

Advancing York University's Sustainability Strategy Through Goal PL5:

A call for community collaboration in reducing York University's carbon footprint

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Vice-President Finance and Administration**

York University recognizes that many Indigenous nations have longstanding relationships with the territories upon which York University campuses are located that precede the establishment of York University. York University acknowledges its presence on the traditional territory of many Indigenous Nations. The area known as Tkaronto has been care taken by the Anishinabek Nation, the Haudenosaunee Confederacy and the Huron-Wendat. It is now home to many First Nation, Inuit and Métis communities. We acknowledge the current treaty holders, the Mississaugas of the Credit First Nation. This territory is subject of the Dish with One Spoon Wampum Belt Covenant, an agreement to peaceably share and care for the Great Lakes region.

“We stand now where two roads diverge. But unlike the roads in Robert Frost’s familiar poem, they are not equally fair. The road we have long been travelling is deceptively easy, a smooth superhighway on which we progress with great speed, but at the end lies disaster. The other fork of the road – the one less travelled by – offers our last, our only chance to reach a destination that assures the preservation of the earth”.

Rachel Carson, *Silent Spring*

KEY DEFINITIONS

Carbon: The reference to carbon throughout this document means the same as carbon dioxide.

Carbon Neutral: Refers to achieving net zero carbon emissions by balancing a measured amount of carbon released with an equivalent amount sequestered or offset.

Carbon Offset: A reduction in emissions of carbon dioxide or other greenhouse gases made in order to compensate for emissions made elsewhere. Offsets are measured in tonnes of **carbon** dioxide equivalent (CO₂e).

Carbon Footprint: The amount of greenhouse gases — primarily carbon dioxide — released into the atmosphere by a particular human activity.

Greenhouse Gas (GHG): Gases that trap heat in the atmosphere, for example, carbon dioxide.

EXECUTIVE SUMMARY

In November 2017, York University released its institutional [Sustainability Strategy](#) with a purpose of communicating and implementing a shared vision. The Sustainability Strategy was designed to inspire positive change, build capacity, empower people, and harness innovation to foster a culture of sustainability within and beyond the University. York University's Sustainability Strategy expresses 17 broad goals under the categories of People, Knowledge and Place; it is a holistic approach that envisions the University decades into the future. One of the goals under the Place category - PL5 states:

“York University has a long-term energy strategy and action plan with the goal of minimizing carbon emissions on our campuses. This will be achieved by pursuing integrated strategies in key areas such as energy, transportation, buildings, and operations.”¹

In the spirit of ‘what gets measured gets done,’ the University intends to set specific targets for carbon emissions and has produced this paper to engage the community in a discussion about what those targets should be.

Global greenhouse gas emissions have reached unprecedented levels and are continuing to rise. The global narrative, grounded in numerous and broad scientific research, is that the world is in a climate crisis. This is evidenced in the increasingly common climate related catastrophic events occurring around the globe.

Catastrophes such as cyclones Idai (March 2019) and Kenneth (April 2019) in Mozambique impacted approximately two million people and caused approximately \$US 1 billion in damages to buildings, infrastructure and agriculture.²

According to the United States Department of Commerce, in 2019 there were 14 weather and climate disaster events across the United States, with losses exceeding \$1US billion for each event. The disasters included flooding, hailstorms and wildfires.³

At home, the Federal Government sponsored report on climate change, *Canada's Changing Climate Report*, found that Canada's climate is warming, and that on average,

¹ York University. “Sustainability Strategy” 2017

² United Nations, “Mozambique Cyclones a ‘Wake-up Call’ to Boost Resistance: UN Weather Agency,” UN News, May 2019, <https://news.un.org/en/node/1039381/mozambique-cyclones-a-wake-up-call-to-boost-resistance-un-weather-agency-2>.

³ “Billion-Dollar Weather and Climate Disasters: Overview | National Centers for Environmental Information (NCEI),” <https://www.ncdc.noaa.gov/billions/>.

it is warming at about double the magnitude of the global rate. The report also forecasts an increase in coastal flooding in many areas, mainly due to sea level rise.⁴

In addition to the Federal Government, several Canadian provincial and municipal governments, higher education institutions and other organizations are responding to the scientific findings on climate change; many have acted by setting defined targets and are working to reduce their carbon footprint. York University is committing to do the same by pursuing goal PL5 of the [University's Sustainability Strategy \(2017\)](#). PL5 is

"The climate crisis has already been solved. We already have the facts and solutions. All we have to do is to wake up and change".

