#### CASE STUDY: CLOSURE OF ONTARIO'S COAL-FIRED POWER PLANTS

#### **Overview**

Ontario was one of the first jurisdictions in North America to deliberately close all of its coal generating plants. The closures were a result of a long public campaign focussing primarily on the health effects of burning coal. Climate change was stated to be the secondary reason, although technology was available to reduce if not eliminate non-greenhouse gas emissions.

The phase-out took place from 2004-2014, following a campaign promise made by the Ontario Liberals in 2003, when they were elected with a majority government. The closure was opposed by Ontario Power Generation, a provincial (publicly owned) corporation and its unions. Although no specific thought was given to a Just Transition for the 1,200 employees who worked in the coal sector, there was strong language in the relevant collective agreements between the unions and the public corporation that provided most workers with relocation, redundancy (severance) pay or retirement options.

# **Context for Coal Power Transition in Ontario**

The provincial election in 2003 proved pivotal for Ontario's transition away from coal-fired electricity generation. Issues of air quality had been strategically linked to human health and mortality rates in international as well as domestic discourse. Coal plant emissions (from Ontario and neighbouring US states) were identified as the primary source of air pollutants in Ontario and coal was defined as 'dirty'. Burning coal produced smog, acid rain and bio-toxins such as mercury and arsenic, in addition to climate-changing carbon dioxide and methane. The Ontario Medical Association, Ontario Public Health Association, Clean Air Alliance, and the Canadian Association of Physicians for the Environment, the Registered Nurses' Association of Ontario and Greenpeace<sup>1</sup> and other public interest groups advocated for including the health costs of air pollution into the calculations of energy economics used in energy system planning. A persuasive cost-benefits case made by health advocates convinced the Ontario Government to transition off coal.<sup>2</sup>

In the final days before the 2003 election the then-Eves government released Ontario's Energy Action Plan, which stated:

"About one quarter of Ontario's electricity comes from coal – it cannot be replaced overnight. Coal-fired generating stations in Ontario will be phased out by 2015 without jeopardizing provincial electricity supplies. This was a key recommendation from the all-

party Select Committee on Alternative Fuel Sources. As a first step, the Lakeview coalfired generating station in Mississauga will stop burning coal in April 2005."<sup>3</sup>

All three competing parties promoted their off-coal policies, despite opposing opinion from electricity sector advisors and union leadership. The Liberal government's platform promised to shift off coal power by 2007. The Liberals won a majority government and began implementing the transition to cleaner energy generation.

Ontario Power Generation was owner and operator of the power generating facilities that supplied the majority of Ontario's electricity needs. Generating capacity included a "thermal" fleet of coal plants, hydro-electric dams and nuclear energy facilities. Nuclear energy and hydro-electric dam power generation were designated to provide baseload, the amount of electricity that falls within a level of constant demand. Coal power plants were already reduced to providing electricity only during peak demand periods, which were daily occurrences and subject to seasonal and climatic variation.

#### **Background/Context**

In 2003, Ontario had 5 coal generating stations. Lakeview, located in Mississauga, west of Toronto, was the oldest plant and slated for the first closure. There were two in south-western Ontario, Lambton, outside of Sarnia and Nanticoke, on Lake Erie. Nanticoke was the largest coal plant in North America. Northern Ontario was served by another two plants; Thunder Bay on the northwest shore of Lake Superior and Atikokan, located 206 kilometres from Thunder Bay.

Until 1998 Ontario Hydro was solely responsible for planning, developing and operating the provincial electricity system. At that time, it was split up into three distinct agencies; Ontario Power Generation that handles power generation; Hydro One that owns and manages the transmission infrastructure, and Independent Electricity System Operator that is responsible for managing supply and demand by operating a wholesale electricity market with rates, prices and licensed suppliers determined by the Ontario Energy Board. Ontario Power Generation provided about 70% of Ontario's electricity in 2003<sup>4</sup>. The remainder was delivered by private sector power generators, the largest of which was 8 units at the Bruce Nuclear Generating Station, which had been privatized in May 2001. Currently OPG operates 2 other nuclear generating stations at Pickering and Darlington.

