This is an exciting time for our institution as we begin a new chapter in our history. Columbia College Chicago committed itself to advancing sustainability in its facilities and operations when it became a signatory to the American College & University Presidents’ Climate Commitment (ACUPCC) in 2009. Since that time, we have made a major statement with the construction of the LEED Gold-Certified Media Production Center at 1600 S. State Street, and have reclaimed a small piece of the urban landscape with the expansion of the Papermaker’s Garden at the corner of 8th Street and S. Wabash Avenue. We are in the midst of a multi-year capital spending plan to fund renovation projects that will, among other things, improve the energy efficiency of our buildings. More modest grassroots initiatives such as the installation of composting bins, used battery collection receptacles, and water bottle refilling stations continue to spread across campus.

All of these efforts have been guided by the vision set out in our Sustainability Roadmap and by the work of the eight Green Teams tasked with developing recommendations in particular areas. The Sustainability Roadmap was designed to be a living document that could evolve to address emerging needs, and the goals set out in it are only the first step in our journey. As we assess our current circumstances and plan for the future, we must renew this commitment, remaining ever mindful of our community’s collective impact on the environment.

One can envision a range of alternative strategies for creating a sustainable Columbia. Establishing new interdisciplinary curricular programs is one, although that process will require careful collaboration between the faculty and the academic leadership of the institution. The development of more complex planning and budgeting systems may open up opportunities for assessing new sustainability initiatives and practices. We can build upon our many successful property redevelopment efforts with a more systematic incorporation of Green solutions into remodeling and renovation projects. And our students’ ability to communicate through diverse forms of creative practice is a potentially powerful resource for articulating a message of environmental stewardship and social justice to the wider world.

The Sustainability Roadmap sets out the path to a more responsible and sustainable future. But without the commitment of the entire community, it is no more than words on a page. To fully align our practices with the ideals set forth in it, faculty, staff, and students must take ownership of the effort, bear the weight of its obligations, and take pride in our achievements along the way. We will build from what is outlined in these pages and develop new initiatives that push the boundaries of what is we think is possible. We need you to be a part of this process.

You can track our ongoing progress at colu.edu/sustainability.
SUSTAINABILITY: Overview
How We Developed This Roadmap

In the fall of 2010 Columbia College signed the American College & University Presidents' Climate Commitment. That action prompted the drafting of this campus plan. The Sustainability Roadmap was designed to be a guide for the Columbia College Chicago community, providing a framework for how sustainability would be viewed on campus.

The intent of the Sustainability Roadmap is that it is a living document that will evolve with our efforts. It was composed through the efforts from consulting teams at TerraLocke and Sustainametrics with input from the Columbia College community, including students, faculty, administrators, board members, alumni and staff.

In light of the contemporary focus on sustainability, we consider our commitment to sustainability as a strategic opportunity to incorporate systemic change around energy and resource efficiency, waste reduction and progressive curriculum development. Environmental responsibility is no longer a “nice to have” initiative. It is a necessary precondition for the future.

The initial project team consisted of the then year-old Sustainability Task Force (STF), comprised of over 30 members of the college community. The consultants conducted a survey of academic managers and department heads to obtain a department-level inventory of how sustainability principles are incorporated into the existing curriculum. In addition, Columbia sent out a survey completed by 390 members of the college community reporting their attitudes and behaviors related to sustainability, the importance of various initiatives, and their satisfaction with our existing efforts.

Green teams were formed to focus on areas where Columbia could track, create, and implement sustainability programs in the aim of reducing our gross GHG emissions. Eight green teams in total were comprised of Sustainability Task Force members and augmented with over 25 additional staff and faculty from across the college. The green teams met with the primary purpose of drafting goals and initiatives for their respective focus. Senior academic and administrative officers reviewed these goals and initiatives along the way—to ensure they were feasible and aligned with the school’s strategic plan.

The Green Teams

Collectively, the Sustainability Task Force and the eight green teams worked with the understanding that the sustainability roadmap would be a collaborative effort grounded in clear communication and guided by the following overarching goals:

» Promote and reward sustainable practices, behavior and culture across our community
» Lower greenhouse gas emissions and other environmental impact through reductions in energy and water use, waste in buildings, and through less individual car use for commuting.
» Develop sustainability literacy among faculty and students that infuse principles of economic vitality, environmental stewardship, and social equity and justice into selected coursework.
» Use best sustainable practices in procurement, classroom operations, facilities, office functions, and information technology.

WHAT DO WE MEAN BY SUSTAINABILITY?

The relevant definition of sustainability in the context of higher education is grounded in the most widely quoted annotation for sustainability, coined in 1983 by the United Nation’s Brundtland Commission: “meeting the needs of the present without compromising the ability of future generations to meet their own needs”. The United Nations subsequently adopted a resolution that established the UN Decade of Education for Sustainable Development (2005 – 2014).

Another view of sustainability is that it embodies a balance of three values: economic prosperity, environmental stewardship, and social equity.
How Sustainability Fits the Columbia Vision

For over 120 years, Columbia College Chicago has been respected as a center for innovation. Known in the 1920s as the “Columbia College of Expression,” the College continued, throughout the 20th century, to utilize new approaches to liberal arts education. Columbia incorporated a progressive social vision with a “hands on, minds on” approach and pioneered experiential learning in radio broadcasting, television, and many other mediums. Columbia has grown into the largest arts and media college in the nation with 11,500 students, 17 buildings, and more than 2 million square feet of academic, performing, gallery, office and residential space.

Guided by President Dr. Warwick Carter’s encouragement for a sustainable campus, Columbia’s Office of Campus Environment commissioned this roadmap to create a sustainability vision and goals that will be understood and supported by multiple stakeholders throughout the Columbia community. This roadmap and related work is intended to address the economic, environmental, and social challenges and opportunities that moves beyond facilities and operations, extending to academics and the culture of Columbia. We believe this is particularly relevant in an arts and media school because our students’ work will ultimately have a wide reach and profound impact in both communicating sustainability topics and creating solutions.

Columbia College has made significant progress towards its sustainability vision prior to and during the completion of this Roadmap project. For example, the state-of-the-art Media Production Center has received a LEED Gold certification; the renovation of the 5th floor of the 33 E. Congress Parkway building has been certified with Silver LEED status for commercial interiors; and initiatives related to recycling, purchasing and information technology are well underway.

