

Supporting Workers and Communities in a Coal Phase-out

Lessons learned from just transition efforts in
Canada

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Executive summary

Canada is on track to phase out coal-powered electricity generation by 2030, with several coal plants shutting down by 2023. This progress, along with Canada's goal to achieve an emissions-free electric grid by 2035 and a net-zero-emissions economy by 2050, are much-needed actions for addressing climate change and the health impacts of air pollution. The pace of this progress puts coal workers and communities on the front lines of change, rendering them vulnerable to potential employment and economic losses. It is critical that adequate support be provided to achieve a transition that not only mitigates the impacts of lost revenue and jobs, but also provides wide-reaching benefits from the energy transition. This transition support, if done well, can provide a blueprint for the efforts needed to ensure a just and equitable transition in other sectors of the economy, as they, too, are impacted by shifts in the global economy and climate action.

In this report, we examine the transition programs in the provinces with coal generation based on interviews with community and labour leaders and review of existing literature and case studies from jurisdictions outside of Canada that have implemented just transition policies and programs. Although the clean energy transition has been underway for some time, most efforts to ensure a smooth transition for affected workers and communities have been made only in recent years. In addition to the direct financial assistance mechanisms needed to support impacted workers and communities, we recommend that transition support to enable access to the emerging net-zero economy be stepped up on three fronts:

- ! **Access to sustainable jobs.** Communities can maintain employment opportunities through retraining, reskilling, and tuition assistance, including exploring opportunities to build capacity in the net-zero economy.
- ! **Community economic development.** Community-driven programming initiatives should be flexibly funded and focus on workers directly impacted by Canada's coal phase-out, as well as other members of the community, including schoolteachers, coal workers' partners, and small business owners, who are impacted by the broader economic effects of coal phase-out on coal-dependent communities.
- ! **Financing just transition.** Federal and provincial government funding structures should continue and be expanded to include groups with historically limited participation in the traditional energy sector, including women and Indigenous groups. Private investment opportunities are also emerging, and

financial standards organizations should work with government agencies and private sector investors to develop a standardized taxonomy that defines terms and helps investors assess risk and fund investments that can facilitate decarbonization in traditionally high-emitting industries.

As federal and provincial governments continue to develop climate and energy policies, several key elements should be included to support impacted workers and communities:

- ! **Set clear targets and pathways toward decarbonization and communicate information to stakeholders in a timely manner.** The 2030 coal phase-out target, once announced in Canada, helped impacted communities, workers, and utility companies to plan for retirement of facilities and seek new opportunities. Because of the range of strategies employed to achieve the federal target, each province should set clear timelines and milestones for achieving coal phase-out. Clear communication about the pace, goals, and pathways of energy transition measures provides the certainty needed for affected workers, communities, and industries to plan their futures.
- ! **Involve all stakeholder groups early in transition negotiations.** Proper engagement and a sound participation process should include community leaders and labour groups in addition to government decision-makers and utility representatives. Early participation is essential for crafting just transition policies that fairly and adequately address the challenges faced by workers and communities affected in the energy transition.
- ! **Include transition financing mechanisms in decarbonization policy design.** A successful energy transition requires adequate funding to ensure sustainable long-term outcomes. Direct funding for just transition projects and programs may be suitable for short-term efforts, but long-term transition financing policies are essential for ensuring sustainable change. Federal and provincial governments can mitigate the risks of accelerated coal phase-out for utility companies by offering conditions-based options to refinance coal assets. Additionally, allocating a percentage of the price on carbon toward just transition initiatives would provide a steady source of funding to be used to ensure the overall stability of just transition initiatives.
- ! **Prioritize impacted communities in clean energy procurement programs.** Communities and workers who have been affected by the coal phase-out can benefit from increased access to opportunities within the clean energy economy. Clean energy procurement programs can be designed to prioritize purchasing renewable energy from former coal communities, with a focus on community and Indigenous project ownership.

1.! Introduction

1.1! Overview

Phasing out electricity generation from coal (hereafter, “coal phase-out”) on a global scale is essential to avoid global temperature rise greater than 1.5°C — the critical limit at which the world will experience the worst impacts of climate change. Coal phase-out is also central to achieving Canada’s target of net-zero electricity sector emissions by 2035 and a net-zero economy by 2050. As Canada delivers on these commitments, coal workers and communities are at the front lines of change, being some of the most vulnerable to potential job losses and economic hardship. Canada’s history with coal power dates back to the 1700s,¹ with coal-producing provinces relying on coal for well over half of their power production into the 2000s.² Over the past decade, however, Canada has moved steadily toward phasing out coal power, as documented in the Pembina Institute report *From Coal to Clean*.³

While the pace of coal phase-out in Canada has accelerated, much remains to be done in planning for a just transition for affected workers and communities. Jobs will be lost in the fossil fuel economy; however, clean energy jobs are projected to outpace those losses.⁴ Managing the impacts of coal phase-out is challenging, but the clean energy transition also creates new opportunities for communities and individuals.

While recognizing that a “just transition” can refer to multiple aspects of energy and environmental justice, access, and inclusivity, this report focuses on its application to Canada’s coal workers and communities in the context of the Paris Agreement, which

¹ Benjamin Thibault, Binu Jeyakumar, Grace Brown, and Kaitlin Olmsted, *From Coal to Clean: Canada’s progress toward phasing out coal power* (Pembina Institute, 2021), 58. <https://www.pembina.org/pub/coal-clean>

² Environment and Climate Change Canada, *National Inventory Report 1990-2019: Greenhouse Gas Sources and Sinks in Canada Part 3* (2021), 60-73. https://publications.gc.ca/collections/collection_2021/eccc/En81-4-2019-3-eng.pdf

³ *From Coal to Clean*, 14.

⁴ Clean Energy Canada, *The New Reality* (2021), 4. https://cleanenergycanada.org/wp-content/uploads/2021/06/Report_CEC_CleanJobs2021.pdf

states that a just transition must include “the creation of decent work and quality jobs in accordance with nationally defined development priorities.”⁵

This report provides a history of Canada’s coal phase-out endeavours in the context of jobs and economic development and an overview of current and proposed worker- and community-focused policies at the provincial and federal levels. It summarizes key considerations for a successful just transition regarding access to sustainable jobs, community economic development, and financing. While it does not comprehensively analyze the effectiveness of the policies and programs that have been implemented thus far, the report demonstrates the importance of including concrete just transition plans in federal and provincial planning at all stages of Canada’s net-zero transition. It concludes with recommendations for effective energy transition policymaking that can support impacted workers and communities. These policy recommendations can be applied to coal phase-out, as well as future energy transitions that will allow Canada to reach its decarbonization targets.

The effects of the net-zero transition on employment and community development are broad, with many areas for potential overlap as facets of the fossil fuel-based energy sector evolve to meet changing consumer demands and decarbonization mandates. Achieving an accelerated phase-out of coal power by 2030 will mark Canada’s first major milestone toward meeting its 2050 net-zero emissions goal.

1.2! Research approach and scope

This report focuses on worker and community impacts, and measures taken thus far to address Canada’s coal phase-out in its four remaining coal-burning provinces: Alberta, Saskatchewan, Nova Scotia, and New Brunswick. Research included a review of recent industry reports, media stories, international reports, and emerging trends in the just transition movement. Fifteen semi-structured interviews were conducted with former coal industry employees, community leaders, labour representatives, and individuals familiar with the implementation of transition support programs across Canada (Table 1). Attribution has been kept anonymous and interviewees are referred to by group (e.g., Community Leader 1, Labour Representative 3).

⁵ United Nations, *Paris Agreement* (2015), 2.

https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf

Table 1. Numbers and groups of interviewees

Representative Group	Number of Interviewees
Former Coal Industry Worker	2
Community Leader	2
Labour Representative	6
Economic Development Representative	4
Sustainable Finance Representative	1

Employment data, number of jobs impacted, and wage statistics were obtained through publicly available sources. Because the available data is aggregated at the national or provincial level, its applicability for examining regional and local effects of the energy transition was limited.

2.! Background and context

2.1! History of coal phase-out in Canada

Over the past decade, Canada has moved steadily toward coal phase-out (Figure 1). Thus, there have been opportunities for a just transition to be considered at several milestones. A complete overview of Canada’s coal phase-out is provided in the Pembina Institute report *From Coal to Clean*.⁶

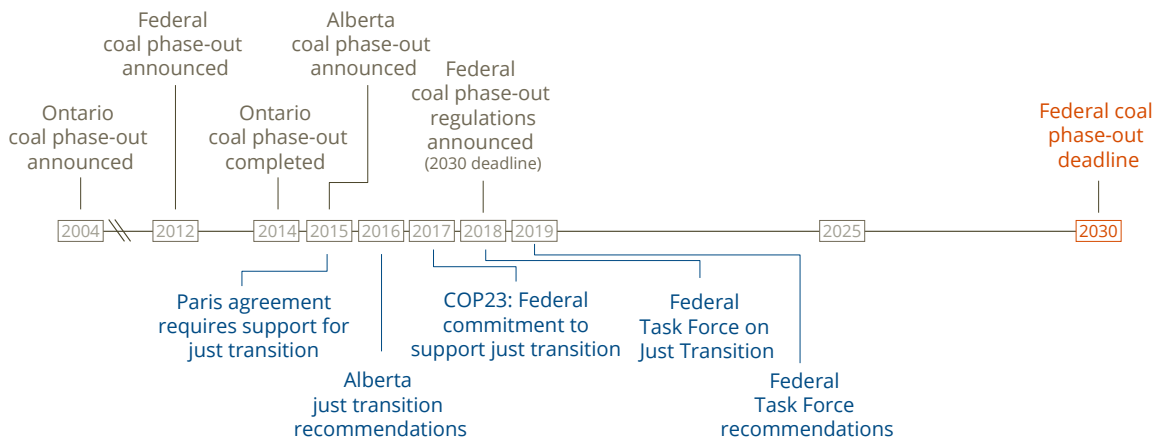


Figure 1. Coal phase-out actions in Canada

In 2004, Ontario announced its intention to phase out coal-fired electricity generation. When the province completed this phase-out in 2014, it was hailed as “the single largest greenhouse gas reduction measure in North America.”⁷ Although planning for the province’s 770 coal workers was not included in the initial transition strategy,⁸ subsequent negotiations with labour organizations provided support for relocation, retraining, and early retirement for coal workers.⁹

⁶ *From Coal to Clean*, 41.

