

# ***SUSTAINABLE DEPAUW***

**April 2011**



*The labyrinth in DePauw's Bartlett Reflection Center symbolizes the introspective nature of conceptualizing Sustainability's solutions to the challenges presented by global climate change. This photo was taken by Jessica Adams, '11.*

## EXECUTIVE SUMMARY

*We believe colleges and universities must exercise leadership in their communities and throughout society by modeling ways to minimize global warming emissions, and by providing the knowledge and the educated graduates to achieve climate neutrality. Campuses that address the climate challenge by reducing global warming emissions and by integrating Sustainability into their curriculum will better serve their students and meet their social mandate to help create a thriving, ethical and civil society. These colleges and universities will be providing students with the knowledge and skills needed to address the critical, systemic challenges faced by the world in this new century and enable them to benefit from the economic opportunities that will arise as a result of solutions they develop. We further believe that colleges and universities that exert leadership in addressing climate change will stabilize and reduce their long-term energy costs, attract excellent students and faculty, attract new sources of funding, and increase the support of alumni and local communities.*

*- from the American College and University Presidents' Climate Commitment*

DePauw's commitment to the American College and University Presidents' Climate Commitment (PCC) is an active and innovative program, intended to be responsive to both the letter and spirit of the PCC. Ours is an inclusive vision, as depicted in Figure 1.

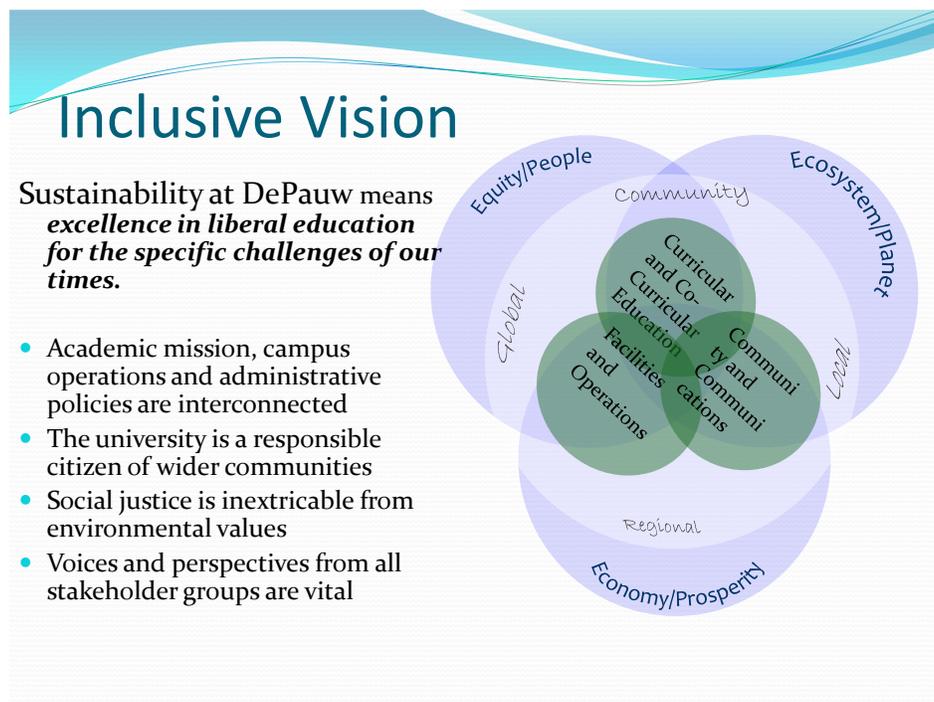


Figure 1. DePauw values including all stakeholders and community members in our Sustainability program.

We recognize the journey to reaching our goal of carbon neutrality in 2040 includes changes to our relationship with our physical environment, just as it will include continued active concern for economic well-being and social justice for all peoples. Our Sustainability Master Plan is a roadmap in that journey, described in three primary sections of our embedded Climate Action Plan: Curricular and Co-curricular Education, Facilities and Operations, and Community and Communications. The goals of this Plan are reflected in the current Campus Master Plan, adopted in 2010. The DePauw Sustainability Director will lead the communal effort to reach the goals of the Sustainability Master Plan. Finally, the Sustainability Master Plan will be reviewed and updated every five years. Our institutional goals are to:

**Goal 1: Sustain and Enhance Sustainability-*focused* and Sustainability-*related* Curricular Opportunities**

**Goal 2: Sustain and Enhance Sustainability-*focused* and Sustainability-*related* Co-Curricular Activities**

**Goal 3: Create a Campus-wide Culture of Conservation**

**Goal 4: Continue Improvements to Energy Efficiency**

**Goal 5: Create a More Sustainable Campus Transportation System**

**Goal 6: Invest in Renewable Energy Projects**

**Goal 7: Review University Investment Opportunities to Further Include Sustainability-*focused* and Sustainability-*related* Funds**

**Goal 8: Enhance Sustainability Service Opportunities and Create Local Carbon Offset Projects and Programs**

**Goal 9: Serve as a Regional Leader in the Comprehensive Promotion of Sustainability**

Each goal (and its attendant strategies) is presented in the associated sections of the Climate Action Plan. A complete list of goals and strategies is presented in Appendix A.

# SUSTAINABILITY MASTER PLAN

*How are we to protect and preserve the crucible of our survival?*

- *Dr. Nafhat Nasr, DePauw Professor Emeritus of Political Science*

## FOREWORD

When DePauw University President Brian Casey signed the American College and University Presidents' Climate Commitment (PCC) on September 15, 2008, Sustainability at DePauw became a formally supported institutional value and DePauw committed itself to making steady progress toward a more Sustainable future.



DePauw's concern about Sustainability issues is well established and our development of a host of co-curricular activities and institutional changes to meet these challenges was solidly underway when the PCC was signed. DePauw's leaders, faculty and students have acted prudently over the past few years to cultivate an ethic of Sustainability that permeates the University. We have, up to the signing of the PCC, with limited resources, developed considerable momentum for academic-, physical- and community-based Sustainability initiatives. Yet, there is much more to be done, both at the individual and institutional level, particularly as we move forward to meet our goal of carbon neutrality by 2040. Current scientific research and economic experience only enhance the need to focus on Sustainability *now*. For we *now know* that our oil-based economy is founded on declining resources and the stability of the states providing this resource. We *now know* we must make wise decisions about our spending, particularly when it is related to energy usage. We *now know* that we must make changes in our behaviors.

Many at DePauw chart the overt beginning of Sustainability at DePauw with "DePauw Discourse 2007: Sustainability and Global Citizenship."<sup>1</sup> Following that event, several

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<sup>1</sup> Held October 4-6, 2007.

professors spoke to the community about Sustainability, and courses were created in part or in whole that included Sustainability topics. Since that time, all sectors of our community have responded positively — many enthusiastically — to the need to address the concern for the unprecedented scale and speed of global warming and its potential for large-scale, adverse health, social, economic and ecological effects. Innovative and effective co-curricular activities have been developed and implemented. Professors are including Sustainability-*related* topics in a variety of disciplines and new classes are being created. Equally, Sustainability is an integral value of DePauw's Campus Master Plan adopted in 2010, and has become a priority in current facilities and operations practices. Last, but surely not least, Sustainability continues to create a natural and strong bridge in developing and maintaining our relationship with Greencastle and Putnam County, and with the world at large.

