

Thesis

With the geomorphological makeup of Canada, Intergovernmental Panel on Climate Change (IPCC) report, and the definition of energy sustainability in mind, the elimination of coal fired power plants in Ontario by former Premier Daulton McGuinty in 2003 is a right move in the path towards energy sustainability because it leads to environmental sustainability, avoids catastrophic event risks, avoids path dependence and minimizes costs.



Former Premier of Ontario, Daulton McGuinty.



Abstract

In 2001, former Ontario Premier Dalton McGuinty proposed an ambitious plan to close all six coal fired power plants in Ontario, and completely shift Ontario's electricity generation to become zero carbon. This paper analyzes the following aspects:

- Savings from healthcare costs caused by pollution, and the environmental costs such as smog days.

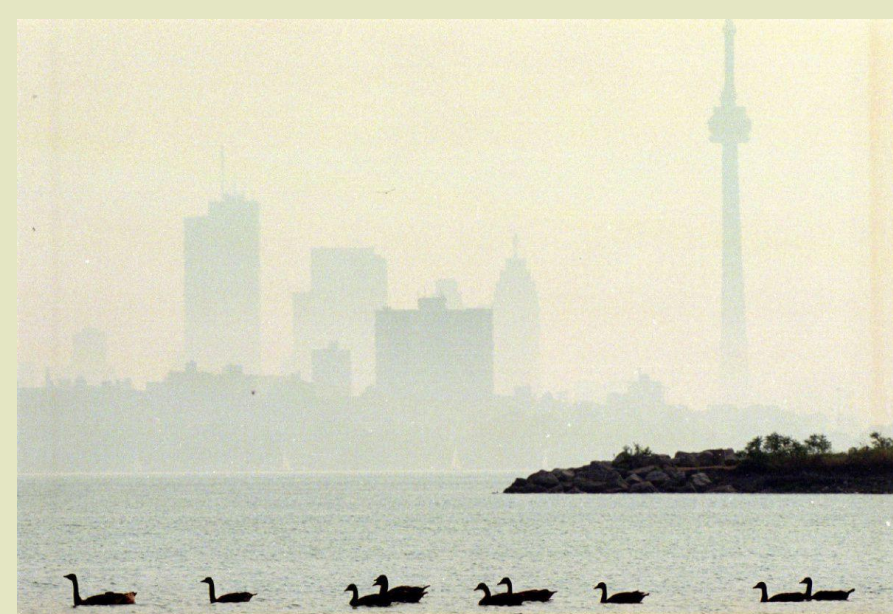


Photo of smog in Toronto during 2014. Peter Power/Toronto Star File Photo

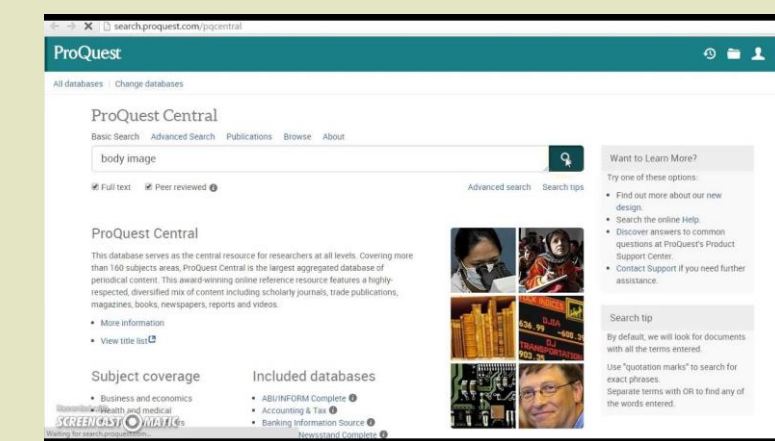
- Replacement of lost electricity from coal by increasing investment in nuclear energy, hydroelectricity, and renewable energy.
- Weights the negative upstream, and downstream effects of electricity generations from nuclear, and hydropower to discern it's financial, and environmental feasibility.



Methodology

I utilized a diverse range of strategies, when it comes to finding resources for this essay because this essay contains historical and current information.

- Google was utilized to attain an overview of my essay's subtopics.
- More specific information was learned in various academic papers, and newspaper articles from York University's Library via the "Environmental Studies: Journal Articles", ProQuest, Environment Complete and Green File.