⁷ Melissa Harris, Marisa Beck, and Ivetta Gerasimchuk, *The End of Coal: Ontario’s coal phase-out* (International Institute for Sustainable Development, 2015), 1.
<https://www.iisd.org/system/files/publications/end-of-coal-ontario-coal-phase-out.pdf>

⁸ World Resources Institute, “Ontario, Canada: Reorienting Local Economies by Converting the Atikokan and Thunder Bay Coal-Fired Generating Stations.” <https://www.wri.org/just-transitions/ontario-canada>

⁹ Labour Education Centre, *Just Transition: Exactly What’s in it for Workers?* (2020), Case Study: Closure of Ontario’s Coal-Fired Power Plants, 14.
https://d3n8a8pro7vhmx.cloudfront.net/laboureducationorg/pages/21/attachments/original/1603908442/Ontario_Aug_14_2020.pdf

In 2012, the federal government committed to closing coal power plants at the end of their useful life (usually 50 years after commissioning). At that time, however, no plans were made to provide financial, educational, or economic development and diversification supports for coal workers and communities.

The 2015 Paris Agreement required supporting a “just transition of the workforce and the creation of decent work and quality jobs.”¹⁰ However, the agreement did not include binding targets, and Canada did not establish legislation that would facilitate a just transition.

Beginning in 2015, Alberta embarked on a transition away from coal power that matched Ontario’s pace and scale and is now on track to complete even faster.¹¹ However, workers and communities were not officially involved in transition planning until after most of the policies were already set in place. In 2016, the province’s Advisory Panel on Coal Communities delivered recommendations for supporting workers and communities affected by the coal phase-out. These recommendations formed the foundation of Alberta’s coal transition initiatives.

In 2018, the federal government set regulations accelerating the phase-out of coal power to a new mandated deadline of 2030. The regulations accelerated the compliance period for achieving a greenhouse gas (GHG) emissions cap of 420 tonnes per gigawatt-hour (t/GWh) to no later than the end of 2029.¹² These regulations directly affected workers and economies in four Canadian provinces that still generate electricity from coal: Alberta, Saskatchewan, New Brunswick, and Nova Scotia. Ahead of this commitment, at the COP23 conference in November 2017, Federal Environment and Climate Change Minister Catherine McKenna committed to supporting coal workers and communities through flexibility in Employment Insurance,¹³ as well as through the community support programs outlined in Section 3.1.1. As part of the 2018 coal phase-out regulations, the federal government commissioned the Task Force on Just Transition for Canadian Coal Power Workers and Communities to assess the effects of the transition on coal communities and workers. In 2019, the task force delivered ten

¹⁰ United Nations Framework Convention on Climate Change, *Just Transition of the Workforce, and the Creation of Decent Work and Quality Jobs* (2020), 62.

<https://unfccc.int/sites/default/files/resource/Just%20transition.pdf>

¹¹ *From Coal to Clean*, 25.

¹² *From Coal to Clean*, 22.

¹³ Lauren Vriens, *The End of Coal: Alberta’s coal phase-out*, (International Institute for Sustainable Development, 2018), 20. <https://www.iisd.org/system/files/publications/alberta-coal-phase-out.pdf>

recommendations for the federal government to facilitate a just transition for workers and communities.

While Alberta declared a clear 2030 coal phase-out mandate in 2015, Saskatchewan, Nova Scotia, and New Brunswick pursued different options for equivalencies to the federal coal phase-out that would allow them to run their coal plants longer. By 2021, however, provincial decarbonization commitments and the terms of existing equivalency agreements made it clear that Saskatchewan, Nova Scotia, and New Brunswick all will indeed phase out coal by 2030.

2.2! History of coal mining and electricity generation in current coal-burning provinces

Canada's four remaining coal-burning provinces each have a different history with coal power and are employing different strategies to phase out coal in accordance with the federal 2030 deadline. Alberta has historically been the most reliant on coal for electricity; however, as it completes a rapid conversion from coal to gas-fired generating units, it will become coal-power-free before any other current coal-burning province. Communities in Saskatchewan, like Alberta, are still driven by coal mining in addition to coal power plants, while New Brunswick and Nova Scotia both ended their coal mining operations at the turn of this century. Because of the wide variations in community dependence on the coal industry, transition plans must be tailored to suit the nuances of each individual community.

Alberta

Alberta has relied on coal for power since mining operations began in the late 1800s,¹⁴ and by the early 2000s, coal generated nearly 80% of Alberta's electricity.¹⁵ In the province's deregulated electricity system, several large independent power producers own all of Alberta's coal power plants, shown in Figure 2.

Many coal mines and plants are already shut down, including the Highvale Mine in TransAlta's December 2021 coal phase-out¹⁶ and the Battle River and Sheerness

¹⁴ Government of Alberta, "About Coal - Overview." <https://www.alberta.ca/about-coal-overview.aspx>

¹⁵ *National Inventory Report 1990-2019*, 69.

¹⁶ TransAlta, "TransAlta Achieves Full Phase-Out of Coal in Canada," media release, December 29, 2021. <https://transalta.com/newsroom/news-releases/transalta-achieves-full-phase-out-of-coal-in-canada/>

facilities in Heartland Generation’s November 2021 coal phase-out.¹⁷ Highvale Mine supplied coal to TransAlta’s Sundance and Keephills Generating Stations in Wabamun, Paintearth Mine supplied coal to the Battle River Generating Station, and Sheerness Mine supplied coal locally to the Sheerness Generating Station. Capital Power operates the last remaining fully operational generating station at Genesee, which is powered by coal from the local Genesee Mine.

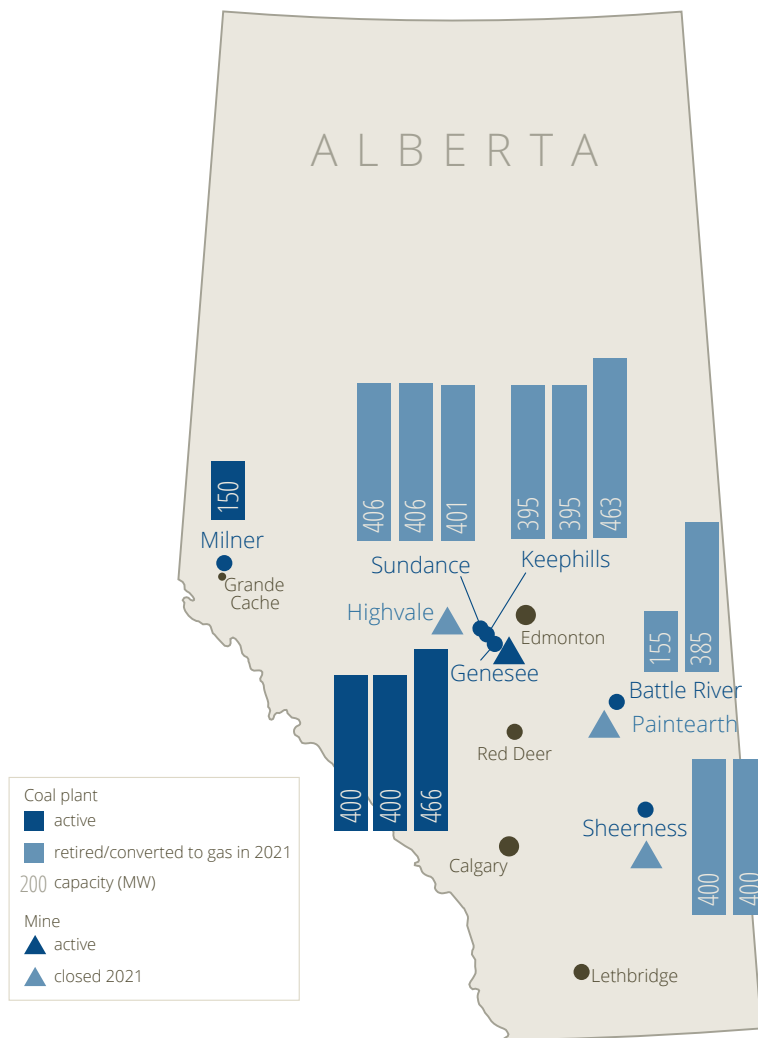


Figure 2. Coal mines, power plants and unit capacities in Alberta (2021)

¹⁷ Heartland Generation, “Heartland Generation Announces Completion of Off-Coal Transitions at Battle River and Sheerness Generating Stations,” media release, November 9, 2021.

<https://www.heartlandgeneration.com/post/heartland-generation-announces-completion-of-off-coaltransitions-at-battle-river-and-sheerness-generating-stations>

Saskatchewan

Saskatchewan is Canada's third-largest producer of thermal coal.¹⁸ Coal from local mines powers Saskatchewan's three remaining coal power plants, shown in Figure 3, which are owned and operated by SaskPower, the province's vertically integrated crown corporation utility. Poplar River Mine and Poplar River Power Station are located in Coronach, on the province's central southern border. Estevan, on the province's southeast border, is home to Westmoreland's Estevan Mine, as well as the Boundary Dam and Shand Power Stations.

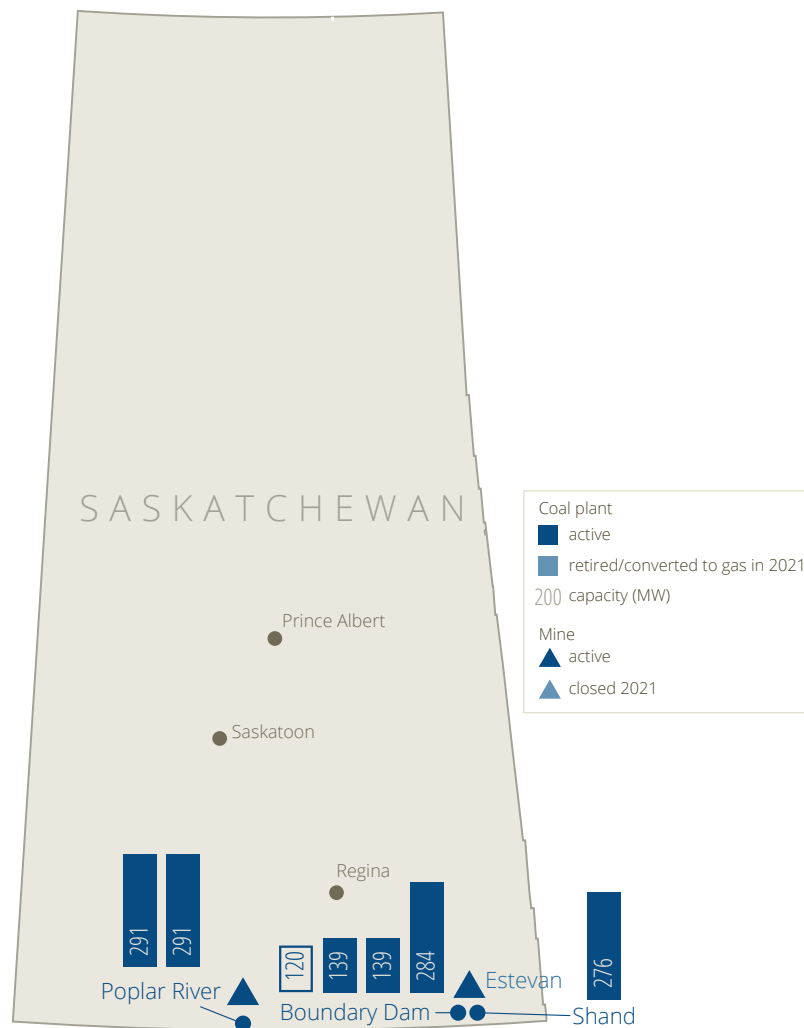


Figure 3. Coal mines, power plants and unit capacities in Saskatchewan

¹⁸ Government of Saskatchewan, "Coal and Lignite Dispositions."

