

Greenhouse Gas Reduction Focus Areas		Not Started	In Progress	Done	Ongoing	N/A	Comments
Focus #1: Energy Supply and Demand							
1	Develop a consolidated energy information database to include -- at minimum -- central plant and per-building steam production, steam use, and electrical demand data. Format the database such that faculty and staff members and students have Web or network access to view and export data.						Lucid system implemented, ongoing refinements to meter maintenance and data analysis / reporting
2	Use the energy information database to develop a regular reporting system to keep the campus community apprised of energy usage per building and the progress of energy conservation/reduction measures.						Some basic reporting implemented (weekly emails) but comprehensive energy report format is still in progress
3	Develop space utilization guidelines to define a comprehensive needs assessment process prior to implementing plans for new square footage, including a set of recommended square footage guidelines for new spaces by type.						Based on Campus Master Plan which projects net growth of only 3%, focusing instead on renovation and replacement.
4	Add requirements to Carleton's current LEED silver new construction standard that provide further guidance for the energy management component of the LEED building rating system						2019 Anderson Hall project implemented net zero energy increase requirement, but no consistent standard exists for all projects - renovation and new construction
5	Evaluate LEED existing building standards as a starting point for developing green building design guidelines for interior renovation projects.						Various measures integrated into Design and Construction standards. Ongoing updates as new technologies and standards emerge.
6	Conduct energy audits for all individual houses and primary campus building, engaging student participation wherever possible and professional engineering assistance as needed.						Xcel Turn-Key audits completed in Dec 2019 on all main campus buildings. Next steps: comprehensive retro-commissioning and controls review.
7	Based on building energy audits, incorporate appropriate energy conservation projects into annual facilities budget and work plans. Projects that fall within a five-year payback time frame should be prioritized, and those with paybacks of ten years or less should be strongly considered.						Comprehensive ECM program in progress based on Turn-Key audits. Next steps: deeper retro-commissioning of all buildings and controls systems.
8	Work with information technology services to develop a green IT energy reduction plan, implement appropriate metrics to measure progress, and incorporate IT energy reporting into campus-wide energy conservation reports.						
9	Complete installation of wind turbine #2 as a direct source of renewable energy.						
10	Add a fifth-year intern or other staff position to work with the manager of campus energy and sustainability, under the guidance of the Environmental Advisory Committee, to implement a comprehensive sustainability campus outreach program.						Sustainability Programs Coordinator position created in 2016
11	Consider implementing a coordinated branding program to unite Carleton's campus-wide sustainability efforts and increase visibility.						Website and logo launched spring 2012
12	Develop a detailed replacement plan for boiler #1 using a combined heat and power solution -- a boiler with the addition of a back pressure turbine.						Utility Master Plan implemented hot water geothermal transition.
13	Rerun prior geothermal studies using measured conductivity values in lieu of empirical values and update Recreation Center, Gould Library, and Center for Mathematics and Computing payback estimates accordingly.						Utility Master Plan implemented hot water geothermal transition.
14	Replace wind turbine #1 at the end of its useful life (appx. 2024); and direct interconnection to Carleton's electrical grid.						To be completed in 2024
15	Evaluate annual financial commitment required to offset Carleton's entire carbon footprint as a baseline for comparison against the capital cost of direct GHG reduction strategies.						Periodic evaluation of offset pricing and opportunities - last undertaken by the EAC in 2016-2017

Focus #2: Transportation

		Not Started	In Progress	Done	Ongoing	N/A	Comments
1	Consider undertaking substitute fuel demonstration projects to evaluate possibilities for improving the overall energy profile of the campus vehicle fleet.						Facilities staff determined this is not practical since biofuel gels in winter.
2	Evaluate current College-owned vehicles for potential opportunities to purchase vehicles with lower emissions.						Campus fleet includes many hybrids, continuing to evaluate EV technology for both campus and maintenance fleets.
3	Consider eliminating all "approved use" student vehicle permits to encourage use of public transit options. (Retain current policy for student "dead storage" parking permits.) Design custom programs for students who have specific travel needs that require frequent vehicular travel off-campus.						No action taken yet.
4	Conduct an annual commuting survey to understand staff and faculty commuting habits and further increase the accuracy of Carleton's greenhouse gas emissions inventory.						Commuting survey found that it would be too consuming to conduct every year, done every five years, FY13 and upcoming FY20. Part of work flow.
5	Encourage faculty and staff members to walk, bike, or carpool to campus.						Bike to Work Week is an annual event, but additional programs or outreach is needed to truly make an impact.
6	Consider implementing employee benefits that set aside pre-tax dollars for carpool and public transit commuting options.						No action taken yet.
7	Consider a "live local" program to encourage staff and faculty members to live in the Northfield area.						No action taken yet.
8	Engage a task force to study the cost, impact, and sources of purchased carbon offsets equal to some or all faculty staff, and student long-distance travel funded by the College.						EAC completed research in FY18, but no formal report completed as administration decided to not pursue at the current time period.

