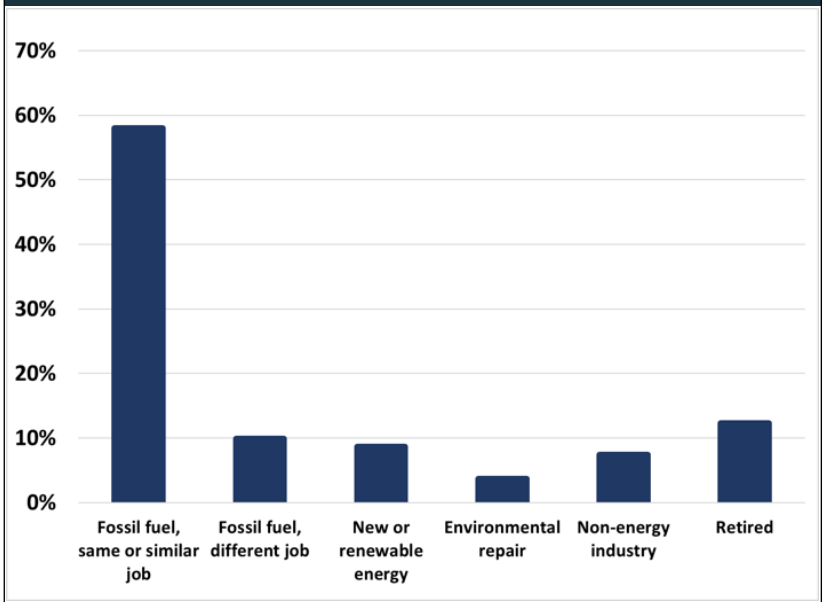
Attitudes to Climate Change Among Fossil Fuel Workers



Source: Original survey data as explained in text.

Figure 6.

Expectations of Future Employment Status in Five Years



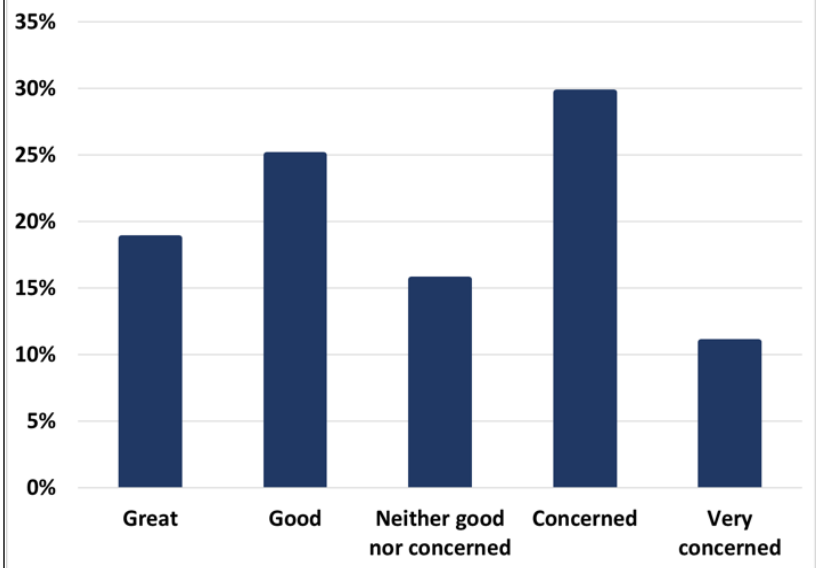
Source: Original survey data as explained in text.

Despite the majority acknowledgment that fossil fuel production and use must gradually decline, most respondents nevertheless expect that they personally will still be working in fossil fuel jobs for the foreseeable future. As illustrated in Figure 6, almost 60% of respondents expect

to be working in the fossil fuel industry, in the same or a similar job, in five years. Another 10% expect to be working in a different fossil fuel job. Close to 20% expect to change industries, working in renewable energy, environmental remediation, or non-energy industries. 12% of respondents expect to retire within five years.

Figure 7.

Expectations of Future Job Prospects in Fossil Fuel Industry



Source: Original survey data as explained in text.

While most fossil fuel workers realize their industry will shrink in the future as a result of climate actions, few expect this to cause imminent changes in their own employment circumstances. This seeming contradiction perhaps reflects uncertainty about when climate policies will actually begin to impact fossil fuel production. This uncertainty is understandable in light of the continuing expansion of Canadian fossil fuel production noted above, and the widening gap between Canada's stated climate commitments and the disappointing pace of actual emissions-reduction progress.

Whatever its causes, workers' expectation that their personal employment circumstances are unlikely to quickly change is associated with a surprisingly modest level of concern over the future of employment opportunities in continued fossil fuel production. As illustrated in Figure 7, a slightly larger share of respondents rated future job opportunities in fossil fuel work as great or good (44%), than those who rated them concerning or very concerning (41%).

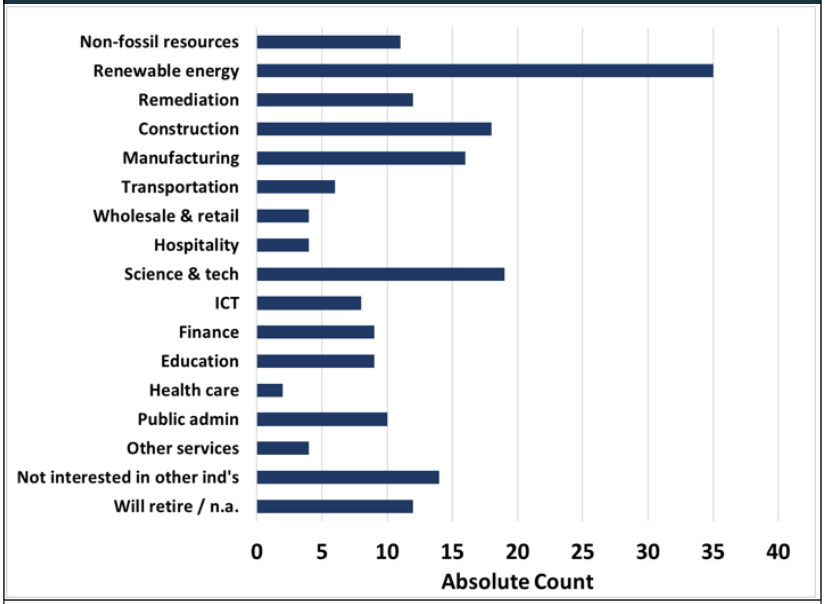
Respondents expressed interest in a great diversity of alternative jobs, should they ultimately change careers.

Employment Alternatives: Respondents expressed interest in a great diversity of alternative jobs, should they ultimately change careers in the future. The greatest interest was expressed in working in renewable energy activities (see Figure 8). However, strong interest also was expressed in many other economic sectors — including in non-fossil-fuel resources, fossil fuel remediation work, construction, manufacturing, and science and technology fields.

These are industries which are relatively compatible with the existing fossil fuel workforce's skills and experiences. Industries which attracted little interest as sources of future employment include hospitality, health care, and wholesale and retail trade (no doubt partly reflecting lower wages and poor job security common in those sectors). These findings reinforce the point made above, that when considering alternative employment opportunities for workers transitioning out of fossil fuel work, it is important to consider the full spectrum of other industries — not just jobs in alternative or renewable energy fields. There is no reason to assume that workers leaving fossil fuel roles will naturally be interested in opportunities in renewable energy. These survey results confirm that fossil fuel workers would indeed consider a much wider range of alternative opportunities.

Figure 8.

Expectations of Future Job Prospects in Fossil Fuel Industry



Source: Original survey data as explained in text. Shows absolute counts (not percentages) since multiple responses were possible.

In considering the prospect of moving to another job, fossil fuel workers confront several concerns and potential barriers. Table 5 reports the concerns highlighted by survey respondents, that could inhibit their willingness to consider alternative employment. The biggest concern expressed was inadequate pay in a new role, with half of respondents indicating it was a major worry, and another quarter as somewhat worrying. Availability of jobs, and security of alternative employment, were also significant concerns, with over two-thirds of respondents indicating great or some worry about those aspects of seeking a new role. Perhaps surprisingly, the need to undertake new training for a new role was the least

Table 5.

Concerns Inhibiting Movement to Another Prospective Job

Concern	Degree of Worry			
	Major Worry	Some Worry	No Worry	May Be Retired / n.a.
No jobs available	41.0%	27.9%	19.7%	11.5%
Inadequate pay	50.8%	24.6%	11.5%	13.1%
Insecure job	32.8%	36.1%	19.7%	11.5%
Need training	21.3%	23.0%	44.3%	11.5%
Need to relocate	21.3%	39.3%	27.9%	11.5%

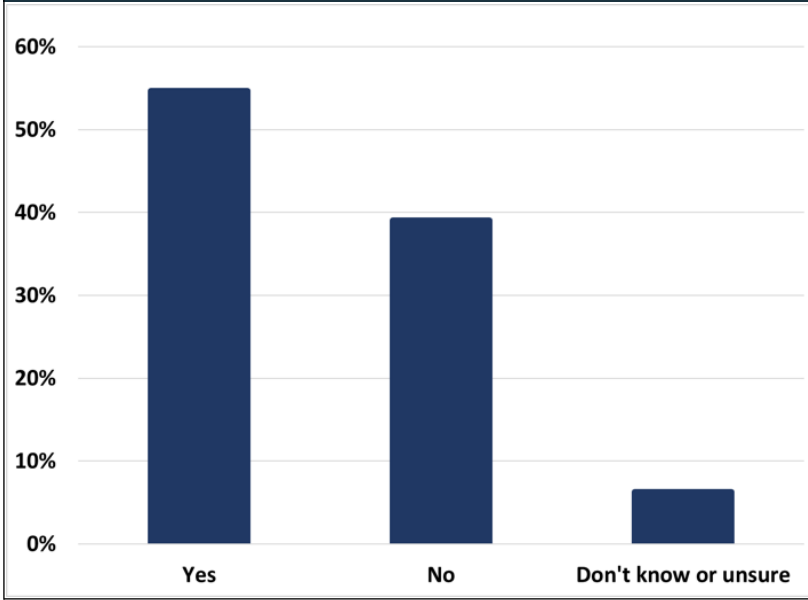
Source: Original survey data as described in text.

pressing worry expressed by respondents, with almost half indicating they had no worry about this issue. Perhaps this is because they feel they already possess the requisite skills, or they would not see undertaking additional training as a significant hurdle. Respondents were divided on whether a need to relocate for new work was a major worry: one-fifth saw it as a major worry, two-fifths as a moderate worry, while 28% were not worried at all. This diversity of opinion regarding relocation likely reflects the regional dispersion of existing fossil fuel work. As noted above, over half of direct fossil fuel jobs are located in major cities; the uncertainty and cost associated with relocation is less likely to be a concern for those workers, who have a greater probability of finding appealing alternate employment in their own communities.

Transition Planning and Supports: Regarding how transition to other jobs (or into retirement) could be achieved, a modest majority (55%) of respondents agreed that a planned downsizing, through which reductions in fossil fuel employment are managed over time through retirements and voluntary employment transitions (rather than lay-offs) is possible (Figure 9). 39% of respondents did not believe that such a transition is possible. Part III of this paper will review experiences whereby planned phase-out of certain fossil fuel activities was indeed accomplished without involuntary displacement. However, many fossil fuel workers in Canada have yet to be convinced that such an approach could work in their industry. It will require more work to concretely describe the dimensions of a planned transition, and build confidence among workers that such a plan could be implemented reliably in practice, to dissipate this skepticism.

Figure 9.

Is a Planned, Supported Transition Without Lay-Offs Possible?



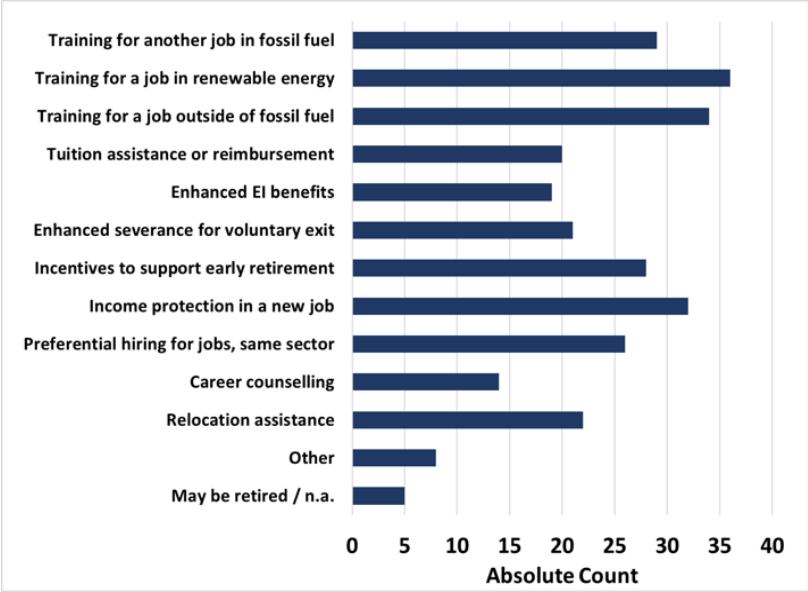
Source: Original survey data as explained in text.

The survey asked respondents what types of income replacement and other supports would be most relevant and valuable in thinking about their own future employment transitions. They were presented with a wide range of potential supports, covering retirement, retraining, relocation, and income security. There was wide interest in most of these options, as illustrated in Figure 10. Training assistance for workers in new jobs ranked highly across all categories of potential new employment: including re-

training for other jobs in the fossil fuel industry itself, jobs in renewable energy, and jobs in entirely different sectors. Another popular policy support is income protection for workers who take new roles, to preserve their pre-transition level of income. Widespread support also exists for several other potential transition measures — including relocation assistance, early retirement incentives, preferential hiring for other jobs within the current industry, enhanced employment insurance protection, and tuition assistance. Career counselling generated relatively little interest among respondents.

Figure 10.

Interest in Potential Employment Transition Supports



Source: Original survey data as explained in text.

Most fossil fuel workers will retire before the 2050 target date for net-zero status, and so retirement incentives will play a critical role in facilitating employment transitions.

Retirement-related incentives of various forms are a common feature of restructuring and transition plans, for obvious reasons. By helping older workers retire earlier than normal, they reduce the number of involuntary displacements experienced by younger workers (who have less seniority and hence would more likely face layoffs without higher-seniority workers leaving voluntarily). As noted above, most fossil fuel workers will retire before the 2050 target date for net-zero status, and so retirement incentives will play a critical role in facilitating employment transitions as fossil fuels are phased out. Our survey asked respondents for their views on specific forms of retirement incentives (see Table 6). Early retirement programs which offer a bridging benefit until normal pension benefits kick in are the most supported option. Improving basic pension benefits, and offering direct lump sum or similar voluntary severance incentives, are also broadly supported. Enhancing employment insurance benefits to provide a partial de facto bridge to normal retirement age are the least preferred (likely because the level of benefit support from EI is considered inadequate).

Table 6.