We believe Sustainability is integrally linked to our University's educational goals and mission. The intellectual life of DePauw — the edification of individual students, faculty and staff members — will be enriched and strengthened by the fulfillment of our growing and long-lasting Sustainability initiatives. Sustainability requires acquisition of knowledge, critical thinking and analytical reasoning. Sustainability also obliges us to be aware of the values by which we make the choices in our lives; equally, we must have respect for the values of individuals from other countries and cultures. We believe a Sustainable life is one in which we will **make a positive difference** as an active global citizen.

The development of DePauw University's Sustainability Master Plan is in part a response to a requirement of the Presidents' Climate Commitment. In larger part, however, it is a way for our community to understand how we will address the three primary elements of Sustainability: Curricular and Co-Curricular Education, Facilities and Operations, and Community and Communication. The Sustainability Master Plan includes our Climate Action Plan, which commits DePauw University to attaining carbon neutrality by 2040. Through this Sustainability Master Plan, we commit to working with the DePauw community to:

- Transform our campus more fully into a living laboratory by turning our academic problem-solving lens onto the physical and social systems that constitute DePauw University. Thinking about our campus in the context of climate disruption requires that we observe ourselves as decision makers through ethical, ecological, and social lenses

instead of only looking onto other actors, other species, other places. **We will educate ourselves more effectively and more self-reflectively.**

- Reduce our operating costs. As we reduce our material needs, we can shift money from physical operations to other communal needs. **We will be fiscally responsible with the financial resources at our disposal.**
- Prepare for future national and international policy that will increase the regulation and/or cost of greenhouse gas emissions and high-carbon products. **We will better prepare ourselves operationally to meet the needs of our community as we respond to these policy changes.**
- Create and sustain safety and material security for present and future DePauw community members, and other members of our global community. We will apply ourselves to issues facing present and future generations of the most vulnerable global populations. **We will contribute to the global common good now and in the future.**
- Promote a just world in which equitable opportunities are ensured as much as possible for all people. **We will promote justice.**
- Model a responsive, compassionate community of global thinkers to the outer world. **We will lead as an example community.**
- Train leaders to live bravely, responsibly, and fully in the face of the challenges, opportunities, and ethical questions of an increasingly industrial, increasingly electronic, increasingly urban, economically globalized, and *climate-disrupted* world. **We will train better leaders.**
- Improve DePauw's standing among its peers. Already, the best residential liberal arts schools in this country are leading on climate and other environmental issues. We will be spoken of as the best of the best of those institutions as we make continued sustainable changes to our physical campus and to academic programs. **We will better compete among our peers for the best students and professors.**

This document explains how DePauw will approach, in a holistic way, goals and strategies that will bring us to a culture imbued with the values of Sustainability as we become a University that is carbon neutral by 2040.

## **METHODOLOGY**

Sustainability at DePauw University, even before it was called “Sustainability,” has been an important part of the culture here. Signing the PCC articulated certain values, and has created a place where these values can be further and publicly exercised. The PCC, with its specific requirements, provides the continued focus for DePauw to reach carbon neutrality – and to address such issues as economic well being and social justice for all.

In signing the PCC, we immediately pledged to build and renovate all campus buildings to the LEED Silver level, and also pledged to buy all new appliances as Energy Star appliances (where they are available). We completed our first greenhouse gas emissions survey on September 15, 2009, using the Clean-Air Cool-Planet computer model. In completing that assessment, we verified what we knew intuitively; specifically, that our largest carbon emitters are from purchased electricity, natural gas, and student travel. We became one of the first universities to sign on to the Sustainability Tracking, Assessment & Rating System (STARS®), which is a transparent, self-reporting framework for colleges and universities to measure the effects of Sustainability efforts<sup>2</sup>. We are now completing this first Sustainability Master Plan, which includes our Climate Action Plan. This Plan will be complementary to other DePauw master planning documents and will be updated at least every five years.

Before putting pen to paper to create this Plan, and before actively involving members of our larger community, the Sustainability Director, the Assistant Sustainability Director and three Sustainability Interns read several Climate Action Plans found on the PCC reporting site. We focused on schools we knew to have an excellent Sustainability reputation, and we also focused on schools within the Great Lakes Colleges Association (a consortium of 13, private liberal arts colleges, of which DePauw is a member). We found much variability between the Plans, both in structure and in content. That led to discussions with Sustainability colleagues at meetings and to education through professional webinars. In conceiving and constructing this Plan, we are most influenced by commensurate Sustainability Plans developed by Furman University, Ball State University and the University of Colorado - Boulder.

Creating this document (and other ones related to it) has been a communal effort that has included active involvement of students, faculty, staff and administrators. We created three working groups: Curricular and Co-Curricular Education, Facilities and Operations, and Community and Communications, each of which met as open meetings during the 2009-2010 academic year. Their visioning efforts were fused into one database through a prioritization exercise that involved participants from all sectors of the University. We have used the outcome

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<sup>2</sup> DePauw was the seventh institution to submit our STARS populated database to AASHE in December 2010.

of that exercise to create this Sustainability Master Plan, and specifically our Climate Action Plan (CAP).

Drafts of the Plan have been shared with representatives of the campus community and the final version of the Plan has been approved by the President's Cabinet. Easy access to the Plan will be facilitated by posting the document on the University's Sustainability website, <http://www.depauw.edu/univ/sustain/index.asp> Also included on that website is the database created by our prioritization exercise.

Implementation and coordination of the various strategies outlined in the Plan will be centered in the Office for Sustainability, led by the Sustainability Director.

## **OUTCOMES**

Sustainability is often thought of as a specific destination, most frequently attached to when an institution will become carbon neutral. While carbon neutrality is a most worthwhile goal, we must be most focused on the journey, which, like any expedition will have its challenges and celebrations – and will have many important moments as yet unknown to us. We do know that awareness and attention to the goals of this Plan will create many changes, individually and institutionally, that will promote all aspects of the three-legged stool that is Sustainability: environmental stewardship, economic wellbeing for all, and social justice for all. Taken together, our initiatives will better prepare our students for taking their place in the world, where they will contribute by their leadership and service. Successful implementation of this Sustainability Master Plan will produce the following visible outcomes:

- Continued and increased student engagement in all aspects of Sustainability
  - On campus
  - In the community
  - In their professional and personal lives after they leave DePauw
- Creation of a conservation culture on campus and in our Research Programs
- Energy and Emissions
  - Reduced greenhouse gas (GHG) emissions
  - Increased resource conservation
  - Fiscal savings from conservation efforts
  - Improved energy efficiency
  - Use of renewable energy systems
- Wellness

- DePauw is a more pedestrian-oriented campus
- Increased wellness through healthier lifestyles, expanded and educated food choices, spiritual practices
- Increased use of locally grown foods
- Community Connections
  - DePauw and Greencastle are a safe, welcoming and affirming place for all peoples
  - Sustainable land use policies that include campus and community
  - Continually increased community collaborations that include volunteer efforts, classroom projects, research projects, service projects
- Financing
  - Continued commitment to Sustainability through investment philosophy, choices and practices
  - Defined ethical standards for choices we make in investments and purchasing
  - Defined opportunities to fund *Sustainability-related* projects
  - Defined options by which to fund projects

To develop these Outcomes, we have committed to the following nine strategic goals.

**Goal 1: Sustain and Enhance Sustainability-*focused* and Sustainability-*related* Curricular Opportunities**

**Goal 2: Sustain and Enhance Sustainability-*focused* and Sustainability-*related* Co-Curricular Activities**

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Each goal (and its attendant strategies) is presented in the associated sections of the Climate Action Plan. A complete list of goals and strategies is presented in Appendix A.

