

**St. Lawrence University  
Climate Action Plan**

**Prepared by:**

**The Conservation Council Working Group for Planning for Carbon Neutrality in  
Response to the Presidents Climate Commitment**

## **I. ST. LAWRENCE UNIVERSITY CLIMATE NEUTRALITY PRINCIPLES**

St. Lawrence University recognizes that as an institution of higher education of some privilege we have an obligation to lead by action to mitigate climate change. In furtherance of this end, the University adopts the following principles to guide our actions:

### **1. We will follow through on our commitments.**

The University has committed to a Climate Action Plan (CAP) to guide it toward zero net greenhouse gas (GHG) emissions, or climate neutrality.<sup>1</sup>

### **2. We will all work together to achieve our commitment.**

All members of the University community including the administration, Board of Trustees, faculty, staff, students, and others will observe the CAP in their planning, policy, and other institutional decision-making.

Recognizing:

- a. University-related actions, endeavors, and policies that are guided by the CAP and contribute to GHG emissions reductions must be varied and flexible.
- b. New practices and policies must be consistent with maintaining the viability of the institution and with overall environmental sustainability.
- c. Changes in any current or future policy should not move the University further from our climate commitment goals.

### **3. We will be leaders using the best available information to guide our actions.**

The University will base its CAP on the best available science, technology, practices, and data to ensure that it is a leader in climate change mitigation. In addition, any emissions reductions we claim toward our goal of climate neutrality must be measurable, reportable, and verifiable.

### **4. We will periodically revise our plan to ensure that it is part of our strategic planning.**

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<sup>1</sup> Where GHG emissions directly from our operations or indirectly from our activities are reduced to zero and/or offsets bought or generated to cover our emissions totals.

The CAP will be revisited and revised to ensure that the best available science, technology, and practices continue to inform the CAP. Revision must not delay achievement of the ultimate goal of zero net GHG emissions.

- 5. We will engage all stakeholders in this endeavor including, but not limited to, the Board of Trustees, Senior Staff, and the tripartite Building and Grounds and Campus Support Committee.**

GHG reduction planning, action, and policies must be transparent and involve all stakeholders, including the local community.

- 6. We will communicate plans, actions, and outcomes to the institution, community, and broader society.**

University GHG reduction planning and implementation will be transparent and foster continuous dialogue between all stakeholders.

- 7. We will prioritize our efforts based on our commitment and defined mission, goals, and objectives as an institution of higher education.**

Projects that contribute to the mission, goals, and objectives of the University and/or reduce University operating costs while reducing greenhouse emissions will be prioritized above other projects that contribute to execution of the CAP.

## II. TARGET, BASELINE, TIMETABLES, AND SCOPE

### A. Target

Climate neutrality, or zero net GHG emissions, will be achieved no later than 2040.

#### Rationale

St. Lawrence University will reduce its GHG emissions:

1. In accordance with the goals expressed by the global community;
2. Guided by the best available science; and
3. Consistent with the principles outlined above.

The United Nations Framework Convention on Climate Change (UNFCCC) has been accepted or ratified by all parties of the United Nations, and observer states, representing a global consensus on matters related to climate change. The ultimate goal of the UNFCCC is to “prevent dangerous anthropogenic interference with the climate system” in a manner that safeguards the ability of ecosystems to adapt, does not threaten food systems, and where economic development can “proceed in a sustainable manner.”<sup>2</sup> We align our efforts to reduce GHG emissions with these goals of the global community.

The most extensive, and current, compilation of peer-reviewed climate change science is the Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC).<sup>3</sup> AR4 identifies thresholds where major disruptions to ecosystems and food systems begin to occur. Accordingly, at 2° C warming from pre-industrial levels we could expect an increase in species extinction, storm activity, flooding, and changes in disease vectors. At 2.5° C we could expect decreased agricultural production and major carbon sinks, such as forest ecosystems, turn into sources of GHGs. For these reasons, a warming of 2° C was considered in the scientific literature up until 2005 an upper threshold to avoid dangerous interference with the climate system. More recent scientific studies have concluded that a 1.5° C or lower threshold, with deeper GHG emissions cuts, is necessary to avoid dangerous climate change.<sup>4</sup>

AR4 estimates that a warming of 2° C is associated with CO<sub>2</sub> concentration in the atmosphere of 350 parts per million (ppm) and that in order to achieve GHG stabilization in the atmosphere below 350 ppm, global CO<sub>2</sub> emissions would have to decrease by 85% from 2000 levels by 2050. These conclusions are widely accepted by national academies of science from Japan,

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<sup>2</sup> United Nations Framework Convention on Climate Change (UNFCCC). 1992. *Convention on Climate Change*. United Nations Environment Programme’s Information Unit for Conventions.