Support for Early Retirement Incentives

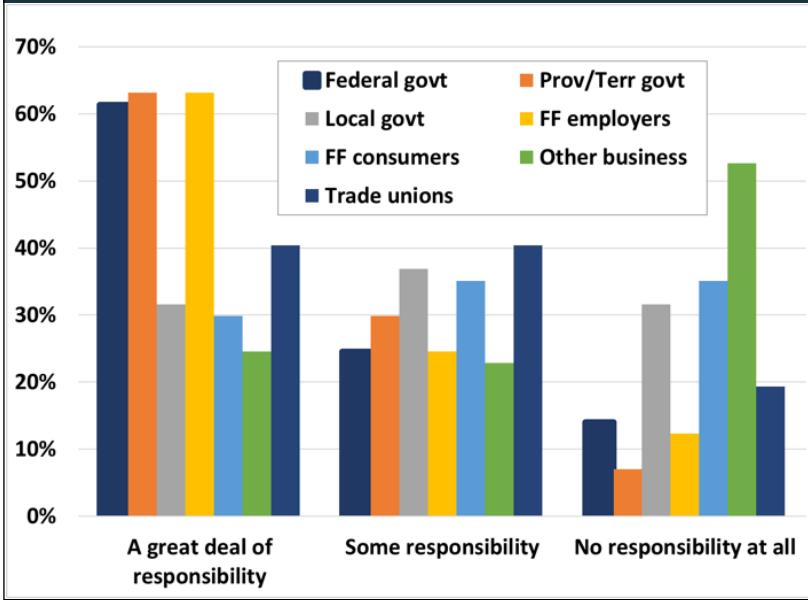
Form of Benefit	Very Important	Somewhat Important	Not Very Important	Not At All Important
Early retirement with bridging benefit	41.0%	27.9%	19.7%	11.5%
Higher basic pension benefit	50.8%	24.6%	11.5%	13.1%
Other retirement incentives (eg.lump sums)	32.8%	36.1%	19.7%	11.5%
Enhanced EI benefits bridging to retirement	21.3%	23.0%	44.3%	11.5%

Source: Original survey data as described in text.

Governance and Funding for Transition: Our survey investigated fossil fuel workers' views regarding how future transition plans should be designed, governed, and funded. First, we asked which stakeholders in society bear the greatest responsibility for supporting fossil fuel workers through the coming transition (see Figure 11). Respondents were clear that the federal and provincial/territorial governments, along with fossil fuel employers, bear the core responsibility for providing transition support. Over 60% of respondents agreed that these stakeholders hold a great deal of responsibility for the transition, with another 25-35% indicating they are somewhat responsible. Respondents generally felt that local governments, other businesses (outside of the fossil fuel sector), and fossil fuel consumers are not very (or not at all) responsible for supporting the transition. Trade unions are seen to hold an intermediate level of responsibility: with 40% indicating they are very responsible for supporting workers through the transition, and another 40% somewhat responsible.

Figure 11.

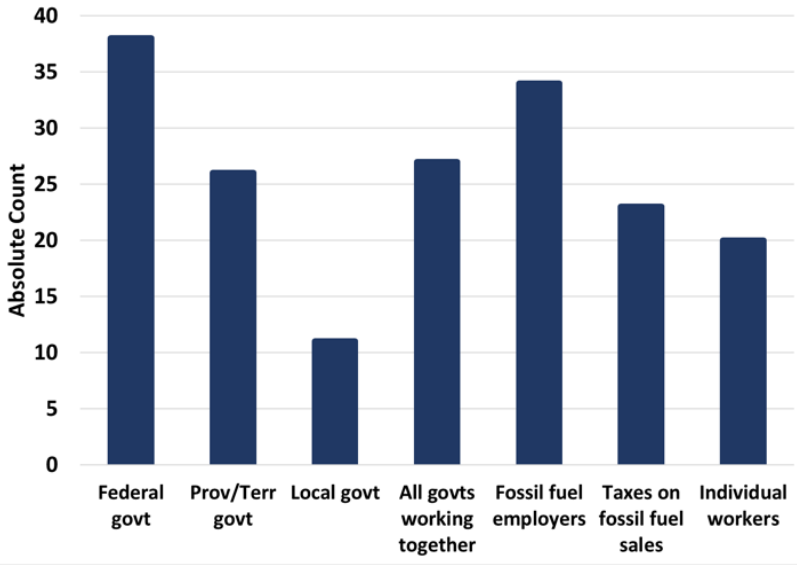
Responsibility for Supporting Fossil Fuel Workers through Transition



Source: Original survey data as explained in text.

Figure 12.

Who Should Fund Employment Transition for Fossil Fuel Workers?



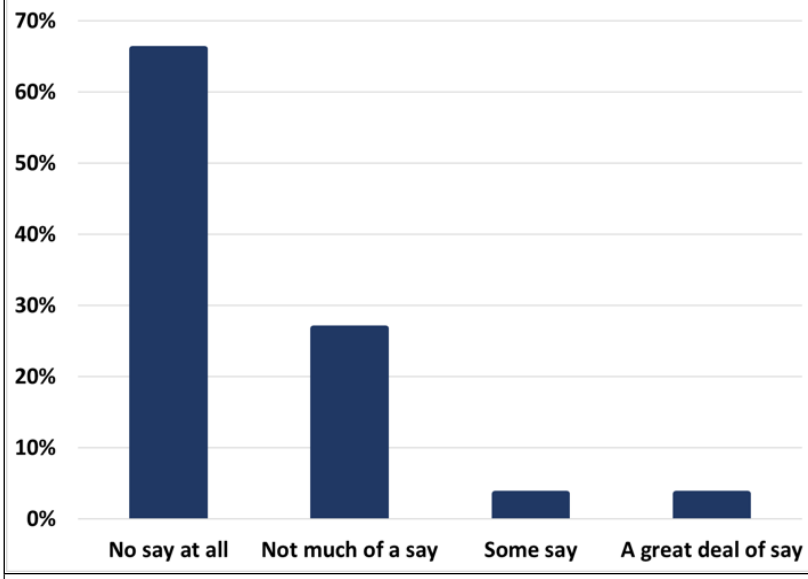
Source: Original survey data as described in text. Shows absolute counts (not percentages) since multiple options could be selected.

Regarding funding for transition supports, respondents also agreed that the greatest responsibility lies with the federal government and with fossil fuel employers (see Figure 12). Intermediate responsibility for funding transition programs lies with provincial and territorial governments (or through inter-government cooperation), and through special taxes on fossil fuel sales (such as a carbon tax). There was least support for funding these programs from local governments, or requiring individual workers to cover the cost themselves.

Workers' Voice and Transition Planning: Respondents expressed an overwhelming opinion that fossil fuel workers currently have very little say in how their jobs will change over coming years, and how transition measures and related policies will be determined. Fully two-thirds of respondents feel that fossil fuel workers have no say at all in the future of their jobs (see Figure 13). Another one-quarter believe fossil fuel workers have very little input. This very strong finding indicates the extent to which existing policy dialogues and policy initiatives have failed to genuinely connect with fossil fuel workers. It also highlights the glaring need to develop better mechanisms so workers have genuine input and in-

Figure 13.

How Much Say do Fossil Fuel Workers Have Over Future Changes to their Jobs?



Source: Original survey data as explained in text.

fluence over how their jobs will change in the future, and how they will be supported through that change.

Respondents expressed an overwhelming opinion that fossil fuel workers currently have very little say in how their jobs will change.

The sobering lack of worker voice and input is felt especially strongly with regard to two stakeholders in particular: the federal government and environmental organizations. Almost three-quarters of respondents indicated fossil fuel workers are not listened to at all by either of those stakeholders (see Table 7). Somewhat more receptivity was identified by respondents regarding provincial and local governments, employers, and other community stakeholders (such as education institutions and non-profit organizations) — although a majority of respondents still felt workers are not listened to at all by those groups. The outlier in this question was trade unions: 34% of respondents say unions listen to fossil fuel workers carefully, and 45% listen somewhat, a stark difference from negative attitudes regarding the other institutions. Recall that the sample for this questionnaire is overweighted among union members; that likely contributes to the strong sense that unions listen to fossil fuel workers much better than other stakeholders. Nevertheless, the fact that respondents have a high degree of confidence that their opinions and preferences are being heard by unions, reinforces the importance of organized worker input (including through formal collective bargaining arrangements) for shaping stronger transition plans.

Table 7.

How Well are Fossil Fuel Workers Listened to by Various Stakeholders

Institution	Listened to carefully	Listened to somewhat	Not listened to at all
Federal government	0.0%	26.8%	73.2%
Provincial government	14.3%	30.4%	55.4%
Local government	5.4%	41.1%	53.6%
Fossil fuel employers	8.9%	39.3%	51.8%
Trade unions	33.9%	44.6%	21.4%
Universities and colleges	8.9%	35.7%	55.4%
Community & non-profit organizations	8.9%	41.1%	50.0%
Environmental groups	10.7%	16.1%	73.2%

Source: Original survey data as explained in text.

We then asked respondents how they could gain more say over the coming employment transition. Two forms of action — electoral participation and collective bargaining — stood out as offering the greatest potential for exercising more input from fossil fuel workers over the transition (see Figure 14). 85% of respondents see collective bargaining between unions and employers as very important or somewhat important in ensuring worker input and influence in transition design. 77% of respondents see voting for political leaders as very or somewhat important (with this option recording the highest indication as 'very important', at 61%). There was intermediate support for non-electoral advocacy (such as writing letters or attending protests) as a means of channeling worker input. There was little

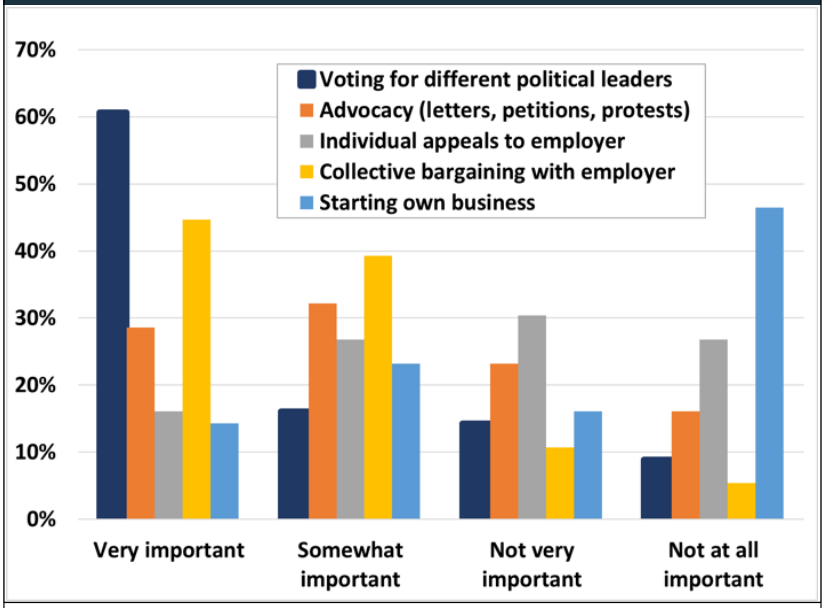
confidence in the impact of personal appeals to employers, or starting independent businesses, as channels for fossil fuel workers to achieve more influence over the transition process; well over half of respondents rated these channels as not very important, or not at all important.

Thinking About the Future: The survey concluded with a general question about fossil fuel workers' degree of optimism regarding the future. The responses to this question were evenly divided, with a slight lean toward pessimism (Figure 15). 36% of respondents felt very optimistic or somewhat optimistic about the future, while 39% felt somewhat or very pessimistic. This divided opinion is consistent with similar splits in responses to other forward-looking questions in the survey (such as the moderately optimistic attitudes respondents expressed about personal employment security noted above, despite respondents' general agreement that their industry will likely downsize in the future).

* * * * *

Figure 14.

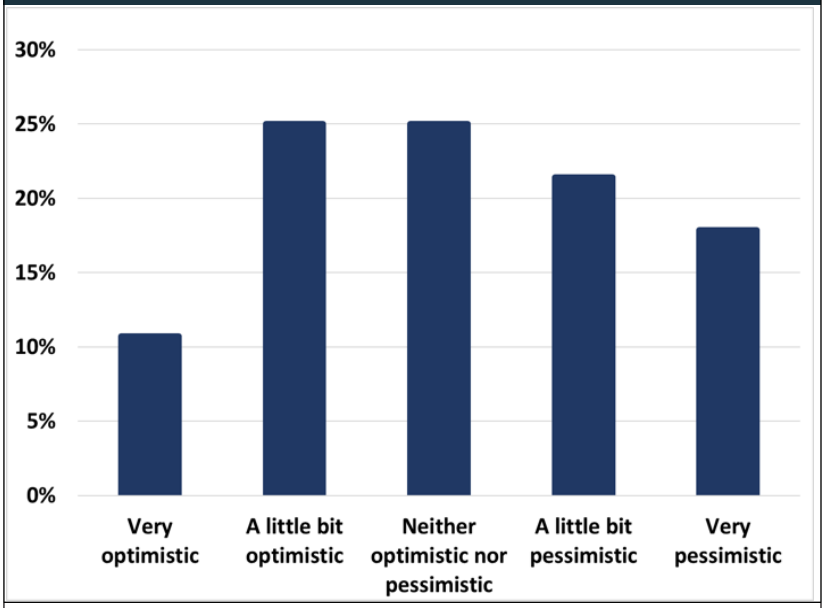
Actions to Strengthen Worker Input into Future Transition Plans



Source: Original survey data as explained in text.

Figure 15.

Attitudes About the Future



Source: Original survey data as explained in text.

In summary, these quantitative survey results convey a complex mixture of both sobering and hopeful findings. On one hand, fossil fuel workers are surprisingly confident about their personal employment security, and not strongly pessimistic about the future — even through a clear majority of them understand that fossil fuel production and use is causing climate change, and that fossil fuel use must be curtailed accordingly. They express interest in a wide range of alternative vocations, reaching far beyond the energy industry (even renewable energy) into other sectors and occupations. A clear majority believe that a planned and supported transition, avoiding involuntary displacements, is possible. And workers are interested in the whole suite of transition supports that could be implemented to support that plan: including early retirement incentives, relocation and retraining supports, and income insurance programs.

On the negative side, respondents overwhelmingly believe they currently have little or no voice in how fossil fuel jobs will change over the coming years, and how the transition will be managed and supported. Of note, few felt the federal government and the broader environmental movement were listening at all to fossil fuel workers' concerns and priorities. Less severe alienation was expressed regarding other institutions — including provincial governments, employers, and educational institutions.

Respondents see unions as the stakeholder most attuned to workers' concerns and preferences.

One particularly bright light in these quantitative results is the positive regard with which respondents view trade unions. Respondents see unions as the stakeholder most attuned to workers' concerns and preferences. They also indicate that collective bargaining between unions and employers offers the greatest potential for ensuring that workers' interests and priorities are respected as the transition unfolds. This is important evidence supporting the conclusion that strengthening workers' collective voice in transition planning, including through the power to negotiate binding commitments in collective agreements, is vital for developing employment transition plans that can win stronger support from fossil fuel workers.

B. Qualitative Interviews

To obtain additional context and nuance into fossil fuel workers' attitudes regarding the future of their jobs and their industry, and the prospects and challenges for achieving successful employment transitions, a program of qualitative interviews with 20 key informants was undertaken. The in-depth interviews were conducted (most by video, one by telephone) between November 2022 and February 2023; interviews were transcribed for subsequent analysis and coding. Those interviewed had knowledge and experience in the fossil fuel sector, and with transition issues. Interviews ranged from 30 to 90 minutes in length. The interview format was open-ended and informal, allowing participants to raise or focus on topics of particular interest or concern.

Twelve interviewees were individuals involved with labour organizations – including four different unions, and four federations of labour/central labour bodies. National union officials and staff, executives and staff from labour federations, local union officers, union activists, and those recently retired from union positions were interviewed. The remaining interviews were with staff or activists from research centres, coalitions, or community organizations.

Interviewees came from across Canada, including British Columbia, Alberta, Ontario, Quebec, New Brunswick, and Newfoundland and Labrador. The participants also represented a variety of fossil fuel-related sub-sectors, including mining, oil and gas extraction, pipelines, refining, and natural gas distribution. Some also had worked previously in roles in the broader energy industry, renewable energy firms, and even the environmental movement.