## CLIMATE ACTION PLAN

DePauw's Climate Action Plan is divided into three sections to reflect the work of our three Sustainability committees: Curricular and Co-Curricular Education, Facilities and Operations, and Community and Communications. Each of the following sections follows the same structure: consideration of underlying values, an assessment of where we are at this reporting, and articulation of goals that will not only bring us to carbon neutrality, but will also guide us toward grappling with related complex economic and social issues of our times. We are in agreement with Anthony Cortese, President of Second Nature, who says

Our view of "sustainability" includes and goes well beyond the environmental dimension to embrace the bigger questions of how we create a world in which all current and future humans are healthy, live in secure, thriving communities and have economic opportunity on a finite planet whose capacity to support life becomes more precarious daily.<sup>3</sup>

### CURRICULAR AND CO-CURRICULAR EDUCATION

#### *Underlying Values*

As an institution of higher education, as we set forth our goals for curricular and co-curricular activities as they relate to all facets of Sustainability, we recognized the importance of studying and understanding where the values of the Presidents' Climate Commitment (PCC) and similar documents touched and are congruent with DePauw's values. A first step included examining the Mission Statement of our university, which affirms that,

DePauw University, a residential liberal arts college, provides a diverse **learning and living community** which is distinctive in its rigorous intellectual engagement and **international and experiential learning** opportunities. DePauw teaches its students **values and habits of mind** which serve them throughout their lives as each of them **makes a positive difference as an active citizen of the world.**<sup>4</sup>  
(emphasis added)

While this is a broad-based statement, our values are clear: our students and alumni, educated in the liberal arts tradition, will continue learning while and after they are here, and they will make

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<sup>3</sup> The ACUPCC and Second Nature: Accelerating Education for Sustainability, <http://secondnaturebos.wordpress.com/2010/12/07/the-acupcc-and-second-nature-accelerating-education-for-sustainability/>

<sup>4</sup> DePauw University web page, Mission Statement <http://www.depauw.edu/univ/index.asp>

their own unique contributions to humanity. Indeed, the DePauw Vision Statement notes that, "...The value of the DePauw experience is reflected ... in the uncommon success of our graduates."<sup>5</sup> Success, in this instance, is defined as making a positive difference in one's personal and professional lives while engaging the challenges of a global society. Such challenges easily include the interlocking foci of Sustainability: climate change and its effect on people's ability to financially care for themselves and to treat each other equitably.

After comparing our own values to those encompassed in the term, "Sustainability," we then compared our world view to the values of the PCC, and found, not so surprisingly, a strong and elementary connection in the third paragraph of the PCC, which states that colleges and universities committed to Sustainability must be

...providing the knowledge and the educated graduates to achieve climate neutrality. Campuses that address the climate challenge by reducing global warming emissions and by integrating Sustainability into their curriculum will better serve their students and meet their social mandate to help create a thriving, ethical and civil society. These colleges and universities will be providing students with the knowledge and skills needed to address the critical, systemic challenges faced by the world in this new century and enable them to benefit from the economic opportunities that will arise as a result of solutions they develop.<sup>6</sup>

After signing the PCC, DePauw also became a part of the first wave of institutions to become a participant in the Sustainability Tracking Assessment and Rating System (STARS®), which is a transparent, self-reporting framework for colleges and universities to gauge relative progress toward Sustainability. STARS® was developed by the Association for the Advancement of Sustainability in Higher Education (AASHE) with broad participation from college and university representatives. STARS® is a robust system that allows an institution to track Sustainability progress throughout the organization. In studying STARS® sections on curricular and co-curricular activities, we once again readily found that the underlying values of STARS® fit with those of DePauw. The overall STARS® goal for curriculum states

This subcategory seeks to recognize institutions that have formal education programs and courses that address Sustainability. One of the primary functions of colleges and universities is to educate students. By training and educating future

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<sup>5</sup> DePauw University web page Vision Statement, <http://www.depauw.edu/univ/index.asp>

<sup>6</sup> Text of the American College and University Presidents' Climate Commitment, <http://www.presidentsclimatecommitment.org/about/commitment>

leaders, scholars, workers, and professionals, higher education institutions are uniquely positioned to prepare students to understand and address Sustainability challenges. Institutions that offer courses covering Sustainability issues help equip their students to lead society to a sustainable future.<sup>7</sup>

The overall STARS® goal for co-curricular activity similarly states

This subcategory seeks to recognize institutions that provide their students with Sustainability learning experiences outside the formal curriculum. Engaging in Sustainability issues through co-curricular activities allows students to deepen and apply their understandings of Sustainability principles. Institution-sponsored co-curricular Sustainability offerings, often coordinated by student affairs offices, help integrate Sustainability into the campus culture and set a positive tone for the institution.<sup>8</sup>

Finally, coming full circle back to DePauw, we found through these deliberations that all of these previous definitions and their underlying values are reflected in the DePauw Sustainability Mission Statement, which avows

Our mission is to create and sustain a nationally recognized living laboratory and learning-community that incorporates the letter and spirit of our foundational Sustainability principles into all facets of campus life. The Sustainability Initiative will act as a broad, integrative priority on our campus, suffused with intellectual vigor. We will welcome participation and leadership from all university stakeholder groups—administration, trustees, alumni, faculty, staff, students and the surrounding community—in our efforts to form a just and sustainable environmental, economic and social future.

### *Assessment of Where We Are Now*

After studying the philosophical underpinnings of Sustainability in US higher education, and confirming that these values are very much aligned with our University's values, we reflected on our evolution in marrying 'Sustainability' with our curricular and co-curricular activities. We consider the year 2007 to be the year that the first shoots of 'Sustainability' sprouted from the ground at DePauw. That year was (unofficially) themed as the Year of Sustainability and Global Citizenship. High profile activities and speakers visited DePauw throughout that academic year, including Majora Carter (Sustainable South Bronx), Robert F. Kennedy, Jr. (environmental law

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<sup>7</sup> STARS (Sustainability Tracking Assessment and Rating System) Technical Manual, Version 1.0, January 2010, p. 31.

<sup>8</sup> STARS (Sustainability Tracking Assessment and Rating System) Technical Manual, Version 1.0, January 2010, p. 14.

professor, author and activist), and Bill McKibben (author, educator, environmental activist). We also formally appointed the University's first Sustainability Program Coordinator, and the first Sustainability Undergraduate Interns. In addition we connected our first campus Focus the Nation in January 2008 with the national event of the same name.

In the ensuing years, in preparing the formal documents required by the PCC — documents that contain concepts that have supplied structure to our program — we have studied our curricular offerings through a manual review of course content descriptions in our catalog. In determining if a course is *Sustainability-focused* or *Sustainability-related*, we take into account the “three-legged stool” definition of Sustainability espoused by AASHE, which incorporates the relationship between the economic, social, and environmental elements of Sustainability. *Sustainability-focused* courses explore a broad range of Sustainability topics, or select one area to investigate in depth; they may also approach an issue or topic using Sustainability as a lens. *Sustainability-related* courses include one or more (Sustainability) elements as a discrete element in the course. Courses do not have to meet all the criteria to be considered as either *Sustainability-related* or *Sustainability-focused*. We have done this exercise for three years and are in the midst of yet another review by a panel of faculty. We now can unequivocally say that more and more courses are suffused with *Sustainability-related* topics. From these efforts, we are able to present here a representative but not exhaustive list of courses, offered in 2010-2011, that are *Sustainability-focused* (SF).<sup>9</sup>