We believe that a clear opportunity exists to expand our efforts, allowing Columbia to differentiate itself through a commitment to sustainability. The intangible benefits of sustainability are difficult to measure; however, research shows that efforts can have
a positive impact on talent and student recruitment, staff productivity, fundraising, grant procurement, and the college’s brand. Developing an identity or brand that differentiates a college from its competitors is essential in today’s market. In order to use our sustainability efforts as an advantage to the Columbia brand, we must communicate why sustainability matters to us. The Sustainability Roadmap was crafted so it can provide a clear basis for this messaging.

Columbia’s Sustainability Vision

Columbia’s mission statement:
Columbia College Chicago is an undergraduate and graduate institution whose principal commitment is to provide a comprehensive educational opportunity in the arts, communications, and public information within a context of enlightened liberal education. Columbia’s intent is to educate students who will communicate creatively and shape the public’s perceptions of issues and events and who will author the culture of their times. Columbia is an urban institution whose students reflect the economic, racial, cultural, and educational diversity of contemporary America. Columbia conducts education in close relationship to a vital urban reality and serves an important civic purpose by active engagement in the life and culture of the city of Chicago.

The sustainability vision for Columbia, crafted by the Sustainability Task Force, is a natural extension of our existing mission and ongoing commitment to creating a better future through innovation in the arts and media.

There are many factors that influence a prospective student’s decision, but when a full 90% value sustainability efforts, greening the campus becomes an opportunity.

Columbia’s vision for sustainability
Columbia College Chicago seeks to use sustainability to better position students and the college to meet the emerging challenges and opportunities in the 21st Century. This includes a holistic commitment to environmental responsibility, social equity, and economic vitality. The College commits to integrate educational excellence, operational efficiency, and community responsibility in an ongoing search for a better global future. In addressing the climate challenge by reducing global warming emissions and by integrating sustainability into the academic and social experience, the College will educate students who will communicate creatively, shape the public’s perceptions of issues and events, and who will author the culture of their times.

We strive to build the campus into a sustainable community: 1) to reduce energy use and to minimize waste; 2) to enable creative activity that helps understand and identify solutions to global environmental challenges; 3) to incorporate issues of sustainability into students’ learning experiences throughout their academic, residential, and personal lives; 4) to create an environment in which all members of the campus community are encouraged to further sustainability in their personal and professional lives.
Strategic Plan Integration

The benefits of sustainability align well with Columbia’s plans for growth and prosperity as an organization. In recognition of the importance of sustainability to Columbia, in October 2010 Dr. Carter and the Board of Trustees approved the integration of sustainability into Columbia College's five-year strategic plan, Focus 2016.

The Sustainability Roadmap is one of the college-wide initiatives, along with the Campus Master Plan and the Technology Plan. The following excerpts from Focus 2016 reveal how the principles of sustainability are woven into our highest aspirations.

» Looking back from Fall 2016: Columbia College Chicago enjoys a well-established national, and growing international, reputation as a first-choice school for creative individuals preparing for a life and career in the arts, media, and communications. In these fields, the college offers multidisciplinary, technology infused programs of study aligned with cutting edge practices and emerging social values—for example, in the area of environmental sustainability.

» Reputational Value: The College will build a reputation regionally, nationally, and internationally as a first-choice school for creative individuals educating themselves for a socially responsible life and career in the arts, media, and communications.

» The College offers academic programs that are well-aligned with these new realities of arts, media, and communications practice and with relevant social and environmental issues, which is critically important to attracting and retaining students.

GHG Inventory and Baseline Report

Along with working on this Roadmap, the firms of Sustainametrics and TerraLocke aided in compiling Columbia’s first greenhouse gas inventory. The baseline was set using FY2010 data. It has been conducted according to the protocols required by ACUPCC. By conducting a GHG Inventory, we create an understanding of how each member of our campus community is responsible for GHG emissions, and how initiatives, practices and behaviors can reduce GHG emissions.

The GHG Inventory and Baseline was completed in August 2011. The results show total carbon dioxide equivalent (CO2e) emissions of 22,106 gross metric tonnes (MT) and 19,383 net MT (emissions after offsets) for the baseline year of FY2010 (September 1, 2009 – August 31, 2010). This is the equivalent emission of 51,409 barrels of oil or almost 2.5 million gallons of gasoline consumed. Clean Air-Cool Planet’s Campus Carbon Calculator was used in obtaining these figures as recommended by the ACUPCC.

The inventory took into account 14 buildings out of the 17 owned by the college. Of the remaining buildings, 1600 S State (the Media Production Center, which is certified LEED Gold), was under construction during most of FY2010 when the baseline was calculated. The property at 1258 N. LaSalle is was not included for the fact that it is the college’s presidential residence.
rather than a campus use building. And after the inventory was completed, in 2011 the college purchased the property at 820 S. Michigan Ave. All locations that are occupied when the next GHG inventory in 2013 (using FY2012 data) is conducted will be included in that inventory.

It is important to note that our three major areas of GHG Emissions are: heating, hot water, air conditioning and other electricity (59.4%), commuting (17.2%), and directly financed air travel (13.6%). Purchased electricity itself accounts for nearly half of our GHG Emissions. The relevant factor for GHG emissions is calculated on a regional basis from the source of energy generation. Columbia's supplier ComEd generates electricity using a mix of 'only' 35% coal, the burning of which releases high CO2 emissions. Roughly 57% of ComEd's electricity is generated from Nuclear Power which, although controversial, has a much lower emissions factor than coal.

To offset emissions from fossil fuel based electricity generation, Columbia is currently purchasing Renewable Energy Credits in the amount of all electricity consumption. In FY2010, we purchased RECs equal to 30% of electricity consumption.

On a relative basis, our gross GHG emissions per person (students, faculty and staff) equals 3,276 lbs. CO2e, and per one thousand square feet of owned buildings, it is 15.6 MT CO2e.

