



BLUE GREEN CANADA CONFERENCE BACKGROUND

4

WORKER TRANSITIONS: TRAINING AND GREEN JOBS

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

THERE ARE ROUGHLY 3,400 ALBERTA WORKERS EMPLOYED IN COAL-FIRED POWER GENERATION UNITS AND THEIR ASSOCIATED COAL MINES. THUS, AS THE LAYOFFS FROM CLOSURES CONTINUE (THEY ALREADY HAVE BEGUN¹) THERE WILL BE 3,400 UNIQUE TRANSITIONS.

SOME OF THOSE WORKERS WILL BE AT OR NEAR RETIREMENT AGE WHEN GENERATION UNITS AND MINES CLOSE. FOR THESE, COMPANIES WILL NEED TO BE HELD ACCOUNTABLE TO THEIR PENSION AND BENEFIT COMMITMENTS - A TASK FOR UNIONS, WITH SUPPORT OF GOVERNMENT. AND PENSION BRIDGING ARRANGEMENTS CAN CARRY WORKERS NEAR TO RETIREMENT AGE UNTIL THEY ARE ELIGIBLE FOR BENEFITS (SEE FACT SHEET ON FINANCIAL SECURITY FOR WORKERS).

OTHER WORKERS WILL BE MID-CAREER, AND SOME WILL BE YOUNG; THESE WORKERS WILL BE LOOKING FOR NEW JOBS, AND WILL NEED APPROPRIATE SKILLS. DETERMINING WHAT TRAINING, EDUCATION AND APPRENTICESHIPS ARE NEEDED WILL REQUIRE A DETAILED STUDY. HOWEVER, SOME OF THE BIG PICTURE ELEMENTS CAN BE DISCUSSED NOW.

TRAINING, EDUCATION AND APPRENTICESHIPS NEEDED

The workers aiming for new jobs could be facing a difficult job market. After the oil and gas price crashes, Alberta's unemployment rate reached 8.8%. It was higher in previous downturns, and has already begun to fall. However, it is unlikely that oil and gas will employ as many people as it did in the past. Thus as most of the units shut down over the next six years, there may be higher-than-normal levels of competition in the Alberta job market.

To compete in that market, workers will need the appropriate skills. Depending on the worker, some jobs options will require more skills development, some less, and some none.

The easiest transitions, and those most likely to have jobs at similar wage levels, would be into the same or very similar sector and occupations.

Fair competition in the job market

The Alberta Federation of Labour notes that the Temporary Foreign Worker program has been abused for years.² The governments of Alberta and Canada have adopted a pilot program to ban the hiring of temporary foreign workers for 29 high-skilled work categories (in which several hundred TFWs are employed), including managers, engineers, technicians, machinists, electricians, plumbers, heavy equipment operators, and mechanics.³ The government's Employers Liaison Service will instead connect employers with qualified Alberta workers.

Jobs in mining and electrical generation

The good news is that there are expected to be many jobs available in both mining and power plants in Alberta and Canada during the transition. So, for many of the affected workers, there can be a fairly straightforward transition to a new job that requires relatively little in the way of training.

Mine workers

There are roughly 1,900 affected workers in coal mines across Alberta. Based on accelerated shutdowns announced by plant owners, about 1,500 will be laid off by 2023. The other 400 will be laid off by 2030, unless more accelerated shutdowns are announced.

For those who choose to stay in the mining sector, it appears there will be many mining jobs available in Alberta. While there are differences between types of mining, there are also occupational similarities.

Many jobs are already available; a recent online search for mining jobs in Alberta returned 981 job postings available.⁴ And more jobs are being posted all the time; 136 of the 981 were posted within 7 days before the search.

There are about five times as many jobs across Canada - 4,954 job postings, 1,664 of which had salaries of over \$80,000.⁵ Industry analysts expect a lot of mining jobs to open up across Canada over the next decade, due in part to retirements (over 51,000 retirements⁶). Estimates range from around 43,000 to 200,000 hires.

"The 10-year [2018-2027 mining industry] cumulative hiring requirements are projected to be 87,830 workers under a baseline scenario; 130,410 workers in an expansionary scenario; and 43,200 workers in a contractionary scenario."

- Mining Industry Human Resources Council of Canada⁷

"Over the next decade, it's anticipated that the mining sector will need to hire up to 200,000 workers to fill jobs in exploration, construction, IT, human resources and more."

- Coal Association of Canada⁸

Thus it appears that the mining sector could provide job opportunities for all workers currently employed in coal mining in Alberta.

Power plant workers

Natural gas is quickly replacing coal in electricity generation; at least 12 of the 13 coal-fired generation

units slated for company-accelerated shutdowns will be replaced by natural gas fired units. And there is a good chance that most or all the other coal units also will be replaced by gas. There are company plans for gas units on the site of every coal plant operating today.