Greta Thunberg,
Swedish climate activist

focused on strategies and actions for reducing the University's carbon footprint on its campuses.

Since its founding in 1959 on principles of social justice, York University has grown to become Canada's third largest research and teaching institution. President Lenton (2017) stated that "with this growth comes a shared responsibility to be a leading advocate for sustainability, as we prepare for and respond to the challenges we face locally and globally".⁵ The climate crisis is both a local and global challenge, and the time is now for York University to pursue PL5 by setting and working towards carbon emissions reduction targets that are informed by the Paris Agreement.

This paper provides context for the community to engage in discussions on setting carbon emissions targets for York University. Specifically, input from community members will inform and propel the University's pursuit of PL5, and further define that goal by setting specific targets. York University's carbon emissions targets will align with the [Inter-governmental Panel on Climate Change \(IPCC\)](#) and the [Paris Agreement](#) recommendation of 45% reduction by 2030 and net zero emissions by 2050.

⁴ Environment and Climate Change Canada, "Canada's Changing Climate," backgrounders, gcnews, April 2, 2019, <https://www.canada.ca/en/environment-climate-change/news/2019/04/canadas-changing-climate.html>.

⁵ York University, "York University Sustainability Strategy," November 2017, https://sustainability.info.yorku.ca/files/2017/11/17120-Sustainability-Strategy2017_FINAL.pdf?x81583.

UNDERSTANDING CLIMATE CHANGE

Climate change is a long-term shift in global or regional climate patterns related to the rise in global temperatures from the mid-20th century to present.⁶ Throughout earth's history, climate has continually changed. When occurring naturally, this is a slow process that has taken place over hundreds and thousands of years. The human influenced climate change that is happening now is occurring at a much faster rate. Scientific research points to human activity (i.e. burning fossil fuels such as coal, oil and gas) as a key contributor to climate change. The increasing use and dependency on fossil fuels to heat and cool buildings, fuel vehicles, etc., release gases which heats the air, resulting in warmer temperatures – referred to as global warming. Climate change refers to the climate effects caused by global warming.⁷

“We have a single mission to protect and hand on the planet to the next generation”.

Francois Hollande,
French President

Global Temperatures

The US Department of Commerce 2019 annual global climate report states that 2019 was the second warmest year in the 140-year record, with a global land and ocean surface temperature departure from average of +0.95°C. Nine of the 10 warmest years have occurred since 2005, and 2019 marked the 43rd consecutive year (since 1977) with global land and ocean temperatures, at least nominally, above the 20th century average.⁸

The last four years were the four hottest on record, and winter temperatures in the Arctic have risen by 3°C since 1990. Sea levels are rising, coral reefs are dying, and we are seeing the life-threatening impacts of climate change on health, air, water, and food security.⁹

⁶ “Climate Change,” National Geographic Society, March 28, 2019, <http://www.nationalgeographic.org/encyclopedia/climate-change/>.

⁷ Society.

⁸ Matthew J. Menne et al., “The Global Historical Climatology Network Monthly Temperature Dataset, Version 4,” *Journal of Climate* 31, no. 24 (December 2018): 9835–54, <https://doi.org/10.1175/JCLI-D-18-0094.1>.

⁹ “United Nations Climate Change Summit,” 2019, <https://www.un.org/en/climatechange/>.

Impact of Climate Change

The United Nations warns that disasters stemming from climate change are occurring weekly and that most draw little international attention. Catastrophes such as cyclones Idai (March 2019) and Kenneth (April 2019) in Mozambique and the drought afflicting India (2019) make headlines around the world, but large numbers of “lower impact events” that are causing death, displacement and suffering are occurring much faster than predicted, said Mami Mizutori, the UN Secretary-General’s special representative on disaster risk reduction. “This is not about the future; this is about today.”¹⁰

“The great tragedy of climate change is that it is the poorest and most vulnerable who suffer the most, despite us doing the least to cause it”.