In terms of data collection for this baseline, we created new mechanisms with the aim of compiling future inventories. Here are the methodologies that were either streamlined or created to collect data and track usage:

» Natural Gas and Electricity usage are being imported into the EPA Energy Star program
» Refrigerant usage is being tracked by our Engineers into a log book
» Direct Transport mileage will be logged each year
» Solid Waste (Recycling and Municipal Solid Waste) is tracked by vendor into a diversion spreadsheet

**Commitments and Goals**

With an inventory and our sustainability plan being integrated into the college's 5-year capital plan, we intend to reduce our Scope 1 and 2 GHG emissions 1% by the end of fiscal year 2017. Of this, we will see a 4.7% reduction in stationary combustion. The GHG emission reduction estimate is based on scheduled equipment upgrades as well as needing to account for two projects that increase the GHG emissions under Columbia's responsibility.

The first project included HVAC improvements at 72 E 11th St. This project will be improving efficiency of the portion of the building that is currently not air conditioned. With the air conditioning installed in the entire building, overall energy consumption is projected to increase by 6%. However, having air conditioned space in the whole building is important for basic comfort levels of Columbia students, faculty and staff, especially as Chicago experiences hotter summers over time.
The second project was the occupancy of the equivalent of one additional floor in 624 S Michigan Ave. These faculty and staff members were previously in leased space that was not included in Columbia’s FY10 GHG Inventory. In reality, the GHG emissions are shifting from out of Columbia control to Columbia ownership and control, which can lead to further management and reduction of energy and GHG emissions in the future. For the college’s Media Production Center at 1600 S. State, emissions data for this property is available for its first fiscal year of occupancy in FY2011 (2010-2011). This data will be represented in future inventories.

Since we conducted only one GHG inventory we do not have data that shows consumption trends over time. Therefore, we will assume that other than the projects described in this section or in the 5-year capital plan, the amount of utility usage will neither increase nor decrease. Also, we know that our utility providers’ fuel mix changes over time, but we do not have a way to project those changes. Therefore, we assume the fuel delivered in 2017 will be the same mix as when we conducted our FY2010 GHG inventory.

This emission-reduction goal is based on what is reasonably certain to project, with the expectation that for the next round of projections we will have better measurements of reductions to date, and more financial capacity and vehicles to fund ECMs and other GHG reduction projects.

In conjunction, we will create policies that focus on Scope 2 and 3 reductions such as direct travel and commuting. The Sustainability Task Force will work to effectively promote and educate the campus in order to create behavioral change and we hope to further reduce GHG emissions through that work; however, we cannot at this time project those potential reductions.

We will also continue to consider our ‘TBD’ Climate Neutrality Date. The goals established in this Roadmap will begin to see the first stages of implementation. We will conduct an updated baseline report in 2013 which will give us a better sense of the potential rate of progress with the aim of helping us to determine when and how we can adopt a realistic climate neutrality date.

The Sustainability Task Force was a vital first step in connecting members of the campus community together, developing inter-department relations, all in the attempt to promote sustainability efforts. In order to meet the goals listed above, there were eight green teams created. The areas of focus for these teams were:

» Buildings and Energy
» Communications and Engagement
» GHG Emissions
» Information Technology
» Learning
» Procurement
» Transportation
» Waste Reduction and Recycling
Each team was tasked to develop: 1) a team sustainability vision, 2) sustainability-related goals and pragmatic initiatives/actions, and 3) a working plan to prioritize and start an implementation schedule and plan for those initiatives/actions. The teams met with Sustainametrics and TerraLocke consultants to accomplish these activities. In the sections to follow, each team will be detailed including their goals and actions.

As a commitment to the college’s effort, dedicated leadership will be seen as essential to the successful implementation of the roadmap. The fall 2012 transition of Columbia’s Recycling Manager to Sustainability Manager will provide the administrative coordination and leadership for campus-wide programs. This position will work closely with the Sustainability Task Force and Green Teams to coordinate efforts.

The following responsibilities will be tasked to the Sustainability Manager:

- Initiate, support, coordinate, and evaluate campus operational and academic issues related to sustainability.
- Participate in strategic planning to infuse sustainability focus into operations, academics, and facilities for the campus.
- Coordinate sustainability efforts between campus and community; communicate and report on sustainability issues.
- Report sustainability issues and progress to senior administration and Board. Advise and collaborate with operational units to implement best sustainability practices.
- Coordinate student involvement in sustainability issues; direct campus internships, volunteer and co-curricular opportunities; coordinate service-learning opportunities.
- Organize high-visibility academic/community events related to sustainability (lecture series, workshops, student events, Manifest, etc.)
GREEN TEAM:
Buildings & Energy
Buildings and Energy: Reduction, Revitalization, Returns

Columbia owns 17 buildings (and leases office space in one other location), concentrated in the South Loop. Our urban college is inherently green since our campus is walkable and well served by public transportation. All of our buildings (except our Media Production Center) are adaptively-reused former office and warehouse buildings. Reusing is inherently more sustainable than demolishing a building and building anew.

The college’s first constructed building, the LEED Gold-Certified Media Production Center is a shining example of functional innovation and sustainability. It was built on a formerly environmentally contaminated site that was cleaned in advance of construction.

The downside to reusing old buildings, however, is that they are energy inefficient. We have been steadily improving our energy efficiencies over the past several years with such projects as retrofitting our lighting fixtures and installing occupancy sensors. Where we have replaced heating and air conditioning equipment, we have significantly reduced energy consumption.

Given our sizable building inventory and over 2 million square feet, energy efficiency investments and activities provide a superior return on investment, particularly as energy prices rise. With this roadmap, we aim to encourage investment in more energy conservation measures and accelerate the benefits of doing so: lowering energy expenditures, reducing greenhouse gas emissions, and communicating to our community and beyond that we are committed to sustainability.

As part of this project, we began to explore the unique challenge of the antiquated boilers and air conditioning systems scattered across Columbia’s campus. We developed a process for identifying replacement-candidate equipment and calculating a return on investment related to various energy conservation measures (ECMs). The Office of Facilities and Operations has developed a 5-year capital plan for campus construction and renovation projects that will effect the college’s overall emissions. These projects will focus on boiler and HVAC improvements and window replacements. Each of these projects will aim to increase the efficiency of their buildings. Certain improvements will affect only a few floors per building. The calculated reductions for these projects varied based on the square footage and equipment replacement per building.

