The photographs from the Apollo missions show earth glowing in the stillness of space like a blue-white opal on black velvet. Cool and beautiful, it hurries along in the Sun's gravitational embrace. The earth is our home, our whole wide world.

Our enfolding blanket of air, our atmosphere, is both the physical condition for human community and its most compelling symbol. We all breathe the same air. Guarding the integrity of the atmosphere—without which complex life could not have evolved on this planet—seems like common sense. Yet a broad consensus of modern science is that human activity is beginning to alter the earth's atmospheric characteristics in serious, perhaps profound ways.

United States Conference of Catholic Bishops, "Global Climate Change: A Plea for Dialogue, Prudence, and the Common Good," 2001

Introduction and Context

The purpose of this document is to present a summary plan of action for achieving climate neutrality at the University of Portland (UP) as guided by the principles outlined in the American College & University Presidents Climate Commitment (ACUPCC). It aims to provide a common understanding of goals, metrics, and actions necessary to achieve climate neutrality.

ACUPCC is a high-visibility national effort to garner commitments to reduce and ultimately neutralize greenhouse gas (GHG) emissions on campuses across the country. ACUPCC recognizes the unique role that presidents, faculty, staff, students and alumni in the higher education community play in providing leadership and guidance to society. Today, there are more than 650 signatories throughout the nation, 14 within Oregon.

The climate action plan is a major component of the ACUPCC as a roadmap to dramatically reducing (and ultimately neutralizing) emissions of GHG in order to avert the worst impacts of global warming. No institution in society is as capable as higher education, having the influence, the critical mass, and the diversity of skills needed to successfully reverse global warming. The ACUPCC climate action plan stresses the importance of leveraging both learning and living on U.S. campuses, with education and practice reinforcing each other and magnifying in our communities over time.

The University of Portland is a comprehensive Catholic university located in northern Portland Oregon. Its main campus is approximately 130 acres. The recently acquired River Campus is about 35 acres of undeveloped land. Since the day it opened in September 1901 with 52 boys and 8 professors, the University has grown to a vibrant intellectual community of 3,700 students and 316 professors. UP is a residential institution with 54% of all students (94% of freshmen) living on-campus.

The University is home to 34 buildings on its main campus, two (2) off-campus office buildings (converted rental houses), and 38 rental houses. The oldest building was constructed in 1898 and the newest buildings became operational in the fall of 2009 (FY 2010). The total maintained square footage for FY 2009 was 1,195,983.

UP became a signatory of ACUPCC in 2007. That same year President Beauchamp elevated the university's ad-hoc sustainability task force to full presidential committee status, becoming the Presidential Advisory Committee on Sustainability (PACOS). These acts demonstrate the University's commitment to meet the environmental, social, and economic need of present generations without compromising the ability of future generations to meet their own needs.

The role of PACOS is to act as sustainability "consultants" to the University, thereby providing the University with useful information to assist management in making informed decisions. The Committee advises the President on matters relating to the sustainability impact of the University and its members on the environment, the community, and the economy. This includes monitoring progress on specific sustainability goals such as climate neutrality, making recommendations for the improvement of services and facilities, and facilitating and supporting sustainability education efforts.

University of Portland Climate Commitment

The University of Portland's goal is to become a carbon neutral institution by the year 2040. We anticipate this happening through the pursuit of three targets described below. We will also pursue a comprehensive educational strategy that will multiply the actions we take on campus well beyond the University of Portland.

Target One: Becoming carbon neutral for Scope 1 emissions by 2020
Scope 1 emissions are those directly occurring "from sources that are owned or controlled by the institution, including: on-campus stationary combustion of fossil fuels; mobile combustion of fossil fuels by institution owned/controlled vehicles; and 'fugitive' emissions. Fugitive emissions result from intentional or unintentional releases of GHGs, including the leakage of HFC's from refrigeration and air conditioning." (ACUPCC Implementation Guide p. 11)

Target Two: Becoming carbon neutral for Scope 2 emissions by 2030
Scope 2 emissions are "indirect emissions generated in the production of electricity consumed by the institution." (ACUPCC Implementation Guide p. 11)

Target Three: Becoming carbon neutral for employee commuting and air travel Scope 3 emissions by 2040
Scope 3 emissions are all the other indirect emissions that are "a consequence of the activities of the institution, but occur from sources not owned or controlled by the institution" such as commuting, air travel for university activities, waste disposal; embodied emissions from extraction, production, and transportation of purchased goods; outsourced activities; contractor owned- vehicles; and line loss from electricity transmission and distribution" (ACUPCC Implementation Guide p. 11-12). As recommended by the ACUPCC,

the University will prioritize and target air travel and staff, faculty and student commuting within this phase.