<https://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/mineral-exploration-and-mining/mineral-tenure/coal-and-lignite-dispositions>

Nova Scotia

Nova Scotia's coal mining history dates back to 1720, when commercial mining began on Cape Breton Island. Coal from local mines fuelled the province's power plants until the last Devco mine closed in 2001.¹⁹ Since then, the province's four remaining coal mines have been powered by imported coal. Nova Scotia Power, the province's privatized, regulated and vertically integrated electric utility, operates all four coal plants (Figure 4). The Trenton Generating Station is located in Trenton on the province's northern coast. Cape Breton Island houses the Point Aconi and Point Tupper generating stations, as well as Lingan, the province's largest generating station.

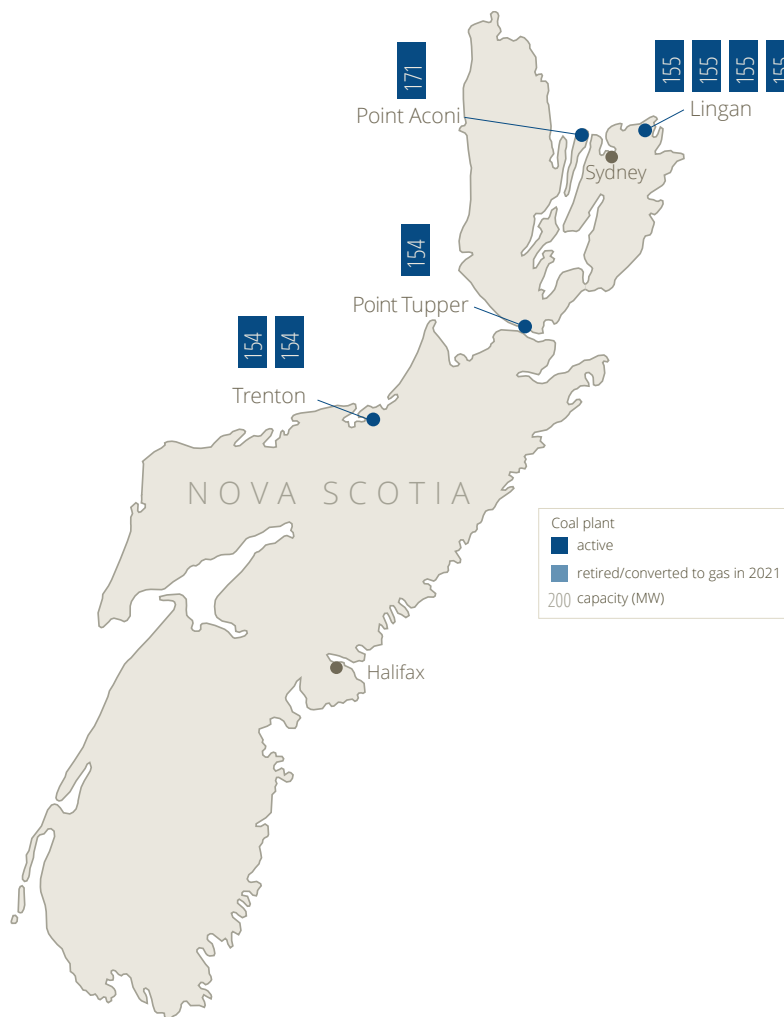


Figure 4. Coal power plants and unit capacities in Nova Scotia

¹⁹ Government of Nova Scotia, "Nova Scotia's Historic Underground Coal Mine Workings Information," April 8, 2020. <https://novascotia.ca/natr/meb/hazard-assessment/historic-coal-mine-workings.asp>

New Brunswick

New Brunswick’s coal mining industry launched in 1904 with the completion of the railroad to the centrally located village of Minto.²⁰ Local coal mining ended over a century later, with the closure of Minto’s coal mine²¹ in conjunction with the retirement of Grand Lake Generating Station in 2010.²² Today, the province has only one remaining coal power station, which is powered by coal imported from Colombia and petroleum coke from the United States.²³ New Brunswick Power Corporation, the province’s vertically integrated crown corporation utility, owns and operates the Belledune Generating Station, which sits adjacent to the Port of Belledune on the northern coast (Figure 5).



Figure 5. Coal power plants and unit capacities in New Brunswick

²⁰ New Brunswick Museum, “Minto Coal Mines.” https://magnificentrocks-rochesmagnifique.ca/the_periods-les_periodes/upper_carboniferous-carbonifere_superieur/community_connections-connexions_communautaires/minto_coal_mines-minto_mines_de_charbon-eng/

²¹ Gary Moore, “Tropical oasis in N.B.? Nope - just remnants of Minto’s mining history,” *CBC News*, May 29, 2021. <https://www.cbc.ca/news/canada/new-brunswick/minto-water-coal-mining-1.6044399>

²² CBC News, “Grand Lake station closed 3 months early,” March 10, 2010. <https://www.cbc.ca/news/canada/new-brunswick/grand-lake-station-closed-3-months-early-1.944700>

²³ Jacques Poitras, “Countdown to obsolescence: A look inside the Belledune coal-fired plant,” *CBC News*, August 20, 2018. <https://www.cbc.ca/news/canada/new-brunswick/future-belledune-power-plant-1.4789524>

2.3! Impacts of coal phase-out on workers and communities

As Canada’s economy decarbonizes, the economic benefits of coal mining and coal power plants are diminishing while those associated with other sectors grow exponentially. These changing dynamics create opportunities as well as complex challenges for coal workers and communities. In some coal-burning provinces, the industry still provides thousands of jobs, while other provincial labour markets are less dependent on the coal industry (Table 2). However, when coal plants and mines close, impacts to workers and the local community vary widely depending on demographic factors and geographic locations. In communities located close enough to major cities, workers may have the option to seek employment in the city without having to disrupt their family units by relocating or leaving for weeks at a time to live temporarily on a job site. However, in communities that were built around coal mining or a coal plant as the primary industry, retiring coal power presents a major economic challenge.

Table 2. Coal power jobs by province

Province	Total Jobs
Alberta	3,100 ²⁴
Saskatchewan	1,060 ²⁵
Nova Scotia	350 ²⁶
New Brunswick	118 ²⁷

²⁴ *The End of Coal: Alberta’s coal phase-out*, 13.

²⁵ Brendan Ellis, “City of Estevan predicts 350 total job losses following power station closures,” *CTV News Regina*, March 4, 2020. <https://regina.ctvnews.ca/city-of-estevan-predicts-350-total-job-losses-following-power-station-closures-1.4838434>

Brian Zinchuk, “Coronach gets \$2 million to assist with coal transition,” *SaskToday*, March 1, 2020. <https://www.sasktoday.ca/south/local-news/coronach-gets-2-million-to-assist-with-coal-transition-4145312>

²⁶ Olivia Malley, “Nova Scotia wants to be off coal by 2030. What does that mean for Trenton?,” *Saltwire*, May 6, 2021. <https://www.saltwire.com/atlantic-canada/news/moving-away-from-coal-energy-in-trenton-100584892/>

²⁷ “Countdown to obsolescence: A look inside the Belledune coal-fired power plant.”

2.3.1! Impacts on individual workers

When coal plants and mines close, workers must seek other economic opportunities. Workers can choose to either transition to a new job (either a short-term job or a different permanent job within the same company), seek a new job in a different industry (and undertake training to qualify for the job, if necessary), retire early, or relocate to find alternate employment.

Reassignment to another job at the same company

Utility companies can retain some jobs when mines and power plants close, but there are constraints. Mine workers can transition to working on closure and reclamation of the mine. This process includes closing the mine, removing all infrastructure, and returning the site to an equivalent capacity as its pre-development state, including revegetating the land. According to the Alberta Energy Regulator, this process can take “many years or even decades”, depending on how the site functioned before mining operations began.²⁸ However, as reclaiming operations generally begin years before the mine shuts down, reclamation efforts are often completed within three years of mine closure. Reclaiming a mine also requires only approximately 20–65% of the workers needed to operate a mine for each year of cleanup.²⁹ Thus, while mine reclamation can provide needed short-term employment for some workers, even those workers will still need to seek permanent employment following successful mine reclamation.

For companies that are converting their coal plants to burn natural gas, coal plant operators can reskill and transition to operating the converted natural gas plants. However, as gas-fired plants require only 30–40% of the workforce needed to operate a coal power plant,³⁰ this transition pathway is not available to all affected workers. In addition, with the Canada-wide transition to a net-zero grid and the limitations of

²⁸ Alberta Energy Regulator, “Mine Reclamation Requirements.” <https://www.aer.ca/regulating-development/project-closure/reclamation/mine-reclamation-requirements>

²⁹ Calculated from figures provided by the Western Organization of Resource Councils, *Coal Mine Cleanup Works: A Look at the Potential Employment Needs for Mine Reclamation in the West* (2020), 8-10. http://www.worc.org/media/Reclamation-Jobs-Report-FINAL_Nov-2020.pdf

³⁰ Task Force on Just Transition for Canadian Coal Power Workers and Communities, *A Just and Fair Transition for Canadian Coal Power Workers and Communities* (2018), 13. <https://www.canada.ca/en/environment-climate-change/services/climate-change/task-force-just-transition.html>

operating inefficient gas facilities,³¹ many of these gas plants are likely to have a limited lifespan.