Analysis of the interviews identified several important sub-themes that are discussed below, each illustrated with a selection of relevant direct quotations:

Climate Change and the Future of Fossil Fuels

> *"I don't believe in climate change, but that summer killed all the fish and I can no longer go to my cabin to fish. Fishing is the 90% of my life. The weather events of the summer of 2021 were so bad that fishing was affected, meaning I can't do what I love which is fishing."*
>
> — Retired Union Staff

> *"We've really been living [the climate crisis] in the last couple of years. Wildfires, heat dome, cold snap… So our members are really feeling those impacts, both in their lives and communities, but also in their workplace."*
>
> — Labour Federation Staff

> *"We live in a conservative environment, and… so there certainly are a lot of people who don't believe climate change is happening. But I truly believe the majority believe that it is happening."*
>
> — Local Union President

> *"People get defensive because this is their livelihood and they see any attack on the industry as attacks on themselves and how they look after their families and their retirement."*
>
> — National Union Staff

> *"A lot of [members] do understand that the world is changing, they look at the history of the world… There's always been evolutions in the world of technology. I mean, there's not too many horse and buggy operations left."*
>
> — National Union Staff

> *"People are quite aware of extreme weather events occurring… They might not call it climate change. They might not link it to extraction of oil and gas. But you can't deny that shit is happening because it's affecting you."*
>
> — Community Organization Staff

Climate change is a polarizing topic among fossil fuel workers. Consistent with the quantitative evidence presented above, there is general agreement that changing weather patterns are having a major impact on the way of life for fossil fuel workers. These impacts are felt directly in workers' lives and communities, but also in their workplaces. Concerns around climate change are gaining prominence. This shift in attitudes has been reinforced by noticeable changes in weather.

Climate change was identified as an issue on which the labour movement needs to educate and lead its members. Several informants stressed that unions and federations need more, and stronger, policies relating to jobs, justice, and the environment, and to do more active outreach with their members on these issues.

Regardless of broader public debate over the causes of climate change, interviewees agreed that their members and colleagues are aware of the linkages between extreme weather events and their living conditions and income security. This sentiment is felt most strongly when weather events directly affect individual lives – for example, by affecting activities such as fishing and hunting. Among union members, however, not all were convinced that the economy needs to transition away from fossil fuels.

Corporate greenwashing, and companies which use climate policies as an advertising opportunity, sparked criticism from several interviewees. Some petroleum companies claim to be divesting and becoming 'carbon neutral', all the while continuing to contribute to climate change, and opposing genuine climate measures.

At the same time, some informants saw environmentalists as adversaries who often paint the situation as more dire than it is, or unfairly target fossil fuel workers as the villains. Some respondents also complained that the environmental movement assumes fossil fuel industries must simply be shut down, rather than proposing more concrete and innovative strategies that would include transition plans for affected workers.

In general, however, most of the union informants considered the environmental movement a strategic partner, while noting that a balance between climate goals and the needs of fossil fuel workers must be found. Several informants expressed confidence that unions are engaging proactively in these debates, wanting to advance climate goals while protecting the interests of workers and union members.

"I am not concerned about the jobs, I am concerned about the quality of the jobs."

— Research Centre Staff

"A member said I could go to school at night for eight months to get a certificate to make half the money."

— Retired Union Staff

"Oil and gas companies are going to follow the money and… be transitioning their operations, with or without legislation. They know that that is the future. But how do we make sure that … this is not a way to sort of contract flip their employees? [That] they bring their workers and their collective agreements with them into these new jobs?"

— Labour Federation Leader

"In the solar industry it's the Wild West and it's really a race to the bottom in that industry. There's a lot of weekend warriors with a… van and they're installing solar and not necessarily licensed in a lot of cases to do that."

— Local Union Staff

"Most people that work in the energy sector aren't there because they just love the smell of crude oil. They're there because it's a good paying job and they want to have a good paying job."

— Community Coalition Member

"I've had a lot of arguments with my environmental friends over the years about why they don't pay attention to these shitty jobs that they are lobbying for… It doesn't seem to be a big issue for them, [or] why these renewable energy jobs [would be] much better located in the public sector."

— Retired Union Staff

"Making sure that these [are] good jobs… can fundamentally change the politics around… net zero low carbon energy."

— Labour Federation Leader

"I was trying to organise a plant a number of years ago that built solar panels, where they were making 15 bucks an hour. You can't raise a family on that. That's why they're trying to organise."

— National Union Staff

"In the recession, the oil and gas recession, that was 2014-2015, actual workers were [saying] like, okay, what the hell, we lost our jobs. They are not coming back. Let's try to move towards renewables."

— Community Organization Staff

"A lot of these wind farms and solar farms, they take place in rural communities and there's a very, very strong incentive on those companies to hire locally."

— Retired Union Staff

The prospect of new jobs in renewable energy is often raised as a key element of transition planning. As noted above, however, there are employment opportunities in many other sectors (including non-fossil resources, construction, manufacturing, and transportation) that are also of interest to fossil fuel workers considering alternative careers. So the common temptation to directly connect disappearing jobs in fossil fuel roles, with new jobs in renewable energy, is more complicated than often assumed. Transition planning needs to adopt a broader perspective on inter-industry employment mobility.

Employment opportunities in renewable energy generated mixed reactions among interviewees. Many believe those jobs tend to be low-paying, short-term, seasonal, contract, or gig work. The renewable energy industry is not known for high quality union jobs. Other concerns include that, after an initial burst of jobs in construction of new renewable facilities, there will be few long-term jobs due to low labour requirements in operations and maintenance. (This concern, of course, applies equally to fossil fuel work, especially capital-intensive operations such as bitumen production.)

Earnings in renewable energy roles are estimated by our informants to be 25-50% lower than current rates of pay in high-wage fossil fuel roles. That would imply significant reductions in incomes, with little chance of improvement. This concern reinforces the interest (noted above) in strong income security provisions as part of effective transition planning.

Fossil fuel workers are seen to possess highly transferable skills, that would be compatible with movement into renewable energy roles. However, the pay in those new jobs must be lifted.

Fossil fuel workers are seen to possess highly transferable skills, that would be compatible with movement into renewable energy roles. However, the pay in those new jobs must be lifted in order to be comparable to current rates of pay, and appropriately recognize the skills and experience of transitioning workers. For example, electricians readily possess skills and certifications required for installing solar and wind energy facilities. However, the pay in those roles is presently low compared to fossil fuel sectors, and concern over the long-term stability of employment in renewable energy roles is also intense.

To strengthen the appeal of jobs in renewable energy, they must be permanent and well-paying. Since governments heavily subsidize renewable energy projects, they should link those subsidies to commitments around job quality, pay, and union representation.

At present union density in the renewable energy sector is low, but union informants believe the labour movement can change this through unionization and collective bargaining. Now is the time to organize workers in renewable energy, to set standards that will apply as the sector grows.

Interviewees expressed general enthusiasm regarding the employment potential of new energy technologies, such as hydrogen, biofuels, and electric vehicles. There is also potential for value-added jobs, such as in manufacturing the equipment used in lower-carbon energy facilities, and jobs in energy-conservation projects (such as public transit infrastructure and energy-saving building retrofits). The clean up of orphaned and abandoned wells could also play a role in employment transitions, with current rates of pay maintained.

Speaking with Workers, Using the Right Language

> *"We want to get away from [the phrase] 'just transition'. It just seems like a red flag to our members, especially in Alberta and BC, … because they think that is a code word to eliminate their very well-paying jobs."*
>
> — National Union Staff

> *"Our members in the energy sector were leaders on coining the term 'just transition,' and putting together principles… The first highly visible impactful use of their voices was encouraging the federal government to endorse the Kyoto Protocol, so that that was great work by our energy sector."*
>
> — Retired Union Staff

> *"I'm concerned about… the radicalization of workers in the energy sector, like towards the right... If we don't talk to them, then they're… getting the convoy kind of messaging, or they're getting the messaging from all these [social media] folks. … And so if we're not counterbalancing what they're hearing on the ground, then it's bad."*
>
> — National Union Staff

> *"We have union members who are engaged and understand the challenges ahead of them. And… workers have a view that we need to be creating good new jobs and protecting job quality for people who have them… There's solidarity on that."*
>
> — Labour Federation Staff

> *"We began our work on just transition by meeting our members throughout [the province]... We designed a policy declaration with them on just transition. We organised our affiliates… to have policies on just transition, which the last ones adopted… last year. So all of the major unions now have just transition policies, and then we worked on explaining them and unpacking the just transition definition. We created a guide on just transition. We created a project about just transition laboratories…, to have study cases inside workplaces."*
>
> — Labour Federation Leader

"Even the words we use, I think, are inappropriate. We use, you know, 'just transition'. Transition. But the real message is, we're not going to have it anymore."

— Retired Union Staff

"Workers are in fear to talk about [transition], … whether they support or do not support the transition, whether they want a different job [or not]. Workers… don't feel comfortable talking because the fear is losing their jobs. So that fear trumps everything… And the more we talk about the transition, the more workers get anxious because it's like, okay, so where's my job going? So what am I going to do? Am I going to make the same amount of money? And that is a narrative that is being used by the fossil fuel industry to say, well, you're not going to get a job with that [wage]."

— Community Organization Member

"You start talking just transition, and they either go on the defensive, or they close their ears and basically say that's just silly nonsense talk… If we want to act like ostriches and put our heads in the sand and pretend like… things are not changing, we're being foolish. I'd rather… teach the next group to keep their heads up and make sure that we're not left behind."

— Local Union President

The phrase "just transition" was first proposed and used by trade unionists. Canada's former Communications Energy and Paperworkers union (CEP, which later co-founded Unifor) was among the first to popularize the term. For several of our informants, however, that language is now viewed unfavourably. Workers see a connection between the phrase and the threat of job loss. There is sensitivity amongst fossil fuel workers about climate change and transition as it relates directly to their job security. It cannot be considered a just or fair transition if the worker bears the cost.

The Fédération des travailleurs et travailleuses du Québec (FTQ) has taken a more proactive approach to building support for the concept of just transition. The FTQ met affiliate unions and union members across Quebec to explain the concept, and worked to shift the connotation between the term and job loss. An accompanying popular education guide was created. It is hoped that once the phrase is unpacked and explained, it can then become a motivating and uniting principle.

All agreed on a need to change the conversation among fossil fuel workers. Recent debates over climate change, so distorted by industry-financed misinformation and lobbying, have contributed to a defensiveness among many fossil fuel workers. Many attempt to deny the reality that their industry has a limited lifespan, and blame any uncertainty or job displacement on a distant government, rather than on the realities of the global energy transition and the greed of their own employers. Ideally, fossil fuel workers can be won over to supporting a planned transition if they see it as a success and an opportunity. They will support a planned transition if it enhances their economic prospects, in comparison to what would happen in an unplanned and forced last-minute shut-down of their industry.

Generational Impacts

> *"The older workers say, don't worry about me, I'll be fine, I'm going to retire, you look after the young guys. The young guys say, don't worry about me, I'll be fine, I'll be able to transfer my skills, look after the old guys. Very Canadian story of caring for each other."*
>
> — Community Organization Member

> *"Average age of my workforce is 40, that's too old for retraining and too young to retire."*
>
> — Local Union President

> *"As a young worker, [I am] not optimistic at all. Governments are going to hack and slash to make the climate targets work. That's my job. What does the future look like? [It's] a long way to retirement."*
>
> — Local Union President

> *"I only have roughly three years left before I retire, but obviously I want to be able to make sure my local and… my members are protected [by] coming up with some sort of idea or plan to make sure that we just don't go to the wayside."*
>
> — Local Union President

Several interviewees spoke of the uneven generational impact of the coming employment transition. It is expected that the wind-down of fossil fuel production will have a smaller impact on older workers than on younger ones. Most older workers believe their jobs are relatively secure until normal retirement age, but they are concerned about the future for the younger workers. Interestingly, however, some of the younger workers interviewed expressed concerns for older workers, worrying they are less able to adapt to new work arrangements and skills.

Transition plans need to include efforts to transform the economic base of industries and entire communities, not just protect or compensate the individuals who lose work.

There was strong support (discussed further below) for the use of retirement incentives to encourage older workers to leave their jobs sooner, thus reducing the likelihood of involuntary layoffs for younger workers. Additional measures such as the ability for workers to move between facilities (so that when one facility closes, senior workers at other facilities can retire early as well, making room for younger workers to transfer from the closing facility) could further reduce involuntary dislocation.

While these measures could reduce the risk of lay-offs for particular groups of workers, respondents also spoke of their commitment to, and concern for, the broader community. Especially in smaller or remote regions where fossil fuel facilities serve as

economic anchors, merely being able to absorb downsizing through voluntary retirement incentives still leaves the broader community vulnerable to the loss of their mainstay industry. In this context, transition plans need to include efforts to transform the economic base of industries and entire communities, not just protect or compensate the individuals who lose work.

Who Has Voice?

> *"One thing that we heard when we were out meeting with coal workers and communities and … local chambers of commerce, was that they were concerned about losing the property taxes if a plant or a mine closed. But what they were more worried about was what happens to their community if all of these workers and their families move away. And what that means for all the other stuff there, whether they're volunteer firefighters or the hockey coaches or their spouses or the teachers and health care workers and pharmacists."*
>
> — Labour Federation Leader

> *"Provincially, it certainly feels like workers' voices are not heard. I mean, we're not even engaged in these discussions right now."*
>
> — Labour Federation Leader

> *"The range of affiliates who are really engaged on just transition as the labour movement's answer to climate change has grown in the last while. So I think people really understand that these transitions are underway, and they know what happens if it is just left to employers to guide it."*
>
> — Labour Federation Staff

> *"Where is the voice for the worker? Because soon as an energy worker steps up for them[self], there's always an environmentalist, who says, well…, it's self-interest because you make your living there… We need to change for saving the planet; we need to make the changes. I don't disagree. I mean, I have eight grandchildren. I want this planet to… continue. So, you know, there's a proper balance."*
>
> — Union Staff

Some interviewees, but not all, felt that the voices of workers and communities are not being heard in current debates about the industry's coming transition. Significant frustration was conveyed because energy unions have been talking about an industrial strategy and transition planning for a long time, but there is widespread concern their arguments have not been heeded. Many felt that energy corporations hold power and money, and therefore have both the loudest voice and the greatest influence over both industry evolution and government policies. Some respondents also noted that environment movements also have a strong voice with some governments.

However, this pessimistic sentiment was tempered by a countervailing view that workers' voice can and will be heard at the collective bargaining table (discussed fur-

ther below). The power of unions and their ability to negotiate binding commitments in a collective agreement are seen as a potent vehicle for making workers' voices both heard, and listened to. Joint workplace committees (on health and safety, training, and environment policies) are another effective tool for ensuring that workers' voice is heard, and effective.

Some interviewees noted that through lobbying and political advocacy, unions have been able to project workers' voices into political and policy debates over energy transition, beyond the collective bargaining table. This view was strongest in Quebec, where tripartite mechanisms of dialogue and codetermination are well established.

The federal Supply and Confidence Agreement between the NDP and the Liberals (which lasted from 2021 through 2024) certainly brought more attention to the needs and concerns of workers in federal transition policies (such as the 2024 Canadian Sustainable Jobs Act, discussed further below). However, that progress is incomplete, and overshadowed at times by the charged and divisive debate over federal carbon pricing and other climate measures. Indeed, as noted above, respondents to our quantitative survey expressed zero faith that workers were listened to by the federal government — seemingly at odds with the extensive consultation and multipartite features of the federal transition legislation. That indicates that unions' efforts to inject labour concerns into high-level government policies are not well known or appreciated at the rank-and-file level of fossil fuel workplaces.

Through collective bargaining, unions win genuine power to advance workers' interests through binding commitments, rather than consultation and token expressions of concern.

Some interviewees expressed concern that unions themselves do not accurately or fully reflect the sentiments of average members. Union policies on climate change and transition may be ahead of the beliefs of the members, creating risk of a gap between union policy and the views of average members on this controversial issue. At the same time, some informants felt members want their unions to show enough courage and confidence to acknowledge the coming changes, and confront them (through education, advocacy, and especially collective bargaining).

Some suggested that unions and employers should work together, formulate a plan, and then jointly meet with governments to push for policies that would support the industry's evolution. A joint voice can be louder. Similarly, formal multipartite structures for transition planning are also seen as helpful in amplifying workers' voice: that voice will be heard more clearly if all parties are in the room.

