



CAPE
Canadian Association
of Physicians
for the Environment

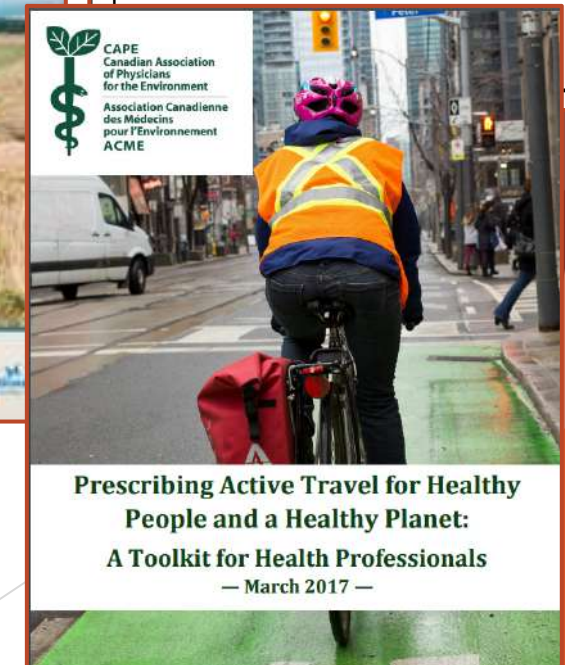
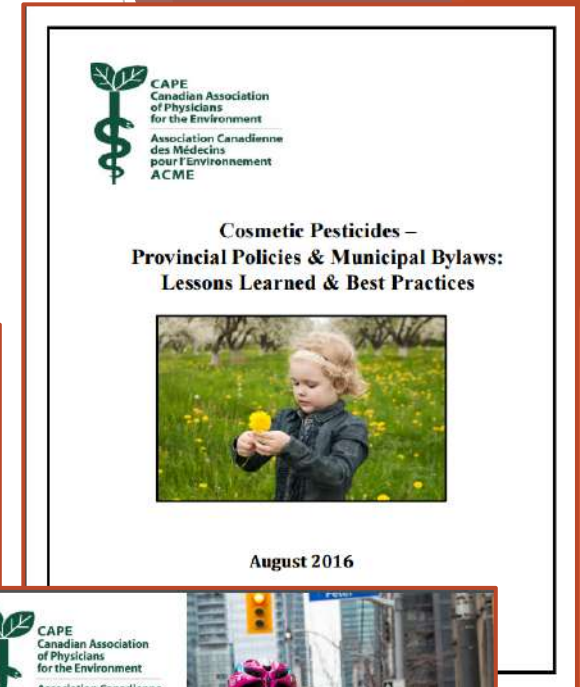
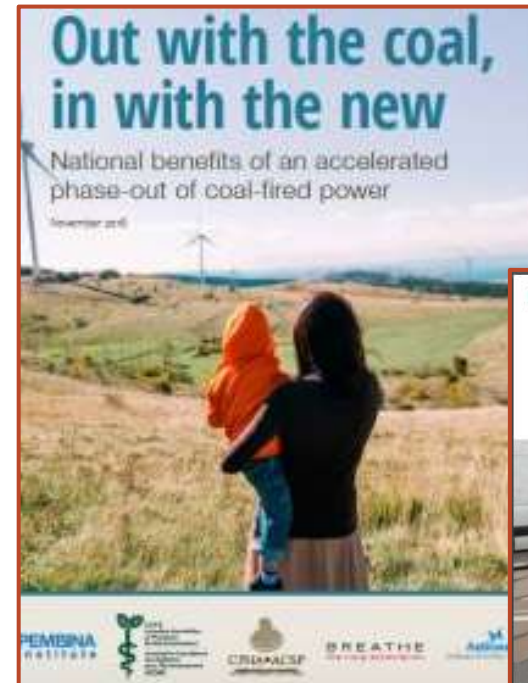
Association Canadienne
des Médecins
pour l'Environnement
ACME

CAPE's Coal Phase-out Campaign

Kim Perrotta MHSc, Executive Director, January 2018

CAPE - Who are we?

- **Mission:** Work to protect human health by protecting the planet
- Non-profit organization directed by a Board of Medical Doctors
- **Staff campaigns:**
 - Pesticides & Coal Plants & Active Travel
- **Volunteer Activities:**
 - Fracking, Site C Dam, Asbestos, Nuclear Energy, Active Transportation, Health Impact Assessments



Climate Change - Threat to Global Health

- WHO - Climate Change is the greatest public health threat of the 21st Century.
- WHO - will produce 250,000 additional premature deaths per year by 2030 from heat stress, diarrhea, malaria and malnutrition.
- Already producing 400,000 premature deaths worldwide.