These phases will overlap in the sense that as we are implementing actions to achieve the Target One goal, we will be taking actions to achieve the Targets Two and Three simultaneously.

This plan presents concrete steps we will take to achieve the goals for Targets One and Two. Progress towards Target Three is highly dependent on the progress of regional and national programs to address GHG emissions.

Education and Community Outreach

The ACUPCC Climate Action Plan includes "actions to make climate neutrality and sustainability a part of the curriculum and other educational experience for all students." The University of Portland recognizes the importance of this requirement, as students apply their education and campus experience throughout their lives.

This section highlights recent climate related education activity on campus, and proposes initial plans for education and community outreach going forward. Achieving our goal of carbon neutrality will be much more likely if we seize, build on, and integrate the education opportunities available on our campus.

Academic Departments and Programs Featuring Climate Change and Sustainability

Recognizing the importance of stewardship of the Earth and challenges to humankind from environmental degradation, The University of Portland recently established a Department of Environmental Science. The mission statement of this new department reads in part: "The environmental science department is for students who want to engage with the most pressing issues of the 21st century, including mitigating global climate change, protecting freshwater supplies, achieving sustainable agriculture, and reducing pollution. The search for the meaning of sustainability requires contributions from people with expertise in environmental science, environmental ethics, environmental policy, environmental engineering, sustainable business practices, and many other areas."

Learning objectives for Environmental Science majors include knowledge to:

- Identify and understand the major ecological and environmental problems that confront the planet and its inhabitants.
- Understand current attempts to reformulate modern theology and ethics in response to ecology and environmental degradation.
- Understand the meaning of sustainability from a scientific and theological perspective.

Environmental Science majors are expected to develop values to appreciate:

- The role of the Christian tradition and its implications for theological reflection and action for ecological responsibility.

- How an ethic of sustainability applies to the complex interplay between local and global environmental issues.

While the Department of Environmental Science may be an academic focal point for environmental science education and scholarship, the University of Portland must take a campus-wide approach to environmental literacy in general and climate change education in particular. The knowledge and values objectives described above for Environmental Science majors should be goals for all members of our university community. Indeed we are all responsible for stewardship of Earth and the welfare of those who come after us.

> *Global climate is by its very nature a part of the planetary commons. The earth's atmosphere encompasses all people, creatures, and habitats. The melting of ice sheets and glaciers, the destruction of rain forests, and the pollution of water in one place can have environmental impacts elsewhere. As Pope John Paul II has said, "We cannot interfere in one area of the ecosystem without paying due attention both to the consequences of such interference in other areas and to the well being of future generations." Responses to global climate change should reflect our interdependence and common responsibility for the future of our planet.* USCCB Global Climate Change

Environmental issues are increasingly featured in political science, business, communications, engineering, nursing, and philosophy courses. Pamplin School of Business faculty members are working on sustainable business practices and a sustainability track has been established within the MBA program. Even a cursory inspection shows that the University of Portland has an impressive interdisciplinary array of faculty expertise on environmental issues, including climate change. A sample of those involved includes:

- Environmental Science: Robert Butler, Steve Kolmes, Ron Wasowski.
- Biology: Kathleen Hunt, Michael Snow.
- Chemistry: Kevin Cantrell, Angela Hoffman.
- Mathematics: Greg Hill.
- Business: William Barnes, Diane Martin, John Schouten.
- Nursing: Joanne Warner.
- Engineering: Mark Kennedy, James Male.
- Philosophy: Alejandro Santana, Lara Trout.
- Theology: Russ Butkus
- Communications: Renee Heath.

Several existing "Core Science" (SCI) courses specifically address topics of climate change:

SCI 110 Earth Systems Science. This course develops a holistic view of planet Earth by considering global interactions between atmosphere, hydrosphere, biosphere, and geosphere. An Oregon perspective is developed by examining how plate tectonics, earthquakes, and volcanoes have shaped the active continental margin in the Pacific Northwest.

SCI 111 Natural Hazards in the Pacific Northwest. Geological catastrophes (e.g., earthquakes, meteorite impacts, and flooding) are important processes in shaping the Earth. This course will acquaint students with the scientific principles governing these catastrophes.

SCI 162 Introduction to Marine Science. Survey of biological, chemical, physical, and geological principles in the study of oceanography.

