



BLUE GREEN CANADA CONFERENCE BACKGROUND

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CONTEXT: ALBERTA COAL
AND OTHER TRANSITIONS

Please see Blue Green Canada's complete set of Fact Sheets:

- Just transition and good green jobs - update and progress
- Context: Alberta coal and other transitions
- Worker transitions - training and green jobs
- Financial security for workers in transition
- Community transitions

See also:

- Blue Green Canada, "Just Transition and Good Green Jobs for Alberta - Edmonton 2016 Conference Summary"
- Alberta Coal Transition Coalition, "Getting it Right: A Just Transition Strategy for Alberta's Coal Workers."

Blue Green Canada is an alliance between Canadian labour unions, environmental and civil society organizations to advocate for working people and the environment by promoting solutions to environmental issues that have positive employment and economic impacts

CHANGES TO THE ALBERTA COAL TRANSITION

Alberta's coal transition has changed dramatically over the past year. It has become more certain, and it has accelerated. Federal policy adopted in Fall 2016 backstopped Alberta's carbon pricing and the 2030 coal phase-out deadline, providing greater certainty and predictability to investors. The federal government echoed Alberta's commitment to work with labour and communities and support them in the transition.

In Spring 2017, the corporate owners of most of Alberta's coal-fired generation units announced that they are accelerating their shutdowns, and replacing coal with cheaper and more profitable natural gas (for details, see Fact Sheet 1 - Just transitions and good green jobs: update and progress). The company shutdown accelerations are substantial - most in the five to ten year range.¹

Table: Government-required and company-accelerated coal unit closure dates

Columns 2 and 3 provide the year of government-required closure along with the government that required the closure. Where company owners have accelerated closures, columns 4 and 5 provide the year and the company responsible. The highlighting shows the effective closure date, whether government-required or company-determined.

Coal-fired generation unit	Year of gov't - required closure	Gov't that required closure	Year of company - determined closure acceleration	Company that accelerated closure	Approx # of affected workers (gen. unit + mine)
Battle River #3	2019	Fed. Cons.	NA	NA	~ 290
Battle River #4	2025	Fed. Cons.	2020	ATCO	
Battle River #5	2029	Fed. Cons.	2020	ATCO	
Genesee #1	2030	AB NDP	NA?	NA?	~ 350
Genesee #2	2030	AB NDP	NA?	NA?	
Genesee #3	2030	AB NDP	NA?	NA?	
H.R. Milner	2019	Fed. Cons.	2017*	Maxim	~ 60
Keephills #1	2029	Fed. Cons.	2021-23	TransAlta	~ 1060
Keephills #2	2029	Fed. Cons.	2021-23	TransAlta	
Keephills #3	2030	AB NDP	NA?	NA?	
Sheerness #1	2030	AB NDP	2020	ATCO	~ 220
Sheerness #2	2030	AB NDP.	2020	ATCO	
Sundance #1	2019	Fed. Cons.	2018	TransAlta	~ 1,400
Sundance #2	2019	Fed. Cons.	2018**	TransAlta	
Sundance #3	2026	Fed. Cons.	2021-23	TransAlta	
Sundance #4	2027	Fed. Cons.	2021-23	TransAlta	
Sundance #5	2028	Fed. Cons.	2021-23	TransAlta	
Sundance #6	2029	Fed. Cons.	2021-23	TransAlta	

? Significant potential for company acceleration

* The company suspended coal-fired generation in July 2017. It will be replacing coal with gas (timing unclear).

** Mothballing, and may be converted to gas.

This accelerated conversion of coal units to natural gas affects the urgency and the fair allocation of responsibility for funding just transitions. It appears the provincial 2030 shutdown date will apply to a maximum of about 600 workers. At least four times as many workers will already be gone, due to accelerated corporate shutdowns.

This suggests that the companies involved should be making significant contributions to a just transition for their workers, and the federal government also should be making a contribution. The provincial government has been discussing this with the companies and the federal government, but details and outcomes of those discussions have not yet been released.