Nevertheless, while government commissions and consultations can be valuable, the best place for workers' voice to be effective is at the bargaining table. Through col-

lective bargaining, unions win genuine power to advance workers' interests through binding commitments, rather than consultation and token expressions of concern.

Collective Bargaining

> *"You know, at the most basic level, …workers' voices are heard at the bargaining table."*
>
> — Local Union President

> *"The basic problem has been, you're not going to negotiate very much in the way of worker transition in energy unless there actually is an economic transition going on in the in the energy systems… Because otherwise, it's just a kind of a theoretical proposition. If workers are displaced because of the implementation of climate policies, you will do this or you will do that. But in reality, that hasn't been happening."*
>
> — Retired Union Staff

> *"If you're not at the table, you're likely on the menu."*
>
> — Retired Union Staff

> *"We can't expect the government to protect our members. They're not going to bargain the protections that we need. We can hope that they'll set in place certain minimal standards, and set in train a process for helping members out in the energy sector and other sectors. But I think a lot of the work has to start with trade unions, [and] also their membership."*
>
> — National Union Staff

> *"Bargaining is how we make a job, a good job."*
>
> — Labour Federation Leader

There was a strong conviction among informants that the transition away from fossil fuels is a collective bargaining issue. Workers and their unions need to be able to address transition issues through binding and contractually negotiated protections and commitments, rather than hoping for general input and consideration from employers and governments.

Preferably this collective bargaining should occur through pattern bargaining across the whole sector. Unions can achieve greater power and consistency through pattern bargaining; and sector-wide arrangements have great potential to oversee phased downsizing and inter-location mobility during a phase-out process. The experience of other successful transition programs (such as the phase-out of Ontario coal-fired electricity generation, or the gradual shut-downs of coal mining in Germany, the Netherlands, and Spain, all discussed below) reinforce the importance of industry-wide planning in achieving successful transitions without involuntary lay-offs.

Respondents argued that the time to negotiate provisions that support and protect workers during the coming transition is now. Some unions are negotiating language

protecting their members during transitions and restructuring in the energy industry — in many cases building on examples of job security, severance, and restructuring language long applied in other industries (such as manufacturing). The fact that petroleum and other energy companies have been earning record profits since the COVID pandemic makes this a good time to bargain new provisions: employers' ability to pay is not in doubt. Moreover, by putting a priority on bargaining transition language, unions indicate to their members, employers, governments, and the public at large that they are preparing for positive change, and committed to protecting their members through that change.

Transition planning is an obvious bargaining issue, but it will be a challenge to convert the general goal of a planned, supported, gradual transition into concrete, binding contract language. Unions can use their collective strength to win commitments for investments in new jobs and technologies; for stronger job security, notice, and severance rights; income supports and early retirement incentives; access to training and redeployment; and other measures to protect workers as the industry phases down.

Transition Planning and Supports

> *"A transformative approach within sectors versus a compensatory approach is needed. Focusing on compensating workers for lost remuneration for their lost jobs and the loss of dignity from not being able to work anymore cannot be the whole thing. We want to transform jobs within the energy, forestry, and other sectors to take advantage of new technologies."*
>
> — National Union Staff

> *"What we're trying to do is push both the feds and the province to take a stronger leadership role in just transition, and not get trade unionists who are concerned about just paying their bills and having a job feeling like they should desert their jobs and walk away… when there's nothing else out there."*
>
> — Labour Federation Leader

> *"There's a menu of [mechanisms]. I don't think you can... make a hierarchy. It would depend on who you're talking about, where they are, and what the circumstances are."*
>
> — Retired Union Staff

> *"I would say that there are probably pockets of resistance, but the vast majority of our members are keenly interested in being a part of a just transition strategy rather than just have something decided for them and deal with the fallout from that."*
>
> — Labour Federation Leader

> *"Our members…, if their jobs are impacted by a planned phaseout of fossil fuels, they're looking for an industrial strategy that includes good family-supporting jobs and income protections for affected workers. So how do you get there?"*
>
> — Retired Union Staff

"Incentives, tax credits, etc., should be tied to the provision of good unionised, sustainable jobs. With that equity lens as well. Here… we call them community benefit agreements."

— Labour Federation Leader

"From a [union] perspective, what we're interested in is the workforce: the members and the fact that they cannot and should not be discarded like a used piece of equipment with respect to whatever changes. The workforce in the fossil fuel industries is highly skilled, highly knowledgeable."

— Union Staff

"Especially in Canada and North America, for a long time, we've really lacked any sort of muscle memory to put in place productive industrial strategies that centre worker and community voices."

— Retired Union Staff

"Whenever there is going to be… pockets of government money for things like skilling, there's going to be a whole line up of for-profit providers popping up like mushrooms ready to spend that money. And we've seen how that doesn't really deliver in the past."

— Labour Federation Leader

"It's really got to be about having a job at the end. At the end of this transition, there has to be a job."

— Labour Federation Leader

"I had this member, a president of a [local]…, who came to me saying, I don't want you to tell me how… to better lose my job. I want to not lose my job."

— Labour Federation Leader

"I drive a truck. I made six figures. I'm not going to make six figures driving a truck anywhere else. Now, I can still potentially drive a truck, but, you know, it's going to be a lot less. And how does that impact me?"

— Union Staff

"I have a worker that… lives in Newfoundland, [and] has to go to Fort Mac to work. But what if we find jobs in their own communities? ... They're staying with their family so [they're] improving their way of life. You might be cutting a little bit on their wages, but they're staying with their families in their communities."

— Community Organization Staff

"We understand from a work perspective that we build everything. So we built and operated and maintained coal plants, but also wind, solar and nuclear. And we advocate for green buildings, we advocate for new standards so that there's work opportunities attached to that. [Members] will not see their jobs disappear, but actually be part of… more opportunities for working in in our sector as technology changes."

— Local Union Staff

Two key transition mechanisms received consistent and strong support from interviewees: training (especially for younger workers, discussed further below), and pension and benefit bridging to retirement for older workers. However, it was also stressed that offering a full suite of transition mechanisms and supports is important, so workers are provided with broad choices about how to navigate the transition in the way that best suits them and their families.

Funding for the transition plan should come from governments and employers. Proper income safety nets are also important as the energy sector evolves to a different employment structure.

Early access to pensions, combined with maintaining supplementary health benefits without penalty for those retiring early, is the strongest transition option for older workers. Once again, retirement incentives should be funded by the companies. Several interviewees mentioned the German model, whereby the transition away from coal mining was managed successfully in part due to the existence of a strong state pension system (which could provide reliable early retirement options for affected workers).

Some younger interviewees stressed the importance of encouraging older workers to retire – to reduce the workforce through voluntary retirements (rather than lay-offs of younger workers). However, they emphasized that early retirement incentives must offer retirement with dignity, through enhanced bridging benefits and other protections.

Some interviewees expressed concerns about unions' limited ability to negotiate improved pensions. This is especially true for local unions that are part of multi-site or industry-wide pension plans (whose terms cannot generally be modified for particular workplaces). This reinforces the importance of industry-wide or sectoral negotiations around transition and associated benefits. Past experience indicates it is vital that government support improved pension options, including by integrating their operation with other public income security programs (such as Employment Insurance).

Training and Retraining

> *"My highest priority would be retraining… There's no reason why we can't retain these jobs, even if the company pivots away from carbon-based fuels or… oil and gas as the demand for that goes down, [and] electrification goes up. You know, if a company is to invest into electric generating a little bit more, there's no reason why our members can't do that. That's within their existing skill set."*
>
> — Local Union President

> *"I have a very strong opinion about who should be providing training, based on my experience over the years in training and transition programs… It is our public community colleges and vocational schools... For any transition measure, whether it's a national pro-*

gram, a provincial program or even a local or regional program, the first place to go is to open up discussions with the community college network in their communities, where they will find highly skilled, unionized staff who know how to provide appropriate, meaningful, credible, certifiable training."

— Retired Union Staff

"[Training should] start with union training centres… We work with our employers so we know what we're training people for. So there's going to be jobs at the end, not just training for the sake of it."

— Local Union Staff

Companies need to – and will – invest in retraining existing workers. Training requires time and money, including up to two years of income support while training (preferably integrated with extended EI benefits) and paid tuition. Without ability to cover living expenses during training, many workers will be unable to take advantage of training opportunities, even with free tuition. All agreed that employers should pay for training, possibly with assistance from governments.

Any training or re-training must be useful, interesting, and linked directly to employment opportunities at the conclusion of training.

Training and re-training should be delivered through existing training structures, such as the college system, union training and apprenticeship centres, or a combination of both. Interviewees expressed strong opposition to for-profit training companies. College offerings need to be current and easily accessible to workers, both geographically and in terms of scheduling, availability, and curriculum.

Any training or re-training must be useful, interesting, and linked directly to employment opportunities at the conclusion of training. Training should not be a patchwork system, left up to individual workers to seek training and then find their own jobs afterward; instead, workers should be given opportunity for clear, supported, integrated pathways to training and jobs. Where possible, retraining should begin while workers are still employed. Training programs should culminate in transferable certification, not employer-specific credentials.

Strong labour market information and data – describing the present state of the labour market, and likely future trends – is necessary, but presently lacking in most provinces. Labour market studies paired with a good labour market information and training system are important tools in identifying training needs and future jobs. The labour market partnership system in Quebec is an example of a successful joint model for planning and managing employment transitions and training.

> *"I don't lobby, but my national union does and it is up to me to hold them accountable, to make sure that they are maintaining the pressure on all levels of government, to make sure that we're getting a seat at the table and that we're not forgotten."*
>
> — Local Union President

> *"Part of our work has been to lobby the government to establish a just transition working committee. So we've identified that is where the world is moving. But what we're not seeing is any action."*
>
> — Labour Federation Official

> *"The funding should come from industry and it should come from government as well, especially the federal and provincial government, municipal governments, maybe a little less so in that regard. But, you know, the employers have a part to play as well because they're… a huge part of the reason why we are where we are."*
>
> — Local Union President

> *"It's super crucial [to do] longer term planning, because… if you have the details, you can look at your workforce, you can look at a 2030 date and you can plan backwards from that and see what's necessary instead of just waiting. And that's the whole point of all this. It's about planning for the future instead of waiting for it to come and reacting."*
>
> — Research Centre Staff

> *"It's important that we try and lead and educate our members on it. But there will be this crash, this clash anyway of where people's livelihoods are threatened. And so I think it's fair to say we try and play a fine line where we're not trying to destroy livelihoods. We are trying to create new livelihoods for people."*
>
> — Labour Federation Staff

> *"Transition is scary for every part of this process. And so transparency is required and collaboration is required because without that, it's not going to work."*
>
> — Union Organizer

There was unanimity among interviewees that planning for the transition should be multipartite and not be left up to corporations alone. The federal transition legislation, and labour's role within the planning and implementation of the program, is a promising development. It is imperative that there is meaningful dialogue with fossil fuel workers throughout the entire planning and implementation process, and that unions are part of the process, helping to shape the legislation.

Indeed, informants agreed it is essential that unions be part of transition planning, at the main table, not invited after the fact – and with opportunities to back up agreed protections and benefits through collective bargaining and binding contract language. Only the union is focused on defending workers' interests; workers cannot rely

on governments and corporations to look after their best interests. Labour federations can also play a crucial role coordinating labour's input; to be most effective, labour needs to speak with one voice.

Many informants noted they are ready and starting to take action, believing that the time for talk is drawing to a close. Several raised the possibility of industrial action to support labour's demand for a planned and supported transition. If governments and corporations are not listening, then it is time to take stronger action.

Many interviewees raised that other constituencies, such as social justice, indigenous communities, regional representatives, youth, and non-unionized workers, should also be part of transition planning. There was no consensus on whether the environmental movement itself should be part of the planning process.

Several informants stressed that a comprehensive industrial strategy, alongside climate policy, is extremely important to a successful transition, to ensure that the economy is producing high-quality, value-added, sustainable jobs to replace those disappearing as fossil fuels are phased out.

Interviewees felt that government levels and departments need to work together, not in silos, although there were regional differences in attitudes toward intergovernmental cooperation. Some respondents from Alberta had little use for politicians and governments, and were opposed to any federal intervention, while those from central Canada tended to favour partnerships involving the federal government. Reneging on previous commitments when governments change is a major concern, given the polarized nature of debates over climate policy. Similarly, respondents expressed concern about conservative governments, and the potential for some workers and union members to become radicalized by right wing ideologies.

There is apprehension that the federal government has talked a lot, but little action has been seen. Some provinces lag behind the federal government on transition planning, and focus mostly on supporting corporations rather than implementing multipartite transition processes. Governments have leverage and influence with companies and need to use it – including by attaching strong conditions to transition programs to ensure good, union jobs at the end of the process.

Union interviewees expressed distrust towards the companies and concerns about whether the companies would use government subsidies for their intended purpose – pointing to massive profits earned in recent years which were neither shared with workers nor reinvested in long-run, sustainable energy projects. Money given to companies by governments does not trickle down to workers and communities, nor does it necessarily translate into binding commitments to sustainable transition. A few interviewees were concerned that corporations would 'walk away' from the industry entirely if forced to pay for transition programs.

There were varied views among interviewees on how to fund the transition process. Some felt that governments have given enough to companies through subsidies and should now use their powers to force the industry to fund the transition. Not all approved of governments subsidizing corporations, while others saw this as an essential role of governments to elicit commitments to a transition plan. Some suggested the federal government establish a dedicated transition fund. For the most part, it was accepted that corporations will require government incentives to move away from oil and gas.

There was a sense among several respondents of "having been here before." The successful phase-out of coal-fired electricity generation in Ontario is an example of a well-managed transition, while the transition from coal mining in Alberta and the collapse of the cod fishery in Newfoundland were held up as examples of poorly managed change. All parties need to learn from past experiences and apply these lessons to the present.

In addition to supporting the workers, communities currently dependent on fossil fuel production may also need government support in transitioning to a post-fossil-fuel economy. The renewable energy sector needs to make strong commitments to community benefits (including secure, well-paying, unionized jobs), and help communities benefit from the energy transition. It is important governments support regional adjustment and diversification. Without transitional support from governments, communities will naturally remain under the thumb of fossil fuel companies which currently support jobs and incomes; better alternatives need to be presented, in order to win over broader community support for a planned transition.

Attitudes About the Future

> *"A lot of the other companies like mine need to start thinking about being an energy company, not just oil and gas. There's a lot of promise out there. We've got the capital. We have the skilled workers, the qualified and confident workers. We have all of that. So there's no reason why we shouldn't have jobs going into the future, even if there's greater electrification and less carbon based fuels being used."*
>
> — Local Union President

> *"[The] extraction industry will be here in 50 years"*
>
> — Local Union President

> *"A worker said to me, I'm a farmer, I only work at the mine to support the farm. Giving me a tuition voucher isn't going to do a thing. If you could help me buy a bigger combine or hire someone else to work on the farm, that would be helpful."*
>
> — Research Centre Staff

Our push while transitioning to green energy is for well-paying jobs that will continue to provide a disposable income for the worker, not just pay bills, but also buy the trinkets and toys."

— National Union Staff

"Was it 20 years ago we found the hole in the ozone layer? … We had to get off the CFC. And it worked, right? … Obviously we found other products… to put in our refrigerators, to put in our cars, … because we still need air conditioning… Hey, if we work together, we can deal with an issue."

— National Union Staff

"The bargain we made with oil and gas was that we'd keep it cheap for companies to exploit provided they provided good jobs for people. [But] we're seeing more and more that there's less jobs per output from the oil and gas sector. So there's less people actually working and the jobs become a bit more boom and bust and tenuous."

— Community Coalition Member

"The natural human part is we don't like change, you know? … Not even the fact that it's coming at us…, until you're faced with it. You're going to have to deal with it."