Dr. Adelle Thomas,
University of the Bahamas

Developing nations are experiencing the worst loss from climate change related disasters. In 2019, cyclones in Zimbabwe resulted in more than 1,300 deaths; monsoon flooding caused the deaths of approximately 2,000 people in India, and over 670 people died during Hurricane Dorian in the Bahamas.¹¹

In Australia, the warming climate compounded by a decrease in rainfall resulted in conditions leading to fires burning almost 5 million hectares in New South Wales alone (since September 2019). The fires destroyed thousands of homes and many more people were displaced; many animal habitats have been destroyed and animals have been killed or euthanized due to severe burns. Furthermore, in December 2019 the air quality in Sydney was recorded at 11 times the hazardous level.¹²

Over the last few years Canada has also experienced increased forest fires in Ontario, Alberta and British Columbia. A recent study predicts that western Canada will see a 50% increase in the number of dry, windy days that enable fires to start and spread, whereas eastern Canada will see an increase of such conditions in the range of 200 to 300%.¹³

Overall, there has been a global rise in the declaration of climate emergencies. As of December 2019, there were 1,252 jurisdictions spanning 26 countries that declared

¹⁰ Fiona Harvey Environment correspondent, “One Climate Crisis Disaster Happening Every Week, UN Warns,” *The Guardian*, July 7, 2019, sec. Environment, <https://www.theguardian.com/environment/2019/jul/07/one-climate-crisis-disaster-happening-every-week-un-warns>.

¹¹ “Climate Disasters in 2019 Cost \$140 Billion, Report Finds,” EcoWatch, December 30, 2019, <https://www.ecowatch.com/climate-change-worst-disasters-2019-2642927054.html?rebelltitem=2#rebelltitem2?rebelltitem=2>.

¹² Pei Yu et al., “Bushfires in Australia: A Serious Health Emergency under Climate Change,” *The Lancet Planetary Health*, January 2020, S2542519619302670, [https://doi.org/10.1016/S2542-5196\(19\)30267-0](https://doi.org/10.1016/S2542-5196(19)30267-0).

¹³ “Forest Fires and Climate Change | Climate Atlas of Canada,” <https://climateatlas.ca/forest-fires-and-climate-change>.

climate emergencies, including Canada (June 2019) and the City of Toronto (October 2019).

Scientists and other climate researchers have been sounding the alarm for decades, warning of a climate crisis that would worsen and result in the types of human and planetary catastrophes the earth is currently experiencing. The alarm is now louder, as the earlier climate forecasts are being realized globally and it “feels” real – that unless we shift gears on carbon emissions – major planetary impacts are imminent.

GLOBAL RESPONSE TO CLIMATE CHANGE

International Community

In December 2015, the United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP21) adopted [the Paris Agreement](#) (the Agreement), ratified by 55 countries and entered into force in October 2016. As of 2019, 196 countries, plus the European Union (EU) have signed the Agreement and 183 countries, plus the EU have ratified the Agreement. The Agreement is summarized below.

“The Paris Agreement builds upon the Convention and for the first time brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort”.¹⁴

The Paris Agreement central aims are to:

1. Strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.
2. Strengthen the ability of countries to deal with the impact of climate change.

Parties to the Agreement have committed to the long-term goals for adaptation and climate resilience. The Agreement is the world’s first comprehensive climate agreement, with a strategy that involves a 20/20/20 target (i.e. reduction of carbon dioxide emissions by 20%, the increase in renewable energy by 20% and the increase in energy efficiency by 20%). The Agreement was formed through consensus-building

¹⁴ United Nations, “The Paris Agreement | UNFCCC,” 2015, <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.

and allowed for voluntary and nationally determined targets.¹⁵

Intergovernmental Panel on Climate Change (IPCC)

The Intergovernmental Panel on Climate Change (IPCC) provides policymakers with scientific information about climate change and it also contributed to the Paris Agreement; in turn, the Agreement has major implications for the work of the IPCC.

"We are the first generation to be able to end poverty, and the last generation that can take steps to avoid the worst impacts of climate change. Future generations will judge us harshly if we fail to uphold our moral and historical responsibilities".