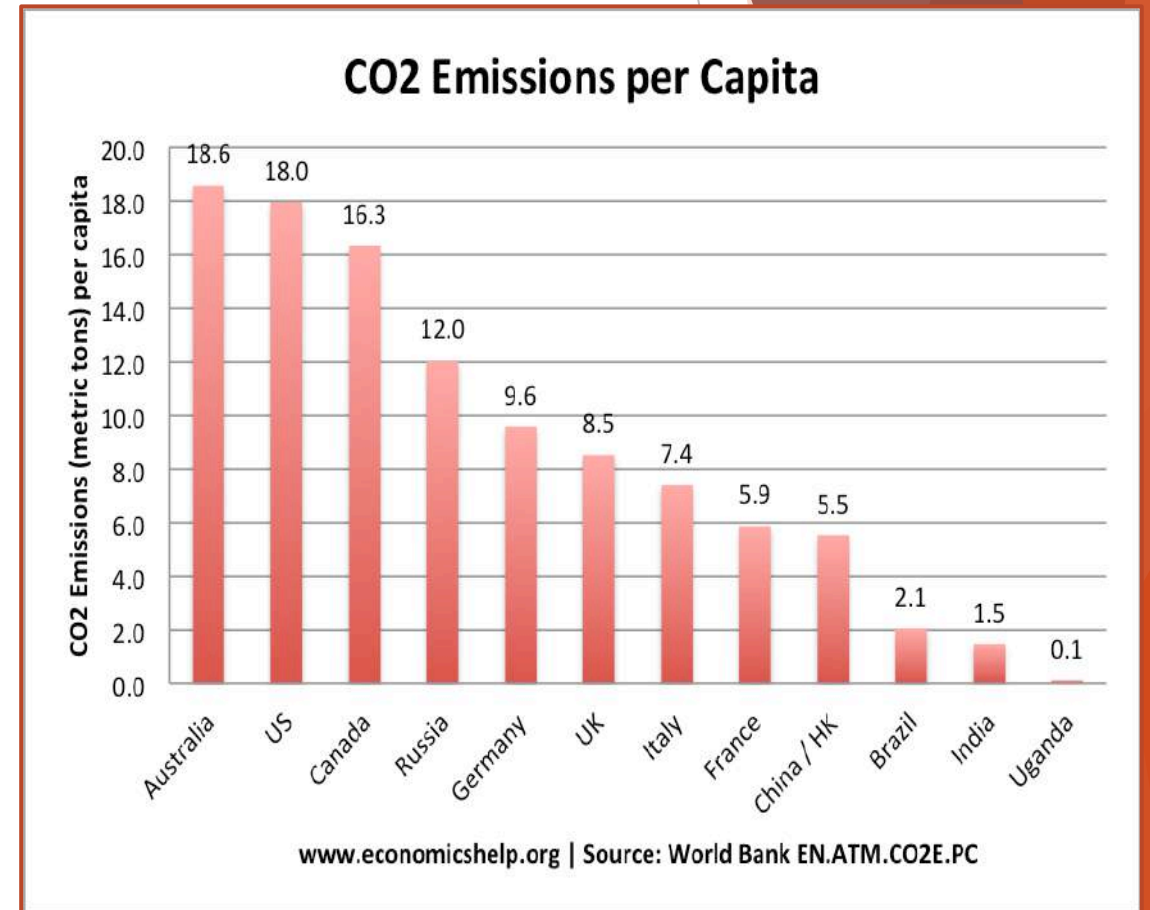


References:

- World Health Organization (WHO). 2016. WHO Director-General Keynote address at the Human Rights Council panel discussion on climate change and the right to health.
- DARA and the Climate Vulnerable Forum. 2012. Climate Vulnerability Monitor 2nd Edition. A Guide to the Cold Calculus of a Hot Planet.
- World Health Organization (WHO). 2014a. Quantitative risk assessment of the effects of climate change on selected causes of death, 2030s and 2050s.
- PHOTO: 350Africa.org