#### Response of the Workers and the Company (OPG) to the Closures

In 2004 the provincial government directed OPG to close its 5 coal-fired generating plants within 4 years.<sup>5</sup> Across the five plants, there were approximately 1,200 workers who would be affected by the closure. Two unions represented the organized workforce. The Power Workers Union represented "blue collar" trades involved in operating and maintaining generating stations. The Society of United Professionals (at the time called Society of Energy Professionals) represented engineering and financial staff.

The closure announcement met an irate response from workers in both unions. Union sources reported that their workers took the Government's decision to close coal generating plants as a disruptive and costly measure.<sup>6</sup> Workers were proud of their role providing electricity for the Ontario economy and for their high ranking in the North American industry for productivity, safety and higher conversion efficiency of coal to electricity than most of their counterparts. There was a feeling of betrayal as workers realized that the government never considered the impact of this type of transition on them. When the Chief Operating Officer of OPG met with Lambton staff to discuss closure at that time, he stated that his two-person advocacy team, with 79 years of expertise in electricity system management between them had been bluntly dismissed by the Premier before any meeting began.<sup>7</sup>. This was taken by workers as unwillingness of the government to listen, and that the decision was based on political determination to phase out coal rather than the relevant merits of the existing generating system. <sup>8</sup>

Workers were angry at the government for threatening their jobs and the welfare of their families. They witnessed first-hand the mega investments of public money that had been made in turbine upgrades and scrubbers for their plants and they knew that the operations were well-run, with sound business economics. It was difficult for them to comprehend how such a decision could possibly be fair or wise. Many remained in denial until they received a lay-off notice.<sup>9</sup>

After that, union and company discussions began in earnest to build mutual understanding of the situation and determine whether closure plans could be turned around. Attempts were made by the two unions and OPG to work with local governments to respond to the provincial off-coal plan. The mayors of the affected communities, Atikokan's Mayor Dennis Brown<sup>10</sup>, Thunder Bay Mayor Lynne Patterson<sup>11</sup>, Haldimand County's Mayors Marie Trainer<sup>12</sup> and Ken Hewitt<sup>13</sup>, and St. Clair Township Mayor Steve Arnold<sup>14</sup> actively advocated on behalf of their constituencies for secure energy supply and for plant conversions. As Ontario Power Authority,

established in 2004 as the province's long-term energy planner, needed a longer planning horizon than originally projected by the provincial government, implementation target dates for coal plant closures started to change and the 2007 Integrated Power System Plan was updated by the 2010 Long-Term Energy Plan<sup>15</sup>. Ultimately, however, there was limited success in counter-closure campaigns. Only Atikokan remains in operation today, after being converted to biofuel in 2014.<sup>16</sup> Thunder Bay, also downscaled and refueled with biomass in 2015, was closed in mid-2018 due to market economics.

# Driving Force for Coal Closure: Shifts from Smog and Acid Rain to Climate Change

Although acknowledging concerns about smog and acid rain, the challengers from OPG and the union pointed at higher polluting power plants south of the border that continued to operate and pollute the regional air shed. This did not dissuade the Ontario government, and when the plants were finally shut down in 2014, Ontario's air shed demonstrably improved.

In August 2007, a series of announcements by Ontario's Liberal government illustrated a change in the reason to phase-out coal plants in Ontario to reducing carbon emissions.

First, 2007 the Ontario's Minister of Environment and the Attorney General filed comments to the US Environmental Protection Agency regarding its rulemaking review for generating plants as sources of air pollution. Substantial evidence was presented showing that much of the air pollution affecting Ontario originated from more than 600 coal-fired power stations in the United States. The submission stated that US sources accounted for 77% of Sulfur and Nitrogen emissions, 94% of NOx, and as much as 90% of Ozone levels of the joint US-Ontario air shed.<sup>17</sup> Only 3 of 5 Ontario coal plants were in the Greater Toronto and Hamilton Area smog zone. An independent cost-benefit analysis using the Government's own information comparing costs of closure of Nanticoke and Lambton with gas conversion or nuclear replacement found that the plants should be further retrofitted for pollution control and continue operating as coal plants.<sup>18</sup> This seemingly confirmed the arguments of OPG and its unions that closure of Ontario's coal plants would not improve Ontario's air shed.