— Union Staff

Although most of those interviewed were generally hopeful about the future for themselves and their communities, it was widely accepted that coming changes in the energy sector are creating anxiety around job and income security among fossil fuel workers. Some informants doubted that major employment changes would be realized for many years, and that fossil fuel production and processing would continue for a long time. Some expressed concerns about lack of reinvestment in the industry, despite recent record profits for petroleum producers and refiners; companies are distributing profits as dividends, share buybacks, and takeovers, rather than investing in future technology. This divestment indicates that even the petroleum companies acknowledge the industry's limited time horizon.

There was strong conviction among our informants that the transition planning process cannot start soon enough. The longer the industry waits, the more sudden and disruptive the eventual phase-out will be.

Several informants pointed to automation (such as the widespread use of self-driving trucks in bitumen mining) and other technological change to explain lower employment in the sector. Indeed, automation was named as the greatest threat to job security – more than climate policy. It was also acknowledged that the impact of job loss falls more heavily on racialized, women, and indigenous workers.

Several informants indicated that workers are more personally committed to their occupation, than to their industry. They are more open to performing similar jobs in other sectors, rather than contemplating entirely new occupations (which would imply greater disruptions in competency and working conditions). It is especially easy for workers with skilled trades designations to move into similar jobs in other, unrelated sectors – and thanks to Canada's Red Seal program (which facilitates interprovincial mobility for qualified trades), relatively easy to work in other provinces, as well. All agreed, however, that to be attractive those new jobs must offer comparable pay, benefits, and union protection.

There was strong conviction among our informants that the transition planning process cannot start soon enough. The longer the industry waits, the more sudden and disruptive the eventual phase-out will be. Unions need to educate their membership, to strengthen the willingness to get ahead of change, rather than resisting and denying it. Employers will continue to create new jobs (since they will not just passively go out of business as fossil fuel use declines, they will find other industries to invest in), but doing what, and under what terms and conditions?

C. Summary and Conclusions

The findings from the quantitative survey and the qualitative interviews are quite consistent. The majority of fossil fuel workers acknowledge that change is inevitable in their industry, and they are interested in being active partners in transition. They are confident that Canada's economy has the capacity to facilitate a gradual transition without major displacement. Surprisingly few fossil fuel workers were worried about their personal job and economic security; they were more concerned about the ongoing well-being of their communities, and the next generation of workers. This is partly because most of them will retire before the transition is complete.

While fossil fuel workers acknowledge the transition is happening, they strongly reject the tokenism that in their view typifies many recent consultation processes.

While fossil fuel workers acknowledge the transition is happening, they strongly reject the tokenism that in their view typifies many recent consultation processes. They demand real voice and bargaining power to shape the process, and win binding commitments and protections (rather than symbolic expressions of concern). Particularly compelling across both the quantitative and qualitative data is the strong endorsement of unions and collective bargaining.

Although there is strong interest in renewable energy opportunities, that is not the only alternative career path that interests fossil fuel workers considering their future personal transitions. A wide range of other industries elicit interest as possible sources of alternative employment, particularly those that encompass skill-sets that

are broadly comparable to the work they presently do (such as non-fossil-fuel resources, manufacturing, construction, transportation, and professional and scientific services). In this light, workers seem more 'loyal' to their occupation or their trade, than to their industry.

By far the dominant concern regarding employment transitions, in both the quantitative and the qualitative results, relates to compensation, working conditions, and union representation in alternative employment (whether in renewable energy or other industries). A critical prerequisite for winning support for transitions, therefore, will be ensuring that alternative jobs offer comparable pay and job security – and also provide transitioning workers with income insurance to sustain their incomes after moving to a new job. To this end, union representatives are determined to improve union coverage, pay, and working condition in renewable energy sectors.

Part III: Lessons for Canadian Transition Planning

IN AN ECONOMY AS DIVERSE AND TURBULENT as Canada's, major employment transitions are nothing new. Throughout Canada's history, the labour market has had to traverse major shifts in the sectoral and geographical location of employment. Indeed, several of those past transitions and restructurings were proportionately larger, and much more sudden, than the (preferably) gradual phase-out of fossil fuel employment that must occur over the next quarter-century. Indeed, painful downturns in resource-related employment are a regular feature of the boom-and-bust pattern that typifies Canada's primary industries, which have frequently experienced closures of remote mining facilities (and even entire towns), and strong cyclical swings in overall employment in response to commodity prices, resource discovery and depletion, or corporate financial conditions.

The collapse and closure of the East Coast cod fishery in the 1990s, and the serial crises afflicting the B.C. forestry sector in recent years (due to U.S. tariffs, pine beetle infestations, forest fires, and deforestation), stand out as telling examples of unplanned, catastrophic transition events. Those painful experiences were made worse by the failure of industry and government to prepare for resource shocks that in some cases were predictable. Equally dramatic – and also largely unsupported – was the shock to Canadian manufacturing employment that occurred in the 2000s: some 600,000 jobs disappeared from Canadian manufacturing between 2000 and 2010, three times more than total direct fossil fuel employment in Canada today. Ironically, that collapse in manufacturing employment was itself partly a consequence of the boom in petroleum production and export that occurred at the same time. Rapid growth in petroleum investment and exports in the 2000s pushed Canada's exchange rate to unsustainable heights (exceeding par with the U.S. dollar for a while), critically damaging the competitiveness of manufacturing and thus accelerating job loss. Rela-

tive to their respective regional economies, all of those crises (fisheries, forestry, and manufacturing) were larger in proportional terms than would be a 25-year phase-out of direct fossil fuel employment in Canada.[41]

Past experience with employment transitions and restructurings has highlighted the multiple challenges of supporting workers and communities through downsizing and mass job loss. Unions, employers, and governments have often stepped in with emergency assistance in cases of severe restructuring.[42] Common features of support plans for such circumstances include:

Throughout Canada's history, the labour market has had to traverse major shifts in the sectoral and geographical location of employment.

- Severance payments for workers who lose their jobs.
- Voluntary severance incentives to encourage workers to leave their jobs voluntarily, when restructuring events are on the horizon.
- Various measures to allow workers to qualify earlier for pensions, including bridging benefits, top-ups, and lump-sum early retirement incentives.
- Preferential hiring or bumping rights to allow affected workers to obtain employment in other locations of the same firm, or in some cases other companies in the same region or industry.
- Offering employment in end-stage decommissioning or remediation activities related to closure of facilities.
- Fiscal, infrastructure, and technology supports for alternative community economic development initiatives in regions affected by restructuring or downsizing (especially relevant for more remote communities).
- Financial support for retraining, including tuition grants and cash incomes while participating in further education.
- Relocation assistance (also especially relevant for affected workers in more remote communities), including moving costs, assistance in selling residences, and/or assistance in locating housing and other amenities in a new community.

[41] Some 32,000 inshore fishers and fish plant workers lost employment after the 1992 moratorium on the cod fishery, representing 15% of the provincial labour market at that time. The broad B.C. forestry sector (including foresters, pulp and paper workers, and workers in other wood product manufacturing) lost 45,000 jobs in the decade after 2000, equivalent to 3% of initial total provincial employment in 2000. Manufacturing accounted for 16% of Canadian employment in 2000, falling to 10% ten years later. As described above, the phase-out of direct fossil fuel employment would be equivalent to the transition of under 1% of current total Canadian employment over a much longer time frame than the cod or forestry downturns. See Stanford (2021, pp. 44-51) for more details on these previous transition events.

[42] See Campbell (1993) and White (2003) for critical surveys of some of these experiences.

All of these avenues of restructuring and transition support can play a valuable role in supporting an orderly, gradual, and supported transition away from fossil fuel employment. The more options that are provided to affected workers in managing their personal paths through a broader transition, the better are the chances that they will achieve a positive post-transition outcome.

A. State of Play in Canadian Energy Transition Planning

Recognizing the inevitability of the coming energy transition, jurisdictions around the world are developing and implementing innovative programs to support associated employment transitions. Some instructive examples of planned and supported transitions[43] include:

- **Phase-out of black coal mining in Germany:** A carefully planned and gradual 20-year phase-out of black coal mining reduced employment in that sector from 81,000 in 1997 to zero by 2018, with no involuntary layoffs. Affected workers had options for early retirement, direct employment in alternative activities (including services and manufacturing), or generous voluntary severance incentives.[44]
- **Other coal phase-outs in Europe:** Several other European countries, including the Netherlands and Spain, have implemented supported phase-out programs to end coal mining in their countries – again, without involuntary lay-offs.[45]
- **Coal-fired electricity and associated coal mining in Australia:** A new transition planning system and regulatory body (the Net Zero Economy Authority) has been established in Australia to pre-emptively plan successful employment transitions following the closure of coal-fired electricity generation and associated mining. It is backed with compulsory arbitration powers provided to the national labour tribunal to define regions and employers affected by a transition, and to enforce requirements on employers for notice, negotiation, and redeployment.[46]

Canada has some experience with planned transitions associated with phase-out of fossil fuel facilities. The two most important precedents are the phase-out of coal-fired electricity generation in Ontario between 2005 and 2014, and the phase-out of coal-fired electricity generation (and directly associated coal mining) in Alberta from 2015 to 2024.

[43] Useful summaries of international energy employment transition planning are provided by the International Labour Organization (2015), Zinecker et al. (2018), Heffron (2021), and Corkal and Beedell (2022).

[44] For more details on the German plan, see Sheldon et al. (2018).

[45] See Stanford (2021, pp. 94-97) for more details.

[46] See Department of the Prime Minister and Cabinet (2024) and Yassin and Jackson (2025) for more detail on the goals, structure and powers of this Authority.

The Ontario phase-out involved the staged closure of five coal-fired generation facilities (encompassing 19 generating units) over a nine-year period, completed by 2014.[47] Three of the facilities were closed; two were converted to alternative fuels (using biogas feedstock). Planning for the phase-out was made more feasible since all units were owned and operated by a single publicly-owned provincial utility. Generating units were closed in sequence under a transition plan which integrated capacity from new non-coal generating units to maintain sufficient capacity for the overall provincial system. Workers at closing facilities were offered a range of transition options, including early retirement access and rights to transfer to work at other facilities in the company's large network. Those supports were enshrined in provisions in collective agreements negotiated between unions and the utility. No involuntary layoffs resulted from the phase-out, which still constitutes the largest single reduction in greenhouse gas emissions achieved yet in Canada.

In 2015 the Alberta government (then governed by the NDP) committed to a similar phase-out of coal-fired electricity generation in that province (Government of Alberta, 2018). Six coal-fired generation stations were to be closed or converted to natural gas. Planning for that transition, however, was more challenging, for several reasons. Alberta's electricity system is mostly privately owned, and fragmented among competing generating firms. This made it more difficult to coordinate the orderly shut-down of generation facilities (since each private generator had its own preferences regarding when it would be most profitable to cease production). To enlist these firms in the phase-out plan, $1.1 billion in compensation was paid to the private generators (financed in part via the companies' own payments under the province's then-carbon tax system; see Bellefontaine, 2016). Unlike Ontario (which imported coal for electricity generation from other provinces or countries), the coal burned in Alberta came mostly from nearby mines, some of which were dedicated to supplying paired electricity generation facilities; those mines also faced closure as a result of the phase-out.

The provincial government implemented a multi-dimensional transition plan to support workers affected by the phase-out beginning in 2018. Strong advocacy from the trade union movement in Alberta was essential in convincing the government to include an employment transition dimension to the phase-out (as described in Velo et al., 2025). A Coal Workforce Transition Program allocated $40 million to affected workers, involving several dimensions (Government of Alberta, 2018):

- Income supplements equal to 75% of former pay for up to 45 weeks, to maintain coal workers' income as they transitioned to new employment.
- Bridging benefits equal to 75% of former pay for up to 72 weeks to support coal workers' income until they qualified for normal pensioned retirement.

[47] See Ministry of Energy and Mines, Ontario (2018) and Environment and Climate Change Canada (2018) for more details on the phase-out.

- Relocation assistance to coal workers who moved over 40 kilometres from their existing home, up to $5000 per worker.
- A tuition voucher worth $12,000 for coal workers who enlisted in recognized further training programs.
- Career counselling services offered free-of-charge to all affected workers.

In addition, a parallel Coal Community Transition Fund provided $5 million in funding to support alternative economic development and infrastructure initiatives in 11 affected communities.

Another dimension of Alberta's off-coal strategy was to accelerate the development of alternative electricity generation, especially wind energy facilities. Wind energy generation in Alberta tripled between 2016 and 2024 (when the last coal-fired plant closed).[48] The success of this wind expansion, along with the conversion of former coal plants to natural gas fuel, allowed for the faster-than-planned closure of coal-fired generation: the last coal-fired plant was converted in 2024, five years ahead of original schedule. More recently, however, the expansion of renewable energy capacity in Alberta has stopped as a result of regulatory barriers erected by the subsequent UPC provincial government (Newbigging, 2025). Moreover, even when renewables were growing, there was no explicit effort to directly connect job openings in wind energy developments with workers leaving coal-fired generation plants and coal mines. In that regard, while the strong investment growth in renewable energy played a useful role in creating jobs and strengthening the provincial economy, those benefits were not directly integrated into off-coal transition planning.

Experiences were mixed for workers affected by Alberta's coal phase-out (Choudhury, 2024; Velo et al., 2025). Many had relatively smooth transitions into retirement or alternative work, but some workers (too young to retire) were not able to find comparable employment; some remain unemployed or outside of the labour force, while others found poorly-paid or insecure work, or new jobs requiring long commutes (to other parts of the province). The Alberta experience suggests that the economic risks facing current fossil fuel workers are exacerbated when they work in a decentralized, privatized industrial context. That makes it more challenging to schedule phase-outs gradually, and connect displaced fossil fuel workers with new opportunities in alternative occupations or firms, compared to cases (such as the Ontario coal phase-out) where more centralized planning is possible. Moreover, individual retraining and career counselling (important parts of the Alberta plan, especially for younger workers) are unlikely to lead to acceptable employment outcomes, since even retrained displaced workers face challenges obtaining comparable quality employment in a competitive, insecure labour market. Therefore, the Alberta experience highlights the importance of offering concrete paths to alternative employment opportunities, backed by strong employment and/or income guarantees.

[48] Calculations from Canada Energy Regulator (2023).

The federal government played a backup role in supporting workers affected by the phase-out of coal-fired electricity generation in Alberta, and in three other provinces (Saskatchewan, New Brunswick, and Nova Scotia) which still rely on coal-fired electricity. Its engagement was connected to a 2018 federal regulation governing emissions from electricity generation, that required the phase-out of unabated[49] coal-fired generation across Canada by 2030. The full phase-out was projected to affect 3,000-4,000 workers in total, working at 12 generating stations and nine associated coal mines. Power generation facilities in Saskatchewan and New Brunswick are operated by provincial Crown corporations, and the power system in Nova Scotia is centrally owned by a regulated private company; this structure could facilitate more effective planning (including cross-location mobility of workers) than in the Alberta case.

To help address the impacts of the phase-out on affected workers, the federal government established a Task Force on Just Transition for Canadian Coal Power Workers and Communities (Environment and Climate Change Canada, 2018). Following the task force's report, the federal government committed to support workforce adjustment and transition in affected communities. This support was delivered through two program channels:

- The Canadian Coal Transition Initiative, providing $35 million in support for retraining and other adjustments for workers, including creation of a new Canada Training Benefit to subsidize tuition costs and other retraining expenses.
- A complementary $150 million Infrastructure Fund ($105 million for Alberta and Saskatchewan, and $45 million for New Brunswick and Nova Scotia) to subsidize new diversification and infrastructure investments in affected communities.

Natural Resources Canada was given lead responsibility for overseeing both tranches of the program, complemented by Employment and Social Development Canada (which focused on training programs). Two federal regional development agencies — Prairies Economic Development Canada and the Atlantic Canada Opportunities Agency — helped design and deliver specific interventions in their corresponding provinces.