Seeking jobs in other industries

Employment opportunities in the clean energy sector are growing rapidly. In the United States, solar photovoltaic installer and wind technician are among the fastest-growing occupations: by 2030, the number of jobs in these occupations is projected to increase by 52.1% and 68.2%, respectively.³² These jobs also pay more than the United States' median annual wage and do not require a postsecondary degree.³³ In Canada, clean energy jobs are forecast to grow by nearly 50% by 2030, adding an estimated 208,700 jobs.³⁴ Much of this growth will occur in the electric vehicle sector, which is projected to grow by 39% per year, reaching 184,000 people employed in the industry by 2030.³⁵ The hydrogen economy will also achieve impressive gains, growing 27% per year by 2030.³⁶

Many positions in coal mines and plants are full-time jobs that pay higher-than-average wages and come with health benefits and pension plans. In Alberta, plant operators and maintenance staff make two to three-and-a-half times the province's \$15 minimum wage, with wages at \$27 to \$55 per hour depending on experience.³⁷ As coal industry jobs are replaced with jobs in the clean energy economy and other sectors, ensuring these new jobs offer similar levels of job availability, pay, and quality is crucial for maintaining the economic opportunities that are available to community members.

Retirement

For workers who are approaching the end of their full-time working years, early retirement may be an option. Early retirement programs help eligible workers bridge the

³¹ Environment and Climate Change Canada, "Technical backgrounder: Federal regulations for electricity sector," December 12, 2018. <https://www.canada.ca/en/environment-climate-change/services/managingpollution/energy-production/technical-backgrounder-regulations-2018.html>

³² U.S. Bureau of Labor Statistics, "Table 1.3 Fastest growing occupations, 2020 and projected 2030," September 8, 2021. <https://www.bls.gov/emp/tables/fastest-growing-occupations.htm>

³³ William Lawhorn, "Solar and wind generation occupations: a look at the next decade," *Beyond the Numbers: Employment & Unemployment*, vol. 10, no. 4 (U.S. Bureau of Labor Statistics, February 2021), <https://www.bls.gov/opub/btn/volume-10/solar-and-wind-generation-occupations-a-look-at-the-next-decade.htm>

³⁴ *The New Reality*, 6.

³⁵ *The New Reality*, 10.

³⁶ *The New Reality*, 10.

³⁷ *A Just and Fair Transition for Canadian Coal Power Workers and Communities*, 13.

gap between their early retirement date and their pension start date. Programs provide a percentage of earnings for a set amount of time to eligible workers, though many people may not qualify. In Alberta, for example, only workers who are at least 53 years old and have been employed with a company for more than 10 years qualify for early retirement support.

Relocation

Many people prefer to stay within their community rather than relocating to seek alternative employment. However, if limited job opportunities are available within the community, workers may have no choice but to seek employment elsewhere. This exodus can start the decline of communities offering few opportunities for economic diversification.

2.3.2! Impacts on coal communities

When coal plants and mines close, communities lose a major regional economic driver and a source of tax revenue. Communities must seek out economic diversification opportunities by assessing the possibility of attracting new industries, increasing focus on existing but nascent local industries, or applying a combination of the two approaches.

Losing a job can mean losing a sense of identity, especially for people who have been employed in the coal industry for decades. Unemployment and human responses to the uncertainty around the future of the industry can lead to social issues within the community.³⁸ Communities in transition need support systems that allow them to prepare for these changes by providing the services people need at local, accessible transition centres.

In addition to the direct challenges coal workers face, people in affected communities must also deal with the indirect effects from coal plant and mine closures. In communities that are primarily supported by the coal industry such as Hanna, Alberta, and Coronach, Saskatchewan, job losses can affect everyone from convenience store workers to schoolteachers. Fewer coal workers means fewer patrons at local restaurants

³⁸ Lluís Mangot-Sala, Nynke Smidt and Aart C. Liefbroer, “The association between unemployment trajectories and alcohol consumption patterns. Evidence from a large prospective cohort in The Netherlands,” *Advances in Life Course Research* (2021), 9.

<https://www.sciencedirect.com/science/article/pii/S1040260821000332>

and hotels, decreased demand for goods and services, and loss of customers for materials suppliers.

Losing revenue from a local coal plant or mine has broad impacts on the municipal revenue stream. In communities that receive funding dollars on a per-student basis, when families move out of the community, schools lose funding to continue educating the students who remain. Residents moving out of the community can result in lower house prices, which leads to fewer property tax dollars to fund municipal projects and community initiatives, leading to a lower capacity to address the effects of coal phase-out. Keeping residents living within the local community is central to maintaining the community's sustainability. Thus, economic diversification efforts are essential for coal communities in transition to ensure residents have the variety of local economic opportunities needed that they do not have to relocate.

3.1 Canada's current transition policies and programs

3.1.1 Federal policies and programs

Canada's federal government has acknowledged the importance of a just transition in achieving sustainable decarbonization in Canada's climate and jobs plans. The Pan-Canadian Framework on Clean Growth and Climate Change recognized the importance of ensuring "a commitment to skills and training to provide Canadian workers with a just and fair transition to opportunities in Canada's clean growth economy".³⁹ A Healthy Environment and a Healthy Economy, Canada's current climate plan, also highlights the centrality of a fair and just energy transition for Canada to continue competing in a global market with increasing demand for cleaner products and services.⁴⁰

3.1.1.1 Canada's federal coal transition programs

The federal government has instituted two primary programs to support affected workers and communities as Canada transitions off coal power.

- ! The **Canada Coal Transition Initiative** supports skills development and economic diversification in coal communities. In 2018, \$35 million was earmarked over five years to help communities transition to a low-carbon economy. This initiative, which expires in March 2023, supports "capacity-building, entrepreneurship support, business start-up expansion, and supply chain development."⁴¹ Prairies Economic Development Canada (PrairiesCan)

³⁹ Government of Canada, *Pan-Canadian Framework on Clean Growth and Climate Change: Canada's Plan to Address Climate Change and Grow the Economy* (2016), 40.

https://publications.gc.ca/collections/collection_2017/eccc/En4-294-2016-eng.pdf

⁴⁰ Government of Canada, *A Healthy Environment and a Healthy Economy: Canada's strengthened climate plan to create jobs and support people, communities and the planet* (2020), 49-50.

https://www.canada.ca/content/dam/eccc/documents/pdf/climate-change/climate-plan/healthy_environment_healthy_economy_plan.pdf

⁴¹ Government of Canada, "Our Programs: Canada Coal Transition Initiative (CCTI)." <https://www.wd-deo.gc.ca/eng/20011.asp>

- manages \$25 million of these funds,⁴² with the remainder managed by the Atlantic Canada Opportunities Agency.
- In 2019, the federal government announced the \$150 million **Canada Coal Transition Initiative – Infrastructure Fund**. The funds are meant to be allocated to projects that focus on community-led, strategic infrastructure investments in communities affected by coal phase-out.⁴³ PrairiesCan manages \$105 million of these funds, and the Atlantic Canada Opportunities Agency manages the remaining \$45 million.⁴⁴

Other emerging initiatives have the potential to further benefit workers in the energy transition. The Government of Canada's Future Skills initiative, for example, aims to prepare Canadians for the jobs of the future that will emerge in light of changing workplace conditions due to technological progress, new business models, climate change, and the COVID-19 pandemic.⁴⁵ With its focus on inclusion of underrepresented and disadvantaged groups, this initiative is well-placed to inform just transition efforts for the net-zero economy.

3.1.2! Task Force on Just Transition for Canadian Coal Power Workers and Communities

In 2018, the Government of Canada commissioned the Task Force on Just Transition for Canadian Coal Power Workers and Communities (hereafter, the Task Force) to “provide knowledge, options, and recommendations to the Minister of Environment and Climate Change on implementing a just transition for workers and communities directly impacted by the accelerated phase out of coal fired electricity in Canada.”⁴⁶ Based on lessons learned through travelling across the country and meeting with coal workers

⁴² Western Economic Diversification Canada, “\$5.8 million for communities in Saskatchewan and Alberta to attract business, create jobs,” media release, September 25, 2020. <https://www.canada.ca/en/western-economic-diversification/news/2020/09/government-of-canada-supports-just-transition-from-coal-generated-power-in-saskatchewan-and-alberta.html>

⁴³ Government of Canada, “Ministerial Transition Book 2019.” <https://www.canada.ca/en/atlantic-canada-opportunities/corporate/transparency/transition-book-2019.html#decision2>

⁴⁴ Government of Canada, “Just Transition Fund.” <https://www.infrastructure.gc.ca/pd-dp/parl/2021/03/tran-b-eng.html>

⁴⁵ Government of Canada, “Future Skills.” <https://www.canada.ca/en/employment-social-development/programs/future-skills.html>

⁴⁶ Government of Canada, “Task Force: Just Transition for Canadian Coal Power Workers and Communities.” <https://www.canada.ca/en/environment-climate-change/services/climate-change/task-force-just-transition.html>

and community leaders, the Task Force developed 10 comprehensive worker- and community-centred recommendations for the federal government. Although the recommendations were released in 2019, most have not been enacted at the federal level,⁴⁷ and a subsequent “Just Transition Engagement” has not advanced the conversation further than this initial stage.⁴⁸ Implementing these recommendations would facilitate a people-focused transition for Canada’s coal workers and communities.⁴⁹

- 1.! Develop, communicate, implement, monitor, evaluate, and publicly report on a just transition plan for the coal phase-out, championed by a lead minister to oversee and report on progress.
- 2.! Include provisions for just transition in federal environmental and labour legislation and regulations, as well as relevant intergovernmental agreements.
- 3.! Establish a targeted, long-term research fund for studying the impact of the coal phase-out and the transition to a low-carbon economy.
- 4.! Fund the establishment and operation of locally-driven transition centres in affected coal communities.
- 5.! Create a pension bridging program for workers who will retire earlier than planned due to the coal phase out.
- 6.! Create a detailed and publicly available inventory with labour market information pertaining to coal workers, such as skills profiles, demographics, locations, and current and potential employers.
- 7.! Create a comprehensive funding program for workers staying in the labour market to address their needs across the stages of securing a new job, including income support, education and skills building, re-employment, and mobility.
- 8.! Identify, prioritize, and fund local infrastructure projects in affected communities.
- 9.! Establish a dedicated, comprehensive, inclusive, and flexible just transition funding program for affected communities.
- 10.! Meet directly with affected communities to learn about their local priorities, and to connect them with federal programs that could support their goals.

⁴⁷ Labour Representative 1, personal communication, May 31, 2021.

Labour Representative 4, personal communication, June 24, 2021.

⁴⁸ Government of Canada, “Just Transition.” <https://www.rncanengagenrcan.ca/en/collections/just-transition>

⁴⁹ *A Just and Fair Transition for Canadian Coal Power Workers and Communities*, 18-28.