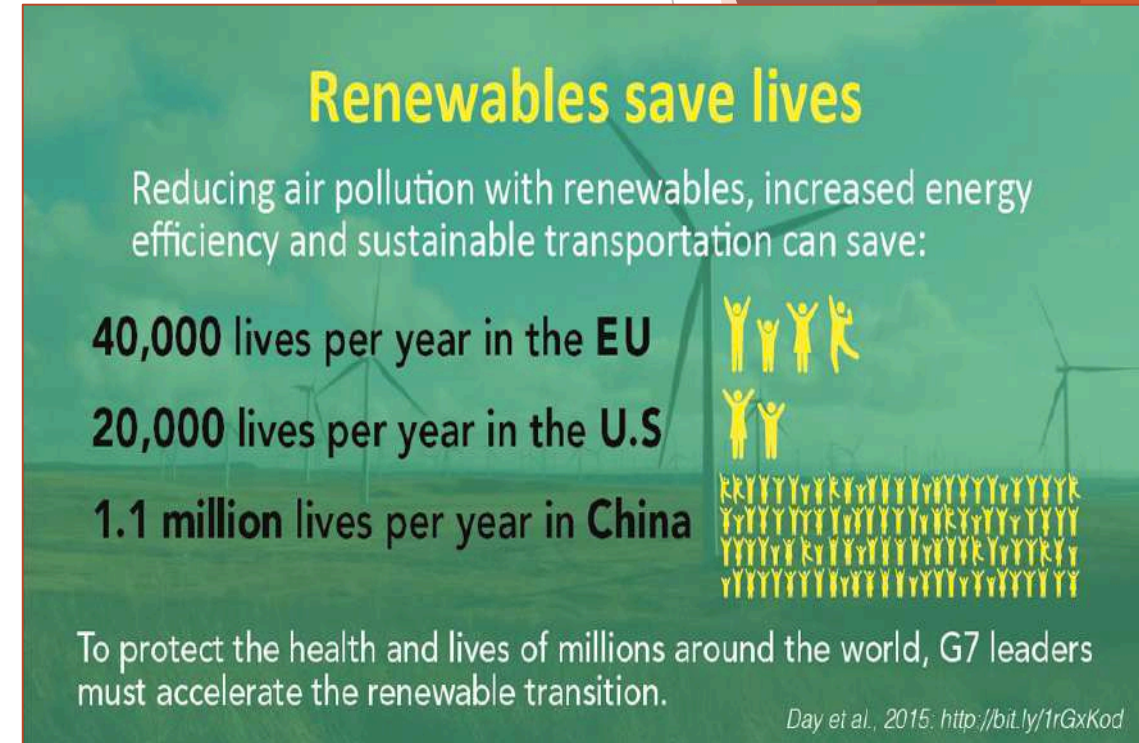
Climate Change & Health Equity

- **Globally**, wealthy countries are heavy emitters; Poor countries are heavy hit
 - Food & water shortages
 - Lacking public health infrastructure
- **Within Canada**, low income populations can be harder hit as well
 - Heat waves in urban centres
 - Indigenous populations in the north



Climate Change & Chronic Disease Nexus

- Second Lancet Health and Climate Change Commission concluded that:
- **Significant health benefits could be associated with the transition to:**
 - renewable energy
 - active transportation
 - sustainable agriculture
 - energy-efficient buildings



References:

- Day et al., 2015. Assessing the missed benefits of countries' national contributions: Quantifying potential co-benefits. New Climate.
- Watts N et al., 2015. Healthy and climate change policy responses to protect public health. The Lancet. 386(10006).

Coal Plants - Globally - Climate & Air Pollution

- Globally - coal plants - 29% of GHG
- Globally - coal plants - huge source of air pollution
- Globally - air pollution - 3.7 million premature deaths per year
 - Heart disease & strokes
 - Chronic obstructive pulmonary disease
 - Lung cancer
 - Acute lower respiratory infections - children



References

- International Energy Agency (IEA). 2015. Energy and Climate Change.
- World Health Organization (WHO). 2014. Ambient (outdoor) air quality and health. Fact sheet N° 313 Updated March 2014. <http://www.who.int/mediacentre/factsheets/fs313/en/>
- Photo: Thinkstock

