

Section 2. It is not properly the subject of ongoing academic debate that:

From the U of T divestment policy:

The University's core academic values include freedom of inquiry and open debate. As a general matter, the University does not take positions on social or political issues apart from those directly pertinent to higher education and academic research. Instead, its role is to provide a forum within which issues can be studied carefully and debated vigorously. Given these values, the University will not consider any proposals for restrictions on its investments that require the institution to take sides in matters that are properly the subject of ongoing academic inquiry and debate.

[Editing note: ideally, for each comment we should cite the best possible accessible source for laypeople as well as the most authoritative possible scientific source]

1. The 10,000 years of human civilization have taken place during a span of relative climatic stability.¹
2. Burning coal, oil, and gas produces known quantities of carbon dioxide (CO₂).²
3. Before the industrial revolution, the concentration of CO₂ in the atmosphere was approximately 280 parts per million (ppm). It has now risen to over 390 ppm, largely because of the burning of fossil fuels.³
4. At present, the concentration of CO₂ in the atmosphere is rising at a rate of approximately 2.0 ppm per year.⁴

¹ This claim is supported by evidence from ice core samples taken in Vostok, Antarctica as well as other proxy measures of climate such as pollen in lake sediments and tree rings.

See: Richard Alley, *The Two Mile Time Machine: Ice Cores, Abrupt Climate Change, and Our Future* (Princeton: Princeton University Press, 2000) p.4

² For example, the U.S. Environmental Protection Agency lists quantities of CO₂ produced by burning a barrel of oil, metric tonne of coal, or therm of natural gas:

<http://www.epa.gov/cleanenergy/energy-resources/refs.html>

³ Evidence for this includes the records of how much fossil fuel has been burned, as well as the changing isotopic ratio of carbon in the atmosphere.

See: Intergovernmental Panel on Climate Change, *IPCC Fourth Assessment Report: Climate Change 2007, Climate Change 2007: Synthesis Report*, "2.2 Drivers of climate change"

https://www.ipcc.ch/publications_and_data/ar4/syr/en/mains2-2.html

Nicholas Stern, *Stern Review: The Economics of Climate Change*, (Cambridge: Cambridge University Press, 2007)

http://www.hm-treasury.gov.uk/d/Executive_Summary.pdf

⁴ See: U.S. National Oceanic & Atmospheric Administration, "Trends in Atmospheric Carbon Dioxide"

<http://www.esrl.noaa.gov/gmd/ccgg/trends/>

5. If humanity continues to burn fossil fuels at the present rate, the concentration of CO₂ in the atmosphere will rise to well over 550 ppm by 2100.⁵
6. Adding carbon dioxide to the atmosphere reduces the amount of energy the Earth radiates into space. This causes the planet to warm.⁶
7. Based on evidence from ice cores, we know that doubling the amount of CO₂ in the atmosphere causes global temperatures to rise by about 3°C.⁷
8. Governments around the world, including the government of Canada, have adopted 2°C as the threshold beyond which climate change should be considered 'dangerous'.⁸
9. If the world is to avoid crossing the 2°C limit, most of the world's remaining fossil fuels must be kept in the ground.⁹

Mitigating climate change is important for allowing the university to achieve its academic mission. In the event that the world fails to curb greenhouse gas emissions and produces well over 2°C of climate change, substantial damage is expected to be imposed on the global economy. This threatens the growth prospects of the endowment and pension funds of the University of Toronto. It also creates additional geopolitical risks such as agricultural disruption and forced migration.

James Powell, former President of Oberlin, Franklin and Marshall, and Reed College, argues that university trustees have a quasi-legal duty to do all they can about climate change, arguing:

"The board is supposed to make sure that the endowment allows for intergenerational equity, that the students who are going to Oberlin in 2075 get as much benefit from it as those there now. But with global warming, you're guaranteeing a diminution of quality of life decades out."

Taking action to address climate change is not an example of needlessly taking sides in a controversial issue. Rather, it is a matter of taking part in a necessary global transition. If the world fails to constrain the worst impacts of climate change, serious deleterious impacts can be expected for Canada and the University of Toronto.

⁵ See:

Nicholas Stern, *Stern Review: The Economics of Climate Change*, (Cambridge: Cambridge University Press, 2007)

http://www.hm-treasury.gov.uk/d/Executive_Summary.pdf

⁶ See: Intergovernmental Panel on Climate Change, *IPCC Fourth Assessment Report: Climate Change 2007, Climate Change 2007: Working Group I: The Physical Science Basis*, "TS.2 Changes in Human and Natural Drivers of Climate"

https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ts2s2-2.html

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⁸ See section 5. C of this document

⁹ One source: IEA World Energy Outlook, January 2012

The university has already taken action with the stated intention of reducing its climate change impact, as elaborated in [we need to add a section on this].

Section 5. Actions have been taken by the Canadian government and international bodies on this issue:

From the U of T divestment policy:

Responses should be based on the following principles:

...

(iii) actions taken by the Canadian government or other national or international bodies with regard to the particular issue of concern.