However, a review of these support programs by the Auditor General of Canada was scathing in its judgment that they did not meet intended goals (Office of the Auditor General, 2022). The audit found that the federal government was not genuinely prepared to make these adjustment programs successful, and had no explicit implementation plan or governance structure to realize the program's objectives. The implementing agencies mostly relied on previously existing programs to deliver incremental resources to specific communities affected by the coal closures. In the first year of the Transition Initiative, the federal government announced 15 local transition projects

[49] Existing coal-fired facilities may continue operating with acceptable carbon capture technologies (unproven so far) or through conversion to other fuels.

(mostly transition centres to provide career counselling and advice to affected workers). The outcomes and present status of the Infrastructure Fund investments are not clear from federal documents.

Outside of Alberta, the off-coal transition has yet to be completed in any of the remaining three provinces,[50] suggesting that additional displacement is likely to be experienced. Without action by the federal and provincial governments to address weaknesses in the initial plan, the remaining phase-outs will likely cause more dislocation for workers and communities.

Therefore, neither the federal initiative nor the more comprehensive Alberta plan constitute successful role models for future transition planning. It is clear that both plans lacked sufficient resources and accountability measures to truly accomplish the goal of avoiding involuntary displacement. None had a specific focus on job-creation in alternative facilities or industries, to provide an immediate 'upside' for displaced workers. And none featured ongoing governance or accountability structures that would allow workers and their unions to participate actively in program design and delivery, evaluate progress, or enforce concrete performance targets and outcomes.

In addition to these interventions focused on the phase-out of coal-fired electricity generation, the more general goal of active planning for energy employment transitions has also received significant policy attention at the federal level in recent years. In 2019, the Liberal government committed to create a Just Transition Act, to support workers and communities in the transition to a low-carbon economy. A lengthy consultation process was held to gather input from various constituencies – including both conventional and renewable energy companies, provincial and municipal governments, trade unions, environmental groups, and others. This process led to the pronouncement of an interim Sustainable Jobs Plan in 2023 (Natural Resources Canada, 2023), and then passage of the Canadian Sustainable Jobs Act in 2024 (Natural Resources Canada, 2024c). The Act has several components:

- Creating a Sustainable Jobs Secretariat to coordinate interventions across federal departments.
- Committing to develop annual Sustainable Jobs Action Plans in various sectors and regions, engaging input from business, community, union, and Indigenous constituencies.
- Creating a Sustainable Jobs Partnership Council to engage those constituencies in ongoing dialogue about prospects and challenges in enacting the action plans.
- A Sustainable Jobs Training Fund to subsidize training initiatives in clean energy and related roles.

The plan also envisions establishment of Regional Energy and Resource Tables in each province and territory. Through those councils, affected stakeholder groups

[50] In fact, the Saskatchewan government is now indicating its intention to sustain coal-fired generation beyond the 2030 phase-out deadline, raising the question as to whether the federal timetable will be attained (Graney, 2025).

would consult with federal and provincial governments to monitor developments in energy-related employment (both conventional and sustainable energy sectors), track progress of training and other supports, and provide input to transition plans in specific sectors or regions. At time of writing these tables were being established in 10 of the 13 provinces and territories; Alberta and Quebec were undertaking unique parallel processes (with federal blessing), while Saskatchewan was refusing to participate at all.

The federal Sustainable Jobs initiative emphasizes multi-partite consultation mechanisms at both the national and provincial/regional levels, and federal financial support for training and retraining initiatives. There is little sign, however, that these initiatives will encompass genuine transition planning goals or powers. In the first place, other than the federal deadline for phasing out coal-fired electricity generation by 2030, there are no timetables or commitments around reducing fossil fuel production in the first place – and in most cases (including oil, bitumen, and natural gas) fossil fuel production continues to grow. This raises an underlying question of what exactly is being 'transitioned'. Clearly the whole federal process is premised on an implicit assumption that fossil fuel use will decline and eventually mostly cease (as renewable energy and energy conservation initiatives reshape the energy system), but that aspirational goal is yet to be codified within binding objectives, plans, or timetables. In that context, establishing transition mechanisms of the sort described in the Act will remain a rather hypothetical exercise until a clear plan for reducing fossil fuel use is confirmed.

The absence of any direct connection to job-creation opportunities in other industries (including but not limited to sustainable energy industries) is another major gap in the federal approach to transition. As noted above, assuming sensible macroeconomic governance, Canada's flexible labour market will indeed generate abundant opportunities for alternative employment as the energy transition unfolds. But to provide confidence in the minds of individual fossil fuel workers that they will be able to personally attain decent alternative employment, more concrete and verifiable commitments must be made to match former fossil fuel workers with alternative work in other vocations. Ideally that would involve employment or income guarantees made as part of the transition plan.

Finally, while it is constructive for governments to establish multipartite mechanisms of consultation involving various stakeholders (including unions), that is a far cry from providing workers with genuine power to actively shape the direction of transition planning. Being consulted is different than having genuine authority to influence outcomes, and veto changes that are unacceptable. The quantitative and qualitative survey results reported above confirm that fossil fuel workers have high confidence in the value of union representation and collective bargaining to shape transition planning. With the exception of intra-firm transition and restructuring occurrences (such as the off-coal transition at Ontario Power Generation, or programs negotiated at individual petroleum companies described further below), there has to date been an absence of genuine worker voice and bargaining power in Canadian energy transition planning. That shortcoming, and possible remedies for it, are addressed in the following section.

B. Workers' Voice and Transition Planning

To date, energy transition planning in Canada has been long on verbiage and aspiration, but short on concrete levers and commitments to shape the outcome of transitions in ways that benefit workers. Programs to date have highlighted support for retraining, and established numerous forums for multipartite consultation and dialogue. The Alberta coal transition plan also included some funds for early retirement pension bridging opportunities and other transition actions. But with the exception of the successful, centrally planned phase-out of coal-fired electricity generation in Ontario (which featured intra-firm job transfer guarantees to other roles within the Ontario Power Generation network), these initiatives have not directly connected transitioning fossil fuel workers with job openings in other locations — including jobs resulting directly from the expansion of sustainable energy projects (such as the growth of wind power that occurred in Alberta alongside the phase-out of coal-fired power). And while workers and their unions have been invited to many consultation processes, their power and authority to meaningfully shape transition plans and demand specific outcomes has been limited. The failure of Canadian climate policy to establish binding timelines and policies to actually reduce fossil fuel production and use over time (with the exception of ending coal-fired power generation) also imparts a sense of superficiality to discussions about employment transitions.

Energy transition planning in Canada has been long on verbiage and aspiration, but short on concrete levers and commitments.

Several researchers and policy analysts have proposed strategies for making transition planning in Canada more concrete and effective, often drawing on the experiences of successful international examples. Hulse (2023) suggests that the lack of binding objectives (regarding either reduced fossil fuel use or employment targets) and accountability mechanisms undermines the effectiveness of the regional planning tables and other consultative bodies established under the Canadian Sustainable Jobs Act. Gordon and Callahan (2023) also stress the importance of clear and effective governance and accountability mechanisms to ensure transition plans are more than performative. Corkal and Beedell (2022) propose to rectify this failing by embedding transition planning within a legally binding and enforceable set of commitments regarding both reduced use of fossil fuels (and resulting emissions reduction) and employment guarantees for affected workers. Mertins-Kirkwood and Duncalfe (2021) suggest linking transition planning to new federal-provincial funding arrangements (reminiscent of the Canada Social Transfer), including new federally-funded income security benefits for displaced workers and regular transfer payments to support provincial and regional infrastructure and diversification investments. Arnold et al. (2022) also appeal for linking transition planning to concrete commitments around alternative employment. This will be especially important, they argue, for protecting workers in rural and regional communities, Indigenous workers, and racialized work-

ers, all of whom face bigger obstacles in achieving decent alternative jobs in a highly competitive labour market. Brown and Jeyakumar (2022) stress the importance of including transition funding as a core part of emission reduction policies, and propose prioritizing communities most affected by fossil fuel phase-out with investment and procurement opportunities tied to clean energy developments.

To help make transition planning more concrete and trustworthy, the role of trade unions in negotiating concrete and enforceable guarantees around various aspects of the transition process seems especially important.

To help make transition planning more concrete and trustworthy, the role of trade unions in negotiating concrete and enforceable guarantees around various aspects of the transition process seems especially important. This importance was one of the strongest findings of the quantitative and qualitative survey data described above. Unifor is the largest trade union in Canada's broad energy sector (encompassing members in upstream and downstream petroleum, natural gas distribution, electric utilities, and mining), and it has developed an agenda for negotiating new provisions in collective agreements to govern how employment transitions occur in a variety of energy workplaces (Unifor, n.d.). This agenda for negotiating better transitions includes several themes:

- Establish joint union-employer committees for mitigating emissions in the workplace.
- Establish joint public and private financial and regulatory supports for reducing emissions in value-added manufacturing and processing activities.
- Expand investments in upgrading extraction and pipeline infrastructure to curtail methane and other chemical leaks throughout the supply system.
- Establish minimum in-house employment levels to ensure capacity for ongoing monitoring, inspection, and replacement of infrastructure when leaks are detected.
- Ensure that new investments in HVAC systems and chemical production use new technologies to lower emissions.
- Build research partnerships to expand job creation in low-carbon chemical and gas projects related to hydrogen, ammonia, biofuels, and plastics production.

Unifor maintains a pattern bargaining system in the energy sector, through which the union strikes a precedent-setting contract with one large employer, and then strives

to replicate its major features through subsequent bargaining by other Unifor energy locals. In this regard, these principles (if established) could spread across segments of the energy industry where Unifor has a presence (including upstream petroleum extraction, petroleum refining, natural gas processing and distribution, and others). Similar goals could be pursued in collective bargaining in other industrial sectors which will also be affected by the energy transition — such as manufacturing, transportation, and some services.[51] An encouraging example of this cross-sectoral transmission of negotiated transition principles is a first collective agreement bargained in 2025 by Unifor members at the new NextStar electric vehicle battery manufacturing plant in Windsor (Dayal, 2025). The plant will employ 750 workers when fully operational, and the new agreement provides for industry-leading wage gains, pensions, supplementary benefits, occupational health and safety, and representation provisions. By negotiating upward the quality of jobs in renewable energy industries, these efforts help to assuage concerns regarding the transition away from fossil fuel jobs.

Other unions including CUPE, Move Up, the United Steelworkers, and several building trades unions are also working to unionize workers in renewable energy workplaces, and establish basic norms of job quality, compensation, and safety in this growing industry.[52] Some unions have actively promoted investments in energy transition projects as a pathway to employment opportunities for their members. Calvert (2023) discusses one example of this strategy: the union for insulation workers and its campaign to accelerate energy-saving building retrofits, tied to the creation of unionized construction jobs. Community Benefits Agreements are another approach to lifting labour standards in publicly-funded or publicly-subsidized projects (including those related to the energy transition). These agreements mandate project developers to meet specified performance requirements related to affirmative action hiring, union representation, apprenticeship opportunities, payment of prevailing wages, and other conditions (see Galley, 2015; James, 2020; and Calvert, 2025 for examples). In all these cases, the goal is to use binding mechanisms (enforced through collective bargaining and/or public policy) to lift the quality of jobs in renewable energy and other transition-related employment settings, thus making movement into those roles relatively more appealing.

The importance and benefits of organized workers' voice in workplaces and industries has been well-established in broader labour relations research.[53] Organized and safe channels of voice, representation, and bargaining allow workers to provide input that improves the performance of workplaces; address workplace concerns before they erupt in conflict; facilitate notice, consultation, and planning regarding workplace changes; and enhance confidence among workers that they can influence the

[51] For example, Unifor represents many workers in auto dealership and repair businesses, for which the transition to electric vehicles will have major employment impacts, and hence where strong transition planning will be important. For more analysis of the coming transition challenge in this sector see Dupuis et al. (2021).

[52] A useful collection of materials related to these union efforts, and other policy regarding the role of unions in the energy transition, is maintained by York University Digital Library (2022).

[53] See Stanford and Poon (2021) for a survey of the benefits and applications of workers' voice in the Canadian context.

conditions of their work, rather than simply quitting their jobs (so-called 'exit voice') when change seems impossible. Strong voice mechanisms contribute to retention, productivity, and job satisfaction.

The benefits of collective worker voice are highly relevant to the coming energy transition. The quantitative and qualitative evidence above confirms that fossil fuel workers currently feel their opinions and preferences are not well-considered in transition planning and consultation. Yet they have strong confidence in the value of union representation and collective bargaining, with its ability to establish binding provisions governing the key dimensions of transition – including notice, consultation, negotiation, severance, training, and income security. In this context, establishing structures and processes of genuine collective voice for workers in transition planning has great potential to both enhance the effectiveness and fairness of future transitions, and maintain the support and cooperation of fossil fuel workers through that process.

The benefits of collective worker voice are highly relevant to the coming energy transition.

The following eight recommendations would strengthen fossil fuel workers' voice and power in the design, implementation, and evaluation of transition plans to oversee the future wind-down of fossil fuel production and use in Canada. Some of these recommendations would apply at the level of individual workplaces, while others are relevant to industry-wide transition planning involving government and other stakeholders. In the case of unionized workplaces, many of these recommendations could be implemented relatively directly; indeed, some already occur in some form in some unionized workplaces, and they can be extended and strengthened through future collective bargaining. In non-unionized workplaces, on the other hand, employers would generally need to be incented or compelled to enact the workplace-specific structures and processes described below – since most employers are reluctant to voluntarily approve genuine rights to consultation, negotiation, and veto for their workers unless required by unionization or regulation.

Some of these recommended processes would be activated in the event of a defined transition-related event, which would be declared by government in cases of downsizing, wind-down, or other restructuring events associated with phase-out of fossil fuel production and/or use under the provisions of broader climate policy actions. Workplace-specific processes would apply to any firms above a certain size threshold (perhaps 25 workers), unless implemented voluntarily or through unionization at smaller firms.

1. **Joint Transition Committees:** Joint worker-management committees should be established in workplaces falling within the scope of fossil fuel phase-out planning. These would operate similarly to the joint occupational health and safety committees already mandated by law in most

provinces. In unionized workplaces, local unions would appoint the worker representatives; in non-unionized workplaces, special elections would need to be held to select representatives. Joint committees would exchange information, establish communication channels with the broader workforce, and create regular opportunities for dialogue. Once transition plans were negotiated, ratified, and initiated (as discussed further below), the joint committees would then have responsibility for overseeing their implementation at each workplace — including the operation of on-site referral and support centres (also discussed further below).

2. **Minimum Notice Requirements:** Employers affected by an identified transition-related event should be required to provide at least six months' notice to the workforce (communicated through the joint committee, and through local union structures in the case of unionized facilities) of anticipated changes in staffing levels, shift arrangements, and other employment changes resulting from the transition action. Adequate notice gives affected workers more time to plan their personal responses to those changes, and more time for supporting policies to be negotiated. Ideally, workers could have several years of notice of coming transition events, on condition that government has confirmed long-term phase-out plans for each sector or sub-sector; employers should be required to stick to those timetables (rather than closing facilities later or even earlier[54] for financial reasons).

3. **Requirement to Negotiate:** In workplaces affected by an identified transition-related event, employers should be required to negotiate special provisions for workplace adjustment, severance, and redeployment — including options for early retirement or voluntary severance, and potential transfer of employment to other facilities of that firm or in the regional industry. In the case of unionized facilities, these agreements might involve modifications or extensions of existing collective agreements, and hence would have to be ratified by union members at the workplace. In the case of non-unionized workplaces, negotiations could occur through the joint transition committee, subject to endorsement by a vote of the affected workers. Any special government financial support (such as stranded asset compensation, subsidies for new investments or remediation, etc.) made available to companies involved in those transition events should be contingent on the successful negotiation and ratification of a transition plan with the local workforce; funds should not be released to the companies until those agreements are in place.