Second, again in August 2007, the provincial government passed Ontario Environmental Protection Act Regulation 496/07, "Cessation of Coal Use - Atikokan, Lambton, Nanticoke and Thunder Bay Generating Stations". <sup>19</sup> This required that the remaining stations no longer use coal by December 31, 2014.

Third, the Ontario government released *Go Green: Ontario's Action Plan on Climate Change*. Citing the closure of the coal plants the report stated the provinces' intention to reduce carbon emissions by 61 mega tonnes by 2014, which represented a 6% reduction based on 1990 levels. This commitment was very close to Canada's Kyoto Protocol commitments of reducing 1990 levels of emissions by 6% by 2012.

The combination of regulating the closure of the remaining 4 coal plants (Lakeview had closed in 2005) and the very public release of the Go Green report turned the tide within Ontario's electricity sector. The discussion between Ontario Power Generation and government was reported to have shifted from OPG defending the value of coal-fired electricity generation to OPG committing to plans for a staged shutdown of coal-fired generators, based on the system readiness with alternative generating capacity.

# Managing Workforce Transition

Negotiations on transition procedures with OPG and its workers took place through the union consultations with their memberships and the collective bargaining process. The closure of Lakeview Generating Station in 2005 was the first test of provisions for worker relocation or exit, and based on this experience a letter of understanding was negotiated to cover OPG workers caught in plant closures.

In 2005 the society bargained a coal closure Letter of Understanding as an addendum to the Collective Agreement. This process was revised and finalized in 2006 through two Mid-Term agreements, "Fossil Station Closures and Partial Closures/Refueling" and "Article 11 Alternative (Non-Nuclear)". Both were updated several times in subsequent years. As clarity emerged from the integrated system planning process, union leaders and company management recognized that government was committed to closing these plants. When the Government's closure dates for implementing the staged shut downs at the four remaining coal-fired generating stations hardened<sup>20</sup>, the priority of union and management shifted to managing the workforce transition.

## Just Transition for Workers: The Seven R's

The Labour Education Centre has studied what happened to workers and their communities when coal plants were shut down in 4 jurisdictions: Ontario, Alberta, South Australia and Victoria, Australia. Funding was provided by the Adapting Canadian Work and Workplaces to Climate Change project based at York University in Toronto, Canada.

That research has led us to believe that the type of assistance that workers and unions need to ensure a Just Transition can be organized into seven categories. Any public money allocated to emission reduction retrofits or equipment purchases for companies should only be available to companies with a Just Transition program in place that has been endorsed by a written agreement with their union. The seven categories are:

- 1. Re-employment grants that provide support for workers to transition to new jobs
- 2. Retirement financial support (bridging) for workers who are close to retirement but not yet eligible for their employer pension.
- 3. Re-location assistance to move a substantial distance for a new job that would include moving costs and help with the purchase of a home.
- Re-education/training grants or assistance to learn new skills or change careers accompanied by income support that would allow the affected workers to access the programs.
- 5. Re-deployment different, perhaps related jobs within the same employer and/or industry
- 6. Rehabilitation workers may be employed in the decommissioning or re-habilitation of the site of the plant or mine
- 7. Re-investment in the community this would include both social and economic investment to insure communities are not hollowed out by plant closures, and maintain a sense of community pride. This might be investing in a worker-led community economic development strategy to re-build and re-vitalize communities after the departure of a major employer and must also include:
  - a. Support for counselling services
  - b. Services for victims of domestic abuse and/or family violence
  - c. Support for child care services to ensure that workers can access new employment, training or re-education
  - d. Income support to pay for food and cover basic expenses while displaced workers are re-training or in education programs.
  - e. Public works, recreation and/or infrastructure projects
  - f. Energy efficiency projects for homes, businesses and institutions

In Ontario the 7Rs took the form of:

**1)** Relocation/re-deployment of workers within the same employer (usually involves travel to another community, can include travel allowances, real estate price adjustments to sell houses and buy new ones)

Management and union leaders interviewed in this study estimated that the closures involved approximately 1,200 regular workers<sup>21</sup>. Of these, 900 were Power Worker Union members, 250 were represented by The Society of Energy Professionals, and 50 were management staff. There was roughly a 50/50 split between those who chose to stay with OPG and be relocated to openings at other thermal plants or to hydro or nuclear generating stations and those who took severance and retirement packages.