The energy projects for the 5-year capital plan will include:

» 33 E. Congress window replacements scheduled in 2013
» 600 S. Michigan Ave. and 624 S. Michigan Ave. window replacements in 2014
» 72 E. 11th St. HVAC improvements scheduled in 2014
» 600 S. Michigan Ave. HVAC replacements scheduled in 2015
» 33 E. Congress HVAC upgrades scheduled in 2015
» 618 S. Michigan Ave. 2nd floor auditorium HVAC replacement scheduled in 2016
» 1104 S. Wabash Ave. HVAC and boiler upgrades scheduled in 2016

WHEN WILL WE SEE SOLAR PANELS AND WIND TURBINES ON OUR BUILDINGS?

We believe that clean, renewable energy solutions are crucial to mitigating climate change. Additionally, solar panels and wind turbines make going green visible. However, at Columbia, we need to prioritize our investments in areas that provide the most energy savings and reductions in greenhouse gas emissions for the amount invested. Because of the age and inefficiency of our buildings and equipment, this means that energy conservation measures provide the biggest “bang for the buck” in the near-term.

As the cost per kilowatt of renewable energy technology decreases, and as conventional energy prices increase, we may reach a point where direct renewable energy will make sense for Columbia. These solutions will be part of our long-term achievement of carbon neutrality.

In the meantime, we are supporting renewable energy indirectly by purchasing Renewable Energy Certificates. Please see the Greenhouse Gas section for more on our RECs.
Our goal is to prudently re-allocate a small percentage of the college’s investment capital into these ECMs, in addition to the ones funded in the 5-year capital plan through an “Energy Investment Fund.” If approved for an initial set of ECM’s, we would measure the results from that first set to prove the concept. We would then prioritize and plan additional sets of ECMs to continue to accelerate the environmental and economic benefits. We are in the process of working with the college’s CFO and Finance Committee of the Board to approve the Energy Investment Fund option.

The Buildings and Energy Green Team’s Goals

- Accelerate Energy Conservation Measures by securing alternative financing (e.g., Energy Investment Fund).
- Continue to implement sustainable operations and maintenance procedures wherever possible.
- Build new construction projects building-wide substantial renovations to LEED-Silver certification standards and continue to build to our own “Columbia standards” on smaller scale renovation projects.
- Continue to strengthen environmental safety in the areas of air quality and chemical hygiene, including adopting an indoor air quality management policy to include monitoring and a mechanism for occupants to register complaints; auditing our Chemical Hygiene Plan; working with our Environmental Health and Safety coordinator.
- Reduce overall energy usage by 1% by 2017.
- Maintain purchase of renewable energy certificates for 100% of electrical consumption.
- Reduce water usage by 5% from 2010 levels by 2017.
- Develop longer-term, campus-wide projections based on ECM analysis.
- Research and secure appropriate available financial incentives from private and public sources.

The Buildings and Energy Green Team’s Actions

- Structure, analyze and make projections for ECMs in the campus’ Five Year Plan. Seek Board approval for such investments.
- Define and adopt an indoor air quality management policy to include monitoring and a mechanism for occupants to register complaints.
- Implement a process to regularly audit compliance with the existing Hazardous Communication plan.
- Provide Building Operator Certifications to engineering staff.

WHAT ARE SCOPES 1, 2 AND 3 EMISSIONS?

Standard greenhouse gas emission protocols define the sources of emissions by source at three levels, called “scopes.” Scopes 1 and 2 are generally mandatory for reporting, and Scope 3 is generally voluntary.

Scope 1 includes stationary combustion (natural gas), mobile combustion from owned vehicles, and “fugitive” emissions from air conditioning and fire extinguishers.

Scope 2 includes indirect emissions from purchased electricity.

Scope 3 includes employee and student commuting and from employee air travel, as well as emissions from waste, which is an area that Columbia will measure. We may also measure embedded emissions from purchased products.
GREEN TEAM:
Greenhouse Gas Emissions
Greenhouse Gas Emissions: Owning Our Impact

Columbia takes responsibility for its GHG emissions. Greenhouse gas is invisible, and most of our campus community is not fully aware of how it is produced here at Columbia. The goals of the GHG Green Team began with a GHG Inventory which measured the emissions generated by the college. Another key goal is educating our community about how our behaviors and activities contribute to GHG emissions every day.

The GHG Inventory created an understanding of how all of us—and how each focus area of our Sustainability Roadmap—is responsible for GHG emissions, as well as how new initiatives, practices, and behaviors can reduce our emissions.

The results show total CO2 equivalent emissions of 22,106 gross metric tones (or tons) or 19,381.1 net metric tonnes (or tons) for the baseline year of 2010.

Campus improvements that have been accounted for in the next 5 years will aim to reduce these emissions. The initial GHG Inventory was conducted in two phases. Phase A includes Scopes 1 & 2 emissions from energy consumption, school-owned vehicles, and refrigerants. Phase B includes emissions from faculty, staff and student commuting, employee air travel and waste. For the areas in Phase A, future improvements will create projected savings in emissions. In the Buildings and Energy Green Team section, we note that most buildings have the need to replace end-of-use equipment. This is a factor into which projects are scheduled to receive funding. Replacement of outdated equipment takes precedence over other areas which might yield immediate reductions. The overall goal is to reduce emissions making any equipment installed more efficient than what systems are currently functioning. When selecting equipment, our Facilities and Operations staff is targeting modern advances in technology ensuring that what is purchased is an efficient replacement.

For the next GHG Inventory, we will calculate emissions relating to the Media Production Center at 1600 S. State (which was not yet occupied during the first GHG Inventory) and the newly purchased property at 820 S. Michigan Ave. The GHG emissions targets described herein are based only on the FY2010 GHG Inventory and Baseline, and therefore these two buildings are not considered.
The Media Production Center was occupied as of January 2010. Since it is a new building, we will add the GHG emissions when associated with it when we conduct our FY2012 Inventory. We currently have data for one year of the building’s energy use, and based on that, we estimate that the inclusion of the MPC building will change our scope 1 and 2 GHG emissions reduction target from a 1% reduction to a 2% – 2.5% increase. When the FY2012 GHG inventory is conducted, we will have a two year trend for the building and be able to revise our 2017 GHG emission target more accurately.