- **Anthropology**
  - Environmental Anthropology
  - Anthropology of Food
- **Biology**
  - Conservation Biology
- **Communication**
  - Special Topics: Environmental Communication
- **Economics**
  - Contemporary Economic Problems
- **English**
  - Non-fiction Topics: Nature Writing
- **Geology**

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<sup>9</sup> We are grateful to the University of Colorado – Boulder for their work in developing the discussion of *Sustainability-focused* and *Sustainability-related* curricula, upon which our discussion is based. Please see the CU-Boulder STARS 2010 submission, Education and Research, Credit 5 at <https://stars.aashe.org/institutions/university-of-colorado-at-boulder-co/report/2010-11-09/>

- Environmental Geology
- Intro to Environmental Science
- EXP: Weather and Climate Change
- **History**
  - Topics: Globalization and Migration
  - Topics: Latin American Environmental History
- **Philosophy**
  - Environmental Ethics
  - Topics: Ethics & Economics
- **Physics**
  - Principles of Physics I
- **Sociology**
  - Protest, Activism and Change

In the past few years, we have seen a rise in the number of our students who are interested in naming an environmental area as a major or minor. While students will continue to have the option of creating a unique, interdisciplinary major, the Geology Department has experienced explosive growth, currently carrying 13 Geoscience majors, 18 Environmental Geoscience majors, and five Earth Science majors. In 2010, DePauw was awarded a three-year grant from the Andrew W. Mellon Foundation, the focus of which is to study and implement ways in which students can focus on environmental science and environmental studies in their experience as DePauw undergraduates. The grant has supported the hire of a new faculty member in Biology, who offers course work and research opportunities in aquatic biology (zooplankton). We will also hire a new faculty member in the next two years in the area of environmental studies. With the Mellon Grant, we are enriching and codifying current *Sustainability-focused* and *Sustainability-related* offerings, and considering several inter-related models that will achieve the following outcomes:

- Creation of more courses
- Providing faculty development opportunities that include workshops to impart substantive information about climate as well as pedagogical techniques to effectively teach these subjects
- Support for summer research, which will include student participants
- Bringing in more outside speakers
- Supporting current co-curricular activities/developing new activities

Finally, as part of our curricular offerings, students, some of whom are Science Research Fellows, may work during the academic year and/or in the summer with faculty on research projects related to faculty research. Summer students are required to display and discuss their

work at a poster session open and advertised to everyone at the University. The work from these poster sessions has, on occasion, found its way into journal articles prepared with professors and/or presentations at national conferences.

Similarly, we have reviewed our co-curricular educational opportunities, which have been created, implemented and sustained by DePauw students. The students work with staff, faculty and the administration to create these varied and vibrant programs. The following are descriptions of representative Sustainability-*focused* co-curricular education opportunities:

- **Energy Wars:** Energy Wars is a competition to reduce resource consumption between living units at DePauw University. The goals of the competition are to increase resource awareness, reduce DePauw's carbon dioxide and resource footprint, encourage creativity in resource-saving solutions, and build community Sustainability. We have held a competition each semester since April 2008. In November 2010, DePauw also participated in the first Campus Conservation Nationals, a national resource conservation competition with 40 other schools, winning 1st place with a 25.8% reduction in electricity.
- **Start Green:** Two students in the 2007 Environmental Ethics course developed as their public project, Start Green — a student-led initiative to incorporate Sustainability and environmental discussion into first-year orientation and programming. Start Green has been implemented into orientation since 2008. Start Green activities include:
  - An informational brochure including green living practices, information about Sustainability at DePauw and in Greencastle, and resources for involvement
  - A BPA-Free Nalgene water bottle
  - A Sustainable Dinner with composting demonstrations
  - Academic sessions on Campus Sustainability
  - Orientation schedule printed on 30% post-consumer recycled content
  - A variety of conversations that highlight sustainable living practices.
- **Sustainability Website:** Our Sustainability website (<http://www.depauw.edu/univ/sustain/index.asp>) was renovated in 2009-2010 and is the central hub for all things relating to Sustainability including, but not limited to student projects, Sustainability news, administrative progress on the American Colleges and Universities Presidents' Climate Commitment, and resources for contact or involvement.
- **Signage for Sustainable Food Systems:** Sodexo, our dining service provider, makes available varied information about sustainable food systems and their commitment to that. Their aim in our eating areas is to lead customers to a nutritional balance through the concepts of mind, body, and soul. To that end, they have posters prominently placed in our eating areas to help customers with food selection, including noting which foods are vegan or vegetarian. Signs in napkin holders often are related to Sustainability-*focused* topics, such as “Proudly serving cage-free eggs.” Signs also exist to aid customers in choosing the correct recycling bin.
- **Composting:** Our composting stations are also coupled with signage to help identify compostable items.

- **Sustainability in *The DePauw*:** For the academic year 2009-2010, Sustainability became a regular topic in a column in the school newspaper, *The DePauw*. Examples of topics covered in the column were: our greenhouse gas emissions inventory, Indiana environmental policy, and our 'ban the bottle' initiative. The column continues in *The DePauw*.
- **DePauw Environmental Club:** DePauw has a very active student group, the DePauw Environmental Club (DEC), which advocates for administrative support of Sustainability, and which brought about DePauw's signing the Presidents' Climate Commitment. As expert witnesses, they have influenced Indiana environmental policy. Through other activist efforts they have created campus and community-wide awareness and annual educational programming (specifically, Earth Week and Focus the Nation).
- **Themed Housing:** Through work with the administration, the DePauw Environmental Club has a Sustainability-themed house in which several students live. In addition to residing there, the students hold meetings, show documentaries, and host Sustainability gatherings there.
- **Outdoors Program:** A recognized student organization, the Conservation Club, organizes outdoor programs such as hiking and camping. They follow Leave No Trace principles. The DePauw Environmental Club has also organized similar activities.
- **Sustainability Events:** DePauw's Office for Sustainability and DEC partner with other organizations and groups to host several events throughout the year. For example, during the 2009-2010 academic year, a collaborative of DePauw organizations hosted the Climate Wise Women, which promotes women's leadership on climate change and gives a human face and voice to this complex issue.

In addition to specific course offerings and many substantial co-curricular activities, DePauw has also developed a significant Sustainability-*related* project, which adds substantively to our curriculum. Created in Summer 2008 is the DePauw Environmental Policy Project (DEPP). Developed by Professors Jen Everett (Philosophy) and Kelsey Kaufmann (University Studies), DEPP began with eight students. The students worked independently, with guidance from their instructors, to become experts in the technical aspects of various Sustainability-*focused* topics; e.g., cap and trade, geothermal renovations for K-12 schools in Indiana, and concentrated animal feeding operations (CAFOs). These eight students were joined by seven more for a DEPP course in Fall, 2008. During that time, the students conversed with IN State legislators, who were on environmentally-related committees. During Winter Term 2009, the professors and students regularly visited the State legislature, where the students spoke as expert witnesses in their given field. The students had a direct effect in that more than one piece of new legislation bore the mark of their efforts. In December 2008, the Hoosier Environmental Council named DEPP the best environmental organization in the state for that year.

The Fall 2009 DEPP course followed the same learning model; however, the students focused on topics directly related to world climate change, and incorporating into those topics environmental change, economic well-being for all and social justice for all. This was in preparation for their travel to Copenhagen, Denmark in December 2009 to serve as delegates to the 15<sup>th</sup> Session of the Conference of the Parties to the UN Framework Convention on Climate Change (COP-15). At the Conference, 13 students participated in formal meetings and in long discussions into the night. They also created a daily blog to engage readers with news from the Conference written from the perspective of a college student. After returning from the Conference, the students prepared, via another Winter Term course, to be participants in the upcoming Spring legislative session. They ended their last school year with trips to and testimony before the Indiana State legislature, and with travel to and observance of the Illinois State legislature. DEPP continues this rich program into the 2010-2011 academic year.