SCI 182 Environmental Science. Survey of the principles and methods of science as applied to the problems of maintenance of environmental quality and preservation of plant and animal organisms within an ecosystem.

Instructors of these courses have developed extensive teaching resources on Earth's climate history, the operations of the climate system, the carbon cycle, the carbon budget, and associated topics. These instructors are faculty members in the Department of Environmental Science who can share their teaching resources with faculty in other departments who wish to incorporate instruction about climate change into their courses.

Core Science courses are currently assigned the responsibility for the Information Literacy and Technological Literacy embedded elements in the university core requirements. Operationally, technology literacy is fundamental to teaching science in the twenty-first century and hardly requires description as an embedded element. Information literacy is the modern world translates to developing skills for locating reliable information on the Internet. Many instructors of SCI courses team with library staff members who are experts on the latest search engines to deliver instruction on information literacy.

Going forward, plans for curriculum and education on campus include the following:

- By June of 2012 we will move forward with a plan for considering the development of Sustainability as an embedded element in Core Science courses and other courses that address environmental and climate science.

This will help provide our students with a richer classroom understanding of climate change, sustainable living, and stewardship of Planet Earth.

In addition, many University of Portland staff employees have important expertise and interests in environmental and climate issues. Notable units are: Clark Memorial Library; Moreau Center for Service and Leadership; Residence Life; and Physical Plant. As described below, several student organizations focus on environmental and climate change issues and these are critical to stimulating student interest in environmental concerns. Collectively, University of Portland faculty, students, and staff have wide and deep expertise on Earth's climate system and contemporary issues of climate change.

Student Programs and Community Outreach Featuring Climate Change

Student leadership in environmental-action clubs, the on and off campus Green Houses, and the Presidential Advisory Committee on Sustainability (PACOS) promotes student awareness of sustainability and climate change and reinforces and leverages academic learning. The momentum generated by student clubs can be harnessed to help advance our university's Climate Action Plan.

College Ecology Club. One of the most active campus clubs, the College Ecology Club, is focused on environmental and sustainability issues. Students organize on-campus events such as the annual sustainability week and recruit students for off-campus events such as SOLV beach cleanups and sustainable energy conferences. Collaboration with other clubs such as the Student Led Unity Garden (SLUG) and the themed campus Green House emphasize the theme of sustainable living in an era of climate change. This is seen already with the local growing of produce in SLUG and the initiation of a composting program for on-campus apartments. These activities build a campus community dedicated to a sustainable university and a sustainable lifestyle that students carry into their future personal and professional lives.

Freshman Workshop - Building Community. Incoming first-year students are required to participate in a freshman workshop led by upperclassmen that focuses on their transition into college. All first-year students participate in a Building Community day of service during the first weekend of fall semester. Off-campus service activities focus on local environmental restoration projects while preceding workshops feature the 2001 statement of the United States Conference of Catholic Bishops (USCCB) report on Global Climate Change: A Plea for Dialogue, Prudence, and the Common Good. The day of service involves student reflection on service as an expression of faith and future service opportunities. These Freshman Workshop – Building Community activities promote awareness of climate change and the Catholic stance on this most pressing environmental challenge of the twenty-first century. In the coming years as the University of Portland's Climate Action Plan takes hold, Building Community activities can put the goals and strategies of that plan into action.

Moreau Center for Service and Leadership. Student volunteer activities in the Portland area and beyond are coordinated by the Moreau Center for Service and Leadership. The center offers service opportunities on a one-time or a continuing basis both during summers and during the academic year and in the summer. There is a strong emphasis on environmental service such as environmental and food justice, energy projects, ecosystem restoration, and sustainability programs. Specific examples include stream and ecosystem restoration (SOLV), tree planting, beach clean up, and the promotion of organic, raised-bed vegetable gardening for poor communities in urban settings.

Residence Life. Resident Assistants (RAs) have a unique opportunity to be student's first point of contact with organizations on campus. Existing programming requirements outlined for RAs by the Office of Residence Life include a variety of community-based and educational events for which funding is provided both per-resident and by special request. Initiatives, such as campus-wide late-night weekend programs, have received special funding. We suggest that programs aimed at sustainability and climate change education could follow this same model. To qualify for special funding, a program would have to reach a significant number of students, have significant likelihood of success, and be focused on educating students about climate change and/or sustainable living. Possible ongoing events could be a carbon-footprint competition between residence halls, a sustainability fair with energy-saving giveaways, or a week of events about options for limiting waste.