The 820 S. Michigan Ave. building was acquired by Columbia on November 5th, 2010, and was being leased to the organization that sold the building until June 30, 2012. The plan is for Columbia to renovate the building in the summer of 2015 and occupy it by the fall semester of 2015. Since this is an existing building, we plan to restate the FY2010 Inventory to include this building’s FY2010 emissions, per The Climate Registry and GHG Protocol rules for acquiring facilities. This will be done in conjunction with the FY2012 Inventory. Since the renovation of the building is not yet in the design stage, we are not able to project the potential increase or reduction to Columbia’s GHG emissions from the use of this building. We will consider energy efficiency and GHG emissions when renovation decisions are made.

**The Greenhouse Gas Emissions Green Team’s Goals:**

- Keep an up-to-date Climate Action Plan with the focus on GHG emission-reduction milestones.
- Implement ongoing GHG tracking, management and reporting.
- Develop tools to communicate ways to connect GHG emissions (and reduction) to individuals’ daily lives and behavior, as well as to sustainability projects.

**As of August 2012, these Green House Gas Emissions Green Team Goals have been completed:**

- To have conducted inventory of GHG emissions consistent with the ACUPCC, including Scope 1 and 2, as well as commuting and air travel.
- Establish limitations on Scope 3 emissions that are consistent with our organizational strategy and overall sustainability goals.
- Set reduction benchmarks and tracking mechanisms.
- As of FY2011 we purchased RECs equal to 100% of electricity consumption.

**The Greenhouse Gas Emissions Green Team’s Actions:**

- Communicate with other Green Teams to connect GHG emissions to their goals, in particular, work with the Communication and Engagement Green Team to connect GHG emissions (and reduction) to individuals’ daily lives and behavior
- Analyze costs/benefits and potential progress for non-ACUPCC Scope 3 options. Waste was included in the initial inventory, but other types of emissions will be considered for future measurements.

**WHAT IS A REC AND HOW DOES IT HELP?**

Since it is not feasible at this time for Columbia to self-generate green power, a Renewable Energy Certificate purchase essentially offsets the greenhouse gas emissions produced from energy within our electrical “grid” with a purchase of clean renewable energy produced outside our grid.

Purchasing RECs enables us to support renewable energy generation indirectly supporting renewable energy generated off-site.
GREEN TEAM: Learning
Learning: Conservation in The Classroom

As the nation’s largest arts and media college, Columbia is charged with educating the leaders and decision-makers of tomorrow. We play a crucial role in the creation of sustainable societies. We need an unprecedented shift in the way we think and act. Education is an essential tool for achieving sustainability; public awareness and training are vital in moving students and, by extension, society toward sustainability.

That is why we have created goals for increasing sustainability literacy—to empower our faculty with the knowledge and opportunity to embed sustainable literacy into their curriculum. It is the reason why various sustainability principles are already taught in many courses. In a December 2010 survey of 19 of Columbia’s 22 departmental chairs and academic managers, we found that a significant percentage of departments (and 55 specific classes) cover sustainability principles. Examples include courses in Energy and the Environment, Intro to Design for the Stage, Product Design, Environmental Journalism, and Marketing for Non-Profits. In the coming years, we understand that there will be changes in the way our academic structures may be shaped. In any newly proposed or integrated departments, these ideas should be instituted from the beginning. It will be easy to start instilling sustainable literacy at the foundations of future courses and areas of study.

Exhibits like the Zero Waste: Fashion Re-Patterned exhibition, created by the Fashion Studies department in Spring 2011, offered potential solutions for dealing with waste in the fashion industry. This show challenged fashion systems by addressing their conceptual framework and brought positive media exposure to the College.

In the spring of 2012, the Paper Maker’s Garden was unveiled on a vacant lot at the center of campus. Columbia’s students receive hands-on education in the entire process of planting, growing, managing, collecting, and utilizing plant fibers. This garden allows them to engage with environmental concerns, such as how green spaces reduce air pollution, air temperature, and urban runoff, as well as interdisciplinary artistic practices that address science, art, and the environment. This multi departmental project between the Office of Campus Environment, the Office of Academic Affairs, the Interdisciplinary Arts Department, the Center for Book and Paper Arts, and Pulp Ink and Thread (PIT), and the Book and Paper graduate student organization is an exemplary model for how cross departmental collaborations can shape our curriculum.

The integration of sustainability literacy into our curriculum matches our mission, values and evolution. Faculty members who are interested will have the tools and support to apply sustainability concepts into existing and new coursework. Integrating sustainability into existing curricula in a holistic way will help the current generation of communications and arts leaders create meaningful, sustainable change.

Incorporating sustainable practices into classroom operations like energy conservation, material reduction/reuse and recycling, and elimination of toxic chemicals in labs and shops creates an experiential learning opportunity. The academic survey revealed that many faculty members aim for sustainability in their classroom operations and some have been practicing sustainable methods for years. We hope to use their courses as positive examples to encourage further integration of sustainable practices in a broader range of courses.

A far-reaching goal of integrating sustainability into our curriculum is to promote systemic thinking around contemporary issues and to create an understanding of how sustainability applies to students everyday and professional lives. By applying knowledge
of sustainability topics in the classroom, our students will develop the skills to create sustainable solutions and promote sustainable communities on and beyond our campus.

The Learning Green Team’s Goals

1. Develop sustainability literacy among faculty and students that infuses principles of economic vitality, environmental stewardship, and social equity and justice into selected coursework.

2. Incorporate sustainable practices into classroom operations like energy conservation, material reduction/reuse and recycling, and elimination of toxic chemicals in labs and shops.

3. Identify, select metrics, and set targets for inclusion of sustainability topics in classes and learning outcomes (where appropriate).

4. Encourage coverage of sustainability principles, where appropriate, in faculty research, published work, exhibitions and students’ Bodies of Work.

5. Promote and raise visibility of sustainability-related coursework, projects, and exhibits.

6. Increase sustainability literacy by promoting a sustainability track which encourages students to enroll in courses with embedded sustainability principles.

The Learning Green Team’s Actions

» Showcase faculty who have found innovative ways to incorporate sustainability principles into their existing curriculum.

» Weave sustainability into academic programming, such as 2011-2012 Critical Encounters events.

» Work with the Center for Teaching Excellence to offer workshops that improve sustainability literacy among faculty, empowering them to incorporate these issues into existing curriculum.

» Fund internal grants or stipends to promote sustainability-related course development and faculty research/projects.