Finally, ‘Sustainability’ continues to bubble up in curriculum discussions and co-curricular activities that are not readily associated with the overall topic. For example, several First-Year Seminars are either Sustainability-*focused* or Sustainability-*related*, Sustainability topics are being infused into ethics programs developed by DePauw’s Prindle Ethics Institute, faculty development funding is being awarded to faculty focusing on Sustainability topics, and the University has adopted internationalization of our student population as a priority. In November 2010, a Senior DEPP student produced a day-long conference, “Supporting and Expanding Local Food in Indiana.” Anthony Baratta was inspired by 2007 Illinois legislation that created a Task Force to research local food production in Illinois and develop a plan to expand it. Two years later, many of the Task Force's recommendations became the Local Food, Farms and Jobs Act. Baratta’s conference examined the current state of local food production in Indiana, discussed the benefits of local food, and demonstrated the need for a Task Force similar to Illinois' in the 2011 Indiana General Assembly.

### *Goals and Strategies*

While there is much curricular and co-curricular activity at DePauw, “Sustainability” is still often first and only connected with stewardship of our physical environment. We are evolving to

recognize that Sustainability is broadly involved with academic themes, ideas, issues and activities, so that it can be actively incorporated into all disciplines. Our overall Curricular and Co-Curricular Education goal is to ensure that no student graduates from DePauw without having confronted issues related to climate change specifically and Sustainability generally. We will attain that goal through the following specific Curricular and Co-Curricular Education goals and their associated strategies.

**Goal 1: Sustain and Enhance Sustainability-*focused* and Sustainability-*related* Curricular Opportunities**

Strategy 1: Explore and create strategies to focus on Environmental Science and Environmental Studies

Strategy 2: Sustain and expand the DePauw Environmental Policy Project (DEPP), as an example of bridging curricular and co-curricular activities

Strategy 3: Enrich current curriculum by providing Faculty Development funding and educational opportunities

- Encourage community-based scholarship/research projects
- Create workshops and incentives to encourage faculty to integrate climate change and related Sustainability topics into their courses
- Provide campus speakers to educate faculty about various aspects of Sustainability
- Consider the feasibility of a scholar in residence program
- Promote greater usage of the Prindle Ethics Institute, the Bartlett Reflection Center and the DePauw Nature Park for Sustainability-*related* programs

Strategy 4: Establish an Eco-Literacy tool/program

- Create a year-long education program for all students
- Include an incoming student Sustainability pledge and a graduation pledge

**Goal 2: Sustain and Enhance Sustainability-*focused* and Sustainability-*related* Co-Curricular Activities**

Strategy 1: Heighten student awareness about Sustainability issues

- Create Eco-reps in University residence halls
- Further develop a Greek Sustainability Round Table and encourage all houses to have Sustainability/Environmental Chairs
- Encourage student leadership; i.e., students as “Sustainability Champions”

Strategy 2: Educate and encourage students to incorporate Sustainable living habits in their daily lives

- Continue and enhance “Start Green” program at First-Year
- Participate in the Student Activities Fair events the first week of each new year

- Teach First-Year seminars related to Sustainability
- Create a year-long program of Sustainability activities for all

Strategy 3: Develop additional student-led Sustainability projects (evolving from classroom projects); e.g.

- Native landscaping initiative
- Cob oven and other earthen building structures

Strategy 4: Support annual campus Sustainability events

- Focus the Nation
- Earth Week
- Energy Wars
- RecycleMania!

Strategy 5: Communicate accomplishments of the campus and alumni communities

- Coverage in The DePauw, our independent student-produced newspaper
- Stories on the DePauw home webpage
- Sustainability program website
- Develop a fact sheet about Sustainability at DePauw that would include directing people to existing resources
- Develop a Sustainability map of the campus to be used as part of campus tours
- Develop a newsletter
- DePauw magazine stories/updates
- Connect with alums through Alumni Relations

Strategy 6: Support student Sustainability-related organizations

- DEPP
- DePauw Environmental Club
- DePauw Water Initiative
- Feminista!
- Conservation Club

## **FACILITIES AND OPERATIONS**

*Prompt and decisive action to stop climate change is nothing less than the Great Work of our time.*

- *Dr. David W. Orr, Sears Professor, Oberlin College*

### *Underlying Values*

Immediately after signing the American College and University Presidents' Climate Commitment in September 2008, DePauw University focused on meeting the requirements of the PCC. We completed the following within our first year:

- Within two months of signing the PCC, we developed the Sustainability Initiative (<http://www.depauw.edu/univ/sustain/documents/Sustfinit.pdf>), which maps the structure to carry out PCC requirements and make certain the program itself is sustained;
- Within two months of signing the PCC, we chose two tangible actions, immediately enacted, to show a good faith effort toward our commitment to carbon neutrality while making our way toward developing this Climate Action Plan. We chose the following (from their list of seven):
  - Purchase (where available) appliances only with the Energy Star rating; and
  - Construct all new buildings and do all renovations at the LEED Silver level.
- Within one year of signing the PCC, we completed and submitted our carbon footprint (also known as our greenhouse gas assessment). We will update this footprint every two years hence.

Within two years of signing the PCC, our next requirement is to create and submit a Climate Action Plan. One of the primary reasons for creating a Sustainability Master Plan and the embedded Climate Action Plan is to make public our goal for carbon neutrality and to discuss how we will journey toward that goal. To that end,

***DePauw University commits to reaching carbon neutrality by 2040.***

## *Assessment of Where We Are Now*

As a first step toward carbon neutrality, in 2008-2009, we created our baseline institutional greenhouse gas assessment. The work was done in-house over a period of several months, led by the Sustainability Coordinator and a team that included administrators, faculty, staff and students. Using the Clean Air-Cool Planet (CA-CP) computer model, Version 6, our team met frequently to determine the information needed and where we might find those often arcane data.

The collected data fell into what the CA-CP model refers to as Scope 1, Scope 2 and Scope 3 emissions.

- **Scope 1** emissions include on campus sources, the university fleet, grounds and campus maintenance
- **Scope 2** emissions include purchased energy
- **Scope 3** emissions include commuting and travel, solid waste, wastewater and paper

Our raw data were normalized and analyzed by a small group of talented and tenacious students<sup>10</sup>, guided by a physics professor and the Sustainability Coordinator. It was truly a moment of triumph to complete and submit the survey.