[54] Some coal-fired electricity plants in Alberta closed earlier than announced under the provincial phase-out plan, when it became financially attractive to shift to lower-cost natural gas sooner than planned. While this faster phase-out had environmental benefits, it resulted in the premature displacement of workers who had been told they had more time to prepare for these closures. If earlier shut-downs are contemplated, workers should be provided with full income assurance until original planned timelines are reached.

4. **Strong Employment and Income Guarantees:** For any identified workplace transition event (resulting from a phase-out or wind-down policy), affected workers should be given strong guarantees of continued employment (performing alternate duties at their facility, or transferred to other facilities) or income security. The latter could include access to early retirement opportunities — which were strongly favoured by respondents in the quantitative and qualitative survey research reported above. Other income security measures could include extended severance or Employment Insurance top-ups (to preserve pre-transition incomes for specified periods), and/or income guarantees to top-up earnings in a new position.

5. **On-Site Presence for Transition Support Services:** Most transition plans involve various programming and supports for workers affected by a restructuring event or workplace closure. These supports can include career and job-hunt counselling, help in accessing government income supports (such as Employment Insurance or other benefits), arranging for early retirement or pension bridging packages, and accessing training opportunities. Experience has shown these supports are delivered most effectively when delivered via tailoured on-site program services, preferably staffed by support workers with direct experience in that workplace and industry. Examples include on-site adjustment and referral centres, often run in partnership with local unions, that have been established at various manufacturing facilities, mining operations, and other workplaces that have experienced restructuring in the past (successful examples are described in Kellogg, 1997, Vrankulj, 2010, and Velo et al., 2025). Providing accessible, respectful, and informed guidance and support for workers traversing a transition, is far preferable to requiring them to deal with distant telephone or online referral and administrative systems, which can be frustrating, inflexible, and demoralizing.

6. **Community Benefit Agreements:** All publicly-subsidized investments in clean-up and amelioration, renewable energy generation and transmission, infrastructure, and other transition-related projects should be required to negotiate a Community Benefit Agreement to mandate commitments to local hiring (including from targeted communities, such as Indigenous, racialized, or young workers), training and apprenticeships, union recognition, payment of prevailing wages, health and safety standards, and more. The B.C. Infrastructure Benefits program (Calvert, 2025) provides a valuable example of the concrete improvements in wages, working conditions, and employment equity that can be attained through this approach.

7. **Employer Neutrality on Unionization:** The most regular and reliable forms of collective worker voice in workplaces are achieved with certified bargaining unit representation. To underpin more effective channels for input, negotiation, and enforcement of strong transition plans, there-

fore, broader unionization of fossil fuel workers would be helpful.[55] A simple way to encourage this (or at least to prevent employers from blocking it) would be to require employer neutrality during union organizing drives at workplaces covered by designated transition plans. Without employer opposition or interference in union organizing drives, many fossil fuel workers would opt for union representation. Especially when facing the uncertainty associated with future employment transitions, they will be all the more interested in being protected by union representation and a binding collective agreement.

8. **Industry-Wide Transition Planning Authority:** At the macroeconomic level, sufficient employment opportunities will certainly exist to absorb any labour displaced by the phased, gradual wind-down of fossil fuel production and use. Replacing employment for less than 1% of the labour force over a 25-year phased period, more than half of whom will retire in the course of that transition, requires only modest reallocations of workers to new jobs: in the order of 3000 jobs per year on average. But converting that macroeconomic potential into concrete employment and income guarantees for those workers requires a higher order of planning capacity and financial support, that is able to coordinate across individual private firms. Many of the adjustments in a comprehensive transition plan (including the ability to transfer to work in other facilities, and income top-ups for workers in new jobs) extend beyond the normal boundaries of private firm-level decision-making. They hence require the exercise of strong overarching transition planning capacity on the part of government.[56] Effective industry-wide transition planning needs the power to collect information from fossil fuel employers (about their future employment plans, and the demographic and occupational features of their workforce); establish timelines for phased closures; allocate funds for alternative job creation projects; and ensure new opportunities are offered first to workers displaced from fossil fuel activities.[57] This industry-level planning capacity would supplement the voice and bargaining power provided to workers at the workplace level through the provisions described above. Workers and their unions would need to have strong voice and negotiating rights in formulating those industry-level plans, primary responsibility for which would rest with government.

These eight recommendations would represent a fundamental departure from the norm in private-sector industries, where decisions regarding investment, operation,

[55] See Stanford and Poon (2021, pp. 56-63) for discussion of non-union collective voice systems and their limitations.

[56] A similar approach to employment transition planning is proposed for the U.S. by Pollin and Callaci (2019), who argue similarly it could be accomplished without involuntary disemployment of affected workers.

[57] The new Net Zero Economy Authority in Australia provides a timely and instructive example of how such a higher-level planning authority can be established; see Department of the Prime Minister and Cabinet, Government of Australia (2024) and Yassin and Jackson (2025).

and employment are assumed to be the domain private business. Hence, these reforms will certainly be resisted by private business as an intrusion into their unilateral decision-making authority. The mission of unions, of course, is to balance the unilateral managerial authority of employers through collective representation, bargaining, and dispute settlement mechanisms which carry contractual force. In unionized fossil fuel workplaces, those mechanisms already empower workers with genuine voice and bargaining power. However, the magnitude of the transformations coming with the phase-out of fossil fuels require that these existing forms of worker voice be extended to new issues and new rights. In non-union fossil fuel workplaces, the need for stronger worker voice is even more pressing.

Empowering fossil fuel workers to have a genuine and effective say in planning the transition, and enforcing commitments to protect their interests through it, should be a core feature of all transition plans.

So long as the task of reducing greenhouse gas emissions is identified as a broad public interest priority (rather than being left to private market actors), a broader role for imposing regulation and planning oversight over private firms is entirely legitimate. This will also necessitate the allocation of significant public resources to facilitate a steady and less disruptive transition (delivered in various forms, including subsidies or compensation to fossil fuel producers; subsidies for carbon abatement; subsidies or public investment in renewable energy projects; and public provision of infrastructure). All those public subsidies and investments further justify a stronger role for public regulation and planning to guide the overall transition process in line with the broader public interest. Empowering fossil fuel workers to have a genuine and effective say in planning the transition, and enforcing commitments to protect their interests through it, should be a core feature of all transition plans. The recommendations described above would go a long way toward ensuring the priorities and interests of fossil fuel workers are indeed centred in transition planning, in more concrete and reliable ways than has been the case to date in Canada.

Conclusion

THANKS TO A COMBINATION OF TECHNOLOGICAL IMPROVEMENTS, competitive pressures, and active climate policies, the global economy is steadily shifting away from reliance on fossil fuels as the major source of energy for industry, transportation, and consumption. Climate policies have been fiercely contested in Canada, the U.S., and some other jurisdictions; where fossil fuel industries wield greater economic and political influence, they predictably try to derail any policies that curtail their sales, profits, and power. But despite setbacks (such as are being experienced in the U.S. under President Donald Trump), there is no doubt the transition to renewable energy sources will continue. They are cheaper, cleaner, and less subject to economic or geopolitical instability. And despite resistance from fossil fuel interests, most people acknowledge that fossil fuel use is causing climate change, with enormous risks to well-being and even survival of themselves and future generations. That consensus will ultimately prevail, expressed both via individual energy choices and democratic political outcomes.

Direct fossil fuel employment constitutes a surprisingly small share of total employment in Canada: under 1%, and falling. A transition away from fossil fuel employment is already well underway. Indeed, for the last decade, relative fossil fuel employment has been falling at a pace consistent with its complete phase-out by 2050 (the deadline for net-zero commitments by Canada and other countries under the Paris Agreement process). However, the current phase-out of fossil fuel employment is not, so far, the result of climate policy. Instead, the decline of fossil fuel employment is occurring despite significant increases in total production of most fossil fuels in Canada. Recent fossil fuel disemployment reflects the decisions of fossil fuel employers, which have found ways to expand production and profits with fewer workers. Business and political commentators who condemn climate policies for supposedly 'jeopardizing'

the livelihoods of fossil fuel workers, are curiously silent regarding the dislocation those workers have experienced because of corporate decisions. At any rate, a transition away from fossil fuel employment is clearly proceeding, regardless of the twists and turns of climate politics in Canada. For the most part, unfortunately, that transition has not been supported by planning, supports, or meaningful voice and bargaining power for fossil fuel workers. Some 38,000 displaced fossil fuel workers have been left to their own devices to navigate a challenging labour market, with little protection or support.

Both the economics and the politics of the energy transition will be more manageable and constructive if all stakeholders – government, business, workers and their unions, communities, educational institutions, and broader civil society — can engage pro-actively in planning and supporting this transition, rather than delaying and denying it. This paper has argued that giving fossil fuel workers meaningful voice and bargaining power (including the power to negotiate and enforce programs that protect their interests through the transition) will help to overcome the fear and divisiveness that has undermined Canada's emissions reduction progress in recent years. Most fossil fuel workers acknowledge the inevitability that their industry will eventually disappear. Empowering them with genuine voice and bargaining power to shape the path toward that end point, not only will produce a transition that is fairer and less chaotic — it will also help to strengthen the social consensus required to ensure that it happens as quickly and safely as possible.

Appendix: Quantitative Survey Questions

Introduction & Demographics

Do you work in:

- Oil and gas exploration and production
- Oilfield services
- Coal mining
- Petroleum and coal refining
- Coal or gas-fired electricity generation
- Oil and gas pipelines
- Natural gas utility
- I do not work in a fossil fuel industry

Are you:

- Male
- Female
- Non-binary or trans
- Prefer not to say

How old are you?

Where do you live?

Work

How long have you worked in the Canadian fossil fuel sector?

Are you currently working, or have you worked in the past, in any of the following fossil fuel industries? Please select all that apply.

- Oil and gas extraction
- Bitumen or oil sands mining and processing
- Oil and gas services
- Petroleum products refining
- Coal mining
- Electricity generation
- Natural gas distribution
- Other

Are you currently working, or have you worked in the past, in a renewable energy industry (such as solar energy, wind energy, geothermal power, hydroelectricity, biofuel, or energy efficiency and building retrofits)?

- Yes
- No
- Don't know or unsure

How do you travel to your job?

- Back and forth from your home everyday
- By car or bus to your job for several days at a time
- Fly in / Fly out
- Work remotely or work from home or hybrid

Are you a member of a trade union?

- Yes, please specify union
- No

Are you active in your union? Please select all that apply.

- Attend union meetings
- Participate in other union activities (such as lobbying, demonstrations, conventions)
- Participate in union education or health and safety programs
- Presently an elective union officer of representative
- Held elected union office in the past

The Coming Energy Transition

Do you believe that human economic activity and pollution is contributing to climate change?

- Yes
- No
- Don't know or unsure

Do you believe that the world economy will use less fossil fuel as part of the response to climate change?

- Yes, quickly
- Yes, gradually
- No, we can continue to use fossil fuels
- Don't know or unsure

Thinking ahead five years do you see yourself (please select all that apply):

- Working in the fossil fuel industry doing the same, or similar, job
- Working in the fossil fuel industry doing a different job
- Working in a new, or renewable, energy sector (such as wind, solar, geothermal, hydroelectric, other)
- Working in an industry which repairs environmental damage
- Working in a non-energy industry
- Being retired

How do you feel about the future of job opportunities in the fossil fuel industry?

- Great
- Good
- Neither good nor concerned
- Concerned
- Very concerned

Do you believe that a planned downsizing, where reductions in the fossil fuel workforce are managed over time through retirements and voluntary employment transitions rather than lay-offs, is possible?

- Yes
- No
- Don't know or unsure

The following industries do not produce or process fossil fuels. Would you be interested in working in any of these sectors? Please select all that apply.

- Non-fossil fuel resources (such as other mining, forestry)
- Renewable energy industries (such as solar, wind, or geothermal)
- Clean-up of former fuel sites (such as mines or abandoned wells)
- Construction
- Manufacturing
- Transportation
- Wholesale or retail trade
- Hospitality services (such as food service, restaurants, hotels)
- Science and technology
- Information, telecommunications, and media
- Finance or real estate
- Education
- Health care
- Public administration or government
- Other service industries
- Not interested in any other industries
- Not applicable / May be retired

If your existing job was at risk, would you be interested in any of the following options? Please select all that apply.

- Training or retraining for another job in the fossil fuel industry
- Training or retraining for another job in a new, or renewable, energy sector
- Training or retraining for a job not in a fossil fuel industry
- Tuition assistance or tuition reimbursement
- Enhanced EI benefits while searching for, or transitioning to, a new job
- Enhanced severance pay to leave your existing job voluntarily
- Incentives to support early retirement
- Income protection to maintain your current income at your present rate of pay, even in a new job
- Preferential hiring for other jobs within the same company or sector
- Career counselling
- Relocation assistance, including moving and resettlement costs to a new location
- Other, please specify
- Not applicable / May be retired

Would any of the following factors discourage you from taking work in another industry? (Choices under each item include: Major worry, A bit worried, Not worried at all, Not applicable/May be retired)

- No jobs available
- Inadequate pay in new jobs
- Need additional training
- Would have to relocate to another city or town
- Unsure if a new job would be secure

The following options have been proposed to support existing fossil fuel workers to transition into retirement. How important would these supports be in encouraging you to transition to retirement. (Choices under each item include: Very important, Somewhat important, Not very important, Not at all important)

- Larger basic pension benefit
- Early retirement with bridging benefits (such as an increased pension for several years, continued access to health care benefits, etc.) until you reach normal retirement age
- Other incentives to retire early (such as lump sum payments, or full pay, for the first six months of retirement)
- Enhanced EI for a specified period of time leading into retirement

How to Manage Change

Which groups in society have the most responsibility to support fossil fuel workers as fossil fuel production declines? (Choices under each item include: Most responsibility, Least responsibility, Not at all responsible

- Federal government
- Provincial or territorial government
- Local government
- Fossil fuel employers
- Fossil fuel users and consumers
- Other businesses
- Trade unions

Please indicate how measures to support fossil fuel workers to move into other jobs or early retirement should be funded (please select all that apply).

- Federal government
- Provincial or territorial government
- Local government
- Government levels working together
- Special revenues or taxes collected on fossil fuel sales

- Fossil fuel employers
- Yourself as an individual

Should governments offer financial support to: (Choices under each option include Yes, No, Don't know/Unsure).

- Companies to support diversification into new lines of work?
- Local communities and regions to diversify their local economies?

Voice

Do you feel you have a say in how fossil fuel jobs will change over the coming years?

- No say at all
- Not much of a say
- Some say
- A great deal of say

How well are your opinions and priorities regarding changes in fossil fuel employment listened to by the following groups? (Choices under each option include: Listened to most carefully, Least listened to, Not listened to at all)

- Local government
- Fossil fuel employers
- Trade unions
- Universities and colleges
- Community and non profit organizations
- Environmental groups

How important do you think the following activities will be for ensuring you have more say in how the changes in fossil fuel jobs will be managed in the future? (Choices under each option include: Very important, Somewhat important, Not very important, Not at all important)

- Voting for different political leaders
- Writing letters, signing petitions, protesting
- Making individual appeals to your employer
- Collective bargaining between your union and your employer
- Starting your own business

How optimistic do you feel about the future?

- Very optimistic
- A little bit optimistic
- Neither optimistic nor pessimistic
- A little bit pessimistic
- Very pessimistic

Conclusion

Would you be interested in participating in a one-hour online group discussion about these issues?

- Yes
- No

If yes, please provide your contact information:

Any comments?

References

Arnold, Jonathan, Rachel Samson, Sachi Gibson, Antonio Ding, and Melissa Felder (2022). *Net Zero Opportunities: A Province-by-Province Comparison* (Ottawa: Canadian Climate Institute).