Closing Ontario Coal Plants

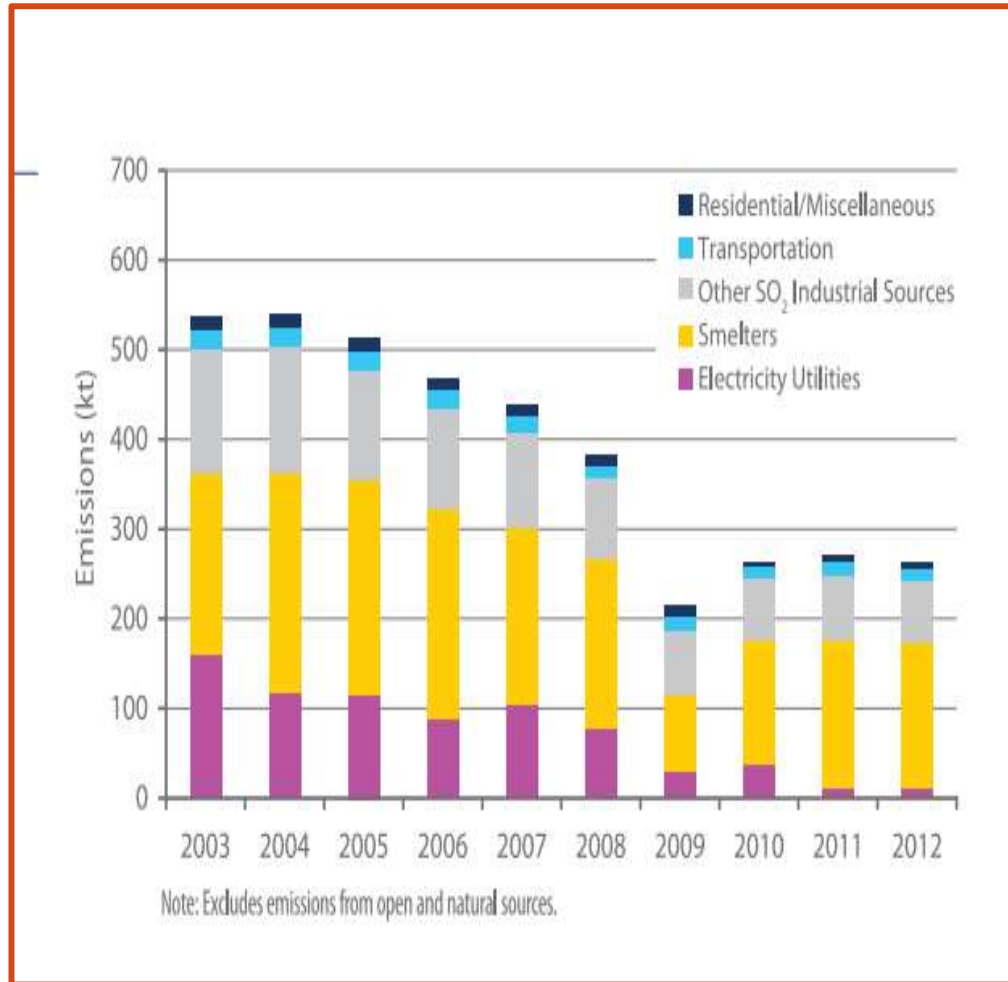
- In 1999, coal plants in Ontario produced:
 - almost one third of the electricity
 - **20% of greenhouse gas emissions**
 - **23% of sulphur dioxide emissions**
 - 14% of nitrogen oxide emissions
 - 23% of the mercury emissions
- Air Pollution Health benefits - \$3 billion per year



References:

- Ontario Ministry of the Environment (OMOE). 2001. Coal-Fired Electricity Generation in Ontario.
- Ontario Power Generation (OPG). 2002). Towards Sustainable Development: 2001 Progress Report.
- Photo: Ontario Power Generation