With the accelerations, what had been a comfortable planning horizon for developing and implementing just transitions strategies became a much tighter timeline for the majority of workers and communities.

TECHNOLOGY AND LAYOFFS

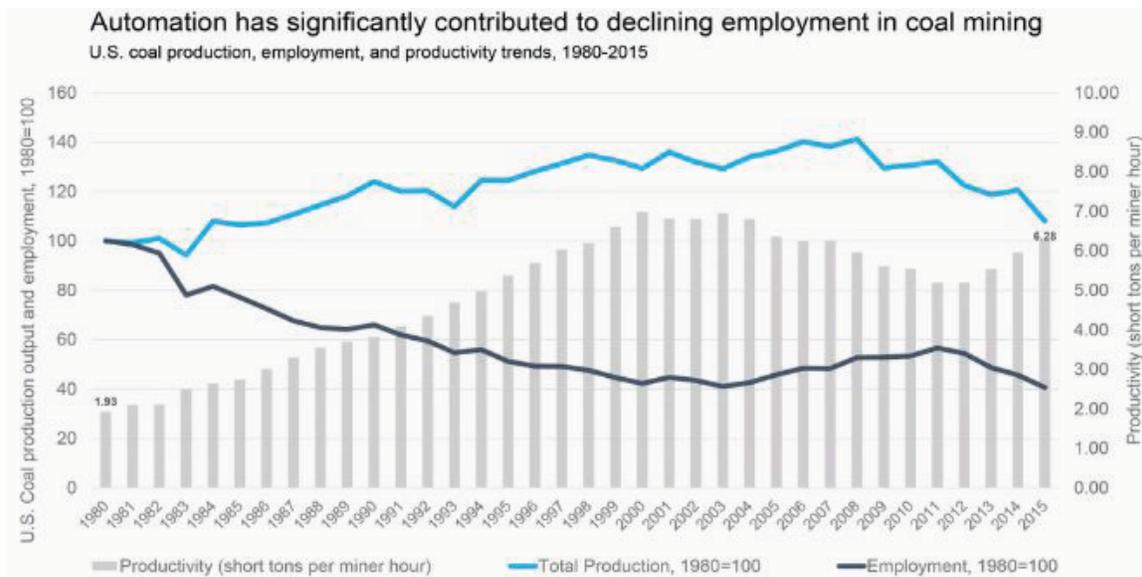
In addition to layoffs caused by the winding down of coal-fired generation, there is a chance that technology will cause even earlier layoffs. Labour productivity in coal mining has been very high over the last several decades due to adoption of new technologies, as historical US data below² illustrates. Combined with a falling demand for thermal coal, continued productivity increases would likely cause labour force reductions in coal mining.

employment in the mining and quarrying sector was at high risk of automation.⁴

Automation may also reduce employment in coal-fired generation units; the studies noted above found that 44% of work activities in the utilities sector had a potential for automation, and that about 30% of employment in the utilities sector was at high risk of automation.

Recent studies suggest more automation is coming. One found that 52% of work activities in the mining, quarrying and oil and gas sector had potential for automation.³ Another found that about 70% of

Investments in labour-cost reducing technology are more likely to take place in plants and mines with a longer operational time horizon, i.e. Genesee plant and mine, and Keephills 3 unit and Highvale mine.