3.1.3! Just Transition Act

At COP25 in 2019, the federal government promised a Just Transition Act to provide training and support for workers to transition to the clean energy economy.⁵⁰ However, a Just Transition Act was notably absent from the federal climate plan that was subsequently developed (A Healthy Environment and a Healthy Economy), and most of the recommendations made by the Just Transition Task Force have yet to be implemented. The Canadian Centre for Policy Alternatives outlines five guiding principles for developing a Just Transition Act:⁵¹

- ! First, legislation must include a **recognition of rights**, including basic human rights, as well as labour, Indigenous, and migrant rights. This recognition of rights ensures an equitable energy transition for all groups, particularly vulnerable communities and groups that will be most heavily impacted by climate change.
- ! A Just Transition Act must also require **participation of affected workers and communities**, including organized labour, community leaders, individual workers, and community members who operate within the coal supply chain to provide other services such as food or healthcare. Community participation including municipalities and First Nations is essential for this process.
- ! A just transition requires a **robust social safety net** to ensure decarbonization policies do not exclude individuals, groups, or communities. The safety net should include pension protections, employment and benefits bridging, and retraining programs for workers directly and indirectly affected by the phase-out of fossil fuel industries.
- ! Legislation should facilitate creation of **new economic opportunities** by realigning local economic development strategies and guiding investment in key industries.
- ! Finally, a Just Transition Act should support **inclusive workforce development** through proactive policies that maximize the long-term benefits of decarbonization. Such policies should include providing retraining opportunities for employment in the net-zero economy, particularly for groups who have been

⁵⁰ Government of Canada, “Canada’s National Statement at COP25.”

<https://www.canada.ca/en/environment-climate-change/news/2019/12/cop25.html>

⁵¹ Hadrian Mertins-Kirkwood and Clay Duncalfe, *Roadmap to a Canadian Just Transition Act: A path to a clean and inclusive economy* (Canadian Centre for Policy Alternatives, 2021), 10-13.

<https://www.policyalternatives.ca/roadmap>

excluded from the fossil fuel-based energy economy, including women, immigrants, Indigenous people, and low-income households.

Together, these principles create a framework upon which to design effective legislation. If the federal government instituted a Just Transition Act, this would allow federal, provincial, and local governments to ensure that worker- and community-centred measures protect Canada's coal workers and communities, as well as ensure a just transition remains a central focus of the broader transition to a net-zero economy.

3.2! Provincial policies and programs

The impacts of coal phase-out are overwhelmingly local, and each coal community's experience is different. Thus, provinces are well-suited to implement policy frameworks and targeted programs that help set their communities up for success. Because of a firm commitment made in 2015 to phase out coal power by 2030, as well as an accelerated timeline, Alberta was relatively quick to establish policies that protect affected coal workers and communities. Canada's other coal-burning provinces, however, have been slower to act. Committing to firm phase-out deadlines with interim targets provides the certainty that industry, communities, and workers need to plan for the future. Because of the long timeline and clear communication needed to successfully manage the clean energy transition, Saskatchewan, Nova Scotia, and New Brunswick should institute flexible funding programs now. These programs would help communities and workers access funds without restrictive stipulations. Communities can use these funds to create programs to diversify their local economies and make good jobs accessible to transitioning workers.

3.2.1! Just transition policies in Alberta

Alberta's energy market has unique features that allow new energy sources to be incorporated: it is deregulated, meaning customers can choose their own retail electricity provider, and its energy-only wholesale market design means electricity is supplied at competitive rates that reflect the price of carbon. This system, coupled with a clear coal phase-out timeline and effective carbon pricing, have spurred an accelerated transition from coal to cheaper, lower-emission fuels. Alberta's electricity grid will be completely coal-free in 2023.⁵² Parallel to the programs started by the

⁵² *From Coal to Clean*, 28.

federal government in 2018, the province instituted two programs specifically targeted to workers and communities affected by this accelerated transition:

- ! The **Coal Workforce Transition Program**, which provides options for financial assistance for re-employment, retirement, relocation, and education for affected workers.
 - ! The **Bridge to Re-employment** provides financial assistance to workers as they search for new jobs. When combined with employment insurance benefits, eligible workers can make up to 75% of their previous earnings for 45 weeks or until they find a new job.
 - ! The **Bridge to Retirement** provides financial assistance to workers who are at least 53 years old and have worked at the company for at least 10 years. Workers can receive up to 75% of their previous earnings for up to 72 weeks or until they become eligible for their pension.
 - ! **Relocation assistance** of up to \$5,000 is available for workers who move at least 40 kilometres to start a new job.
 - ! The **Coal and Electricity Transition Tuition Voucher** provides workers with up to \$12,000 for new skills training.
- ! The **Coal Community Transition Fund**, which was funded by a carve-out from the Community and Regional Economic Support (CARES) program to support municipalities and First Nations affected by the coal phase-out. Grants were awarded to fund projects including economic and strategic transition plans, identification of opportunities for economic diversification, attraction of local investment, and promotional activities. The Government of Alberta awarded a total of just under \$5 million to fund projects in the Battle River region, Paul First Nation, Stony Plain, Hanna, and other areas.⁵³

Alberta's 2015 commitment to phase out coal power in line with the federal government's 2030 goal was reinforced by a sector-wide provincial carbon pricing standard. The transition initiatives listed above are partially funded through the provincial carbon price. The provincial government earmarked \$680 million over three years to support the coal transition, including "financial support for coal workers through the Coal Workforce Transition Program, Renewable Electricity Program, and

⁵³ Government of Alberta, "Coal Community Transition Fund." <https://www.alberta.ca/coal-community-transition-fund.aspx>

community generation.”⁵⁴ Setting aside funds from carbon pricing toward just transition programs ensures a sustainable funding stream that returns revenues to local communities.

To support Alberta's independent power producers through the provincial coal phase-out, the provincial government entered into Off-Coal Agreements with coal-owning utilities. These agreements facilitated an accelerated transition by providing payments to help the businesses recover lost revenues due to early retirement of coal facilities. In exchange, utilities agreed to meet minimum employment quotas in Alberta, provide annual monetary support for the communities around affected plants, and fulfill their legal obligations to employees, including meeting severance and pension commitments.⁵⁵ Unfortunately, labour representatives were not consulted or involved in the discussions leading to these agreements.⁵⁶

Canada Coal Transition Initiative funds were used to establish two transition centres in Forestburg and Castor, Alberta.⁵⁷ A dedicated Just Transition Centre in Keephills, Alberta, as well as Alberta's regular community learning centres, provide career and transition program application assistance to affected workers. At these centres, workers can receive help filling out applications for transition programs, which is important for people without internet access, as well as help with writing cover letters and resumé and preparing for interviews. These centres provide services to people who know how to seek them out; however, centres could be more effective if governments or utilities coordinated with them to reach out and provide services to workers directly. For example, all workers in the community could be asked if they would like to “opt in” for assistance, and those who do so could proactively be provided with information and support.

⁵⁴ Government of Alberta, *Budget 2018: Fiscal Plan* (2018), 35. <https://open.alberta.ca/dataset/8beb5614-43ff-4c01-8d3b-f1057c24c50b/resource/68283b86-c086-4b36-a159-600bcac3bc57/download/2018-21-fiscal-plan.pdf>

⁵⁵ Off-Coal Agreement (TransAlta), November 24, 2016. Available at <https://www.sec.gov/Archives/edgar/data/1144800/000113717116000391/agreement.htm>

⁵⁶ Labour Representative 1, personal communication, September 16, 2021.

⁵⁷ Environment and Climate Change Canada, “Government of Canada welcomes report from Just Transition Task Force for Canadian Coal Power Workers and Communities,” media release, March 11, 2019. <https://www.newswire.ca/news-releases/government-of-canada-welcomes-report-from-just-transition-task-force-for-canadian-coal-power-workers-and-communities-882134855.html>

Community Leaders expressed that a lack of access to data makes it difficult to track the impact of the services provided at transition centres.⁵⁸ Proactively providing data to local transition centres, through the provincial government or the utility company, on the number of employees laid off during a plant or mine closure can help centre staff plan appropriately for the types and extent of services they will need to provide. Additionally, having access to demographic data would allow the centres to track centre utilization rates and program success across age groups, gender, or income as compared with the affected population in aggregate. While community learning centres are valuable tools for providing career assistance, creating just transition centres dedicated specifically to people affected by the energy transition allows for more efficient allocation of resources in the communities that need them most. Community Leader 2 suggested that locating these just transition centres directly within the affected communities, rather than at regional hubs, would create local jobs and provide better access to those who need assistance.⁵⁹

3.2.2! Just transition policies in Saskatchewan, Nova Scotia, and New Brunswick

Until recently, the path for coal phase-out in Saskatchewan, Nova Scotia, and New Brunswick was uncertain. By the end of 2021, however, it became clear that all provinces would phase out coal by 2030. New Brunswick's bid for an equivalency agreement that would allow operation of the Belledune Generating Station through 2040 was rejected by the federal government in November 2021.⁶⁰ In the same month, the Government of Nova Scotia committed to coal phase-out by 2030.⁶¹ Per the terms of their 2018 equivalency agreement, all unabated coal power plants in Saskatchewan will retire by 2029,⁶² leaving only the Boundary Dam Power Station operating with carbon capture and storage.⁶³ These three provinces do not currently have transition programs in place specifically for coal workers, though general programs funded through

⁵⁸ Community Leader 1, personal communication.

⁵⁹ Community Leader 2, personal communication, July 14, 2021.

⁶⁰ Grace Brown, Kaitlin Olmsted, and Binu Jeyakumar, *Progress from Coal to Clean: Comparing Canadian electric utilities' approaches to energy transition*, (Pembina Institute, 2021), 8. <https://www.pembina.org/pub/progress-coal-clean>

⁶¹ *Progress from Coal to Clean*, 8.

⁶² *From Coal to Clean*, 50.

⁶³ *Progress from Coal to Clean*, 20.

Employment Insurance and other provincial funds are accessible for all workers who are searching for a new job or are reskilling or retraining.

Saskatchewan's Provincial Training Allowance Assistance program provides income assistance to eligible adult learners enrolled in workforce development or skills training programs. In February 2020, the Government of Saskatchewan committed to invest \$8 million and \$2 million to support the communities of Estevan and Coronach, respectively, as their coal facilities are retired.⁶⁴ Although these funds will not provide direct support to coal workers, they can be used to support community economic development and diversification initiatives that could help residents be able to remain in their communities.

Nova Scotia's Skills Development Program and New Brunswick's Workplace Essential Skills Program provide assistance to people who require additional skills training to re-enter the job market. These programs could be amended to apply directly to coal workers as the provinces move towards coal phase-out by the federal 2030 deadline.