Emissions & Air Levels in Ontario - 2003-2013

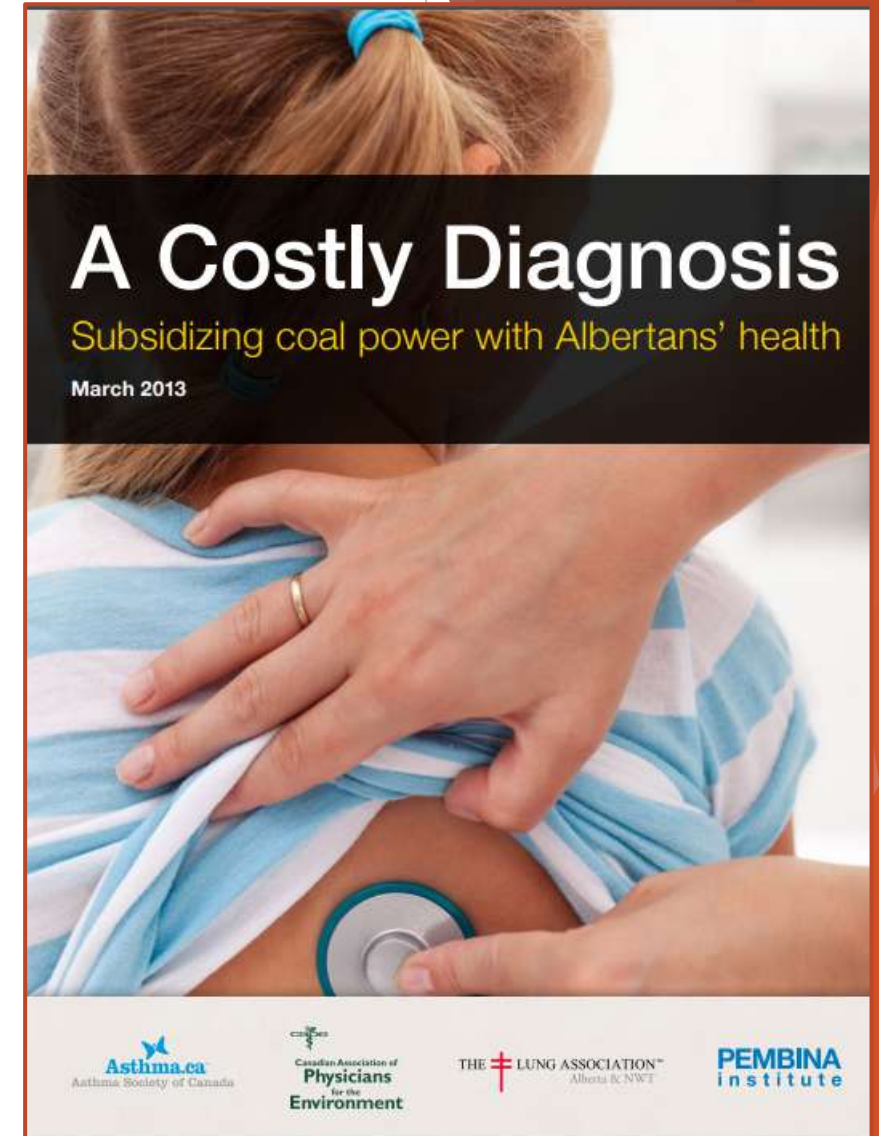


Closing Alberta's Coal Plants

- Collaborating with Pembina Institute
- In 2011, 6 plants emitted:
 - **17% of Greenhouse Gases**
 - **33% of sulphur dioxide**
- Accelerated phase-out could prevent:
 - 600 premature deaths
 - 500 emergency room visits
- **Valued at \$3 billion from 2015-2035**

Reference:

- Pembina Institute, Canadian Association of Physicians for the Environment, Asthma Society of Canada and The Lung Association Alberta and NWT (**Pembina**). 2013. A Costly Diagnosis: Subsidizing coal power with Albertans' health.



Alberta Coal Campaign

- Focus on Immediate Health Benefits
- Meetings with Party Leaders
- Ad campaigns - transit signs
- Conference with Party Leaders
- Op-eds & Press Releases

Canadian Association of Physicians for the Environment

Edmonton - September 5, 2015: CAPE reacts to alarming air levels reported in Alberta's new Environment and Parks report on air quality.

The Canadian Association of Physicians for the Environment (CAPE) is dismayed, but not surprised, by the findings of Alberta Environment and Parks that the majority of Alberta is in an "orange" management level, meaning that actions must be taken to prevent further exceedances of the Canadian Ambient Air Quality Standards. The Red Deer region is specially designated in the "Red" zone, meaning that this region exceeded the standards. The problems are widespread, and specific to fine particulate matter (PM2.5) with only the Peace River region avoiding an "orange" or "red" tag.

"This calls into question the pervasive belief that the clear blue skies of Alberta foster clean air, safe from the pollutants better known from smoggy cities" offered Dr. Joe Vipond, an emergency room physician and CAPE member. "We know that PM2.5 has negative effects on the cardiovascular and respiratory systems of people and that exposure increases premature deaths, hospital admissions, and chronic diseases."

PM2.5 is comprised of both primary PM2.5, which is emitted directly from tailpipes and smoke stacks, and secondary PM2.5, which is created in the air from reactions between air pollutants such as sulphur dioxide (SO2) and nitrogen oxides (NOx). These three pollutants (primary PM2.5, SO2, and NOx) come from multiple sources, including the electricity, construction, transportation, and oil and gas sectors, as well as natural sources such as wildfires. In order to address the problem, multiple policies on multiple sources must be enacted.