The model calculated our raw data to provide us with knowledge about the metric tons of carbon dioxide equivalent we are emitting each year, which, when fit into the scopes categories are:

- Scope 1 Emissions – 8,261 metric tons of CO<sub>2</sub> equivalent
- Scope 2 Emissions – 21,029 metric tons of CO<sub>2</sub> equivalent
- Scope 3 Emissions – 9,424 metric tons of CO<sub>2</sub> equivalent

**Total Emissions – 38,714 metric tons of CO<sub>2</sub> equivalent**

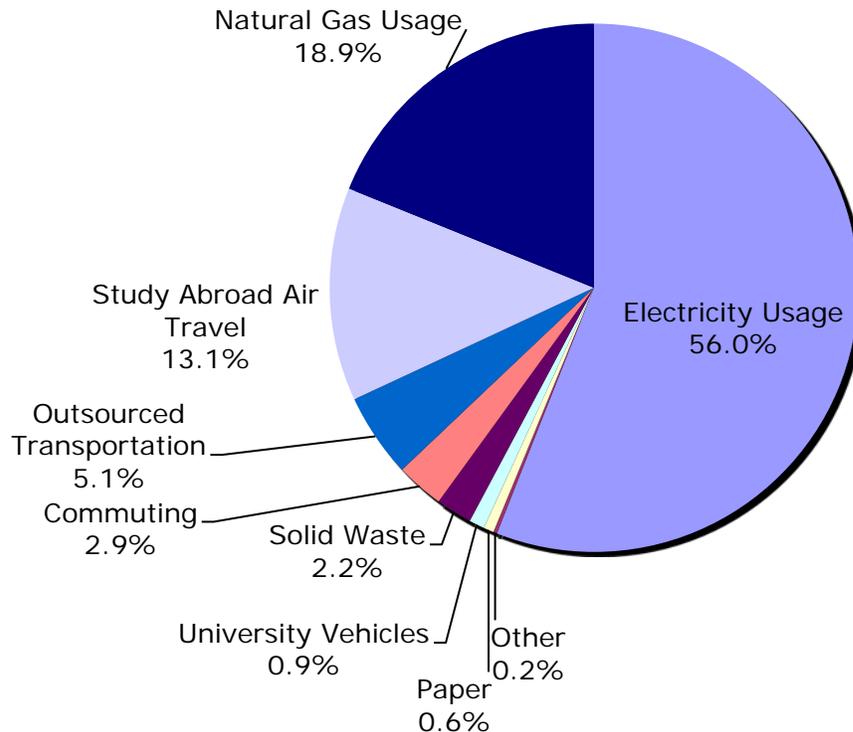
The model also provided us with the following graphic, which illustrates each of the areas comprising the three scopes, and shows how each one contributes to the total creation of our emissions. Using percentages (of total emissions) the graphic provides easy visualization of where the larger problems are. Not surprisingly, because the source of our energy is coal-based,

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<sup>10</sup> The students are Taylor Cantril, '11, Alex Lopatka, '12, and Missy! Orr, '09; the professor is Dr. John Caraher, Assistant Professor of Physics and Astronomy; and the Sustainability Coordinator is Carol Steele.

our biggest challenge areas for lessening carbon emissions are energy usage and natural gas. The next largest area of carbon emission is student travel: ours is an institution that values off-campus learning experiences, and a large percentage of our students will participate in a Winter Term experience and/or an internship that will take them to another place within our country or around the globe.

## DePauw's 2009 Greenhouse Gas Emissions



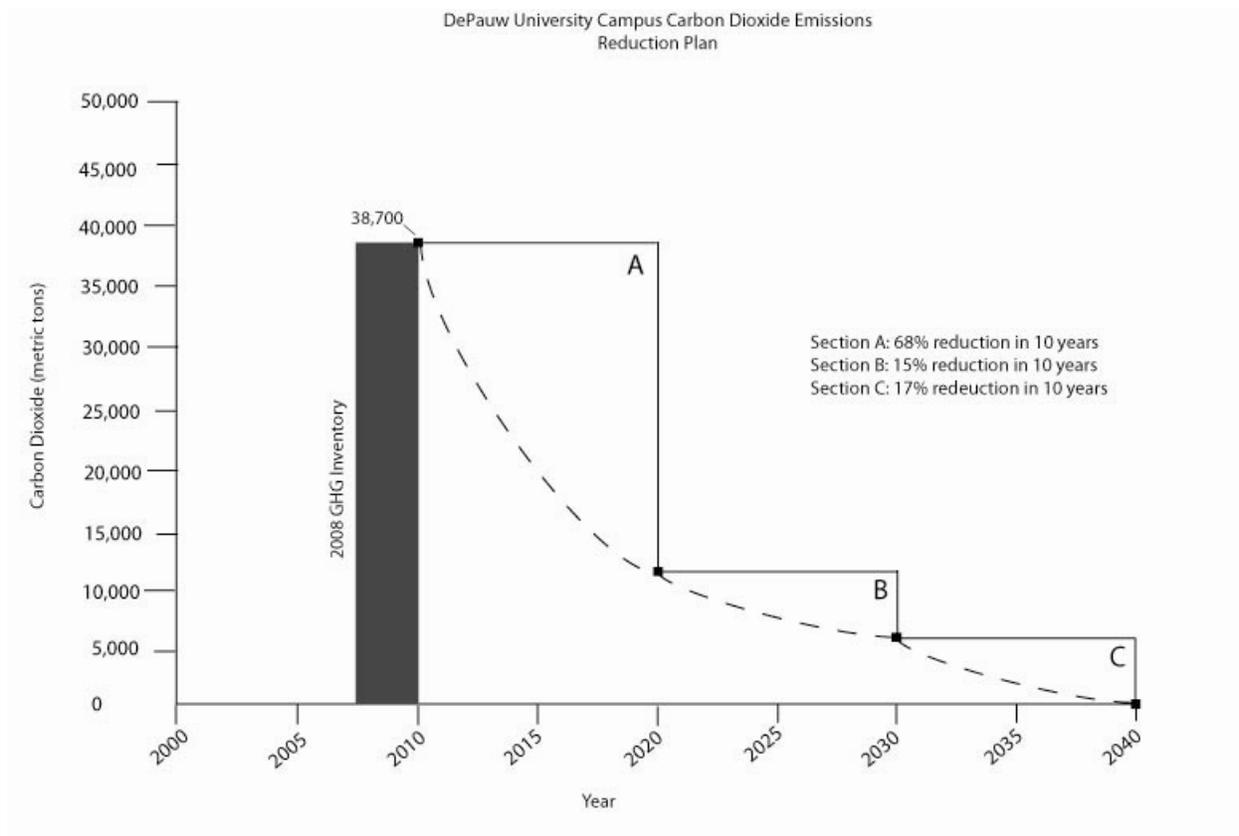
After assessing our challenges, through many meetings with a broad base of institutional constituents, we developed lists of what could and should be done to improve our overall Sustainability posture. Not surprisingly, much of the discussion focused on how to attain carbon neutrality. Our generalized CO<sub>2</sub> reduction plan takes into account all activities delineated by our

focus group members; however, most of the effort to reach carbon neutrality will be borne by facilities and operations changes. The following two graphics<sup>11</sup> provide a generalized understanding about how we will reach carbon neutrality by 2040. The graphics are based on several assumptions to be discussed shortly. The mathematical and contextual underpinnings for these graphics are presented in Appendix C.

The DePauw University Carbon Dioxide Emissions Reduction Plan conceptually shows our goals for how much less carbon we will emit in the coming years. The graphic is intended to portray institutional carbon emissions in the aggregate and is not associated with any specific academic or administrative component of the University. The graphic also implies that the rate of reduction in emissions will be smooth; whereas in reality, some years will see greater or lesser movement toward our goals. Our greatest change in lessening our emissions will come in the next ten years, where we have a goal of reducing our overall carbon emissions by 68%. In the ten years following, we will cumulatively add another 15% reduction, and between 2030 and 2040, we will reduce our emissions cumulatively yet another 17%. These are aggressive goals, but ones we believe are obtainable in our overall goal to reduce our current emissions (38,741 metric tons of carbon) to zero by 2040.

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<sup>11</sup> We are indebted to Margaret Baber, '11, for conceptualizing and creating these two graphics; and for articulating the key assumptions.