The Atlantic provinces have demonstrated experience with reallocating coal workers after coal plant closures. For example, when the Dalhousie plant closed in 2012, New Brunswick Power was able to close the plant without employee layoffs, as it did for Grand Lake Generating Station and Courtney Bay Generating Station in years prior.⁶⁵ The utility offered early retirement, voluntary separation, and reallocation or reskilling opportunities to plant workers. Communication was also central to keeping workers and the general public aware of developments as the plant closure progressed.⁶⁶ New Brunswick Power's success with providing employee-centered retraining and relocation opportunities shows it is possible to achieve a successful energy transition while minimizing impacts to affected employees.

In addition to strong federal programs that support the net-zero economy, it is imperative that provincial governments work closely with utility companies to create robust coal worker and community transition programs. Provincial transition programs should provide supports for workers and their families, as well as workers employed in services adjacent to the local coal economy, including restaurant and hotel workers,

⁶⁴ Government of Saskatchewan, "\$10 Million To Support Coal Communities' Transition," media release, February 28, 2020. <https://www.saskatchewan.ca/government/news-and-media/2020/february/28/coal-communities-transition>

⁶⁵ Louise Comeau and Devin Luke, *Climate Stability and Worker Stability: Are they compatible?* (2018), 11. <https://www.greenindustryplatform.org/research/climate-stability-worker-stability-are-they-compatible>

⁶⁶ *Climate Stability and Worker Stability*, 12.

contract tradespeople, and small business owners. These services should include pension protections, relocation support, and education and training programs that are accessible to all community residents. Programs should also support local communities in identifying opportunities for economic development and diversification, as well as creating jobs that add value to the community.

4.! Considerations for a just transition with an accelerated coal phase-out

To support an equitable transition for coal workers and communities, proactive efforts must be taken to establish opportunities long before individuals and communities are impacted. In addition to these long-term strategies, there is also a need for mechanisms that can rapidly deploy short-term support to those who are already being impacted by Canada's coal phase-out. Diversifying the local economy is essential for communities to continue to thrive after losing a major economic engine. Creating new, well-paying jobs keeps workers in the community, secures livelihoods, and allows workers and their families to continue to stimulate the local economy by paying for goods and services. To create these jobs, financing must be allocated to provide the initial economic stimulus needed to individuals and communities in transition.

4.1! Job creation

As Canada transforms its energy system to meet our international obligations and achieve a net-zero emissions grid by 2050, jobs will shift, opening up new opportunities in emerging sectors. While jobs will be lost in the fossil fuel economy, clean energy jobs are projected to outpace those losses. Between 2020 and 2030, an estimated 125,800 Canadian fossil-fuel-related jobs will be lost, but 208,700 jobs in clean energy will be added.⁶⁷ To allow coal workers to benefit from this change, considerations must be made to ensure the newly available jobs are of equivalent quality to the jobs they are replacing.

4.1.1! Retraining and reskilling for jobs with the utility company

Opportunities exist within the utility company for reskilling and retraining workers to meet the utility's changing needs. Benefits of reskilling include being able to continue working for the same employer and living in the same community with

⁶⁷ *The New Reality*, 4.

minimal disruption to family life. Mine reclamation can extend work for some coal mine workers, and coal plant workers can similarly be retrained to work at repowered gas or biofuel plants. As discussed in Section 2.3, however, because these jobs are only available to a minority of coal workers, most workers will need to find work elsewhere.

Providing predictable and practical timelines for when existing jobs will be phased out, access to transition support centres and other available support structures, and clear communication of transition details will allow workers sufficient time to plan for their future. Workers need time to consider their available options and decide on the best course of action to take for themselves and their families. Those who are unable to reskill into other jobs within the utility should be presented with other options including retirement and pension protection, retraining education programs for career changes, and support for relocation.

4.1.2! Reemployment in the clean energy economy

Opportunities to shift employment from fossil fuel-based energy production to clean energy production will increase across Canada by 2030. With its long history of energy production and wealth of natural resources, Alberta has opportunities to diversify employment through renewable energy, transit and electric vehicle infrastructure, energy efficiency for buildings and industry, and environmental cleanup and methane reduction in the oil and gas industry. Between 2020 and 2030, Alberta has the potential to add 67,200 jobs in these sectors.⁶⁸ Alberta and Nova Scotia in particular will benefit from more jobs in wind power, with Alberta increasing its wind power workforce by 22% and Nova Scotia more than doubling its industry employment by 2030.⁶⁹ As the clean energy economy expands due to market forces such as lower renewable energy market prices and higher demand for electric vehicles, governments must institute comprehensive clean energy policies that ensure the clean energy sector continues to grow sustainably.

Preserving job quality is crucial to achieve a just transition through diversification within the clean energy economy. Wages are perhaps the most important consideration for maintaining job quality between existing local coal jobs and replacement jobs in the clean energy economy. Coal power engineers and power systems operators in Canada made an average of \$38.85/hour in 2020, and coal miners

⁶⁸ Saeed Kaddoura, *Alberta's Emerging Economy: A blueprint for job creation through 2030* (Pembina Institute, 2020), 34. <https://www.pembina.org/pub/sustainable-finance-safe-climate>

⁶⁹ *The New Reality*, 14.

made an average of \$34.61/hour.⁷⁰ Comparatively, the median wage for a wind turbine operator in Canada was also \$38.85/hour in 2020,⁷¹ but solar panel installers made only \$22/hour.⁷² Access to jobs with comparable wages for similar education levels is essential for maintaining quality of life for workers in coal communities. Given the technical education required to work in the renewable energy sector, wages for renewable energy jobs should increase to provide the same quality of life as fossil fuel jobs.

In addition to wage considerations, the new jobs that replace existing jobs must be local, permanent, and full-time. Part-time, contract, or “gig economy” jobs do not provide the same level of security as permanent, full-time, unionized employment. Many workers, especially those who have lived in their communities for decades, do not want to uproot their families to seek similar job opportunities to what has been available to them locally. Creating opportunities through economic diversification and developing broad industrial strategies can provide opportunities for workers to retrain into industries that can provide local, well-paying jobs.

4.1.3! Data collection and availability

Data collection and access to information are essential to design evidence-based, targeted transition support programs and to track their progress. While the regional unemployment rates and industry employment data collected by Statistics Canada can uncover overall sectoral trends, data collected at this level is inadequate for identifying regions and municipalities that are affected by specific issues such as coal phase-out. For example, data on the number of employees laid off during a plant or mine closure can inform local transition centres of the impact the layoffs will have on the community. This information can help transition centres prepare for assisting workers with applying for applicable support programs and providing career development and job search assistance. When planning for and implementing a coal phase-out, provincial governments can require coal mine and plant owners and operators to provide employment data for their facilities when they announce closures.

Developing key indicators that capture the impacts of employment and industry losses at the regional and municipal levels can facilitate knowledge sharing and

⁷⁰ Government of Canada Job Bank, “Trend analysis: Compare wages.” <https://www.jobbank.gc.ca/trend-analysis/search-wages>

⁷¹ *The New Reality*, 14.

⁷² “Trend analysis: Compare wages.”

proactive planning. Because coal plant and mine closures have an outsized impact on individual communities, collecting data at the regional, municipal, or, ideally, mine or plant level is crucial for assessing the local impacts of the coal phase-out. Conducting site-level assessments can provide insight on the individual impacts of coal phase-out, as well as the site’s potential for transitioning into providing services in the clean energy economy. These assessments could be conducted by coal plant and mine owners seeking new avenues for their businesses, or by provincial or municipal government representatives evaluating the possibilities for community economic diversification. Making these data publicly accessible on provincial government websites would allow other sites and just transition practitioners to apply lessons learned to future energy transitions.

Increased availability of disaggregated data would help identify trends and vulnerable populations within communities impacted by job losses related to the coal phase-out. Data collected by coal facility owners or operators, provincial government representatives, or municipal governments should include demographic information that can be organized and made available to the public. Disaggregating data by gender, income, socio-cultural or ethnic background, language, and age group can show the full scope of impacts to the community and reveal which groups are more impacted than others.⁷⁵ This data could also help identify the overall impacts of just transition programs, the populations benefitting most from those programs, and the populations who are being left out.

4.2! Community and regional economic development

The transition to a net-zero economy opens the opportunity to create new sources of economic development with the growth of emerging industries and economic sectors. **Diversifying the local economy is essential for ensuring community survival when losing a major economic engine, such as a coal power plant or mine.** This need is especially strong for rural areas and communities that have historically relied almost exclusively on the coal industry to drive their economies. Economic diversification opportunities vary widely depending on many factors, including the local community’s proximity to other services, regional resource availability, and community members’

⁷⁵ National Collaborating Centre for Aboriginal Health, *The Importance of Disaggregated Data* (2010). <https://www.nccih.ca/docs/context/FS-ImportanceDisaggregatedData-EN.pdf>

interest and motivation to change. Economic diversification and industrial strategizing are long-term processes that must be instituted years before coal plant and mine closures to allow sufficient time to strengthen the local economy by instituting new revenue streams that create local employment opportunities.

The net-zero transition also presents an opportunity to institute structural changes that address the systemic inequalities that exist within fossil fuel-based energy production. For example, just transition programs for coal communities can intentionally provide opportunities for permanent, well-paying jobs that protect workers’ rights for groups who have been historically excluded from the economic benefits of the fossil fuel-based energy system.

4.2.1! Clean energy projects and industrial strategy

Canada’s commitment to net-zero-emissions by 2050 opens opportunities to reorganize existing manufacturing, distribution, and energy production systems to function sustainably and durably in a decarbonized economy. Renewable energy development, electric vehicle manufacturing, supply chain management, recycling services for end-of-life batteries and solar panels, and carbon capture and storage are only some examples of many growing sectors in the clean energy economy.

Lessons from a successful economic transition away from coal in Ruhr, Germany

Germany’s transition of the coal-producing Ruhr area demonstrates the importance of large-scale, regional industrial policy in facilitating a just transition. While early policy interventions focused on slowing the decline of the coal industry in the area, anticipatory policies instituted in the 2000s shifted the focus to making targeted investments in coal communities. This shift allowed for new public sector investments that supported regional economic development through attracting businesses and promoting economic growth.⁷⁴ Regional development measures were focused on socially responsible

⁷⁴ Andrea Furnaro, Philipp Herpich, Hanna Brauers, Pao-Yu Oei, Claudia Kemfert, and Wesley Look, *German Just Transition: A Review of Public Policies to Assist German Coal Communities in Transition*, (Resources for the Future, 2021), 40. <https://media.rff.org/documents/21-13-Nov-22.pdf>

reduction in coal industry employment and the expansion of infrastructure in the Ruhr area to align with national standards.⁷⁵ Funding supported the establishment and expansion of the road network, public transit system, regional recreational facilities, and education and research infrastructure.⁷⁶ Though geographic and structural differences between Germany and Canada may limit the applicability of some of these lessons, Germany's example shows the potential for coal-dependent regions to thrive by implementing an integrated, regionally focused industrial development strategy that pivots the area into benefitting from new economic opportunities.