Educational Events Open to the Community. The University of Portland participated in the National Global Warming Teach-In, Focus the Nation, on January 31, 2008. This event united educational institutions and their surrounding communities across the country to engage the science of climate change and climate change mitigation strategies. The University of Portland day included discussants and speakers from business, government, and academia, almost 30 panel sessions, a sustainability fair, and a play. In the evening University of Portland hosted a free live Oregon Public Broadcasting production of a "green democracy forum," with leading Oregon elected officials and nine students from across the state in front of a crowd of over three thousand people. Focus the Nation and an upcoming University of Portland sponsored Water and Justice Symposium are examples of how we invite local and regional neighbors to join with us as we confront the many environmentally related challenges of the 21st century.

Building a community committed to greenhouse gas mitigation requires an effective communications strategy, discussed in a later section of this document. Another important component of climate education and action includes evaluating current environmental performance. The University is in the process of building better capacity to analyze this. Our initial greenhouse gas inventory is discussed immediately below, followed by our plan for carbon neutrality.

Greenhouse Gas Inventory

In 2007, the University partnered with Sightlines, a firm originally contracted to link facilities operating strategy and financial capacity. Sightlines offered another program, newly developed, that dealt solely with sustainability: Greenline (since changed to Go-Green). Go-Green services were immediately retained.

Go-Green was designed to help institutions meet two crucial needs when it comes to sustainability – accurate measurement of Stage 1, 2, and 3 carbon footprints and development of feasible Climate Actions Plans. Go-Green Services, being sequential in nature, start with Go-Green Measurement and Analysis, their annual Greenline Process that captures carbon emissions. Next, they utilize Go-Green Strategy and Go-Green Tactics for their environmental consulting services, providing in-depth knowledge to facilitate the development of feasible Climate Action Plans and identifying projects to reduce carbon emissions. UP has thus far utilized Go-Green to measure its carbon footprint for the fiscal years 2004 through 2009.

Utilities are supplied to UP by Portland General Electric (PGE) for electricity, NW Natural Gas for natural gas, and City of Portland for water and sewer. The current Go-Green peer institutions for utility consumption are: Gonzaga University (WA), Lewis & Clark College (OR), Oregon State University (OR), Pacific Lutheran University (WA), Portland State University (OR), Seattle Pacific University (WA), Seattle University (WA), University of Oregon (OR), Western Oregon University (OR), and Whitworth University (WA). A comparison between UP and its peers on utility consumption shows UP keeping very close to the peer average, sometimes slightly lower and sometimes slightly higher.

The current Go-Green peer institutions for carbon emissions are: Lewis & Clark College

(OR), Pacific Lutheran University (WA), Portland State University (OR), Seattle University (WA), University of Denver (CO), University of Redlands (CA), Western Oregon University (OR). The University is in the beginning stages of tracking our carbon emissions, and the data utilized for early years mentioned above are not very accurate. A comparison between UP and its peers suggests that UP is above the peer average in all net-emission categories for the years mentioned above.

Overall, our initial rough greenhouse gas inventories indicate plenty of room for improvement going forward, and as we begin to collect better data, we will have higher confidence in the accuracy of our audits. To maximize educational opportunities and to create incentives for conservation, all results of inventories going forward will be published and presented for the use of University community members.

Plan for Carbon Neutrality

Actions Currently Adopted and In Progress

The ACUPCC implementation guideline to achieving carbon neutrality defines specific areas to consider, culminating in a Climate Action Plan (CAP).

Establish an Institutional Structure: Accomplished. PACOS, a presidential advisory committee, has been established to provide the University leadership with guidance and to ensure UP meets ACUPCC criteria.

Measure Greenhouse Gas Emissions: Accomplished. UP has partnered with Sightlines, who, through its Go-Green Services, collect data and establish the University's carbon footprint. Sightlines also allows for comparisons with peer institutions.

Accomplish Tangible Actions: In process. ACUPCC has outlined seven (7) tangible actions to reduce GHG emissions, of which two (2) or more should be adopted while the CAP is being developed. The seven actions and UP's status for each are as follows:

(1) Green Building Policy – Adopted

All new campus construction will be built at least to U.S. Green Council's LEED Silver Standard or equivalent.

The newly formed Department of Facilities Planning & Construction will ensure that all new building construction will meet this action. Since its adoption of this tangible action, UP has constructed two joined residence halls to Gold LEED and has remodeled its engineering building to Platinum LEED.

Building remodels will follow LEED construction standards.

(2) Energy Star Procurement Policy – Adopted

Adopt an energy-efficient appliance purchasing policy requiring the procurement of ENERGY STAR certified products in all areas for which such ratings exist.