Ban Ki-moon,
Secretary-General UN

The IPCC was established by the World Meteorological Organizations and the United Nations Environmental Program, to provide research findings to the world on climate change and its potential environmental and socio-economic impacts.¹⁶

A requirement of parties to the Paris Agreement is to "regularly provide information on anthropogenic emissions by sources and removals by sinks of greenhouse gases, using methodologies accepted by the IPCC and agreed by the COP".¹⁷

The IPCC Report (2018) indicated that avoiding irreversible damage from climate change and to limit global warming to 1.5°C would require "rapid and far-reaching" transitions to reduce greenhouse gas emissions; 1.5°C indicates that "both urgent and transformational adaptation action is needed to reduce climate-related risk". The scale of expected impacts is such that business as usual is no longer an option for any country, community, or organization. Specifically, the IPCC report recommended GHG reductions of 45% by 2030 and reaching net-zero emissions by 2050¹⁸. These targets were reiterated at COP25 (Madrid 2019). At the Madrid conference, UN Secretary-General's António Guterres' opening remarks stated:

"we are not meeting our global targets and temperatures are continuing to rise...I call on business and civil society leaders to address climate change...if we do not reach carbon neutrality by 2050, all our current efforts to promote sustainable development will be undermined."¹⁹

¹⁵ United Nations.

¹⁶ "Outcomes of COP21 and the IPCC," World Meteorological Organization, November 1, 2016, <https://public.wmo.int/en/resources/bulletin/outcomes-of-cop21-and-ipcc>.

¹⁷ "Outcomes of COP21 and the IPCC."

¹⁸ Masson-Delmotte et al., "Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty."

¹⁹ United Nations, "UNITED NATIONS Climate Change Summit."

To reaffirm earlier findings, in 2019 the IPCC published a range of evidence confirming that human activity over the last century is the cause of climate change, and submitted that the planet is already experiencing the impacts of climate change, including increased temperatures, heat waves, melting ice caps, rising sea levels, species loss, and increased extreme weather events, including unprecedented flooding, droughts and fires.²⁰

Beyond the UN, in November 2019, the Journal *BioScience* published a “Declaration of Climate Emergency” signed by 11,000 scientists from 153 countries (including faculty from York University). The declaration identified the following six critical and interrelated areas of focus for government and policymakers to address in reducing the impacts of climate change:

- Energy
- Short-lived pollutants
- Nature
- Food
- Economy
- Populations²¹

“The climate is changing.
The proper political debate
would be how to deal with
these risks”.

Steven Chu,
Professor of Physics,
Stanford University

The declaration of climate emergency and the above recommended areas of focus are consistent with the findings of the IPCC and provides additional context for the University’s considerations in its carbon emissions reduction initiatives.

Also, around the world, 94 megacities formed a coalition to address climate change through collaboration, knowledge sharing and support, aptly captured in the following statement:

“Representing 700+ million citizens and one quarter of the global economy, mayors of the C40 cities (including Toronto), are committed to delivering on the most ambitious goals of the Paris Agreement at the local level, as well as to cleaning the air we breathe.”²²

²⁰ P.R. Shukla et al., “IPCC, 2019: Summary for Policymakers. In: *Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems*” (In Press, 2019).

²¹ William J Ripple et al., “World Scientists’ Warning of a Climate Emergency,” *BioScience*, November 5, 2019, biz088, <https://doi.org/10.1093/biosci/biz088>.

²² “C40 Cities,” C40.org, <https://www.c40.org/>.

CANADIAN RESPONSE

Government

Authored by scientists from various Government Ministries and university experts, and informed by consultations with Indigenous organizations, academia and governments, the Federal Government's report, *Canada's Changing Climate Report (CCCR)*, is consistent with international scientific understanding of climate change and builds on information found in the United Nation's IPCC assessments. Key findings of the CCCR are as follows:

- Canada's climate continues to warm and is driven by human influence
- On average, past and future warming in Canada, is about double the magnitude of global warming
- Canadian areas of the Arctic and Atlantic oceans have experienced longer and more widespread sea-ice-free conditions
- Coastal flooding is expected to increase in many areas of Canada because of local sea level rise
- The rate and magnitude of climate change under high versus low emission scenarios project two very different futures for Canada²³