"CAPE has been highlighting the phase-out of coal-fired power plants because there are viable economic, non-polluting alternatives that can be brought in fairly quickly to produce rapid improvements in air quality," explained Dr. Vipond.

Such a phase out has recently occurred in Ontario with their last coal-fired power plant, and in the recent publication of *Zeroing in on Alberta's health crisis*, *Northwest Health* Air: To



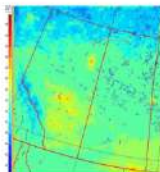
Press Release

Modelling results illustrate the impact of coal plants in Alberta - October 8, 2015

CAPE, The Lung Association and the Asthma Society of Canada point to modelling results produced by Environment Canada that demonstrate the extent to which coal plants impact air quality in Alberta.

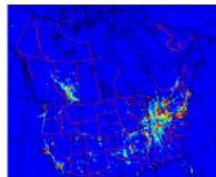
"These maps show us how Alberta's air quality compares with the rest of Canada" offered Dr. Joe Vipond, CAPE spokesperson. "It is equivalent to the northeastern United States with its plethora of coal plants, industry, and high density population."

The air modelling results were produced by Environment Canada and presented at the February 2015 AEMERA Oil Sands Monitoring Conference.



"The modelling results demonstrate that air emissions from point sources such as coal plants in Alberta reach almost all corners of the Province" offered Leigh Allard, President and CEO of The Lung Association of Alberta and North West Territories.

The video, which models sulphur dioxide (SO2) emissions from point sources across Alberta, has been produced to a 2.5 km resolution. It uses 2010 emissions data for the oil sands region, 2006 emissions data for the rest of Canada, and meteorology for 2013. The time period modelled was August 10th to September 10th, 2013. [SO2Alberta.mov](#)



Canadian Association of
Physicians
for the
Environment

Asthma.ca
Asthma Society of Canada

THE LUNG ASSOCIATION™
Alberta & NWT

Public Interest Alberta
Advocating for a Better Alberta for All

Background: Phasing Out Alberta's Coal Plants

Our four organizations have been calling for the phase-out of Alberta's coal-fired power plants for two years now because they are a major source of air pollutants that harm the health of Albertans: mercury which is persistent and accumulates in the food chain; and greenhouse gases that contribute to climate change.

Reliance on Coal Plants in Alberta

- Alberta burns nearly twice as much coal as all of the other provinces combined.
- In 2014, Alberta generated 68 per cent of its electricity from coal.
- While other jurisdictions have been working to reduce or phase-out their use of coal, Alberta has been increasing its coal-fired generating capacity. Between 2002 and 2012, Alberta increased its coal capacity by 14 per cent.
- Alberta has six coal plants with 18 individual generators. Each one has a generating capacity ranging from 150 MW to 495 MW for a combined capacity of over 6,200 MW. (Pembina, 2013)
- The figure to the right identifies the locations of Alberta's coal-fired power plants in 2015 (Pembina, 2015).



thestar.com

Business

Can Alberta go coal-free by 2025?

Alberta is a province that wears its fossil-fuel heritage with pride. But it's taking aim at coal-fired electricity generation.



Alberta Coal Campaign

- Op-eds
- Press Releases
- Submission to Leach Commission from Health Groups
- Full-page ad: more health groups.
- Phase-out Announced Nov 2015
- Supportive blogs & press releases during implementation



Don't be misled by incomplete facts about effects of coal burning on air quality and health

CMAJ • March 24, 2017 • 1 Comment



Kim Perrotta
Association of

A month ago the
entitled "They k
healthier, so how come there's no eviden
School of Public Health at the Universi
times that this article, which muddles



ACCELERATED
PHASE OUT
OF
COAL-FIRED
POWER IN ALBERTA

We, the undersigned, support an accelerated phase out of coal-fired electricity generation in Alberta. Coal causes more pollution than any other source of electricity, including greenhouse gas pollution as well as air contaminants such as sulphur dioxide and mercury that pose health risks. Research shows the burning of coal contributes to over 100 deaths and more than 4,000 asthma episodes in the province each year.

We urge the Alberta government to develop and implement programs, policies and legislation to replace coal by ramping-up energy conservation and developing our world-class wind, solar and other renewable resources.