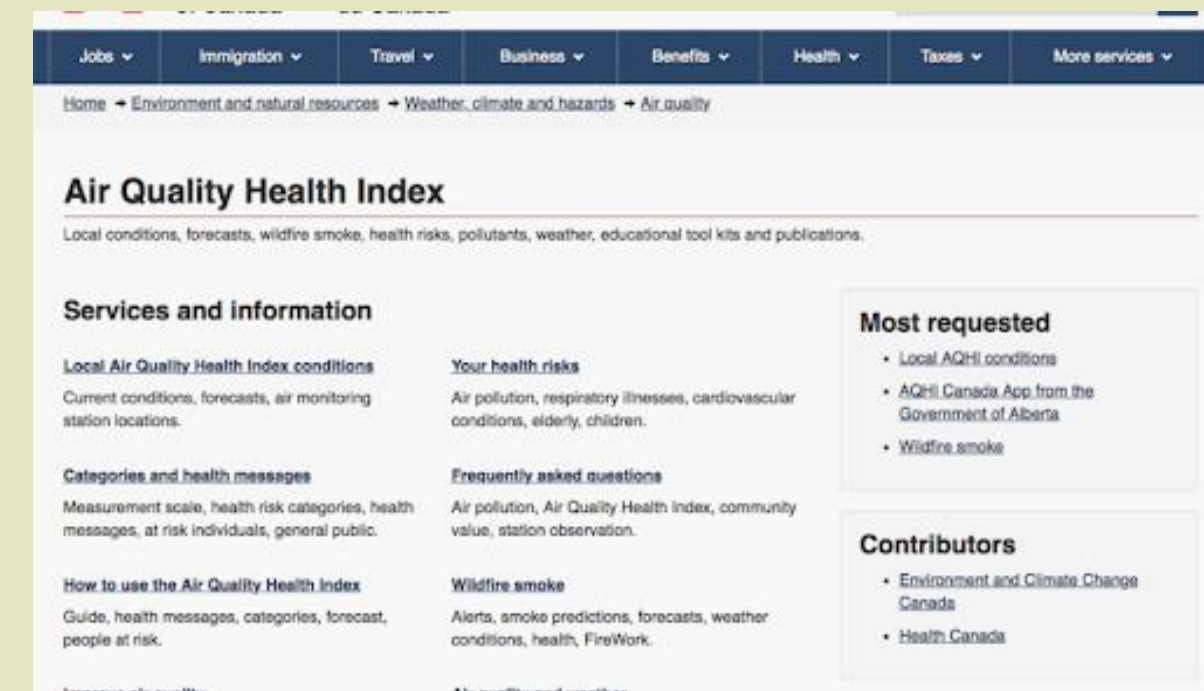
End of Coal in Ontario



ENVS 3130 – Energy & the Environment in Canada

Abdeali Hatim Saherwala

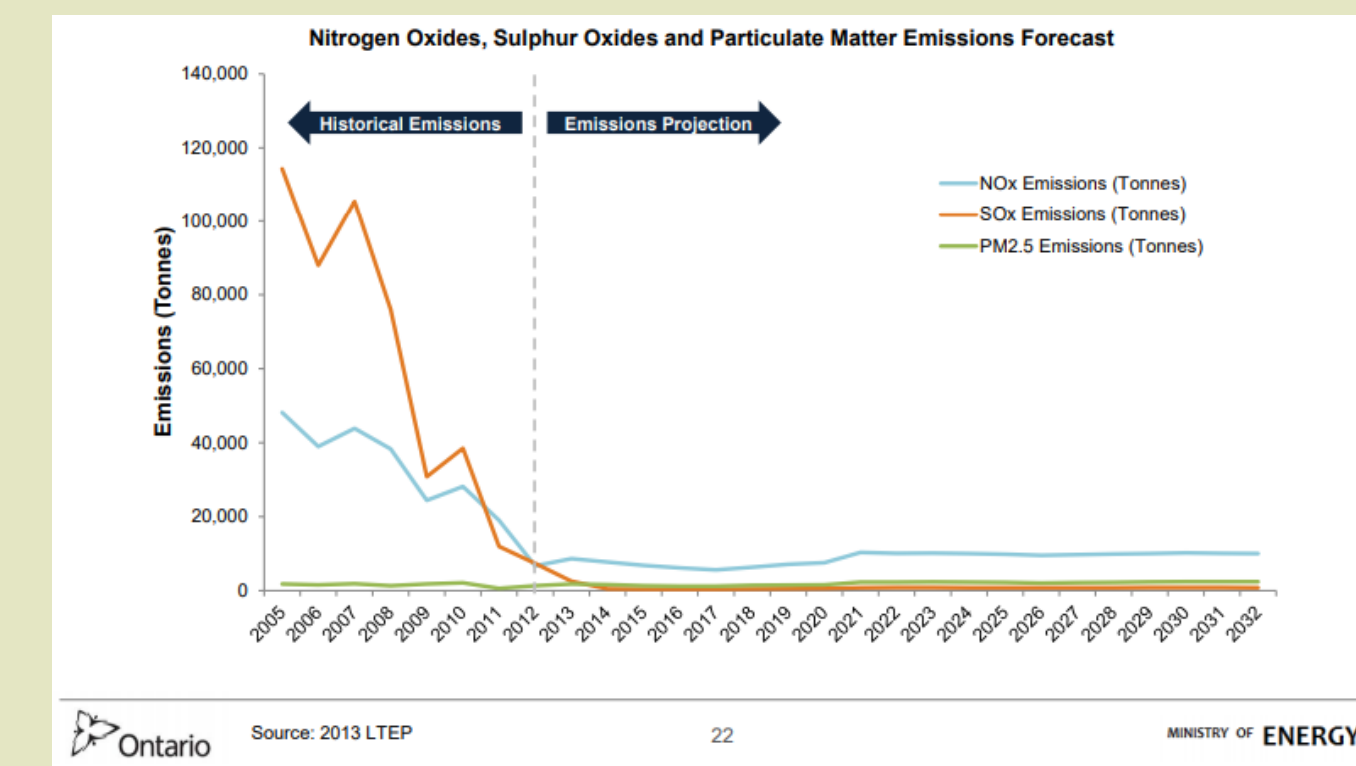
- Ms. Dana taught me how to use the City of Toronto and the Government of Ontario's archives.
- Finally, I found everything from the Government of Canada, Government of Ontario, and the City of Toronto's archives.