As one of the world's largest GHG emitters per capita, Canada has committed to net-zero carbon emissions by 2050, as revealed by Governor General Julie Payette in her speech from the throne in December 2019.²⁴

At the municipal level, the City of Toronto adopted its first climate action plan in 2007, which set targets to reduce emissions by 65% against the 1990 levels, by 2030. In 2016, the City inventory reported emissions reduction by 33% - halfway towards the 2030 target.²⁵

In 2015 Toronto also launched the TransformTO: Climate Action for a Healthy, Equitable and Prosperous Toronto. More recently, in Fall 2019, the City pledged as part of the C40 Cities Challenge – that all new buildings will operate at net zero carbon by 2030 and that all old and new buildings will meet net-zero carbon standards by 2050.

²³ Canada, "Canada's Changing Climate."

²⁴ Carl Meyer in News, Energy, and Politics | December 5th, 2019, "Liberals Commit to Carbon-Pollution Target of Net-Zero by 2050," National Observer, December 5, 2019, <https://www.nationalobserver.com/2019/12/05/news/liberals-commit-carbon-pollution-target-net-zero-2050>.

²⁵ "City of Toronto Releases Updated Greenhouse Gas Emissions Inventory," accessed January 19, 2020, <http://wx.toronto.ca/inter/it/newsrel.nsf/11476e3d3711f56e85256616006b891f/e29796278fb8c9a5852583990052eaf5?OpenDocument>.

Toronto is also launching a Building Challenge for property managers and owners to move Toronto towards 100% net-zero carbon emissions. To date, several large private property owners and the following organizations have signed onto the challenge:

- Ryerson University
- The University of Toronto
- The University Hospital Network
- Toronto District School Board
- Toronto Catholic District School Board

Higher Education

Higher education has the power, potential and imperative to shape a sustainable society and a moral obligation to adapt and mitigate against the emerging climate change crisis. Academic institutions play an important role in educating community members on the climate crisis and on mitigating behaviour to lower carbon emissions. Furthermore, institutional leadership, policy and practices have the potential to serve as models for addressing climate change. Universities are uniquely positioned to facilitate interdisciplinary and multi-sector research collaboration to drive innovation and creativity needed to tackle the big problems facing the world today — issues like climate change.

At the United Nations Climate Change Conference (COP25), Italy and Mexico committed to “stepped – up climate and environmental education in order to equip a new generation with the knowledge, awareness and skills needed to tackle climate change and other environmental challenges and called on other countries to follow suit.”²⁶

Second Nature, an organization committed to accelerating climate action in and through higher education, has a Climate Leadership Network that comprises colleges and universities in the United States. Second Nature is taking climate action and preparing students through research, education and operations to solve challenges of the 21st century. There are now over 440 institutions across the United States who have made a commitment to carbon neutrality.²⁷ Additionally, in 2019, more than 45 universities from across the world joined G7 countries to form the U7+ Alliance, with goals to take action on a range of global issues, including climate change. The U7+ alliance includes

²⁶ Carl Meyer in News, Energy, and Politics | December 5th, 2019, “Liberals Commit to Carbon-Pollution Target of Net-Zero by 2050,” National Observer, December 5, 2019, <https://www.nationalobserver.com/2019/12/05/news/liberals-commit-carbon-pollution-target-net-zero-2050>.

²⁷ Second Nature, “Climate Leadership Network,” Second Nature, 2019, <https://secondnature.org/climate-action-guidance/network/>.

Universities of Toronto, British Columbia, Montreal, Ottawa, and McGill University.²⁸ Appendix A, attached, is an analysis of climate action by higher education, particularly Canadian institutions.

Many universities have already committed to carbon neutrality and have seen it as an opportunity to accelerate on campus experiential learning and to prepare students to enter a rapidly changing world through the connection of academic programs with hands-on experience.²⁹

For example, in October 2019 the University of Toronto released its “Low-Carbon Action Plan 2019-2024” report which identifies fostering innovative solutions through a model of using the Campus as a Living Lab & Experiential Learning to “apply skills in teaching and research to real-world operational settings through course work, collaborations with research teams and the Work Study program”.³⁰ Similarly, a goal identified in the York University Sustainability Strategy states:

“York University utilizes its campus operations, grounds and buildings as ‘living labs’ that provide experiential opportunities to both undergraduate and graduate students.”³¹

“Universities should step up to [climate change] challenges. . . We should be foreseeing changes, developing solutions and strategies to shape and cope with them and equipping students with the tools to succeed and thrive in an uncertain world.”