While the government developed no transition plans for the workers in tandem with the decision to close the plants, the workers, their unions and the OPG relied on the existing collective agreements, and their mutually negotiated amendments to inform transition planning. OPG Management was required by the Collective Agreement to give a minimum of one year notice to workers, and to offer redeployment opportunities at all of its workplaces across the province with seniority bumping rights for the workers who were to be laid off.

OPG and the two unions negotiated a downsizing process for the staged shut down at Lakeview Generating Station and refined this practice through subsequent coal plant closures. When a worker was notified by their plant management that they were to be "surplused", meaning that their job had become redundant, plant management would offer options for a variety of OPG jobs across the Province that matched their skills. Lists were posted and workers were offered up to three placements, which often meant relocating. Many of the workers lived in communities near the coal plants and they had long-term family and community connections, making it difficult to consider transferring away from the area.

Financial assistance was available for those workers who were redeployed to a new location and who owned a home in their existing community. This enabled them to sell their property at a price that was guaranteed by the company, and covered the expense of finding a new home. Travel expenses were reimbursed by OPG for the first year after relocation. Some workers who were transferred to Generating Stations across the province decided to keep their family in their existing home and travel to work through the week and return on weekends. Accommodation and travel expenses were negotiable for up to 2 years after redeployment.<sup>22</sup>

Generally this worker transition process took 6 months to 9 months to complete. Workers who chose not to take any of the three relocation options that were offered were laid off with a smaller redundancy package than the original offer to those exited voluntarily.

Some workers reported difficulty integrating into a new job site or acclimating to a new workplace culture. This occurred for workers who had a long tenure at their previous plant. Other workers found that their colleagues in a new location were differently trained and had different expectations of the skill sets workers brought with them to the new position.

# 2) Remediation of Worksite

In some plants, workers were offered jobs by OPG decommissioning the coal plants. This was later viewed as a mixed blessing for those who wanted to stay with OPG, as the opportunities for good transfers were much more limited once most of the workforce had transitioned.

**3) Re-employment in local area jobs** (usually at the employees' own initiative) Human resource assistance was outsourced to call centres rather than handled by informed, internal experts.

Little counselling support was made available during these transitions. Benefits covered counselling for the worker through Employee Assistance Programs (EAP), but did not extend family counselling. Representatives from OPG and both unions all agree that additional counselling supports were needed and that families ought to be much more involved in the transition planning and implementation. An impersonal call centre line was a poor substitute for an informed, internal Human Resources Counsellor. As OPG in time outsourced its EAP functions, the process did not ensure the availability of a full set of wrap-around supports for the transitioning workers and union representatives were left to navigate on behalf of members facing difficulties.

**4) Re-training for a new Profession** (sometimes with the same company, but usually not, and usually with few guarantees in the new skill)

OPG organized workplace-based workshops to provide an explanation of the impending changes, why they were required and what options were to be offered. Workers reported that the information in the slide presentation did not always match explanations given during the presentations.<sup>23</sup>.

Those who chose to exit were sometimes connected with workforce development agencies to assist with retraining or re-employment. A re-training allowance of \$5,000 to \$10,000 was

reported to be available for tuition expenses over 2 years from the exit date.<sup>24</sup> The details of this allowance came from one interviewee but others have since contested this report. <sup>25</sup>

**5) Retirement** – early retirement bridging to a certain age or years of service or a combination of both. Workers could exercise their option to retire if they had the requisite years of service plus age, and provision was made by OPG for bridging people to retirement by adjusting their pension or assigning to short term jobs to those approaching retirement age. Retirement milestones were: Age 65; Twenty-five years of service; or rule of 82 (age +years of service).

6) Redundancy Payments (lump-sum payments, often up to 1 year base salary)

If the worker chose to exit rather than be redeployed, a voluntary redundancy package was arranged that included a monetary payment for severance and entitlements in accordance with their collective agreement.<sup>26</sup> Voluntary redundancy payments were based on a cash-out of 5 months base pay plus 4 weeks base pay per year of service (prorated) up to a maximum of equivalent to 120 weeks wages.