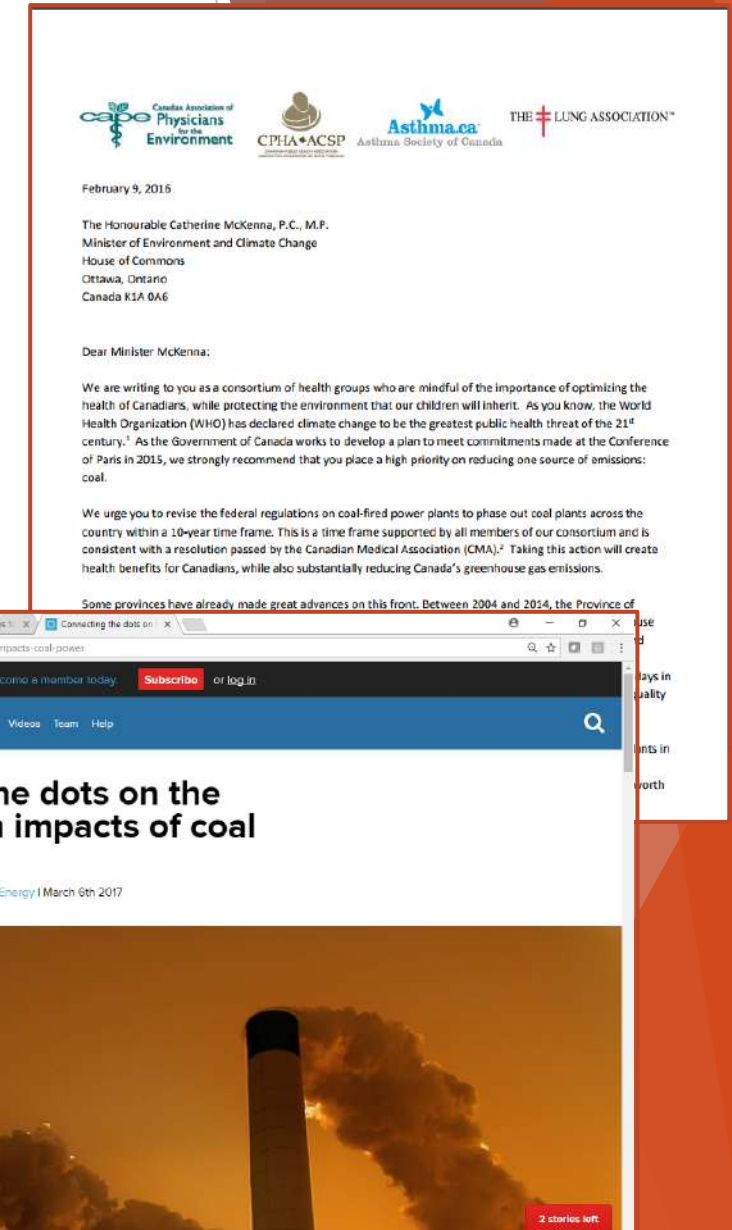
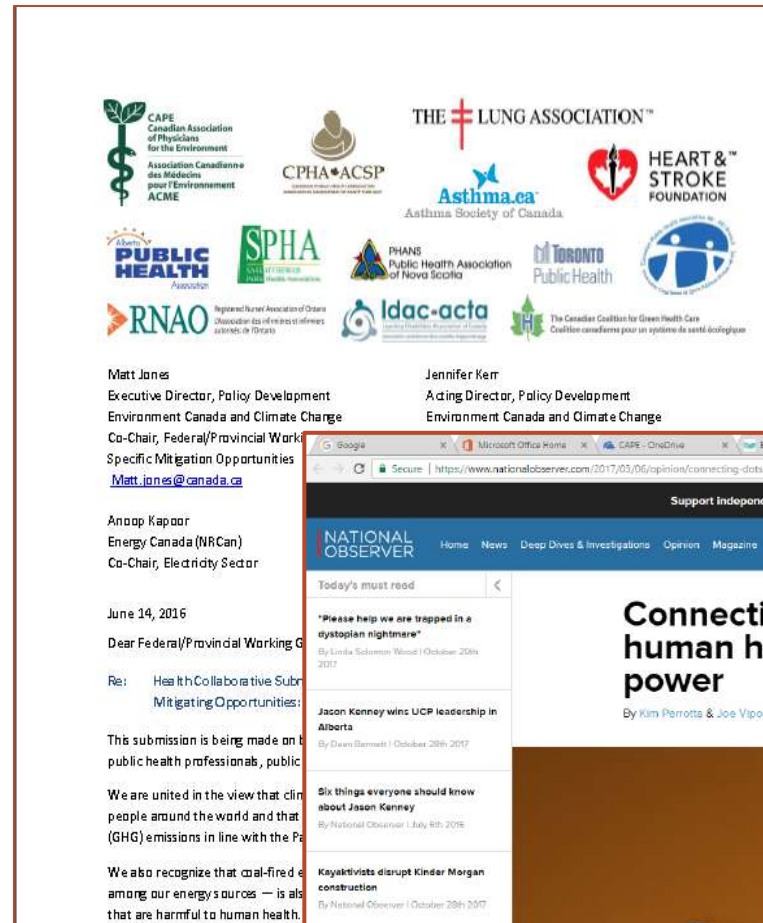
Closing Canada's Coal Plants