Gas-fired units can and should employ workers being laid off from closing coal-fired units. They only employ about half as many workers as coal-fired units - so about 700 of the roughly 1,400 coal unit workers. Unions and companies can work out agreements to secure guaranteed jobs for affected workers in the new plant, training costs, and a right of first refusal for any laid-off coal plant worker, as has been done in coal plant closures elsewhere.⁹ The provincial government can back that up. This could leave as many other 700 needing jobs, and most of these between 2020 and 2023 (the real number would likely be lower, due to retirements).

There are electrical generation jobs available today. A recent online search found 89 jobs posted in electrical generation in Alberta (of which 52 have salaries over \$70,000, and 9 postings were new).¹⁰ Note that this hiring rate (about 500 per year in Alberta, 3,500 in Canada¹¹) does not include hiring for the 5,000 MW of renewable energy capacity Alberta plans to add by 2030.

Apart from electrical generation, plant workers may find jobs in the mining sector. According to the Coal Association of Canada, there is a wide range of occupations in the sector, including:

- Civil Engineers
- Information Systems Analysts
- Human Resources Specialists
- Pipefitters
- Heavy Duty Equipment Mechanics
- Industrial Electricians
- Welders
- Heavy Equipment Operators
- Millwrights¹²

So for a worker with the needed skills or able to take training for work in mining or gas-fired electrical generation, there will be a lot of jobs coming available in coming years.

However, some workers might not find a suitable job in mining or generation, or may find a suitable job but in a location that they can't commute to or move to. For these workers, there is a need to identify additional job options.

Training and education for work in other sectors

Moving into other sectors likely will require a greater degree of training and education, which will require greater support by industry and government. Some principles have end in just transitions discussions:

- Training needs to be selected and designed for realistic career paths, not for jobs that will never exist.
- Employers should be involved in providing job-specific training and apprenticeships at the new worksite, as well as giving hiring priority to affected workers.
- Training needs to be high-quality and with properly qualified trainers.

- The government needs to make broader education more accessible and ensure that costs is not a barrier in order to allow for greater career flexibility (especially in light of automation and its ongoing boosting of job churn).
- There is a need for adult basic and post secondary education, and overall greater investment in public education.
- Training and education for affected workers should be free.

An arms length agency, as suggested in the Coal Transition Coalition Report, could coordinate career counselling and transition paths with training and education for all workers needing support.

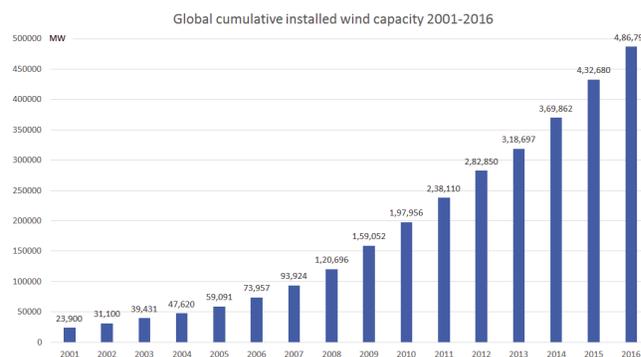
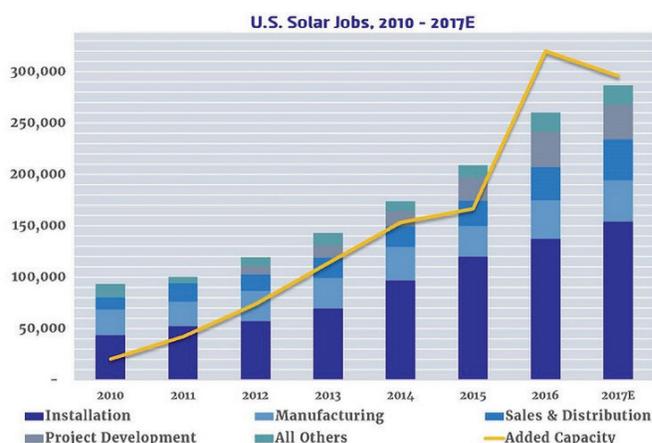
GOOD GREEN JOBS

While training and education programs make individuals *more competitive* for available jobs, developing green sectors like renewable electricity, energy efficiency, and low-carbon transportation makes more jobs available.

Good green jobs include a range of occupations, including computer software engineers, electrical engineers, civil engineers, operating engineers, electricians, electrical equipment technicians, electrical power line installers and repairers, iron and steel workers, millwrights, sheet metal workers, machinists, welders, metal fabricators, construction equipment operators, industrial truck drivers, industrial production managers, and industrial machinery mechanics.