# 7) Reinvestment in Affected Communities

Although Ontario's coal plants were important economic drivers in their communities, neither OPG nor the Government of Ontario made any provisions to re-invest in communities affected by plant closures. There was no community impact assessment done in conjunction with the province's decision to close the coal-fired electricity plants and the effect of the closures continues to resonate in the local communities in terms of loss of tax base, loss of population and family separations due to relocation.

Except for Lakeview, which was part of Toronto's major urban economy, Ontario's coal power plants were anchor industries in each of their local communities. Well-paid workers owned homes, paid taxes and supported local economies. Many workers had followed members of their family into work at the coal plant and retirees called the communities home.

OPG plants had supported municipal services through property taxes and by procuring goods and services from local businesses, Spending in the local area of the Nanticoke plant totalled \$4.3 M in 2006 and annual tax payments were \$45.M. OPG also contributed community grant funds for local wellbeing and environment. .<sup>27</sup>

No community impact assessment was done by the province during the decision-making process on coal power plant closures. Instead, the government reassessed the property values of the plants at an early point in the process and withdrew from direct dialogue, leaving the OPG to handle community relations on closure plans.



LAKEVIEW Closed 2005. NANTICOKE Staged closure 2010 to 2013.



LAMBTON Staged closure 2011 to 2013. ATIKOKAN Closed 2013, converted to biomass and reopened 2014. THUNDER BAY Closed 2014, converted to biomass and reopened 2015, closed 2018.

Although Thunder Bay and Atikokan had been ruled out for natural gas due to the cost of building a new supply line, a research station was set up at Atikokan for use of biomass and both conversions were subsequently approved. Adapting biomass technology significantly reduced CO<sub>2</sub> emissions, and the new fuel also promised to support diversification of the region's forestry industry.

The Ontario Auditor General raised concerns in 2017 about the power generation value for dollar given the high operating costs at Atikokan and Thunder Bay. Both were being used for standby power and kept online in anticipation of energy requirements for future mine expansions and supporting economic development potential for the Ring of Fire mining region.

The higher energy cost had been rationalized by economic analysts as part of Ontario investing in the diversification of the northern region's forest industry, and as a lower cost alternative to gas conversion which would require a new pipeline connection. In both instances, the unions were largely responsible for the bio mass conversion at Thunder Bay and Attikokan. I

In 2018, OPG announced that the regional energy market did not justify investing \$4M in a needed boiler overhaul for the Thunder Bay Plant, which has since been closed. This shut down affected the remaining 70 workers. According to OPG, no employee will lose their job by closing the Thunder Bay Generating Station. OPG is in discussions with Power Workers Union and the Society of United Professionals on redeployment opportunities and work reassignments.

## **Summary and Conclusions**

On the surface, the Ontario coal plant closures were highly effective in reducing Ontario's climate impact and reducing the amount of air pollution. Electricity generation had been Ontario's leading source of greenhouse gas emissions. There were 182 Megatons of CO<sub>2</sub> (equivalent) produced in 1990, Ontario's baseline year for making reductions. 2014, after the closure of the Thunder Bay Generating Station, was "the first year that almost the full impact of the closure of the coal-fired power plants is reflected in Ontario's ghg inventory.... Ontario met (its 2014) target primarily by closing its coal-fired power stations. Most other sectors' GHG emissions grew or remained flat." <sup>28</sup>

The Ontario Ministry of Environment and Climate Change released the 2015 Air Quality Study, highlighting "significant decreases in pollutants in Ontario. There were no *smog days* in 2015, compared to 53 a decade earlier. "<sup>29</sup>Coal was phased out, but actual cost impacts of plant closures were not fully accounted for and this has only recently come to light as consumer's electricity prices increase. The cost of the stress to workers due to the challenge and uncertainty of a transition are invisible.

The International Institute for Sustainable Development's (IISD) report "The End of Coal: Ontario's coal phase-out" notes that natural gas plant generating capacity had been built up in advance of the expected decline of nuclear capacity for supplying Ontario's baseload supply of electricity.<sup>30</sup> Indeed even though renewable energy has grown in Ontario, gas has replaced much of the Provinces' coal generated electricity. Natural gas had been commonly viewed as the cleaner fuel for transitioning our energy supply toward a carbon neutral economy, and only recently has the impact of substantial amounts of methane released in upstream fracking and transportation of natural gas been factored into climate change impact models. Faced with this, environmental activists are calling for the shift off natural gas as an energy source within 20 years.