TECHNOLOGY AND LAYOFFS IN OTHER INDUSTRIES

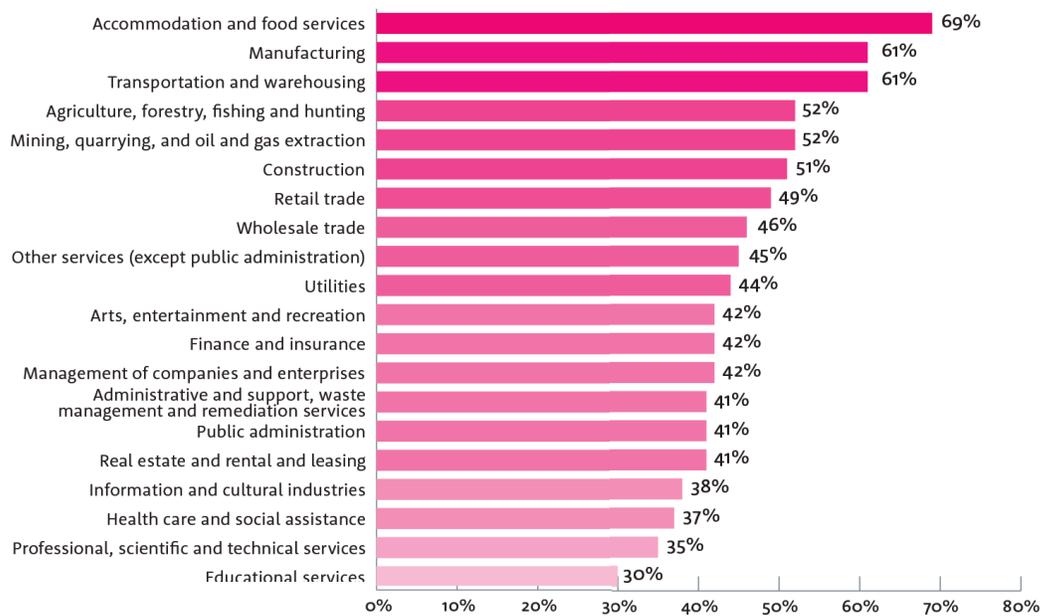
Furthermore, many workers will be laid off in other industries over the coming decade - tens or even hundreds of thousands. The causes of these layoffs, as in the coal generation and coal mining sectors, will include market changes. Most notable is rapidly advancing technology, especially related to automation. Analysts have noted that upward of 40% of jobs may be affected by automation in the next decade. In Alberta that would be over 900,000 workers.

This is not to say that 900,000 people will be unemployed at any given time. Layoffs would take place over years, and jobs will open up in different areas. Also retirements will take some workers out of the workforce, reducing unemployment rates. For some industries, increasing demand for outputs will mitigate

any job losses. Also, previous technological changes have been accompanied by job growth. However, those changes were much slower, and often limited to particular sectors; displaced workers could find other jobs to go to. With automation eliminating jobs in many sectors relatively quickly (see figure below⁵), other jobs might be difficult to find.

The changes to come from automation will be complex. However, whether the effects on the overall unemployment rate are small or large, forecasters agree that there will be significant job “churn”, or turnover. Many workers will face job and career transitions. And automation will pose an *ongoing* risk to Alberta coal plant and coal mine workers after they transition to their new jobs.

Percent of Work Activities with the Potential for Automation, by Industry



Source: McKinsey Global Institute (2017), BII+E analysis

- 1 The only four units that will be operating after 2023 - Genesee 1-3 and Keephills 3 - are scheduled to be closed in 2030, but could be shut down sooner by their owners.
- 2 D. Saha and S. Liu, "Increased automation guarantees a bleak outlook for Trump's promises to coal miners." Brookings Institute, January 25, 2017. <https://www.brookings.edu/blog/the-avenue/2017/01/25/automation-guarantees-a-bleak-outlook-for-trumps-promises-to-coal-miners/>.
- 3 M. Lo and C Lamb, "Mapping Automation: How will advancing technology impact cities and towns across Canada?" Brookfield Institute. June 2017.
- 4 Specifically mining and quarrying, except oil and gas. M. Oschinski and R. Wyonch, "Future Shock? The Impact of Automation on Canada's Labour Market" C.D Howe Institute. Commentary No. 472. March 2017. https://www.cdhowe.org/sites/default/files/attachments/research_papers/mixed/Update_Commentary%20472%20web.pdf.
- 5 M. Lo and C Lamb, "Mapping Automation: How will advancing technology impact cities and towns across Canada?" Brookfield Institute. June 2017. brookfieldinstitute.ca/2017/06/08/mapping-automation-across-canada/.