(3) Air Travel Offsetting – Not Adopted

Establish a policy of offsetting all GHG emissions generated by air travel paid for by the institution.

(4) Increase use of Public Transportation – Adopted

Encourage use of and provide access to public transportation for all faculty, staff, students, and visitors at the institution.

The University subsidizes public transportation to its faculty, staff, and students. It also provides a free-of-charge shuttle service between campus and the nearest light-rail station. Also, UP supports Zipcar use by faculty, staff, and students with three (3) Zipcar stations on campus.

(5) Green Power Production of Purchasing – Adopted

Begin purchasing or producing at least 15% of the institution's electricity consumption from renewable sources.

30% of our power comes from low carbon hydroelectric sources. Beyond this, UP purchases 3% of its electrical needs as "green electricity." In addition, it is negotiating with vendors for solar panels on possibly two (2) buildings.

(6) Waste Minimization – Partially Adopted

Participate in the Waste Minimization component of the national RecycleMania competition, and adopt three (3) or more associated measures to reduce waste.

While UP is not a participant of the RecycleMania competition, it has implemented or intends to implement numerous associated measures, including:

- A campus recycling program
- Purchasing office equipment with waste prevention in mind
- Establishing a campus surplus department (e.g., IT, furniture, etc.)
- Working with vendors to reduce transportation packaging
- Promoting inter-office reusable envelopes for campus mail
- Replacing production of paper materials with online alternatives as possible
- Creating an opt-out registry for unwanted bulk mail
- Encouraging the cancellation of unnecessary or duplicate subscriptions
- Limiting printing in computer labs and copy rooms
- Discouraging non-recyclable paper

- Using bulk condiment dispensers instead of single-serving packages as much as possible

- Implementing materials management improvements in "grab & go" dining operations

- Establishing a system to review and approve placement of new and existing campus trash and recycle containers

(7) *Climate Action Plan*: In Process. UP will utilize PACOS, the University community, and its affiliation with Sightlines to submit this initial Climate Action Plan on January 15th, 2010.

Achieving Carbon Neutrality

Phase One Actions

The goal for phase one is to bring the GHG impact of on campus fossil fuel usage and fugitive emissions to net zero. The actions we will take to address this goal are:

1. *Reduction of Natural Gas Usage*

Our first priority with respect to natural gas usage is to reduce usages. Areas to consider in reducing natural gas consumption include the equipment that utilizes natural gas and the employment of the end product (steam, heat, hot water, etc). An analysis of the equipment and infrastructure running on natural gas will be made; e.g., boiler age and efficiency, steam pipes, etc. and could be completed as early as June 2012. Any recommendations from the study are to be implemented as soon as practical. Saving from retrofits of existing infrastructure and use of best practices for new construction (discussed in 5 and 6 below) are particularly important for reduction of natural gas usage.

2. *Displacement of Natural Gas Usage*

After we have implemented reduction actions, our next priority will be to displace the use of natural gas with alternative low-carbon or zero-carbon alternatives. We will select options from several possibilities including biomass and renewable sources of electricity. The State of Oregon has ambitious plans for developing both of these options, and the specific actions we will take will depend of progress made toward these goals. As well, PACOS will track the development of innovation in this area, studying the practicality of novel technologies, implementing new options as they become available.

3. *Fossil Fuel Usage for On-Campus Vehicles*

It is the hope of the University to sharply reduce if not eliminate the use of fossil fuel by 2020. Utility vehicles (e.g., backhoe, dump trucks, etc) are to be non-fossil fuel propelled as soon as possible when alternate fuel items become available. If possible

non-utility vehicles (e.g., automobiles, carts, etc) will be alternatively fueled by 2020. Diesel-powered vehicles shall be converted to bio-diesel by 2015. The university has purchased and operates a biodiesel processor to convert waste oil from on-campus food services. Biodiesel from this source will be used to displace as much fossil fuel use in diesel powered vehicles and boilers as possible.

4. *Water Usage*

Water usage has implications for GHG emissions in the use of fossil fuels to heat water, and electricity to operate pumps. Thus reduction in water usage has implications for GHG emission reductions. The University utilizes two sources for its water: city water and a University-owned well. The well is used exclusively for campus irrigation purposes. The water from the well is cost-free and therefore has negligible carbon footprint with the exception of pumping equipment and electricity. An analysis of the irrigation system and irrigation needs could be conducted by June 2012 and recommendations from the study implemented as soon as practical. The Physical Plant is currently phasing in low-flow showerheads, with full implementation expected in December 2010.