- 14 plants - 4 provinces - AB & SK & NS & NB
- **8.5% of Canada's GHGs**
- 12 of top 25 emitters of Sulphur Dioxide
- Top 2 emitters of Mercury
- **Pembina Study found that a 2030 phase-out would prevent:**
 - an additional 1,008 premature deaths
 - 871 hospital admissions or emergency room visits between 2015 & 2035.
- **Valued at nearly \$5 billion**



Canada Coal Campaign

- ▶ Monthly Meetings
- ▶ Health Letter to Minister
- ▶ Health Op-eds in regional & national papers
- ▶ Health Collaborative Submission on Coal Plants to the Federal/Provincial Working Group on Climate Change - 15 Health Groups



Canada Coal Campaign

- ▶ Articles in the CMAJ
- ▶ Op-ed in the Globe & Mail - CAPE & CMA
- ▶ Press event on Parliament Hill - release report
- ▶ Meeting with MPs & Ministers
- ▶ Government Announced Phase-out - November 2016
- ▶ Follow-up op-eds & press releases



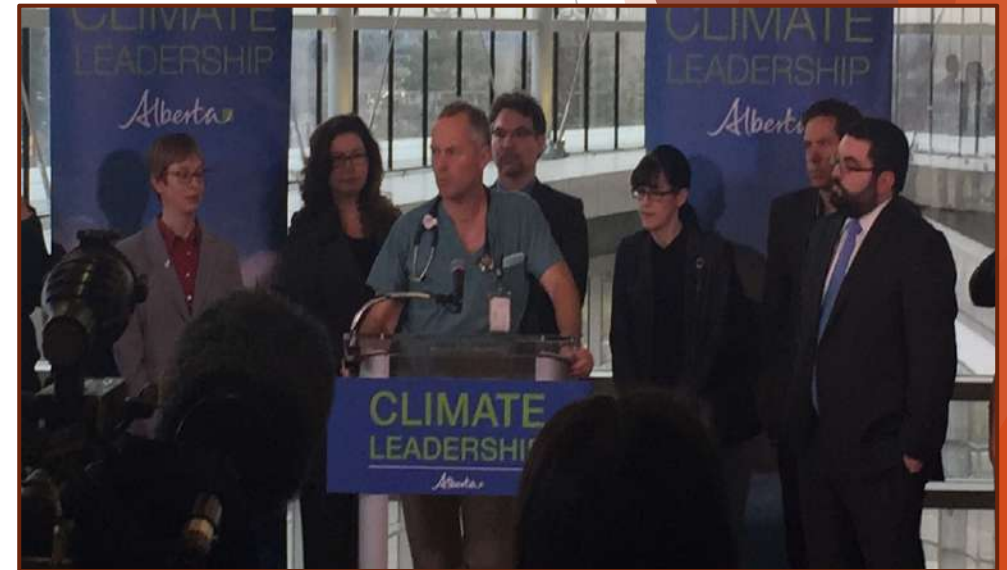
Closing Coal Plant's Worldwide

- Global Health Statement on Coal Plants
- Collaborated with TckTckTck, & Global Climate Health Alliance:
- 82 organizations from 30 countries signed on to the Statement
- Representing 300,000 health professionals around the world
- Released before the G7 meeting with op-eds and press releases from countries around the world in May 2016
- Op-ed in Edmonton Journal with the CPHA
- Social media campaign



Health Evidence, Credibility & Influence

- Health Professionals are Powerful Policy Influencers
- Public cares about health issues
- Public trust health professionals
- Decision-makers care about health care costs & feel comforted by broad health support
- Must use Credible Evidence to:
 - Maintain Confidence of Decision-makers
 - Cultivate Health Allies
 - Defend against Powerful Interest Groups





<http://cape.ca/>

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