DePauw is committed to becoming more sustainable as it moves forward with planning for the future of the campus; and will continuously explore a broad mix of Sustainability-related options as part of its overall campus planning process. As portrayed in the following graphic, the options fall into the broad categories of waste management, transportation/travel, buildings/grounds/energy, curricular activities, co-curricular activities, and changes in policy and culture. Each section of the graphic corresponds to the generalized plan shown above; hence, A = 68% reduction between 2010 and 2020, B = a cumulative 15% reduction between 2020 and 2030, C = the cumulative 17% reduction between 2030 and 2040.

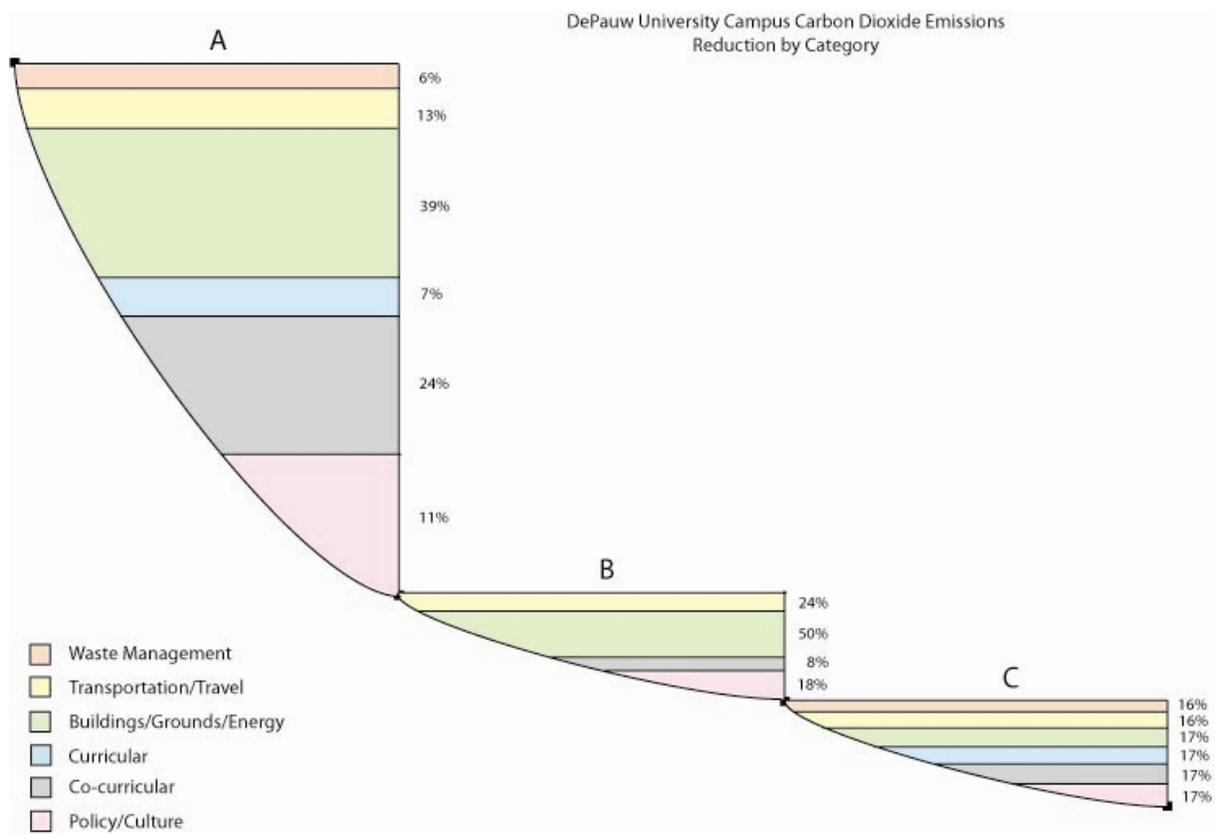
The following graphic provides a visual construct for how we will reach carbon neutrality. The following three key assumptions form the basis for how these percentages and graphics are conceptualized:

1. We assume our carbon footprint is the same in 2010 as it was in 2008 at 38,700 CO<sub>2</sub> metric tons.
2. We assume that already proposed projects will enable us to get to carbon neutrality. Without

more data, it is not practical to assess the validity of that assumption. However, since the percentages were based on the relative impact of each project, the graphs could be equalized a bit if geothermal were given a relative impact of 10 or 15, instead of 5 as it is now. Geothermal is included from 2020-2030, so if the relative impact were bigger, the second block would have more reduction potential and the first block would have a little less.

3. We assume DePauw will not add any buildings/programs/etc. that will add emissions in the next 30 years.

These, especially #2 and #3, are huge assumptions. However, because of the lack of actual reduction data for each project, we assigned relative values and made more of a "comparative analysis." Thus, because of the number of projects and the relative impact of the projects, we found that it is actually possible to reduce about 68% of our carbon footprint *assuming* #1, #2, #3, and that geothermal only has a relative value of 5.



The size of the internal goals for each ten-year increment corresponds to the projects for reducing carbon emissions developed by our focus groups. Following are examples of ongoing

and discrete projects that, together, will bring us to carbon neutrality by 2040. The projects, while frequently focused on reducing carbon emissions, often have aspects related to economic well-being and social justice for all members of our communities.

Waste Management projects will focus on increasing reduce/reuse/recycle awareness among all members of our campus community *and* increase recycling initiatives. As part of our PCC commitment, we will continue to participate in the annual national recycling competition called *RecycleMania!* A significant part of our waste minimization program continues to be our partnership with campus food vendor, Sodexo. We will continue to work closely with our food vendor to provide locally grown/produced food, to further minimize food waste, and to enhance our recycling and composting programs. We will also continue to seek ways to combine University waste management efforts with those of Greencastle.

Transportation/Travel *within* our campus will focus on two main areas: our campus fleet, and opportunities to improve the walkability of the campus that will also better connect the campus to Greencastle.

The campus fleet has begun changing to hybrid vehicles; and we will continue exploring these opportunities as we buy new vehicles for both facilities and operations uses, and for campus transportation, and as we consider moving parking to the perimeter of the campus. The addition of bike lanes would foster a campus safe for pedestrians and bicyclists and would cultivate a setting conducive to improving the health of our community members *and* the environment.

Travel *outside* the campus will focus on educating student, faculty and staff travelers about Sustainability and travel, which will encourage ride sharing and the use of mass transit and alternative energy transit options in both inter-city and intra-city travel.

Buildings/Grounds/Energy projects provide many and significant opportunities to achieve our carbon neutrality goal. They start with our commitments to build and renovate all buildings at least at the LEED Silver level, which would include consideration of using such strategies as alternative energy sources and green roofs and wall gardens.

We will continue to conserve water with our waterless urinals, and we will continue current and new innovative ways to conserve water while maintaining our athletic fields. We will continue installation of water hydration stations around campus, to encourage use of re-usable water bottles. Congruent with the goals of our Campus Master Plan, Sustainability will be enhanced with the planting of significant numbers of new trees throughout the campus, which will mitigate our carbon footprint while providing enhanced beauty and shade to the campus. Tree plantings will rely heavily on native species, which require less water and fertilizer once established. We will continue using the compost developed through our campus program as fertilizer for our trees and other plantings, and will continue to follow and improve upon our Integrated Pest Management procedures. We will consider environmentally-friendly construction materials, such as porous paving, when renovating walkways and paths; and new landscaping and streetscaping projects will consider water reclamation efforts and the use of native plants.