As the technology around renewable energy, clean transportation, and energy efficiency improves, those sectors become more competitive, and grow and create more jobs. Data confirms the sector's growth and job-creation, particularly in renewable energy (see figures below¹³). According to the US Department of Energy, solar electricity generation now employs more Americans than all fossil fuel generation - coal, oil and gas combined.¹⁴

Alberta's green jobs sector can create enough jobs on its own to absorb laid-off coal plant and coal mine workers (see figure below¹⁵). The government projects that the Climate Leadership Plan will create 7,000 jobs by transitioning to renewable and natural-gas generated electricity by 2030.¹⁶



With a stronger policy push, that number could be higher, and there could be more options for transitioning workers.¹⁷ The government is planning to create 5,000MW of new renewable power generation by 2030 through an auction process that engages private developers. However, with the accelerated conversions to natural gas, the government may need to further boost renewables in order to reach its target.

- It can invest cash in equity ownership of renewable energy developments
- It can obtain equity through contributing publicly owned lands as a project partner, potentially working with local governments.

It can prioritize affected coal communities for the development of clean transportation and for energy efficiency investments.

Alberta and local governments have had a significant degree of public ownership of firms in new and rising sectors, including energy and utilities, e.g.

- Telus (Edmonton Telephone Corporation);
- Cenovus (Alberta Energy Company);
- EnCana (Alberta Energy Company); and
- ATB Financial.

Alberta can also work collaboratively with the federal government to attract investment. The federal government plans to invest \$21.9 billion to help attract capital investments in low-carbon electricity by 2030. Alberta's proportionate share of those investments could create on the order of another 9,000 to 18,000 jobs, helping to absorb a number of affected coal plant and coal mine workers.

1 Closures have already begun. The H.R. Milner power station was closed by its corporate owner ahead of any government requirements, in July 2017. TransAlta and ATCO will be closing most of their plants ahead of government requirements from 2018 through 2023, if not sooner.

2 Alberta Federation of Labour, "Workers must be heard in TFWP Review" www.afl.org/workers_must_be_heard_in_tfwp_review.

3 Employment and Social Development Canada, "Refusal to process a Labour Market Impact Assessment application" <https://www.canada.ca/en/employment-social-development/services/foreign-workers/refusal.html#LOC>

4 <https://ca.indeed.com/jobs?q=Mining&l=Alberta>. September 14, 2017.

5 <https://ca.indeed.com/jobs?q=Mining&l=Canada>. September 14, 2017.

6 By 2025, "more than 51,000 employees will retire from the sector, which represents over 25% of the industry's current workforce." The Mining Association of Canada, "Facts and Figures of the Canadian Mining Industry 2016" www.mining.ca/sites/default/files/documents/Facts-and-Figures-2016.pdf.

7 Mining Industry Human Resources Council, "Canadian Mining Labour Market Outlook - 2017" https://www.mihrc.ca/pdf/publications/National-Report-2017_EN_WEB.pdf.

8 Coal Association of Canada - Careers in Coal, "A snapshot of the Canadian Coal Mining Industry" careersincoal.ca/a-snapshot-of-the-canadian-coal-mining-industry/ [Accessed September 13, 2017].

9 Coal Transition Coalition, "Getting it Right: A Just Transition Strategy for Alberta's Coal Workers" www.coaltransition.ca/read_the_report, at pp.

10 <https://ca.indeed.com/jobs?q=electrical+generation&l=alberta> September 19, 2017.

11 726 jobs posted for Canada, 71 new. <https://ca.indeed.com/jobs?q=electrical+generation&l=canada> September 19, 2017.

12 Coal Association of Canada, "Careers in Coal" <https://www.coal.ca/careers-in-coal/>.

13 The Solar Foundation, "Solar Jobs Versus Installed Capacity 2016" <https://www.thesolarfoundation.org/solar-jobs-census/jobs-capacity-2016/>; Global Wind Energy Council, "Global wind power cumulative installed capacity at the end of 2016, in MW" <http://www.gwec.net/wp-content/uploads/2012/06/Global-Cumulative-Installed-Wind-Capacity-2001-2016.jpg>.

14 US Department of Energy, "US Energy and Employment Report" January 2017 https://www.energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report_0.pdf.

15 B.Jeyakumar, "Job Growth in Clean Energy: Employment in Alberta's emerging renewables and energy efficiency sectors." The Pembina Institute, 2016, <http://www.pembina.org/pub/job-growth-clean-energy>

16 Government of Alberta, "Working Together to Build an Economy for the Future" <https://www.alberta.ca/assets/documents/Coal-community-meeting-handout.pdf>.

17 D. Thompson and A. Thompson, "100,000+ Jobs: Getting Albertans back to work by building a low-carbon future" www.greenpeace.org/canada/Global/canada/report/2016/04/GP-GreenJobsReport2016.pdf.