<sup>3</sup> Intergovernmental Panel on Climate Change. 2007. *Climate Change 2007: Synthesis Report*. World Meteorological Organization and the United Nations Environment Programme.

<sup>4</sup> See for example: Smith, et al. 2009 “Assessing dangerous climate change through an update of the Intergovernmental Panel on Climate Change (IPCC) ‘reasons for concern’” Proceedings of the National Academy of Sciences V. 106, No. 11: 4133-4137.

Brazil, Germany, Canada, Italy, France, Russia, India, China, the UK, and the United States. The global atmospheric concentration of CO<sub>2</sub> is about 388 ppm and rising at about 2 ppm/yr.<sup>5</sup>

As an institution of relative privilege, charged with educating the next generation, we believe it is our obligation to be a leader in the global effort to stabilize the global climate system at 2° C and to avoid dangerous climate change. We therefore chose 2040 as our date for climate neutrality, or 100% net GHG reductions.

## **B. Baseline**

In 2007, the University committed to the goal of climate neutrality; therefore 2007 is the GHG emission baseline against which future reductions will be measured.

## **C. Timetables and Interim Targets**

GHG emission reductions will be achieved by implementing projects and initiatives that will result in percentage reductions from the baseline year, 2007.

To achieve zero-net greenhouse gas emissions, St. Lawrence must mitigate around 19,000 metric tons of carbon dioxide-equivalent annual emissions (MT CO<sub>2</sub>e). The target for this commitment is 2040, 30 years from the acceptance of the Climate Action Plan. Given the expected changes in University operations and finances, as well as state, federal, and international policy, and availability and cost of sustainability technologies, providing a detailed 30-year mitigation plan is difficult. We will therefore begin with a three-year Work Plan largely determined by the timeframe of our capital investment needs. Subsequent work plans will be developed every two to five years.

The objective of the Work Plan is to provide detailed information on short-term mitigation projects and updates on the progress of long-term projects. Developing plans on a two- to five-year timeframe allows for greater detail on emissions savings; more accurate financial costs; the most relevant curricular change and behavior change campaigns; and appropriate communication tools to be included.

The Coordinator of Sustainability Projects and the Director of Facilities Operations will develop the first work plan by the end of the fiscal year 2011.

## **D. Scope**

University GHG emissions can be divided into three categories called scopes (Table 2). Scope 1 includes to direct GHG emissions and removals on University property, such as emissions from our power plant. Scope 2 includes indirect GHG emissions supported by University-related

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<sup>5</sup> National Oceanic & Atmospheric Administration (NOAA). 2010. "Trends in Atmospheric Carbon Dioxide – Mauna Loa." <http://www.esrl.noaa.gov/gmd/ccgg/trends/>. Viewed January 15, 2010.

activity, such as campus outdoor lighting. Scope 3 emissions include other indirect GHG emissions supported by University-related activity, such as faculty travel.

**Table 2: GHG Emissions Sources by Scope**

Category	Sources
<b>Scope 1</b>	
Stationary combustion	Boilers, furnaces, heaters, generators
Mobile combustion	Fleet vehicles, utility vehicles
Agriculture	Fertilizers, horses, sheep
Other	Refrigerants
<b>Scope 2</b>	
Purchased electricity	On and off campus buildings, external lighting
<b>Scope 3</b>	
Transportation	Employee commuting, University air travel, <i>leased vehicles, study abroad travel</i>
Waste	Landfill, <i>wastewater</i>
Procurement	<i>Paper</i>

Note: Items in italics are emissions sources currently tracked but not included in our GHG emissions assessment.

St. Lawrence University claims responsibility for all scope 1 and 2 emissions that are measurable, reportable, and verifiable and for identified Scope 3 emissions (Table 2). Omitted from Table 2 are activities contributing indirectly to GHG emissions that are beyond University control, such as food-related transportation emissions are not currently being included in the CAP. Also known carbon sequestration processes on campus, such as tree planting, have not been incorporated in to the GHG assessment because they are currently difficult to measure accurately.

### III. FRAMEWORK

#### A. Organization

Since the CAP must be integrated into strategic planning and policy formation, simply recharging a standing tripartite committee will not be an efficient and effective administrative unit. Therefore, the responsibility for the CAP must also be shared with strategic members of the University Staff, as well as the Board of Trustees. Therefore, it is recommended that:

1. The Board of Trustees assigns responsibility for sustainability and climate neutrality to a committee of the board. This Committee will be charged with review and long-term implementation of the CAP, including periodic Work Plans within the larger mandate of leading St. Lawrence University's transition to an environmentally sustainable institution.
2. That the Conservation Council be renamed the Campus Committee on Sustainability and Climate Neutrality and recharged as follows:

*The Campus Committee on Sustainability and Climate Neutrality will review progress toward climate neutrality and environmental sustainability, especially as represented by successive Work Plans for the implementation of the CAP.*