» Work with curriculum committees to look for opportunities for new sustainability related courses.

» Develop performance measures to track the inclusion of sustainability themes in curriculum.

» Identify career-related opportunities related to sustainability and promote within counseling sessions, at the Portfolio Center, at Industry Night, etc.

» Conduct an inventory of labs, studios, and classrooms to identify opportunities for recycling, reduction in toxicity and material/production redesign.

» Improve signage and guides promoting the new sustainable operations.

» Encourage the use of electronic resources such as Moodle and e-books.

SEEING STARS IN THE CLASSROOM

The AASHE STARS assessment awards a full one-third of its points to aspects of sustainability in the curriculum. AASHE categorizes sustainability-focused courses as those that explore a broad range of sustainability topics, select an area to investigate in depth, or “approach an issue or topic using sustainability as a lens.” Sustainability-related courses include one or more discrete sustainability elements in the course. Courses designated as sustainability-related or sustainability-focused may contain the following elements:

» Integration of basic and applied knowledge from multiple disciplines, including the natural and social sciences, to analyze human-environment interactions;

» Analysis of the tradeoffs or co-benefits involved in managing resources for the social, economic, and environmental welfare of current and future generations;

» Development of alternative strategies for the use of natural, human, and fiscal resources that are compatible with the constraints on these resources;

» Implementation of practical solutions to socioeconomic and environmental challenges, including those that relate to energy, technology, ecosystems, social transformations, food systems, policy, and governance.
GREEN TEAM: Procurement
PROCUREMENT: A “THINK BEFORE WE BUY” CULTURE

Procurement is a major area of opportunity because it impacts the entire institution. An effective, environmentally preferable purchasing policy would be highly influential in driving behavioral change and meeting campus sustainability goals. Sustainable purchasing can have a far-reaching impact on the College’s supply chain by specifying environmentally-friendly products from vendors, reducing shipping frequency and distance with local purchasing, recycled packaging, and requiring third-party product certifications.

The Purchasing Green Team created the following vision to guide their policy development, goals, and initiatives:

The purchasing functions at Columbia College Chicago work to secure and/or re-use products and services for the College community to support the academic process in the manner that seeks to reduce all adverse effects to the environment from their fabrication, transportation and usage, while providing the best value in the marketplace.

The Purchasing Department prioritized the top categories of purchased goods based on dollars and identified the following areas to target for improvement:

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>2009/10 SPEND (000’S)</th>
<th>OPPORTUNITIES FOR COST SAVINGS &amp; SUSTAINABLE PURCHASING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>$2,557</td>
<td>Energy efficient ratings</td>
</tr>
<tr>
<td>Barbizon Lighting</td>
<td>$1,245</td>
<td>Professional lighting – energy efficient</td>
</tr>
<tr>
<td>Dell Computers</td>
<td>$552</td>
<td>EnergySTAR monitors</td>
</tr>
<tr>
<td>Lake County Press</td>
<td>$379</td>
<td>Expand usage of print / mail service</td>
</tr>
<tr>
<td>Office Max</td>
<td>$369</td>
<td>Reduce paper purchases</td>
</tr>
<tr>
<td>Disc Warehouse</td>
<td>$360</td>
<td>EnergySTAR related products</td>
</tr>
<tr>
<td>B&amp;H Video</td>
<td>$332</td>
<td>EnergySTAR related products</td>
</tr>
<tr>
<td>Interior Investments</td>
<td>$299</td>
<td>Herman Miller sustainable furnishings</td>
</tr>
</tbody>
</table>

A NEW ERA?

Many scientists agree the influence of human activity on the earth is so significant that it warrants the creation of a new geological era called the Anthropocene. We are just realizing the extent to which our collective activity has global and long-term impact. We are at a tipping point. As artists, as purveyors of media and ideas, and—as importantly—as educators, we are obliged to illuminate issues of sustainability.

Sustainability is not about “saving” the Earth: it’s about finding creative ways to live on the earth without diminishing the quality of life for future generations. Columbia’s deep pool of artistic and intellectual talent positions us well to lead this global imperative."

—Jonathan Keiser, Director of Evaluation and Assessment, Academic Affairs
This team’s long-term goals:

» Identify and eliminate 50% of all non-essential and redundant items, non-energy efficient equipment, or administrative tools that can be converted to electronic methods, by 2014.

» Reduce the institution’s annual purchase of internal and external printing and associated resources.

The Procurement Green Team’s Actions

» Develop a college-wide policy regarding all print materials. The policy will seek to standardize internal and external documents, reducing overproduction of printed materials and overall paper purchases. This action step represents significant savings for the college in terms of energy, paper, and ink purchases.

» Continue to consolidate vendor orders to minimize deliveries.

» Coordinate with Waste Reduction and Recycling Team to raise awareness about re-use and over-use to reduce unnecessary purchasing.

» Eliminate the procurement of appointment books and individual wall calendars for all administrative and academic office (yearly wall planners are exempt).

» Add to “Rich’s List,” developing a “re-use exchange” for all electronic equipment, office supplies, art supplies, and residence life castoffs.

» Improve communication about purchasing initiatives and goals.

» Inventory and eliminate all Cathode Ray Tubes (in coordination with IT).
GREEN TEAM: Waste Reduction & Recycling
Waste Reduction and Recycling: Don’t Trash It!

Recycling is one of the most visible areas of any sustainability effort and is arguably the most robust sustainability-related program at Columbia. Since its inception in the late 1990’s, Columbia’s current recycling program has matured to a comprehensive and quite successful level. The current scope of the recycling program includes paper, glass, plastic, aluminum, batteries, “techno trash”, and plastic bags. There are also programs which support recycling initiatives such as collection of fluorescent light bulbs, electronics, ink cartridges, hazardous wastes and film strips. In 2011, the Recycling Program began to collect food scraps for composting from selected locations and events on campus. The Recycling Program was awarded in the spring of 2012 an Illinois state grant for food scrap collection from the Department of Commerce and Economic Opportunity. The program also encourages re-use on campus through the creation of “Rich’s List,” an online post-and-swap venue for items like furniture and office supplies.

The importance of a successful recycling program cannot be understated because it crosses virtually every department and requires action on the part of the entire community. The recycling program is embedded in the operations of the College with an excellent web presence, creative signage, and student involvement.