5. *Existing Building Upgrade/Renovation/Retrofit*

The University is over one hundred years old and thus has a large number of older, inefficient buildings. A comprehensive assessment of all buildings owned by the University shall be completed by June 2013. This assessment shall be all encompassing and provide information to allow upgrades and renovations to reduce energy consumption. On-campus existing buildings that require upgrade or renovation should be scheduled for necessary upgrade/renovation and/or demolition with the goal that the work be completed by June 2040.

6. *New Building Construction*

All new campus construction will be built at least to U.S. Green Council's LEED Silver Standard or equivalent. The newly formed Department of Facilities Planning & Construction will oversee all new building construction to this end. Since its adoption of this standard, UP has constructed two joined residence halls to Gold LEED certification and has remodeled its engineering building to Platinum LEED certification.

7. *Fugitive Emissions*

Due to a mild summer climate, the University has relatively low usage of air-conditioning and thus low emissions of HFC's from this source. Other sources of HFC's include older refrigeration in food service and dormitories. PACOS will formulate a specific policy on the replacement of older units with low or no-emission options. Being mindful of the off-campus impact of the production of new refrigeration units, we will carefully weigh the carbon costs and benefits of replacing functioning refrigeration units.

8. *Offsets*

The University regards carbon offsets as a method of last resort, to be used in the event if conservation and conversions fail to bring us to carbon neutrality with respect to Scope 1 emissions. If we need to purchase carbon offsets, we will use only Verified Emission Reduction from certified offset projects adhering to the highest standards with respect to additionality, leakage and measurement.

Phase Two Actions

The goal for phase two is to bring the GHG impact of electrical use on campus to net zero. The actions we will take to address this goal are:

1. *Conservation*

   a. *Lighting*

   For several years the University's Physical Plant Department has been implementing a campus-wide program to upgrade its lighting to be more efficient and effective, thereby reducing electrical use. This program is continuous – as new technology is developed, if possible, it will be adopted as capital financing becomes available. By June 2012 occupancy sensors will be used more extensively to reduce the use of lighting when it is not needed. A program to implement this has already begun.

   b. *Target One implications for electricity*

   Renovation and retrofit of existing buildings as well as use of best practices in new building construction (see above) will have important, measurable, impacts for the reduction of electrical usage on campus.

2. *On-Campus Generation*

   a. *Solar Energy*

   Solar panels usage on several of the campus buildings and University-owned rental houses may be a viable option. An investigation of the feasibility of this technology for individual buildings is could be completed as early as June 2015. Full implementation, if pursued, could be completed by June 2030.

   b. *Wind Generation*

   The use of wind-generated electricity, including micro wind turbines that could leverage educational opportunities, requires research as to its practicality. An investigation of the feasibility of this technology for use on campus could be completed by June 2012. Full implementation, if pursued, could be completed by June 2030.

c. *Electric Co-Generation*

Co-generation electrical options will be considered too. Local suppliers will be contacted to determine the feasibility of cogeneration. Full implementation, if pursued, could be completed by June 2030.

3. *Off-Campus Sources of Carbon Neutral Electricity*

Portland Gas and Electric, our electric power supplier, has a well-established wind generation capacity located adjacent to the Columbia River Gorge. State law mandates that utilities maintain sufficient production capacity to match consumer demand, so the university is guaranteed a supply of this source of electric power. The University will increase its purchase of "green power" gradually so that when the goal can practically be achieved, 100% of the University's external sources of electricity are carbon neutral.

Phase Three Actions

Note: the first two items will be prioritized.

1. *Commuting*

The University monitors employee-commuting patterns and has a workforce-housing program to encourage, with financial incentives, faculty to live close to campus. The University also has a strong residential program for students and has recently significantly increased the already high percentage of students living on campus or within easy walking or cycling distance. The City of Portland is well known for progressive transportation policies and practices. The city's Climate Action Plan includes aggressive measures to expand and improve alternative transportation options. As these plans come to fruition, the University will encourage faculty, staff and students to use available low-carbon transportation option to campus.

2. *Travel*

The University's travel patterns should be analyzed continuously and changed in order to reduce UP's Scope 3 emissions whenever practical. We have implemented a purchasing card policy that will enable us to better track the impact of travel of all kinds. When possible and realistic, webinars and teleconferences should replace in-person attendance of conferences and meetings that would otherwise require travel.

3. *Recycling and Composting Program*

The Recycling Program should be improved and expanded. A feasibility study for a full, centralized recycling program is to be completed by June 2011 and should be

implemented thereafter. The goal should include food waste and landscaping by-products.