Bellefontaine, Michelle (2016). "Coal-fired power plants to get $1.1B in compensation over next 14 years," *CBC News*, November 24, https://www.cbc.ca/news/canada/edmonton/coal-fired-fpower-plants-to-get-1-1b-in-compensation-over-next-14-years-1.3866763.

Bourbeau, Emmanuelle (2019). "Labour market dynamics since the 2008/2009 recession," Labour Statistics Research Paper (Ottawa: Statistics Canada), https://www150.statcan.gc.ca/n1/en/pub/75-004-m/75-004-m2019001-eng.pdf.

Bridge, Tyee, and Jim Stanford (2025). *Jobs for Today: Canada's Building Trades and the Net-Zero Transition* (Vancouver: Centre for Civic Governance), https://ccg.eco/wp-content/uploads/2025/09/Jobs_for_Today_Report.pdf.

Brown, Grace, and Binnu Jeyakumar (2022). *Supporting Workers and Communities in a Coal Phase-out: Lessons Learned from Just Transition Efforts in Canada* (Calgary: Pembina Institute).

C40 Cities Climate Leadership Group (2021), *The Case for a Green and Just Recovery* (London: C40 Cities), https://c40.my.salesforce.com/sfc/p/#36000001Enhz/a/1Q000000gRCH/24OgS-bRwj1hZ305yJbyPMZJQKhXXWNYE8k8sr2ADsi8.

Calvert, John (2023). "Just Transition in the Construction Industry: A Union's Campaign to Create Jobs by Promoting Climate Change Upgrades in Buildings," *Alternate Routes: A Journal of Critical Social Research* 35, pp. 101-117.

Calvert, John (2025). *Building Better: The Positive Impact of Community Benefits Agreements on the B.C. Construction Workforce* (Ottawa: Canadian Centre for Policy Alternatives).

Campbell, Bruce (1993). "Restructuring the Economy: Canada into the Free Trade Era," in Ricardo Grinspun and Maxwell Cameron (eds.), *The Political Economy of North American Free Trade* (London: Macmillan), pp. 89-104.

Canada Energy Regulator (2023). Canada's Energy Future, Data Appendices (Ottawa: Canada Energy Regulator), https://www.cer-rec.gc.ca/en/data-analysis/canada-energy-future/#data.

Canadian Association of Petroleum Producers (2025). *The Economic Impact of Canadian Oil and Gas* (Calgary: Canadian Association of Petroleum Producers), April, https://www.capp.ca/wp-content/uploads/2023/12/The-Economic-Impact-of-Canadian-Oil-and-Gas.pdf.

Centre for Future Work (2022). "Calling Canadian Energy Workers: Take Our Survey on Future Job Transitions," December 12, https://centreforfuturework.ca/2022/12/12/calling-canadian-energy-workers-take-our-survey-on-future-job-transitions/.

Cha, J. Mijin, Vivian Price, Dimitris Stevis, and Todd E. Vachon with Maria Brescia-Weiler (2021). *Workers and Communities in Transition: Report of the Just Transition Listening Project.* (Takoma Park, MD: Labor Network for Sustainability).

Chejfec, Ricardo, Rachel Samson, and Abigail Jackson (2025). *The Community Transformations Project: Supporting Workers and Communities on the Road to Net Zero* (Montreal: Institute for Research on Public Policy).

Chen, Xuyang, and Maxime Fougère (2010). "Inter-provincial and Inter-industry Labour Mobility in Canada, 1994-2005" (Gatineau: Human Resources and Skills Development Canada), https://www.researchgate.net/profile/Maxime-Fougere-2/publication/235781189_Inter-provincial_and_Inter-industry_Labour_Mobility_in_Canada/data/0fcfd513756756b9b7000000/Inter-provincial-and-Inter-industry-Labour-Mobility-in-Canada.doc.

Chen, Wen-Hao and René Morissette (2020). "How Do Workers Displaced from Traditional Energy-producing Sectors Fare after Job Loss? Evidence from Coal Mining," Economic Insights, Catalogue 11-626-X (Ottawa: Statistics Canada).

Choudhury, Nayanika (2024). "Community Impacts of Phase-Out of Coal Fired Electricity Generation in Alberta" (Calgary: University of Calgary), https://ucalgary.scholaris.ca/items/616d75aa-b100-4067-b951-957c3a7be80d.

Clean Energy Canada (2021). *The New Reality* (Vancouver: Clean Energy Canada).

Corkal, Vanessa, and Estan Beedell (2022) *Making Good Green Jobs the Law: How Canada Can Build on International Best Practice to Advance Just Transition for All* (Winnipeg: International Institute for Sustainable Development).

Dardour, Saled, Deborah Ayres, and Lourdes Zamora (2025). *Renewable Power Generation Costs in 2024* (Abu Dhabi: International Renewable Energy Agency), https://energiaoltre.it/wp-content/uploads/2025/07/IRENA_TEC_RPGC_2024_ES_2025-embargo.pdf.

Dayal, Pratyush (2025). "NextStar Energy workers ratify their 1st collective agreement," CBC News, July 20, https://www.cbc.ca/news/canada/windsor/nextstar-energy-collective-agreement-ratified-1.7589642.

Department of the Prime Minister and Cabinet, Government of Australia (2024). Considerations for the Establishment of the Net Zero Economy Authority: A rapid research report by ANU to Australia's Net Zero Economy Agency (Canberra: Government of Australia), https://www.pmc.gov.au/sites/default/files/resource/download/nzea-establishment-considerations.pdf.

Doyle, Amanda (2021). "Oil and Gas Workers have their Say on the Just transition," *The Chemical Engineer*, October 28.

Dupuis, Mathieu, Gregor Murray, and Meiyun Wu (2021). *Technological Transformations and the Automotive Services Industry: Meeting the Skills Challenges for Automotive Service Technicians in Quebec* (Toronto: Future Skills Centre).

Environment and Climate Change Canada (2018). *A Just and Fair Transition for Canadian Coal Power Workers and Communities: Task Force on Just Transition for Canadian Coal Power Workers and Communities* (Ottawa: Environment and Climate Change Canada).

Future Skills Centre (2023). *Participation in Skills Training: A Report from the Survey on Employment and Skills* (Toronto: Future Skills Centre).

Galley, Andrew (2015). *Community Benefits Agreements* (Toronto: Mowat Centre), https://communitybenefitsagreements.ca/.

Gordon, Megan, and Alex Callahan (2023). *A Sustainable Jobs Blueprint, Part II: Putting Workers and Communities at the Centre of Canada's Net-Zero Energy Economy* (Calgary: The Pembina Institute).

Government of Alberta (2018). "Support for Albertans Affected by Coal Phase Out" (Edmonton: Government of Alberta), https://www.alberta.ca/support-for-coal-workers.

Government of Canada (2023). *Sustainable Jobs Plan* (Ottawa: Government of Canada), https://www.canada.ca/content/dam/nrcan-rncan/documents/SGJ_Report_EN_March8.pdf.

Graney, Emma (2025). "Saskatchewan budgets $900-million to refurbish coal plants, says no gas conversions," *The Globe and Mail*, August 25.

Heffron, Raphael J. (2021). *Achieving a Just Transition to a Low-Carbon Economy* (Cham: Springer).

Houeland, Camilla and David Jordhus-Lier (2022). "'Not my task': Role perceptions in a green transition among shop stewards in the Norwegian petroleum industry". *Journal of Industrial Relations* 64(4), pp. 522-543.

Hughes, David W. (2003). "Policy Uses of Economic Multiplier and Impact Analysis," *Choices* 18(2), pp. 25-29.

Hulse, Matt (2023). *Proposals for the Canadian Just Transition Act* (Vancouver: Ecojustice Canada).

International Energy Agency (2021). *Net Zero by 2050* (Paris: International Energy Agency).

International Labour Organization (2015). *Guidelines for a Just Transition Towards Environmentally Sustainable Economies and Societies for All* (Geneva: International Labour Organization).

Jackson, Abigail, Rachel Samson, and Ricardo Chejfec (2025). *Resilient Workers, Resilient Communities: The Need for Place-Based Skills Development* (Montreal: Institute for Research on Public Policy).

James, Carole (2020). "B.C. Infrastructure Benefits Mandate Letter," B.C. Ministry of Finance, January 14, https://www.bcib.ca/wp-content/uploads/2023/05/BCIBMandateLetter2020.pdf.

Kaplan, Lennie (2023). "Examining key demographic characteristics of Canada's oil and gas sector workers," Canadian Energy Centre, September 19, https://www.canadianenergycentre.ca/examining-key-demographic-characteristics-of-canadas-oil-and-gas-sector-workers/.

Kellogg, E. Jean (1997). "An inquiry into the psychological, social and work-related outcomes of an innovative labor adjustment program," Theses and Dissertations (Comprehensive), Wilfrid Laurier University, https://scholars.wlu.ca/etd/215/.

Laporte, Christine, Yuqian Lu and Grant Schellenberg (2013). "Inter-provincial Employees in Alberta," Analytical Studies Branch Research Paper Series, Catalogue 11F0019M — No. 350 (Ottawa: Statistics Canada).

Lindwall, Courtney (2025). "Electric vs. Gas Cars: Is It Cheaper to Drive an EV?," Natural Resources Defense Council, July 21, https://www.nrdc.org/stories/electric-vs-gas-cars-it-cheaper-drive-ev.

McKenzie, Janetta, and Megan Gordon (2025). *Drilling Down: Oil and gas jobs in transition* (Calgary: Pembina Institute).

Mehdi, Tahsin, and Ping Ching Winnie Chan (2025). "The impact of job displacement on earnings of workers in high-emission industries in Canada," Economic and Social Reports, Catalogue 36-28-0001 (Ottawa: Statistics Canada).

Mertins-Kirkwood, Hadrian, and Clay Duncalfe (2021). *Roadmap to a Canadian Just Transition Act: A Path to a Clean and Inclusive Economy* (Ottawa: Canadian Centre for Policy Alternatives).

Ministry of Energy and Mines, Ontario (2018). "The End of Coal" (Toronto: Government of Ontario), https://www.ontario.ca/page/end-coal.

Myers, Karen, Simon Harding and Kelly Pasolli (2021). *Skills Training That Works: Lessons from Demand-Driven Approaches* (Montreal: Institute for Research on Public Policy).

Natural Resources Canada (2023). "Government of Canada releases interim Sustainable Jobs Plan to enable the creation of good, middle class jobs across Canada" (Ottawa: Natural Resources Canada), February 17, https://www.canada.ca/en/natural-resources-canada/news/2023/02/government-of-canada-releases-interim-sustainable-jobs-plan-to-enable-the-creation-of-good-middle-class-jobs-across-canada.html.

Natural Resources Canada (2024a). *Energy Fact Book: 2024-2025* (Ottawa: Natural Resources Canada).

Natural Resources Canada (2024b). "Coal Facts," https://natural-resources.canada.ca/minerals-mining/mining-data-statistics-analysis/minerals-metals-facts/coal-facts.

Natural Resources Canada (2024c). "The Canadian Sustainable Jobs Act Becomes Law" (Ottawa: Natural Resources Canada), June 20, https://www.canada.ca/en/natural-resources-canada/news/2024/06/the-canadian-sustainable-jobs-act-becomes-law.html.

Net Zero Advisory Body (2022). *Compete and Succeed in a Net Zero Future* (Ottawa: Net-Zero Advisory Body).

Ng, Winnie, Salmaan Khan, and Jim Stanford (2024). *The Importance of Unions in Reducing Racial Inequality: New Data and Best Practices* (Vancouver: Centre for Future Work).

Newbigging, Liam (2025). "Industry watchers raise alarm on Alberta renewable-energy project cancellations," *CBC News*, August 24, https://www.cbc.ca/news/canada/edmonton/alberta-renewable-energy-projects-cancelled-1.7615892.

Office of the Auditor General of Canada (2022). *Just Transition to a Low-Carbon Economy* (Ottawa: Office of the Auditor General).

Oil Sands Community Alliance (2018). "The Rotational Workforce in the Athabasca Oil Sands Area" (Fort McMurray: Oil Sands Community Alliance).

PetroLMI (2021). *Labour Market Outlook 2021 to 2023: Oil and Gas Industry* (Calgary: Petroleum Labour Market Information Division, Energy Safety Canada).

Pollin, Robert and Brian Callaci (2019). "The Economics of just transition: A Framework for supporting fossil fuel-dependent workers and communities in the United States". *Labor Studies Journal* 44(2), pp. 93-138.

Samson, Rachel, Abigail Jackson, and Ricardo Chejfec (2025). *Empowering Community-Led Transformation Strategies: Government-Backed Community Development Plans are Most Likely to Succeed* (Montreal: Institute for Research on Public Policy).

Savoie, Daniel (2024). "The Maritimes are no longer an economic basket case. But the good times bring their own problems," *Globe and Mail*, August 6.

Sheldon, Peter, Raja Junankar and Anthony De Rosa Pontello (2018). *The Ruhr or Appalachia? Deciding the Future of Australia's Coal Power Workers and Communities* (Sydney: University of New South Wales, Industrial Relations Research Centre).

Stanford, Jim (2021). *Employment Transitions and the Phase-Out of Fossil Fuels*, (Vancouver: Centre for Future Work).

Stanford, Jim (2025). *The Alberta Wage Disadvantage: Evidence on Alberta's Continuing Suppression of Wages and Salaries* (Vancouver: Centre for Future Work).

Stanford, Jim, and Kathy Bennett (2021). *Bargaining Tech: Strategies for Shaping Technological Change to Benefit Workers* (Vancouver: Centre for Future Work).

Stanford, Jim, and Daniel Poon (2021). *Speaking Up, Being Heard, Making Change: The Theory and Practice of Worker Voice in Canada Today* (Vancouver: Centre for Future Work).

Statistics Canada (2023). "Training participation, 2022," Quality of Employment Index, June 13, https://www150.statcan.gc.ca/n1/en/pub/14-28-0001/2023001/article/00010-eng.pdf?st=bigaiVJE.

Thulin, Per (2015). "Local Multiplier and Economic Base Analysis," in Charlie Karlsson, Martin Andersson, and Therese Norman (eds.), *Handbook of Research Methods and Applications in Economic Geography* (Cheltenham, U.K.: Edward Elgar), pp.213-233.

Unifor (n.d.). "Unifor's Energy Sector: Principles and Bargaining Priorities," https://unifor.unionresearch.ca/energy-policy/principles/ (accessed August 24, 2025).

Velo, Doray, et al. (2025). *Workers Perspectives on Alberta's Coal Transition Program: White Paper* (Toronto: Labour Education Centre).

Vrankulj, Sam (2010). *CAW Worker Adjustment Tracking Project: Preliminary Findings* (Toronto: CAW Canada), https://canadacommons.ca/artifacts/1221314/caw-worker-adjustment-tracking-project/1774394/.

White, Melissa (2003). "Retraining Programs for Displaced Workers in the Post-Industrial Era: An exploration of government policies and programs in Canada and England," *Compare: A Journal of Comparative and International Education* 33(4), pp. 497-506.

Xuereb, Silas (2025). *Exporting Profits: Alberta Oil and Gas Workers Fall Behind While American Shareholders Thrive* (Edmonton: Alberta Federation of Labour).

Yassin, Shaimaa, and Abigail Jackson (2025). *Learning from Place-Based Approaches on the Road to Net Zero: International Lessons in Skills Training and Workforce Development.* (Toronto: Future Skills Centre and Institute for Research on Public Policy).

York University Digital Library (2022). *Adapting Canadian Work and Workplaces to Respond to Climate Change*, Digital Collection, https://digital.library.yorku.ca/adapting-canadian-work-and-work-places-respond-climate-change.

Zinecker, Anna, et al. (2018). *Real People, Real Change: Strategies for Just Energy Transitions* (Winnipeg: International Institute for Sustainable Development).

This report is published by PowerShare, a partnership between the Centre for Future Work and the Canadian Centre for Policy Alternatives with support from the Atkinson Foundation.