Capitalizing on the new opportunities in the clean energy economy will require years of advanced planning, and in some cases, complete restructuring of existing industrial policy and strategies.

For example, the Government of Canada has proposed a “mines-to-mobility” approach to develop a domestic battery supply chain through unlocking critical mineral supply chains and creating jobs in manufacturing zero-emissions vehicles.⁷⁷ To capitalize on Canada’s opportunity to establish itself as battery supply chain leader that can help meet growing demand for lithium-ion batteries,⁷⁸ years of effort and coordination on mineral mining, policy, and supply chain systems will be needed. This will require a coordinated effort among government agencies and industry leaders to institute policies that allow for favourable project permitting timelines, improved supply chain data availability and transparency, and establishment of manufacturing facilities.⁷⁹

Communities must have access to funding that facilitates new local ventures. The Canada Coal Transition Initiative Infrastructure Fund provided start-up funding for economic diversification projects in communities affected by coal phase-out. The federal government could expand this model to provide follow-up grants for projects that have successfully launched to ensure their long-term sustainability. Additionally,

⁷⁵ Elke Dahlbeck and Dr. Stefan Gärtner, *Just Transition for Regions and Generations: Experiences from structural change in the Ruhr area* (WWF Germany, 2019), 39. https://regionsbeyondcoal.eu/wp-content/uploads/2019/02/2019_01_15_Just-Transition-for-regions-and-generations.pdf

⁷⁶ *Just Transition for Regions and Generations*, 39.

⁷⁷ Government of Canada, *People-Centred Just Transition: Discussion Paper* (2021), 3. https://www.rncanengagenrcan.ca/sites/default/files/pictures/home/just_transition_discussion_paper_-_en_-_july_15.pdf

⁷⁸ Clean Energy Canada, *Turning Talk into Action: Building Canada’s Battery Supply Chain* (2021), 2. https://cleanenergycanada.org/wp-content/uploads/2021/05/Turning-Talk-into-Action_Building-Canadas-Battery-Supply-Chain.pdf

⁷⁹ *Turning Talk into Action*, 11-12.

the private financing sector is becoming more aware of and interested in funding sustainable development initiatives. For example, in 2017, the United Kingdom’s Environment Agency Pension Fund committed to address “the social impacts of transition” and “look for investment opportunities to support the Sustainable Development Goals and the Paris commitment for an orderly and just transition.”⁸⁰ As these opportunities continue to evolve, communities will have increased avenues to access sources of funding and to enter public-private partnerships that allow for flexible spending on new community economic development projects.

4.2.2! Economic development opportunities beyond the energy sector

While ample opportunities for economic diversification exist within the net-zero economy, communities can also benefit from expanding their economic opportunities to other initiatives that suit the specifics of the community. To prepare for the closure of Belledune Generating Station, the Atlantic Canada Opportunities Agency has delivered federal funding to support diversification efforts in the Belledune region. These funds will allow the Port of Belledune to expand its scope of services to ventures such as wood pellet and structural insulated panel distribution for newly constructed regional facilities, attract a broader client base, fund new fabrication and manufacturing opportunities for local businesses, and make improvements such as road construction and water and power supply upgrades to accommodate new industrial activity.⁸¹

In Hanna, Alberta, community leaders are exploring diversifying the region through establishing an agriculture centre and providing expanded services for aging residents.⁸² Opportunities also exist to attract new business and innovation to the area. Regions that maintain electricity-producing facilities can work to attract major industries and large energy consumers to establish load centres at the source of the electricity

⁸⁰ Nick Robins, Vonda Brunsting, and David Wood, *Climate change and the just transition: A guide for investor action* (Grantham Research Institute on Climate Change and the Environment, 2018), 18.

https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2018/12/Climate-change-and-the-just-transition_Guide-for-investor-action.pdf

⁸¹ Atlantic Canada Opportunities Agency, “Government of Canada supports economic diversification initiatives in Belledune,” August 5, 2021. <https://www.canada.ca/en/atlantic-canada-opportunities/news/2021/08/government-of-canada-supports-economic-diversification-initiatives-in-belledune0.html>

⁸² Community Leader 2, personal communication.

generation. This type of arrangement would allow businesses to benefit from favourable electricity rates due to reduced transmission costs, as well as provide new employment opportunities for the local area.

4.2.3! Transition support opportunities for community members

Transition support programs that help workers directly impacted by the effects of coal phase-out are essential for managing a sustainable energy transition. **Perhaps equally essential is extending these supports to coal workers' partners, as well as other community members who are indirectly affected by the local jobs shift, including teachers, small business owners, tradespeople, and other community service providers.** Expanding eligibility for tuition vouchers for re-education to support the wide range of people whose livelihoods are impacted as local jobs are lost can allow workers to remain in their communities while receiving necessary training to provide the services that their community's economic shift requires. Flexible program funding requirements allow communities the freedom to design projects that fit their community and help community members train to provide the services needed. This approach is more effective than mandating projects to fit a set standard in order to receive funding.

As utilities transition off coal power, discussions must include all stakeholders. In Alberta, for example, Off-Coal Agreements were negotiated directly between the utilities and the provincial government. Workers, community leaders, and labour representatives were not included in these discussions, thereby resulting in a missed opportunity to address the needs of impacted stakeholders within the agreements. There was also a missed opportunity in Alberta in terms of early engagement of communities. Because some — not all — communities did not engage proactively and did not put forward the supporting mechanisms they would need to navigate the transition, they missed out on opportunities to provide input into program designs to benefit their communities. Energy transition discussions should be carefully designed to represent all stakeholders, especially the individuals and communities who are affected most.

4.3! Financing

To facilitate a just transition for coal workers and communities as Canada's coal transition comes to completion in 2030, allocating funding toward just transition

programs is necessary for creating new, targeted initiatives and strengthening existing support programs.

4.3.1! Government funding

Government funding provides a strong source of revenue for workers and communities. Canada’s two federal funding programs have made \$185 million available for coal transition programs; however, as of May 2021, only \$29 million of those funds had been distributed to the country’s coal communities.⁸³ Providing opportunities to quickly access funding and unlock capital allows communities to navigate application processes and request access to opportunities as early as possible in the transition. This consideration is especially relevant in Alberta, which will be completing its transition in just two short years. As Canada moves toward net-zero emissions by 2050, further funds will need to be made available to sustainably transition emitting industries to non-emitting industries that provide jobs in the clean energy economy. Future government funding programs should be designed to provide flexible funding that communities can use to play to their individual strengths.

Governments can provide attractive options for coal asset owners to mitigate some of the risk of accelerated coal phase-out through refinancing.⁸⁴ Refinancing allows coal mine and plant owners to access lower-cost electricity generation options after accepting a buyout of coal mines, plants, or power purchase agreements. To ensure loan recipients use the funds to advance a just transition in tandem with accelerated coal phase-out, loan conditions can explicitly state that a portion of the funds must be applied to measures that ensure a just transition for coal workers, as well as community economic development programs for the community in which the coal assets operate.

Federal and provincial carbon pricing structures can be applied to fund a just transition. In addition to funding energy efficiency upgrades and incentivizing personal and household decarbonization efforts, a carve-out can be created for carbon pricing proceeds to go to communities transitioning from coal to non-emitting power sources. Alternatively, governments could offer a “carbon bonus” to electricity providers who decrease emissions while maintaining the same standards of service and ensure a just transition for their workforce.⁸⁵

⁸³ *People-Centred Just Transition*, 4.

⁸⁴ Paul Bodnar et al., *How to Retire Early: Making Accelerated Coal Phaseout Feasible and Just* (Rocky Mountain Institute, 2020), 27. <https://rmi.org/insight/how-to-retire-early>

⁸⁵ *How to Retire Early*, 32.

In addition to federal programs, provinces can expand Employment Insurance and skills development programs to apply specifically to workers experiencing job shifts due to the coal phase-out. These programs can be funded through provincial and federal prices on carbon by earmarking part of the funds received specifically for just transition initiatives.

4.3.2! Private sector finance and institutional investing

As the global dialogue focuses on just transition as a cornerstone of net-zero commitments, **private investment is beginning to emerge as a robust funding opportunity.** Many financial institutions and investors have made climate change and decarbonization part of their investment strategies, a trend that has been accelerating in recent years. For example, Québec’s Caisse de Dépôt et Placement will divest from oil production by the end of 2022, as well as reduce the carbon intensity of its investment portfolio by 60% below its 2017 level by 2030.⁸⁶ Additionally, the Ontario Teachers’ Pension Plan committed to reach a net-zero emissions investment portfolio by 2050, including interim decarbonization targets of 45% by 2025 and 67% by 2030, compared to its 2019 baseline.⁸⁷

To facilitate institutional investors’ work to decarbonize their portfolios, financial experts are calling for a “transition taxonomy” that clearly defines terms such as “sustainability” and “transition financing” to identify the types of investments that qualify as sustainable finance initiatives. Clear, standardized terminology would help investors assess risk and fund investments that facilitate decarbonization in traditionally high-emitting industries.⁸⁸ As part of the development of a National Standard of Canada for Transition Finance, CSA Group is currently developing a “Transition Finance Taxonomy” that will address the current lack of definition in this area.⁸⁹

⁸⁶The Canadian Press, “The Caisse de depot et placement du Quebec wants out of oil by 2022,” *CTV News*, September 28, 2021. <https://montreal.ctvnews.ca/the-caisse-de-depot-et-placement-du-quebec-wants-out-of-oil-by-2022-1.5603395>

⁸⁷ Ontario Teachers’ Pension Plan, “Ontario Teachers’ Releases Ambitious Interim Net-zero Targets,” media release, September 16, 2021. <https://www.otpp.com/news/article/a/ontario-teachers-releases-ambitious-interim-net-zero-targets>

⁸⁸ Cedric Smith and Morigan Simpson-Marran, *Sustainable finance for a safe climate: Perspectives on mobilizing capital for a swift, resilient recovery* (Pembina Institute, 2021), 6-7. <https://www.pembina.org/pub/sustainable-finance-safe-climate>

⁸⁹ CSA Group, “Defining Transition Finance in Canada,” media release, February 21, 2020. <https://www.csagroup.org/news/defining-transition-finance-in-canada/>

Options for allocating “green” capital and incentivizing just transition efforts are emerging in the financial sector. **Performance-linked loans** allow investors to ensure achievement of environmental, social, and corporate governance (ESG) targets by linking the loan’s interest rate to meeting those targets. **Green bonds** are used to finance projects that lead to positive environmental impacts. Specific **just transition targets** can be incorporated into performance-linked loans and green bonds to encourage development of environmental initiatives with a central focus on a just transition. Developing a method of quantifying the social impacts of these just transition measures will help align market and financing structures with just transition initiatives.