4. *Food Service*

Agriculture has an important and increasingly well-documented, impact of carbon emissions. The University's food service provider, Bon Appetite, has a corporate policy of emphasizing sustainable, locally produced organic foods and the policy of the UP management is particularly aggressive. These actions are already reducing the carbon impacts of external transportation of food as well as the impacts of use of fossil fuels in fertilizers and on-farm fossil fuel usage. Oregon is a national leader in this area and, as regional capabilities are developed, we will continue to improve our performance.

5. *Material Usage Reduction and Purchasing*

Measures bulleted on pages 9 and 10 of this plan in "Actions Adopted and In Progress" will be fully implemented and expanded over time. PACOS does and will continue to solicit feedback from students, faculty and staff on methods to reduce material usage and substitute products with reduced carbon impacts.

6. *Carbon Offsets*

Carbon offsets will be utilized after all other GHG reduction efforts are implemented and exhausted. Offsets shall be used to ensure the University meets its 100% carbon neutrality goal for Scope 3 emissions by 2040. As stated above, the University regards offsets as a last resort and will use the highest standards for offset authenticity in any potential purchases.

Barriers and Opportunities

Today's economic environment and the current technology supporting the production of energy make achieving the goal of climate neutrality a major challenge. While having a very serious intent to become fully sustainable in all areas, UP realizes that funding to achieve its intent is a controlling factor. The goal to achieving carbon neutrality will be periodically reviewed and adjusted if necessary.

At the same time we recognize that up-front investments often yield longer-term benefits that are not always effectively captured and understood by the standard methods of accounting. The most obvious benefits include operational savings that more than pay back the initial outlays. This applies to both infrastructure efficiency investments and investments in education that help to encourage significant and lasting conservation efforts. Less obvious benefits occur over time and include student learning and satisfaction, faculty retention and engagement, expansion of research and grant opportunities, and donor development.

The University of Portland, having many older buildings that were not originally designed with energy efficiency in mind, faces a range of challenges and opportunities in upgrading its physical plant resources. The University will initially prioritize Scope 1 upgrades that immediately help to increase energy efficiency while lowering consumption and in an environment of stable or modestly increasing prices may result in operational savings. A recent influential McKinsey study on energy efficiency potential in the U.S. economy argues that 520 billion dollars invested in energy efficiency could yield over 1.2 trillion dollars in efficiency savings over the next decade. At the institution level, this implies that for every one dollar invested, at least two dollars can be gained in cost avoidance over the decade. In the case of Universities where the physical stock lasts for decades and even centuries, these kinds of cost-saving investments are compelling.

As the University community captures savings through efficiency and conservation through Targets 1, 2, and 3, when possible, those improvements will be quantified and tracked. In the years the University operates at a surplus, any gain in unrestricted net assets attributable to these effort or improvements will be earmarked for new conservation and efficiency programs.

Other methods to raise revenue to fund outlays will include:

- The pursuit of all available grants from government, foundations or business partners.
- Energy efficiency and renewable energy incentives provided by government or utilities. Physical Plant has worked closely with Energy Trust of Oregon to determine all available credits and incentives.
- Alumni donations and other fundraising. We have already established a sustainability fund for alumni and others (GreenUP Your Gift)
- Student activity fees and graduating class gifts. The Class of 2008 recently marked their gift to go towards sustainability efforts on campus.

There are many other benefits associated with pursuing carbon neutrality.
Many of these benefits do affect bottom line performance through long run increased revenue for the University and decreased long run costs, and when possible these net benefits will be quantified. They include:

- Truly relevant public service on behalf of saving the planet for our children and future generations
- Graduating students who will be part of the solution to climate change and not be part of the problem
- Academic enrichment for students and faculty
- Improved recruitment and retention of new students and faculty who increasingly will be looking for colleges and universities that embrace sustainability and serious climate action.
- Enhanced comfort and safety through efficiency and physical plant upgrades that improve academic and research productivity
- The possibility of attracting more research dollars for what will undoubtedly be a burgeoning field of study

- Substantial public relations and public image value
- A sense of relevance and pride from being on the cutting edge and among the leaders tackling the problem of climate change

Prioritizing short term energy efficiency and conservation, finding creative ways to fund clean energy alternatives, and taking into account the longer term benefits inherent in a pursuit of carbon neutrality will certainly help to achieve our goals. However, there are other barriers that should be recognized and overcome over time. Some of the more notable social and structural issues at our University include:

- A general lack of information and understanding of what sustainability is, what carbon neutrality really means, and how it can pay off in the long run both privately and socially
- The "silo" effect - where separate departments, divisions, and disciplines maximize within and not across boundaries and often not past a current fiscal year
- Scarce staff and faculty time, with no person or office dedicated to the pursuit of sustainability and carbon neutrality full time
- Improper, insufficient and/ or unclear motivation for behavior change

Implementing the educational and communications strategies discussed in this climate action plan will help to overcome many of these problems.