The next cycle of Just Transition is already happening in Ontario. Pickering Nuclear Generating Station is one of the oldest and largest nuclear power plants in the world, and is scheduled to close in 2024 (moved from 2020). The unions have started to negotiate protections for the 3,000 workers in anticipation of this closure. In 2018 the Power Workers Union and Ontario Power Generating negotiated a Nuclear Staffing Agreement intended to ensure that qualified staff will be on hand to safely operate the plant until closure, while minimizing the number of term workers needed to keep the plant open until 2024. By July 2020 no just transition agreements have been reached by either the Power Workers Union or the Society of United Professionals for Pickering employees beyond the default language that exists in t e collective agreement, unlike the special agreements reached for the coals closure in 2005 for the society and 2006 for the Power Workers Union. In late 2018, the regional economy received a jolt in the automotive sector as General Motors announced that 2,500 workers are to be laid off at its Oshawa assembly plant as it shifts global production to meet the world's need for eco-friendly electric vehicles.

Lakeview Generating Station's last two coal-fired generators were shut down in April 2005. OPG management and the unions collaboratively implemented a program of relocation, retirement, and redundancy for the last 275 workers at that site. The parties resolved almost all issues related to relocation between themselves. The few remaining cases were settled via expedited arbitration.

The long delay after the closure of the Lakeview plant helped diminish the anger generated by the original decision to close the plants. However, the long period of uncertainty following the closure of the Lakeview created a high degree of tension for both management and workers, and fueled the denial of the impending closures and the accompanying lay-offs.

Closures disrupted lives and the social fabric of communities. Besides workers who no longer contributed to the local economy or paid local taxes, there were also generations of workers with ties and family identities based in the local plant. Many retirees still lived in their plant's local community, where both the OPG and unions were active supporters of community life. The loss of property taxes from the plant affected local prosperity, as did the loss of business for local contractors hired by OPG to do provide services for the plants. Workers who relocated to smaller communities reported being ostracized because they we seen as having taking scare good paying jobs from local people.

In 2019 OPG announced the opening of the 400 mw Nanticoke clean energy facility using solar energy. The project is a partnership between OPG and the Six Nations of the Grand River Development Corporation and the Mississaugas of the Credit First Nation. Under Ontario's Green Energy and Green Economy Act (2009) that provided financial incentives to develop wind and solar energy. However OPG was explicitly denied permission to develop solar and wind facilities, the Liberal government of the day preferring these projects to be privately owned.

The closure of Ontario's coal power plants was undertaken without a specified relationship to the principles or process of Just Transition. To the degree that unions and management put together a program of transition measures one could say it was a Just Transition for the workers who were able to relocate, redeploy, or take advantage of early retirement or re-training. Those workers who were not able to take advantage of these opportunities did not experience a Just Transition. Their experience became collateral damage of a choice made for purely economic reasons rather than the combination of economic and social considerations.<sup>31</sup>

Overall, the process suffered from the lack of good coordination, which led to time lags and people waiting too long to be reimbursed for moving expenses, losing both time and income.

The issue of Just Transition is gaining international prominence with the passing of the Solidarity and Just Transition Silesia Declaration<sup>32</sup> at the 2018 Katowice Climate Summit. The declaration notes the importance of ensuring that economic policies to reduce emissions must be coupled with social programs for the workers losing jobs. "The issue of fair transition is a vital issue for governments, social partners and civil society organizations." As countries continue to grapple with the challenges of moving to a carbon neutral economy, combining social and economic policies is an important consideration.

People who were interviewed for this case study are:

Vince Campaner, Staff Officer 2, Power Workers' Union 244 Larry De Corte, OPG worker, Nanticoke Joseph Fierro, Local Vice President, The Society of United Professionals Ted Gruetzner, former Ontario Power Generation Vice President Stakeholder Relations Jim Richardson, former OPG worker, Lambton

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