Philip Steenkamp,
President & Vice-Chancellor,
Royal Roads University

York University has an extensive history of demonstrating commitment to sustainability. In 2017 the University approved a Sustainability Strategy to guide the University in advancing sustainability into the near and long-term future. The strategy identifies goal PL5, which states:

“York University has a long-term energy strategy and action plan with the goal of minimizing carbon emissions on our campuses. This will be achieved by pursuing integrated strategies in key areas such as energy, transportation, buildings, and operations.”³²

This goal connects well to the areas of focus identified under the “Declaration of Climate Emergency”, mentioned earlier in this document under the “Global Response to Climate Change” section.

²⁸ U7 Alliance, “U7 + Alliance of World Universities,” 2019, https://www.u7alliance.org/wp-content/uploads/2019/07/U7_2019_FINAL_DECLARATION.pdf.

²⁹ Sara Rinfret, “Experiential Learning and Pathways to Carbon Neutrality,” *PS: Political Science & Politics* 50, no. 03 (July 2017): 842–48, <https://doi.org/10.1017/S1049096517000701>.

³⁰ University of Toronto, “Low-Carbon Action Plan 2019-2024,” 2019, https://www.fs.utoronto.ca/wp-content/uploads/2019/10/2019-10-04_LowCarbonActionPlan_V22_Spread_Web.pdf.

³¹ York University, “York University Sustainability Strategy.” 2017

³² York University. “Sustainability Strategy” 2017

In addition, both the York University Academic Plan 2015-2020³³ and the Indigenous Framework for York University (2017)³⁴ speak to the University's commitment to sustainability as a core value. Furthermore, the commitment to carbon neutrality is an opportunity to accelerate research and innovation on climate solutions to address the climate crisis.

CALL FOR CLIMATE ACTION

Climate change activism is gaining significant momentum. Lead by Greta Thunberg, a 16-year-old Swedish activist, people around the globe, especially young people concerned about their future, are challenging world leaders, the United Nations and other institutions to stem carbon emissions to reduce the impact on the planet. In September 2019, the largest climate mobilization in history took place with over 7.6 million people³⁵ participating in climate action globally.

"Why should we study for a future that is being taken away from us...We demand a safe future. Is that really too much to ask?"

Greta Thunberg,
Swedish climate activist

"For why do we educate, except to prepare for the world? Why do we cultivate the intellect of the many beyond the first elements of knowledge, except for this world? Will it be much matter in the world to come whether our bodily health or our intellectual strength was more or less, except of course as this world is in all its circumstances a trial for the next?"

John Cardinal Newman,
Philosopher

Young people and future generations are at the greatest risk of experiencing loss and suffering due to climate change. They are also most likely to be current or future members of higher education institutions. A recent survey of students on their views on sustainability efforts by higher education institutions found that of those surveyed, 94% felt that universities should be behaving more responsibly on environmental issues. Respondents also agreed that "universities have a responsibility to take part in protecting the environment (66%), developing sustainable technologies (65%), and developing green energy technologies (61%)."³⁶

As Canada's third largest University, York University must build on its long history of commitment to social justice, including environmentally

³³ York University, "University Academic Plan 2015-2020," February 25, 2016, <https://secretariat.info.yorku.ca/files/UAP-2015-2016-Final.pdf>.

³⁴ York University, "The Indigenous Framework for York University - A Guide to Action," 2017, <https://indigenous.yorku.ca/files/2017/08/Indigenous-Framework-for-York-University-A-Guide-to-Action.pdf>.

³⁵ "Global Climate Strike," Global Climate Strike, <https://globalclimatiestrike.net>.

³⁶ Sarah Linney, "Sustainability in Higher Education: What More Can Universities Do?" (QS, 2019), <https://www.qs.com/higher-education-students-sustainability-expectations/>.

sustainable practices and must engage its community in learning and actioning behaviours that contribute to carbon emission reductions. The University must be bold and confident in setting its carbon emission reduction targets by aligning its targets with the [Inter-governmental Panel on Climate Change \(IPCC\)](#) and the [Paris Agreement](#) recommendation of 45% reduction by 2030, and net zero emissions by 2050.