This green team rallied around ways to further make progress towards their vision and collaborate with other departments to focus on waste reduction and reducing overall consumption. Because the group is already well established, the team took a creative approach to raising awareness and participation in their programs.

LIVING SUSTAINABLY

John Wawrzaszek, head of the recycling program, believes that “living sustainably means being conscious of how your actions have an impact on the environment, your life, and future generations to come.” It is important to the college, he says, because “Columbia needs to recognize how important its role in promoting sustainability will be in order to prepare students for the challenges they will face in our ever-changing environment...to reduce our carbon footprint, recycling and reuse is a major component to achieving that goal.”

Recycling is one of the most visible areas of any sustainability effort and is arguably the most robust sustainability-related program at Columbia.
The Waste Reduction and Recycling Green Team’s Goals:

» Maintain waste diversion at least 45% by the 2015-16 academic year.
» Increase awareness of amount of waste and usage by students/faculty/staff.
» Compost up to 20 tons of food and landscape waste by 2013.

The Waste Reduction and Recycling Green Team’s Actions:

» Communicate recycling efforts and goals through Columbia Online weekly newsletter.
» Work with event planners to lower waste and raise awareness at events through the recycling program’s Green Seal initiative.
» Involve Creative Services and Purchasing department to develop plans on reduction of overprinting.
» Involve Academic Affairs and Student Affairs in programs to raise awareness of recycling, use diverted materials in artwork, and develop creative visual campaign.
» Set boundaries for waste diversion calculations and identify what we can measure; develop simple reporting template for these measurements.
» Identify areas for more recycling bins for paper, cans, and bottles; manage janitorial recycling staff.
» Identify candidate departments for self-sorting recyclable pilot program; develop communications plan to show results of this program.
» Work collaboratively with other departments and community groups; for example, promote the Sustainable Swap in conjunction with the Citizen’s Utility Board as an outreach event.
GREEN TEAM: Transportation

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THE FUTURE OF CLEAN AIR
One of the environmentally-friendly aspects of Columbia’s urban setting is a variety of transportation options. Over 80% of students, faculty, and staff use public transportation or bicycles to get to campus. There is also a significantly reduced need for a campus fleet. Since the GHG inventory was conducted, the campus has reduced its fleet even further, from eight vehicles to six. The Campus Environment department has intentionally limited their fleet to only one E-85 van for Facilities usage and developed an agreement with the contracted security provider who owns and uses only two vehicles (one being a Hybrid) and four Segways. The overall campus fleet of six vehicles including those listed has a very low impact on our institutional carbon footprint. The process of tracking mileage will help reduce the projected emissions by allowing for the most accurate data as possible.

In the spring of 2011, Facilities and Operations built a bike parking lot next to the Paper Maker’s Garden in the center of campus. The lot has the maximum capability to house 144 bikes. In the South Loop, the city of Chicago has also established more bike racks and a greater presence for bike lanes. The urban setting of our campus makes us a great candidate to improve on bicycle commuting. Our office of Safety and Security has also revisited their bike policy which addresses faculty and staff bike commuters and how they have access to our buildings. This space is currently underutilized. The Sustainability Task Force will work with the Transportation Green Team on promotion of the space to increase usage.

Transportation-related greenhouse gas emissions at Columbia are primarily related to Scope 3 areas: employee/student commute and employee air travel. One of our GHG goals is to incorporate emissions from commuting and air travel; therefore, the focus of the Transportation Team is on increasing education about and solutions involving cycling, carpools, and mass transit. There are fewer pragmatic ways to reduce air-travel emissions, but encouraging video conferencing when appropriate will impact both environment and finances in a positive way.

“Over the past five years, the Columbia College Chicago IT department has been working on sustainability. With the implementation of virtualization and consolidation of servers, document imaging, work flow development, and web applications, IT is at the heart of the sustainability projects. We know that technology for the academic departments’ curriculum and for the administrative efforts are mission critical. Columbia will continue to enhance its IT initiatives with sustainable infrastructure. It is IT’s responsibility to assist all departments in seeking sustainable technology solutions.”

— Bernadette McMahon, Associate Vice President/CIO
The Transportation Green Team’s Goals:

» Increase alternative transportation use (walking, biking, public transportation, carpooling and ride-sharing) to 90% of student body/faculty/staff by 2016.

» Increase awareness and understanding of how commuting and driving behaviors impact individual economics and the environment.

» Create a more bike-friendly campus.

» Promote the campus bike parking lot (built in 2011).

» Formalize existing policy to limit purchases of new vehicles to what is necessary—and for those vehicles to be hybrid or non-gasoline-powered.

The Transportation Green Team’s Actions:

» Work with the Human Resources Department to promote alternative transportation and available benefits for these transportation methods.

» Increase awareness and among staff and students about alternatives and real costs of single-passenger driving, using a personalized spreadsheet.

» Work with C4 Cycling (Columbia College Cycling Corp) on their tune-up program, safety training, and access to tools.

» Communicate parameters for bringing bikes into buildings.

» Review and evaluate carpool-matching program for commuters and create additional incentives for using carpools (discount parking, prizes, etc.)
GREEN TEAM:
Information Technology
Information Technology: Greening The Digital Revolution

Information technology can have a significant impact on sustainability performance, particularly for an arts and media school with a strong technology focus. Technology impacts GHG emissions and other environmental and social issues in three important ways. First, the electricity that computers, servers, printers, copiers, etc. use is significant—and is included in our GHG calculations. "Plug loads,"—the amount of energy consumed by electronic devices plugged into a socket—alone are typically responsible for 15-20% of office electricity consumption. Second, effective use of IT reduces the need for paper, thereby saving trees that capture and convert CO2. Third, recycling of IT equipment must be done in an environmentally conscious way due to heavy metals and other contaminants in hardware (as well as in accordance with Illinois State Law SB2106).