*It will review and approve revisions to the CAP and the successive work plans in the light of this progress.*

*It will consider means to move the University toward environmental sustainability and review the University's progress toward that goal.*

*It will ensure effective communication with the campus and larger community about the University's plans to achieve climate neutrality and environmental sustainability, and its progress toward these goals.*

*It will seek ways to heighten education about climate neutrality and sustainability at the University through the classroom curriculum and by other appropriate means.*

3. Membership of the newly charged Campus Committee on Sustainability and Climate Neutrality will include the Director of Facility Operations, Staff Representatives from Student Life and Admissions, the Coordinator of Sustainability Projects, a member of Faculty Council, at least two designated Thelmo delegates, and at least two additional faculty members. The Coordinator of Regional Development and Sustainability and the

Assistant Director of HVAC and Utilities should be designated resource persons. This committee will be chaired by a faculty member, and the chair will be a designated delegate to the trustee committee assigned responsibility for sustainability and climate neutrality.

4. The Coordinator of Sustainability Projects will organize the collection of data from all relevant parties, derive successive work plans, and provide this information to the Campus Committee on Sustainability and Climate Neutrality so that CAP progress can be reviewed, feedback collected, and successive Work Plans developed.
5. The Coordinator of Sustainability Projects and the Director of Facilities Operations will develop the first work plan by the end of the fiscal year 2011.

## **B. Education and Research**

Pursuing carbon neutrality as a campus commitment will stimulate many new opportunities for education, research, and extra-curricular learning.

The University has an unusually rich and well established environmental curriculum poised to take advantage of CAP as an academic pursuit. Departments across the campus with diverse faculty expertise already cover climate change themes. The CAP will be an additional area of inquiry with valuable data and information that can be included in our academics.

Data and information generated from our climate planning, and made available to the campus community, can also support new research for faculty and students, including research fellowships and advocacy work. Specific areas to note are listed in the Work Plan below.

The Coordinator of Sustainability Projects will be the contact point for information on the CAP and CAP activities for interested faculty, staff, and community members. The Campus Committee on Sustainability and Climate Neutrality will also organize periodic information sessions on the CAP and our progress toward meeting its goals.

With the implementation of the CAP, students will benefit from forming new habits of sustainable living by participating in a community striving to become climate neutral and moving toward environmental sustainability.

## **C. Communications and Outreach**

The process of getting the University to climate neutrality must be inclusive and in order for that to be successful, every step in that process must be communicated well and clearly to the community, both within and outside of the campus.

Communication – which encompasses input as well as dissemination of information – may take a

variety of forms, depending upon audience, resources, relevance, schedules, and other factors. Some of the methods that might be considered:

- Training faculty and staff in new technologies, facilities, equipment and methods;
- Assistance in and encouragement for incorporating sustainability into event planning;
- Events that would attract a broad variety of constituents; and
- Use of electronic means to convey information (including University GHG emissions data) and seek input.

#### **D. Financing**

The University recognizes that a commitment to the CAP entails finding the resources to implement it. The specifics of financing climate neutrality and the recommended mitigation strategies in this plan require on-going strategic planning and discussion. St. Lawrence is making incremental steps within the current annual capital budget process to support the advancement of the sustainability initiatives within this report and other financial options are being considered to implement both immediate and longer-term advancements towards our goal of carbon neutrality by 2040

Beyond capital budget allocation, the most immediate source of financing will be found within each of the institutions operating budgets as we encourage all of our program and budget directors to make more sustainable choices with the funding we presently have within each of the universities budgets. Additionally, initiatives are underway within our current development structure to enhance the current giving opportunities available for “directed” giving to sustainability initiatives. Sustainability is now one of the gift designations alumni, parents and friends can support through the St. Lawrence Annual Fund. Additionally, the University should prioritize the pursuit of outside funding sources to support climate neutrality and environmental sustainability projects and initiatives.

#### **E. Means of prioritizing emissions reduction projects**

It has been said that the cleanest power plant on earth is the one we don’t have to build. To reduce St. Lawrence’s greenhouse gas emissions to zero we must identify our priorities and specify the order of tasks to be accomplished. The following principles should be followed, in order, to prioritize expenditures on greenhouse gas emissions reductions:

- Energy conservation through behavioral change.
- Increased building and operational efficiency.
- Switching to renewable, non-fossil fuel energy.
- GHG emissions offsetting.

We will give first priority to emissions reduction projects that that will contribute to the mission, goals, and objectives of the University or reduce University operating costs. Additionally, since

it is easier to reduce greenhouse gas emissions that are a direct result of our on campus activities, we recommend focusing efforts first on operations on campus, second on operations off campus (e.g. Canaras), and third on indirect emissions (e.g. employee commuting).