Communications Strategy

The primary goal of this communication strategy is to provide general information about the Climate Action Plan. The University of Portland is an important asset in the city, and as such realizes the value of communicating progress toward climate neutrality for the benefit of internal and external publics. This strategy includes identification of the audience, variety of media options, general themes for messages, ideas for implementation and control, and a sample of possible tactics.

Audience

This strategy is developed for the edification of internal publics, i.e., students, staff, and faculty, and external publics, i.e., suppliers, parents, alumni, community, competitors, and government entities.

Media

Traditional media, i.e., newspapers, magazines, television, radio, transit, cable, and outdoor offers opportunities for both co-op sponsored advertising and public relations messages. New media, i.e., UP website, banner ads, and social media offers opportunities for regular, individual contributions from selected university leaders representing the faculty, students and administration.

Message

Ongoing messaging should reflect the complimentary nature of the Climate Action Plan process with the university mission. Intermittent messaging should focus on goals achieved, important milestones, awards and recognition, and outstanding group and individual service and accomplishments.

Implementation and Control

Message integrity, continuity, professionalism and tactics developed for this strategy and in consultation with the University's the Assistant Vice President for Marketing & Communications introduced when appropriate. Critical messaging content includes to the "what, how and why" of the pursuit of carbon neutrality and sustainability.

Sample tactics include:

- Weekly notices in student newspaper, *The Beacon*
- Regular updates on the existing Sustainability link on the UP website
- Hosting lectures and conference
- Regular update reports to the faculty senate
- Regular update reports to student senate
- Increased on-campus signage in the Pilot House, dorms and other gathering places
- Co-operative advertising opportunities
- Information in new faculty orientation materials
- Information in new and prospective student orientation materials
- Information in parents' orientation materials
- Information in alumni newsletters and email
- Labeling and promoting regularly serviced and more attractive recycling containers
- Informational signage consistent with the campus' standards where guests are likely to gather, i.e., the Commons, Chiles Center, performance halls
- Information in all academic departments

Implementation Structure

As this Climate Action Plan is implemented, a number of best practice steps will be necessary:

- Assessing progress towards specific goals in the plan through annual reports. This report will include a comprehensive cost-benefit analysis of ongoing implementation actions.
- Monitoring and conducting research on changing regional policies and technological innovations with respect to carbon impacts.
- Revising the plan on a regular basis based on assessment of progress and research.
- Coordinating implementation efforts among students, staff, faculty and administration.

- Maintaining consistent and transparent communication concerning the plan and its implementation to all relevant stakeholders.

Conclusion

The University of Portland is committed to achieving carbon neutrality and ensuring sustainability becomes a way of life for its students, staff, and faculty. UP recognizes that to become sustainable will require collaboration, patience, and a concerted effort from the university as a whole and from the surrounding community.

> *Passing along the problem of global climate change to future generations as a result of our delay, indecision, or self-interest would be easy. But we simply cannot leave this problem for the children of tomorrow. As stewards of their heritage, we have an obligation to respect their dignity and to pass on their natural inheritance, so that their lives are protected and, if possible, made better than our own.* USCCB Global Climate Change

As a Catholic University committed to the tradition of the Congregation of Holy Cross in teaching, faith, and service, students should be exposed to an integrated vision of what these priorities mean for their futures on a warming planet. Where will there be unmet needs for climate mitigation or adaptation that call out for assistance from well educated and powerful countries? Where and how in our own country will costs be borne by the disempowered and vulnerable as the climate becomes increasingly less predictable and livelihoods suffer? We are mindful of documents like *The Columbia River Watershed: Caring for Creation and the Common Good,* with its insistence that we consider the broader implications of our actions and consider ourselves as parts of a greater commons, and *Ex Corde Ecclesiae,* which calls for Catholic Universities to engage in interdisciplinary research and engagement with the vital contemporary issues of their region.

Climate change mitigation is not peripheral to our mission; it is central to our responsibility to our students, our institutional future, and our society. It is a concrete example for our students on how living our lives as individuals and as an institution can make an impact and can give deeper meaning to being people on Earth today.