Like the Waste Reduction and Recycling Team, the Technology Team personnel have already begun making strides towards sustainable practices with programs such as purchasing energy efficient equipment, requiring a long life cycle for existing equipment, recycling old computers, and supporting the purchasing department’s printing policies. Their largest reduction effort to date has been their 5 year plan to virtualize all Information Technology managed servers on campus, which are located mainly in the 600 S. Michigan Ave. building. This project is already underway beginning in 2009. As of 2012, two-thirds of IT servers have been switched to virtual servers. Once complete, IT servers will be 95% virtualized with only a few physical "worker" servers remaining. These results will lead to a reduction in electric from running the equipment to the HVAC needed to cool the equipment. The Technology Green Team is in a great position for collaboration and synergistic initiatives related to energy efficiency and consumable paper savings.
The Information Technology Green Team’s Goals

» Complete IT managed server virtualization project by 2015.
» Incorporate energy savings functions on computers in all areas of the college, for a savings of 30% by 2016.
» Reduce paper and other technology consumables by 35% by the year 2015.

The Information Technology Green Team’s Actions:

» Draft sustainable purchasing policy for campus-wide technology (to include Energy Star-compliant systems and virtual servers).
» Work with Communication Team to educate the campus to be aware of power usage and where they can conserve (labs, classes, operations).
» Document business process flow to reduce paper usage and shift community mindset to electronic sharing.
» Update computer rooms across campus with more energy-efficient electric power supply and air-conditioning systems.
» Prioritize potential cloud data usage.
» Develop visual dashboard on IRIS for dollars saved from energy-efficiency measures in IT.
» Research, then create, use of virtual repository for the work of students, faculty and staff.
» Incorporate all production equipment (servers/workstations, lighting, boards, recording equipment) into power saving mode to optimize energy savings.
» Investigate script used for rebooting machines and calculate savings in kilowatt hours.
» Research document imaging options for online document management and storage.
GREEN TEAM: Communications & Engagement
COMMUNICATIONS AND ENGAGEMENT

There is a need to effectively communicate the sustainability efforts of each team throughout Columbia, hence the creation of this Communications and Engagement green team. This team is tasked specifically to encourage collaboration and participation between departments. It is an integral part of the Roadmap that this team can enable and promote a culture in which the entire community shares and coordinates sustainability-related challenges, opportunities, efforts, and accomplishments. The power of an individual action may seem small, but multiplied by thousands it has great impact for the college community. The whole of our sustainability actions should be greater than the sum of its parts and recognize Columbia College’s place in the broader community.

The power of an individual action may seem small, but multiplied by thousands it has great impact for the college community.

Online information on sustainability-related events, initiatives, programs and green teams are located at colum.edu/sustainability. The goal for this site is that it will be continually updated and will allow members of the community to sign up for activities, exhibitions, green teams, and learn more about our efforts.

**The Communications and Engagement Green Team’s Goals:**

» Reward and motivate individual members of the Columbia community for building sustainability behaviors into their everyday actions.

» Maintain effective communication between students, faculty, staff through ongoing, long-term and consistent communications about the importance of sustainability.

» Report performance indicators of ongoing sustainability efforts, including dashboards and updates on the progress in each of the focus areas of this roadmap.
The Communications and Engagement Green Team’s Actions:

» Incorporate sustainability into the recruitment and orientation process for new students, faculty and staff.

» Hold ongoing contests between residence halls, departments, and/or buildings to encourage and reward green behaviors (such as most energy saved or greatest reduction in water usage).

» Maintain a robust sustainability website and social media efforts to promote sustainability.

» Work with IT to create templates or dashboards that can be easily updated to inform the college community of progress.

» College-sponsored events and exhibitions will continue to showcase environmental and social justice issues and reflect Columbia’s commitment to sustainability. Work with the Waste Reduction and Recycling team to ensure the event meets Recycling Program Green Seal standards.

» Show how small efforts have an impact in terms of CO2 removed, trees planted, or cars taken off the road—encouraging individual participation.

» Better inform campus users—particularly building users—of relative costs and the impact of everyday practices; track trends; and recognize improvements.

» Investigate community service opportunities for students, faculty, and staff in recycling, take-back programs, energy, and water efficiency/retrofits.

» Hold periodic town hall meetings to update and encourage participation in sustainability efforts, as well as to maintain a community dialogue to cultivate new ideas.
AASHE (Association for the Advancement of Sustainability in Higher Education)

ACUPCC (American College and University President’s Climate Commitment) - commits institutions to make progress towards integrating sustainability into their strategic plans and curricula, creating socially responsible programs in the areas of diversity, advocacy, investment and outreach.

CAP (Climate Action Plan) – an overview of what a campus is doing to measure and reduce their green house gas emissions. Our CAP is this Sustainability Roadmap.

CO2e – (Carbon Dioxide Equivalent) is a measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

ECM (Energy Conservation Measure) - projects or technology the college implements to reduce energy consumption.

EPA (Environmental Protection Agency)

GWP (Global warming potential): the ratio of the warming caused by a substance to the warming caused by a similar mass of carbon dioxide.

GHG (Green House Gas) - the six gases that cause climate change: carbon dioxide (CO2); nitrous oxide (N2O), methane (CH4), hydrofluorocarbons (HFCs); perfluorocarbons (PFCs) and sulphur hexafluoride (SF6).

kWh (Kilowatt-hour)- A kilowatt is 1,000 watts with a watt being a unit of power.

LEED (Leadership in Energy and Environmental Design) - an internationally-recognized green building certification system developed by the U.S. Green Building Council (USGBC) in March 2000. This is a framework for green building design, construction, operations and maintenance solutions. --from the US Green Building Council website, http://www.usgbc.org/.

MT (Metric Tons or Tonnes) – unit of measurement in calculating GHG emissions.

REC (Renewable energy credit) – these are offsets to greenhouse gas emissions produced from energy within our electrical "grid" with a purchase of clean renewable energy produced outside our grid. While RECs are positive, they reduce neither the amount of energy we consume nor the related GHG emissions.

Scope 1, 2 and 3 emissions - GHG emissions by source at three levels, called "scopes." Scopes 1 and 2 are generally mandatory for reporting, and Scope 3 is generally voluntary. Scope 1 includes stationary combustion (natural gas), mobile combustion from owned vehicles, and “fugitive” emissions from air conditioning and fire extinguishers. Scope 2 includes indirect emissions from purchased electricity.

Scope 3 includes employee and student commuting and from employee air travel, as well as emissions from waste, which is an area that Columbia will measure. We may also measure embedded emissions from purchased products.

STARS (Sustainability Tracking, Assessment and Rating System) – an ASSHE rating system.