Dana Craig, Faculty of Environmental Studies' Liaison Librarian at York University.

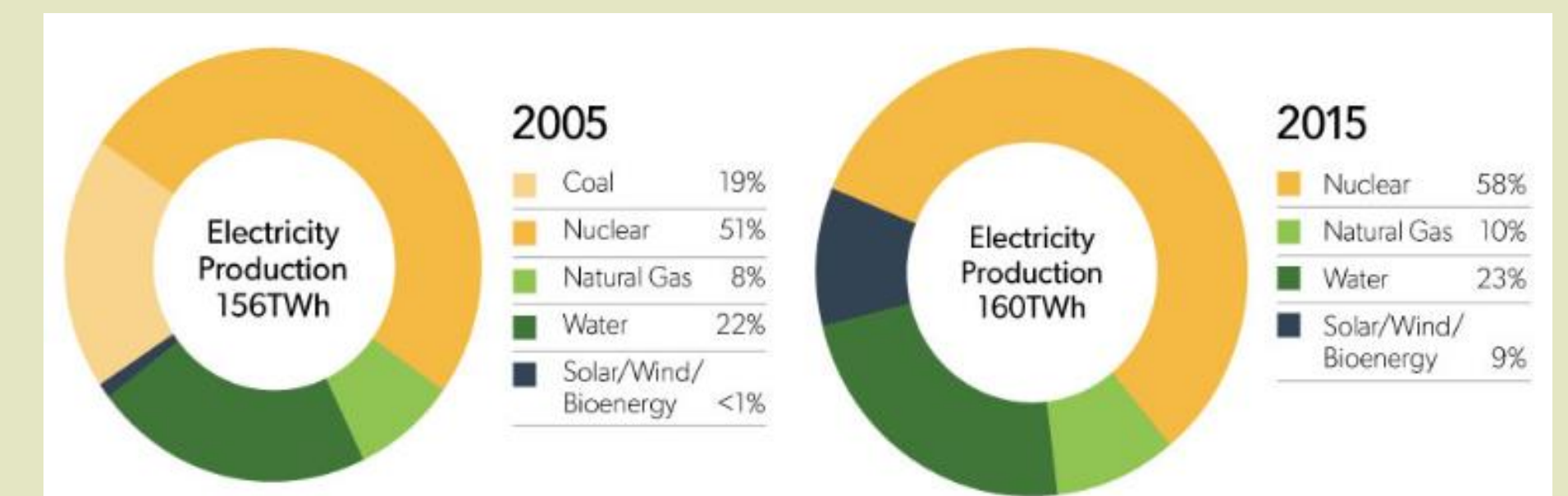
Results

- Ontario was able to reduce its greenhouse gas (GHG) emissions by nearly 90% in the electricity sector.



This line graph aids us to visualize the reduction of Sulphur oxide emissions, Nitrogen oxide emissions and fine particulate matter (PM2.5) emissions to the atmosphere, since the closure of coal fired power plants (Government of Ontario & Ministry of Energy (Ontario), Coal Closure In Ontario, 2015).

- Elimination of coal fired power plants removed the equivalent of pulling seven million cars off the road in terms of greenhouse gas (GHG) emissions.
- Smog days were eliminated from Ontario in 2015, then compared to 53 smog days in the past decade.
- Ontario was able to save CAD \$3 billion per year in healthcare costs. Also, this decision prevented 1,900 premature deaths, 9,800 hospital admissions, 13,000 emergency room visits and 46 million illnesses.



These two graphs show the utilization of different energy sources for electricity generation purposes in Ontario during 2005 and 2015. The 2015 graph highlights the disappearance of coal from Ontario's energy system, and an increase in renewable energy.

Future Implications & Research

- Ontario 's pathway of becoming coal free in terms of electricity generation can be implemented in other countries, who are still heavily dependent on coal.
- Benefits pertaining to the elimination of coal fired power plants can be utilized as proof for nations, who are hesitant in moving away from coal.
- More research should be conducted on how much Ontario saved in potential healthcare and maintenance costs of coal fired power plants.
- The success of Ontario's elimination of coal fired power plants can be an incentive for other provinces in Canada such as Alberta, Saskatchewan, Nova Scotia, and New Brunswick to eliminate coal as well.