Focus #3: Waste Management

		Not Started	In Progress	Done	Ongoing	N/A	Comments
1	Work with waste hauler to commence a monthly recycling and compost reporting system.						DSI provides annual reports, piloting the Lucid system for data visualization.
2	Partner with Minnesota Waste Wise to conduct annual or biannual waste management audits.						Audits on a rolling basis, as needed and where there is contamination. No longer working with Waste Wise.
3	Improve and expand communication and education about what is recyclable, compostable, and waste. Work with food service provider to label café items accordingly.						Campus-wide signage complete in FY14 and again in FY18. Ongoing maintenance.
4	Consider expanding composting to administrative and academic buildings in addition to res halls.						Completed in FY2013
5	Expand residence hall bathroom composting program to include all on-campus residence halls with the eventual inclusion of all primary campus buildings.						Completed in FY2013
6	Institute a campus-wide IT policy that all standard office and computer lab printer defaults are set to duplex mode.						Complete date?
7	Reduce the number of plastic bag insets in Carleton office waste baskets by reducing the number of waste baskets in each office and reusing or eliminating plastic inserts.						Pilot project attempted in FY2013; partially successful. Program was tabled for the time.
8	Establish a Web-based inventory system for excess office supplies and office furniture so requests can be filled with a reused item rather than a new purchase whenever possible.						Office supply swap established in sustainability office; govdeals used for other items. Use work order system and workflow established FY19 for surplus.
9	Work with students, the Environmental Advisory Committee, and Carleton's waste hauler to evaluate whether Carleton should participate in the nationwide higher education Recyclemania competition which is listed as a "tangible action" in ACUPCC. (www.recyclemania.org)						Participated in Recyclemania FY17, FY18, FY19 and intend to participate in FY20.

Focus #4: Land Management

		Not Started	In Progress	Done	Ongoing	N/A	Comments
1	Conduct evaluations of arboretum carbon sequestration with each update to the Carleton Greenhouse Gas Inventory, coordinating with student class projects whenever possible.						BIOL 221: Ecosystem Ecology, Nancy Braker - no updates since 2011.
2	Include carbon sequestration potential as an evaluation criterion for any future opportunities to expand arboretum acreage.						
3	Support the proposed reduction of vehicular parking within the campus center.						Some parking spaces by the bald spot eliminated. Circulation Planning includes parking study by density need and studies reduction of vehicle traffic on core campus.
4	Continue replacement of existing impervious surfaces with permeable paving, formally establishing this as a campus-wide grounds policy.						To be evaluated as part of construction standards revision in Feb 2014. No campus-wide grounds policy. Pervious Pavers were installed prior to 2012 as a pilot in 2nd & Union lot and James/Concert pavers in summer 2020. Further study needs to be evaluated for ongoing maintenance of these lots. No further projects are planned at this time. Alternative filtration and stormwater projects are being evaluated. Building standards include this.
5	Consider establishment of a policy requiring that any addition of exterior hardscape (sidewalks, plazas, driveways, ect.) be accompanied by an equivalent reduction of hardscape in other areas (no net loss of green space).						To be evaluated as part of construction standards revision in Feb 2014. Have not addressed hardscape reduction at this time.
6	Develop a campus landscape map by zone that can be used by students to calculate carbon sequestration of the landscaped area using methods previously applied to the arboretum.						Future class topic for GIS to map different landscapes and surfaces (buildings, green space, plant beds, parking lots, etc.) was initiated in 2014, but didn't get off the ground. Tree Survey is updated annually.
7	Evaluate sustainable alternatives (prairie plantings or other types of perennial plants) to ornamental turf grass that reduce mowing and watering requirement and increase carbon sequestration.						To be evaluated as part of construction standards revision in Feb 2014.
8	Evaluate pesticide and fertilizer use, pest management systems, and storm water management in the format consistent with how these elements are evaluated in the AASHE STARS rating system. Develop percent reduction targets where possible.						Part of ongoing maintenance. Pilot to use Clove Oil and Citric Acid as a weed killer in 2020. Constantly seeking out the least-toxic materials to use. Looking into thresholds for success (allowable weeds)

Focus #5: Procurement

		Not Started	In Progress	Project Complete	Complete & Ongoing	N/A	Comments
1	Increase visibility of existing Carleton green purchasing policies by linking them to the sustainability website.						Green purchasing practices highlighted on Procurement page of sustainability site
2	Review the existing preferred vendors list and identify vendors that engage in sustainable practices.						Primary purchasing nodes evaluated in FY2012 (computing, paper, etc.)
3	Institute an education campaign regarding proper disposal of CFL light bulbs.						No longer use CFL lightbulbs as common practice.
4	Continue monitoring advancements in LED lighting technology for campus light fixture upgrades.						Current LED technologies used whenever possible in campus lighting retrofits. Part of workflow.
5	Evaluate ways to report on and monitor green purchasing practices in order to understand the impacts of our purchasing dollars on Carleton's overall sustainability profile.						
6	Evaluate and implement floor system vendors (carpet, tile ect.) who employ a "cradle to cradle" approach to manufacturing. Research and implement other products where "cradle-to cradle" options are available.						
7	Evaluate ways to increase green IT purchasing polities. Explore EPEAT certification and similar programs.						Carleton is now tracking EPEAT purchasing but we need to do more.
8	Monitor and shape the profile of food purchasing practices, encouraging Carleton's food service provider to increase percentages of local organic, and sustainable food purchases.						Two food purchasing surveys conducted annually - fall harvest and winter season
9	Explore opportunities to reduce packaging through purchasing decisions that take this into account.						Major computer package reductions in FY2012