A PATH FORWARD

Pursuing PL5 requires a commitment to setting targets. To achieve carbon neutrality, York University will need to develop a comprehensive climate action plan. This will include a Greenhouse Gas Emissions Inventory (with a consideration for historical emissions), and a mechanism to track progress.

“Unless someone like you cares a whole awful lot, nothing is going to get better. It's not”.

The Lorax,
Dr. Seuss

GHG Emissions are broken down into three categories (scope):

Scope 1 Emissions – Direct emissions produced through the burning of fuels, including the following:

- Natural gas for heating and cooling, and electricity produced by co-generation units,
- Gasoline and diesel to operate vehicles.

Scope 2 Emissions – Indirect emissions generated by the electricity purchased from external utilities such as Toronto Hydro.

Scope 3 Emissions – All other indirect emissions resulting from academic and administrative operations, including:

- Travel by all modes of transportation for business (i.e. conferences, meetings, student recruitment, athletic competitions, student exchanges, and commuting to/from the University),
- Through procurement for the purchase of goods and services,
- The treatment of waste generated from operations, construction and wastewater.

Achieving carbon neutrality will require engagement and commitment from all parts of the University community, institutional prioritization and planning, and the allocation of appropriate resources.

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Wilfrid Laurier University	Yes (2018)	Reduce emissions by 40% by 2030 and Carbon Neutrality by 2050	https://www.wlu.ca/news/spotlights/2019/ian/laurier-combats-climate-change-with-sustainability-action-plan.html
Other Canadian Institutions			
Mohawk College	Yes (2016)	30% reduction by 2020 versus our 2007 baseline	https://www.mohawkcollege.ca/about-mohawk/sustainability/environmental-management-plan-20
McGill	Yes (2017)	Carbon Neutrality by 2040	https://mcgill.ca/sustainability/files/sustainability/vision_2020_executive_summary.pdf
Univeristy of British Columbia	Yes (2017)	Reduce emissions by 67% by 2020, with 100% reduction in GHG emissions by 2050 Member of UC3 Commitment to Carbon Neutrality 2050	https://sustain.ubc.ca/campus/climate-action/climate-action-plan
University of Calgary	Yes (2019)	97% reductions in GHG emissions by 2050	https://ucalgary.ca/sustainability/files/sustainability/climate-action-plan_final.pdf
Canadian Government Targets			
City of Toronto	Yes	30 % by 2020; 65% by 2030 and Net Zero by 2050 or sooner	https://www.toronto.ca/services-payments/water-environment/environmentally-friendly-city-initiatives/transformto/transformto-climate-action-strategy/
Province of Ontario	Yes	30% below 2005 levels	https://www.ontario.ca/page/climate-change
Federal Governement of Canada	Yes (2020)	Net-Zero carbon emissions by 2050	https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/ministers-message.html
US Universities			
Arizona State University	Yes (2009)	Carbon Neutrality (eliminate GHG emissions from building energy source 2025 and all sources by 2035)	https://sustainability.asu.edu/resources/climate-neutrality-at-asu/
Ohio State University	Yes (2017)	Carbon Neutral by 2050	https://www.osu.edu/energymanagement/
Univeristy of California	Yes (2011)	reduce GHG emissions by 1990 levels by 2020; Achieve Climate neutrality for scope 1 and 2 by 2025; Scope 3 emissions by 2050	https://ucop.edu/sustainability/_files/climate-report.pdf
University of Colorado, Boulder	Yes (2015)	reduce by 20% by 2020 from a 2005 baseline, a 50 % reduction by 2030 and 80% by 2050	https://www.colorado.edu/fmenergy/
University of Maryland	Yes (2015)	50% reduction in carbon emissions (2005 levels) by 2020 and a 60% by 2025. Carbon Neutral by 2050.	https://sustainability.umd.edu/progress/climate-action-plan
University of Washington	Yes (2009)	15% below 2005 levels by 2020; 36% below 2005 by 2035 and Carbon Neutrality by 2050.	https://green.uw.edu/inform/uw-climate-action-plan