A) Actions taken by the Canadian government

All three levels of Canada's government have taken action in response to the threat of climate change.

i) Federal government

- **Emission standards for passenger vehicles and light trucks:** In November 2012, proposed regulations were released for vehicles beginning with the 2017 model year. Average emissions from vehicles in 2025 are expected to be 50% of those sold in 2008.¹⁰
- **Heavy-duty vehicles:** In April 2012, the federal government released regulations for heavy duty vehicles beginning with the 2014 model year.¹¹
- **Coal-fired power plants:** In September 2012, final regulations were introduced to limit emissions from the coal-fired electricity sector.¹²
- **Renewable fuel requirement:** As of December 2010, gasoline is required to contain an average of 5% renewable content, with a 2% requirement for diesel fuel.¹³

¹⁰ Environment Canada, "Reducing Greenhouse Gases"
<http://climatechange.gc.ca/default.asp?lang=En&n=4FE85A4C-1>

¹¹ Environment Canada, "Reducing Greenhouse Gases"
<http://climatechange.gc.ca/default.asp?lang=En&n=4FE85A4C-1>

¹² Environment Canada, "Harper Government Moves Forward on Tough Rules for Coal-Fired Electricity Sector"
<http://www.ec.gc.ca/default.asp?lang=En&n=714D9AAE-1&news=4D34AE9B-1768-415D-A546-8CCF09010A23>

¹³ Environment Canada, "Reducing Greenhouse Gases"
<http://climatechange.gc.ca/default.asp?lang=En&n=4FE85A4C-1>

- **Carbon capture and storage (CCS):** Canada's federal and provincial governments have committed a total of approximately \$3 billion in funding for CCS, which could lead to as many as five to six large-scale demonstration projects in Canada.¹⁴
- **Agricultural greenhouse gases:** Canada is contributing \$27 million toward the Global Research Alliance on Agricultural Greenhouse Gases, a group created to advance research, technology transfer, and adoption of beneficial management practices to mitigate agricultural greenhouse gases.¹⁵

ii) Government of Ontario

- **Emission reduction targets:** The Government of Ontario has legislated greenhouse gas emission reduction targets of 6% below 1990 levels by 2014, 15% below by 2020, and 80% below by 2050.¹⁶
- **Phasing out coal:** The Government of Ontario has committed to phasing out coal-fired electricity generation by 2014.¹⁷
- **Public transit investments:** The Ontario government is contributing over \$9 billion to the Metrolinx Regional Transportation Plan.¹⁸
- **Green Energy Act:** Ontario's 2009 *Green Energy Act* created a system of feed-in tariffs to support the deployment of renewable energy options including solar photovoltaic, biogas, biomass, landfill gas, and wind power. It established a right for all renewable energy projects to be connected to the grid, streamlined the approval process for green energy projects, and began the implementation of a 'smart' energy grid.¹⁹
- **Forest protection:** Ontario has protected roughly half of the province's boreal forest from mining and forestry, motivated in part by the forest's importance as a carbon sink.²⁰
- **Establishment of a Climate Change Secretariat:** In 2008, the province created a permanent secretariat to coordinate its *Climate Change Action Plan*.²¹
- **Community Go Green Fund:** The province provided \$6 million to 90 community groups in order to help charitable or environmental organizations, youth or cultural

¹⁴ Environment Canada, "Reducing Greenhouse Gases"

<http://climatechange.gc.ca/default.asp?lang=En&n=4FE85A4C-1>

¹⁵ Environment Canada, "Reducing Greenhouse Gases"

<http://climatechange.gc.ca/default.asp?lang=En&n=4FE85A4C-1>

¹⁶ Ontario Ministry of the Environment, "Climate Change - Greening Our Ways"

http://www.ene.gov.on.ca/environment/en/category/climate_change/STDPROD_078897.html

¹⁷ *Environmental Protection Act*. Ontario Regulation 496/07: Cessation of Coal Use – Atikokan, Lambton, Nantcoke and Thunder Bay Generating Stations

http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_070496_e.htm

¹⁸ Ontario Ministry of the Environment, "Climate Change - Greening Our Ways"

http://www.ene.gov.on.ca/environment/en/category/climate_change/STDPROD_078897.html

¹⁹ Ontario Ministry of the Environment, "Green Energy Act"

http://www.ene.gov.on.ca/environment/en/legislation/green_energy_act/index.htm

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²¹ See:

associations, educational institutions and Aboriginal communities reduce their carbon footprint.²²

iii) City of Toronto

- Documents from Yasmin

B) Actions taken by other national bodies

Governments around the world have also been acting to mitigate the seriousness of climate change. In many cases, they have implemented significantly more ambitious policies than those enacted in Canada to date.

i) United States

ii) United Kingdom

iii) France

iv) Germany

v) Japan

vi) China

C) Actions taken by international bodies

International efforts to address climate change have often been centred around the United Nations Framework Convention on Climate Change (UNFCCC), though many other international forums and organizations have also made efforts to address the issue.

United Nations Framework Convention on Climate Change (UNFCCC)

- Signed in 1992, came into force in 1994 with 50 ratifications
- Objective: "stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system"
- This has subsequently come to be understood to mean limiting warming to less than 2°C

Other sub-components of UNFCCC – adaptation funding, etc

²² Ontario Ministry of the Environment, "Climate Change - Greening Our Ways"
http://www.ene.gov.on.ca/environment/en/category/climate_change/STDPROD_078897.html

Canada has repeatedly endorsed the 2°C limit for warming

- The 2009 Copenhagen Accord - signed by Canada - recognizes "the scientific view that the increase in global temperature should be below 2 degrees Celsius"
- Other references to the limit
- For the world to reach this goal, fossil fuels need to be phased out aggressively