Although investors are beginning to show increased interest in financing just transition initiatives, this is still very much an emerging field. The Investing in a Just Transition Initiative aims to define the role institutional investors can play in the energy transition by connecting their decarbonization commitments with just transition initiatives. They define five action areas through which investors can make just transition part of their core operations: investment strategy, corporate engagement, capital allocation, policy advocacy and partnerships, and learning and review (Figure 6).⁹⁰ Over 130 institutional investors representing more than US\$8 trillion in assets have signed on to support the initiative.⁹¹ This framework and others will be valuable in guiding investor action forward and encouraging increased investment in a just transition.

⁹⁰ *Climate change and the just transition*, 5.

⁹¹ The London School of Economics and Political Science, “Banking on a just transition.” <https://www.lse.ac.uk/granthaminstitute/banking-just-transition/>

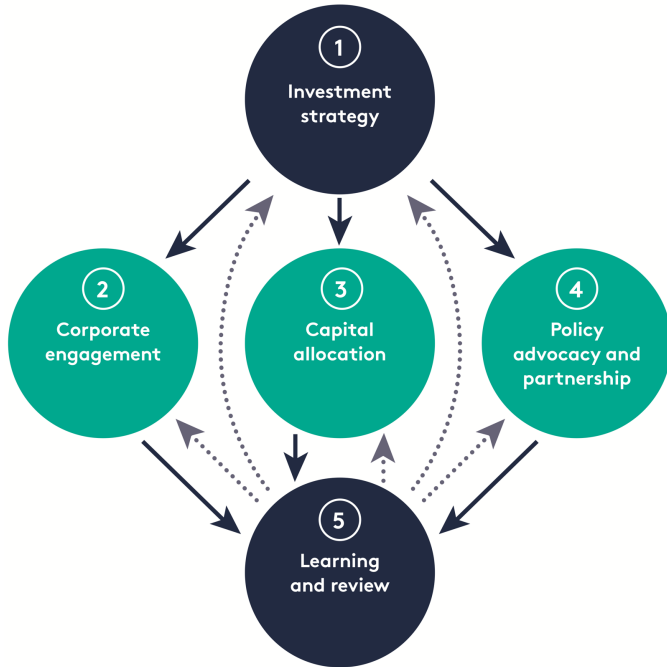


Figure 6. The just transition: Five action areas for investors

Source: Grantham Research Institute on Climate Change and the Environment⁹²

As an extension of the Investing in a Just Transition Initiative, the Banking on a Just Transition project will convene banks, other financial institutions, and key stakeholders to deliver recommendations for policy and market reform to support the banking sector in delivering a just transition for a net-zero emissions economy.⁹³ This alliance, which is focused on institutions in the United Kingdom, could be modified to bring together Canadian financial institutions and other stakeholders to finance just transition initiatives for Canada’s coal workers, as well as future initiatives for the 2050 net-zero transition.

⁹² *Climate change and the just transition*, 15.

⁹³ “Banking on a just transition.”

5.1 Conclusion and recommendations

As jobs and communities shift to achieve a net-zero economy, federal and provincial policies will play a central role in ensuring an equitable transition for Canada's coal workers and communities. People-centered just transition legislation must be designed to provide stability and transparent communication to affected workers and communities as they navigate transitioning to a clean energy economy.

The net-zero transition also presents a broader opportunity to address the systemic inequalities that have historically existed in the traditional energy system. When considering the policy recommendations below, federal and provincial governments should focus on enabling equitable participation and access to clean energy jobs through:

- ! Working with municipal and Indigenous governments to identify, prioritize, fund, and develop local and Indigenous-owned infrastructure projects in affected communities
- ! Providing equitable access to permanent jobs with good pay and opportunities for advancement, particularly for women, First Nations, Métis, Inuit, and other groups with historically limited participation in the fossil fuel-based energy sector
- ! Providing accessible and culturally appropriate opportunities for participation in decision-making processes for communities that have been disproportionately impacted by the environmental and health impacts of heavily polluting electricity generation

5.1.1 Integrating just transition goals into energy policy design

As Canada's economy decarbonizes and ambitious energy and climate policies are put in place for various sectors, it is critical that these policies are designed to support a just transition. Several key elements should be included to support impacted workers and communities from the start:

- ! **Set clear targets and pathways toward decarbonization and communicate information to stakeholders in a timely manner.** The 2030 coal phase-out

- target, once announced in Canada, helped impacted communities, workers, and utilities to plan for retirement of facilities and seek new opportunities. Clear communication about the pace, goals, and pathways of energy transition measures provides the certainty needed for affected workers, communities, and industries to plan their futures.
- ! **Involve all stakeholder groups early in transition negotiations.** Proper engagement and a sound participation process should include community leaders and labour groups in addition to government decision-makers and utility representatives. Early participation is essential for crafting just transition policies that fairly and adequately address the challenges faced by workers and communities affected in the energy transition.
 - ! **Include transition financing mechanisms in decarbonization policy design.** A successful energy transition requires adequate funding to ensure sustainable long-term outcomes. Direct funding for just transition projects and programs is well-suited to short-term interventions, but additional long-term transition financing policies are essential for instituting sustainable change. Federal and provincial governments can mitigate the risks of accelerated coal phase-out for utility companies by offering conditions-based options to refinance coal assets. Additionally, allocating a percentage of the price on carbon toward just transition initiatives would provide a steady source of funding to be used to ensure the overall stability of just transition initiatives.
 - ! **Prioritize impacted communities in clean energy procurement programs.** Communities and workers who have been affected by the net-zero transition can benefit from increased access to opportunities within the clean energy economy. Clean energy procurement programs can be designed to prioritize purchasing renewable energy from former coal communities, with a focus on community and Indigenous project ownership.

5.2! Federal support for workers and communities

Federal programs establish the backbone on which provinces, municipalities, and regions can base their own, more targeted programs. Establishing robust just transition programs solidifies Canada's commitment to prioritizing a just transition while achieving sustainable decarbonization. We recommend that the federal government:

- ! **Institute worker-focused transition support programs that provide options for affected workers, including:**

- ! A pension bridging program that does not compromise workers' earnings and retirement benefits if they must retire early due to plant or mine closures
- ! An employment and benefits bridging program to provide financial assistance to workers as they look for new employment
- ! Retraining programs to help workers build careers in the net-zero economy
- ! Communication efforts, partnerships with educational institutions, and direct support to workers to enable them to access jobs in the emerging economy
- ! **Adapt programs to provide flexible funding to assist workers, community members, and regions affected by the coal phase-out.** Extending financial supports for coal workers to their partners, as well as other community members who are indirectly affected by the local jobs shift, extends opportunities to thrive in the net-zero transition to the community as a whole. Flexible program funding requirements allow communities the freedom to design projects that fit their community and help community members get training to provide the services needed.
- ! **Leverage convening power to advance dialogue among industry, private sector, and institutional investors.** As transition finance is an emerging field, investors would benefit from greater understanding of just transition financing options, as well as from lower barriers to engaging and increasing investments in just transition initiatives. Governments can also incentivize public-private partnerships among governments, private sector investors, and industry to deliver effective programming.
- ! **Institute a federal Just Transition Act.** A Just Transition Act would establish Canada's ability to fulfill the Paris Agreement imperative of supporting a "just transition of the workforce and the creation of decent work and quality jobs."⁹⁴ This legislation would provide the basis for all future transition-focused legislation, and would ensure recognition of rights, worker and community participation, expansion of social safety nets, creation of new economic opportunities, and inclusive workforce development. Instituting principles and a framework for delivering a just transition would protect Canada's coal workers and communities through the 2030 phase-out, as well as ensure a central focus on just transition in other sectors that will shift as a result of Canada's movement to a net-zero emissions economy by 2050.

⁹⁴ *Just Transition of the Workforce, and the Creation of Decent Work and Quality Jobs*, 62.

5.3! Provincial support for workers and communities

Impacts of the net-zero transition are experienced locally, as many industries have a large impact on the regional economy. Because sectors such as electricity fall under provincial jurisdiction, provinces play a key role in providing workers and communities with opportunities to thrive in a net-zero economy. Given little time to plan for just transition during its accelerated coal phase-out, Alberta's efforts have been limited to offering a short-term response to the most immediate challenges. Saskatchewan, Nova Scotia, and New Brunswick can start now to institute long-term, forward-thinking policies that set individuals and communities up for success in the future. We recommend that provincial governments:

- ! **Commit to a net-zero grid by 2035 and a net-zero economy by 2050.** Such targets can provide long-term certainty to industry, investors, and communities. They also ensure that local and provincial economic development is aligned with shifts in the global economy, the federal governments targets, and the climate action necessary to keep global warming under 1.5°C.
- ! **Invest in local, community-led economic development initiatives in clean energy and other locally appropriate economic diversification efforts.** Ensure programs are designed to provide initial seed funding to get projects off the ground, as well as follow-up funding to see projects through to completion and deployment.
- ! **Create community transition task forces for each affected community with inclusive representation from local elected officials, volunteer organizations, and community leaders in business, industry, and social sectors.** To ensure success, provide funding that allows the task force to operate as a business entity rather than on a volunteer basis. Community transition task forces should be charged with delivering a communications plan and building a community resilience plan for all sectors in their community.
- ! **Include affected workers and communities early in transition planning initiatives.** Industry representatives, labour unions, Indigenous communities, and local community leaders should be consulted prior to program design and throughout program implementation to effectively tailor programs to local needs. Initial consultations should involve representatives from all groups simultaneously to ensure everyone has a seat at the table and all voices are heard.

- ! In Alberta and jurisdictions with similar market structures, **deliver monetary incentives to utility companies that proactively retire fossil fuel assets in exchange for providing worker and community protections.** Protections should include maintaining minimum regional employment quotas, providing monetary support for community economic development, and offering worker supports such as early retirement options, opportunities for employee retraining, and support for relocation. Requiring transparent reporting is essential to ensure companies are held accountable for delivering on these responsibilities.
- ! **Fund the establishment and operation of local just transition centres.** Centres should be established before job losses occur and be staffed by local experts who can provide services to local workers and their families.
- ! **Work closely with utility companies to create robust worker and community transition programs.** Provincial transition programs should support workers and their families, as well as workers employed in services ancillary to the local coal economy. Company-provided services should include pension protections, relocation support, and education and training programs. Programs should also support local communities in identifying opportunities for economic development and diversification, and creating jobs that add value to the community.