The momentum in current improvements in energy efficiencies will continue; e.g., our commitment to purchase only Energy Star appliances where they exist, and the current effort to change copiers and faxes throughout the University to more energy efficient ones. We will continuously review and improve energy efficiencies that could include using improved insulation and increased use of CFL and LED lighting. Continued education of our campus community will play a large role in improvement of energy efficiency.

Curricular inclusions of Sustainability have and will continue to educate students and engage them in discussion about the complexities of climate change and its effects. Proposals to improve Sustainability-*focused* and – *related* courses are regularly adopted and have become an integral part of our overall culture. Expanded curricula relating to all aspects of Sustainability promise increased numbers of innovative ideas created by our students. Adoption of these proposals for improvements at DePauw will create an overall decrease in our carbon emissions.

Co-curricular projects continue to be an important factor in decreasing our carbon emissions. A significant strength of DePauw's Sustainability program is our students, students who represent all sectors of student life. As students add "Sustainability" to the variables for choosing a University, as students discover Sustainability when they come to DePauw, as students

participate in academic programs such as DEPP, as they participate in programs such as Energy Wars, they will continue to create, implement and maintain programs inclusive of everyone on campus aimed toward decreasing our carbon footprint.

Policy/Culture at DePauw will continue to respond to quality improvements in facilities and operations practices and from DePauw community requests for change. As we continue in our journey to create a campus-wide culture of conservation, policies will be reviewed and updated and new policies developed. Our policies will continue to codify the underlying values of our organization in general and Sustainability specifically.

### *Goals and Strategies*

Since 2007, our program has embraced all people on campus and in our surrounding community in an effort to understand the expanse of what Sustainability means to us and more specifically, how we will use all facets of Sustainability to create a carbon neutral campus by 2040. We are not now investing in renewable energy projects; however, as we review our progress toward carbon neutrality, that will continue to be a part of our overall strategy discussion.

Our discussions and ensuing efforts to decrease our carbon footprint remain frequent and intense. We believe we are on a complex but ultimately fruitful path toward that goal that will include our behaviors and practices and policies as they now are and as they will become. Our current focus in reducing our carbon emissions is on ourselves and on our interactions with our surrounding community. We will attain that goal through the following specific Facilities and Operations goals and their associated strategies.

#### **Goal 3: Create a Campus-wide Culture of Conservation**

##### Strategy 1: Enhance faculty/staff awareness

- Work with each department to create and maintain a Sustainability Liaison Program
- Create and implement a “Green Office” designation
- Include Sustainability (including waste minimization information) into new hire orientation and faculty orientation

Strategy 2: Create continuing opportunities for individuals and groups to be part of efforts to envision and improve Sustainability at DePauw

- Create a Green Advisory Council/Sustainability Council
- Create an online “suggestion box” or listserv
- Create an online “help desk”
- Ensure that University policies support Sustainability initiatives and conservation practices

Strategy 3: Encourage energy water conservation awareness programs and practices

- More and better signage in all buildings (e.g., turn off the lights when not in use, turn off computers/faxes, turn off fume hoods)
- Better signage in service areas (e.g., laundry facilities)
- Create energy savings campaigns (e.g., an “unplug your electronics” campaign)
- Create energy “bills” for students to show them how much energy they are using

Strategy 4: Participate in the Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking and Assessment Rating System (STARS®)

#### **Goal 4: Continue Improvements to Energy Efficiency**

Strategy 1: Expand and improve energy efficiencies

*Buildings (systems)* – Develop a systems approach to constructing and renovating buildings

- New buildings and renovations will be constructed at (the minimum) LEED Silver level
- When building/renovating, consider alternative energy sources such as geothermal, solar, green roof/wall gardens
- On existing buildings (and on future buildings) conduct energy audits, evaluate building emissions, insulate buildings well to ameliorate energy loss
- Consider/assess the feasibility of the development of co-generation options on campus
- Incorporate new energy-saving technologies and systems when they become technically and economically viable
- Automate the energy data collection system and share the data with the campus community
- Increase the number of energy data monitoring systems on campus
- Continue upgrades to campus utility systems
- Use solar powered outdoor lighting and better directed lights for less light pollution
- Upgrade energy control systems

*Facilities Operations (ongoing maintenance)* – Continuously review operational and maintenance practices to increase their Sustainability

- Continue installation of waterless urinals
- Continue installation of hydration stations

- Evaluate regularly the need to re-commission building systems to ensure maximum operating efficiencies: continue improvement of operating efficiency of lighting systems, Heating/Ventilating and Air Conditioning (HVAC) systems
- Create a systematic approach to divesting/razing unused/underused buildings
- Continue and expand use of CFL lighting
- Buy Energy Star (or other comparable efficiency) appliances where available
- Evaluate space utilization; maximize space utilization
- Motion sensor lights
- Lock and cover thermometers to control temperature
- Set maximum kWh usage for the entire campus each semester
- Buy “kill-a-watts” for use around campus (devices to measure energy use real time)
- Hire work study students to turn out lights/turn off fume hoods on campus
- Return amounts saved in energy costs to Facilities and Operations for further energy improvements

#### *Information Technology*

- Purchase/lease IT and A/V equipment and systems with continued improved energy efficiencies
- Implement more Sustainable practices in the use of information technology
- Set computers and printers/copiers to shut down after a period of no use
- Continue printer/copier culture shift with new technologies

Strategy 2: Continue and expand improvements to ensure the Sustainability of our physical environment

#### *Landscaping*

- Continue Sustainable watering practices campus wide; enhance these practices by installing meter irrigation systems
- Harvest water
- Expand use of low maintenance landscaping that includes native plants
- Continue and expand water saving landscaping strategies such as those used on our athletic fields
- Plant many more (native) trees on the campus and in areas connecting the campus with the surrounding community
- User fewer pesticides/alternative pesticides

#### *Waste Minimization*

- Continue and expand composting infrastructure
  - Compostable concessions
  - Educate Greeks and Independents on composting
  - Provide excess compost to the community
- Continue use and improvement of the campus recycling program
- Create standards to reuse furniture
- Give away and/or repurpose excess materials

- Develop a Vendor Code of Conduct, ensuring that our suppliers enforce safe working conditions, treat their workers with respect and dignity, and that their manufacturing processes are environmentally responsible.

Decrease junk mail

- Continue review and improve use of green cleaning products

Strategy 3: Continue and expand Sustainable food practices

- Continue with the goal of serving 20% local foods
- Continue buying fair trade food and products
- Continue buying cage-free egg products and add to that similar products
- Continue and expand on Vegetarian and Vegan food offerings

### **Goal 5: Create a More Sustainable Campus Transportation System**

Strategy 1: Educate the campus community about carbon emissions generated by vehicles; encourage less automobile use

- Close selected streets to create a more pedestrian-focused campus
- Relocate parking areas to the periphery of campus
- Maintain Rural Transit for off-local off-campus transportation needs
- Work with the surrounding community to assess and institute mass transit systems (specifically train based) between Greencastle and cities such as Indianapolis, Crawfordsville and Bloomington
- Organize a ride sharing program
- Charge faculty/staff/student automobile registration fees to discourage casual car use on campus
- Consider a policy change that would restrict first-year students from having a car on campus
- Assess the feasibility of a car share program
- Institute a bicycle program (rental, lease, purchase for all students; procurement for first-year students)
- Evaluate and (potentially) continue with a campus-wide shared bike program
- Encourage ride sharing between faculty/staff commuting to campus for work
- Consider telecommuting options

Strategy 2: Continue efforts to obtain more efficient transportation options

- Continue to convert the campus fleet to more energy-efficient vehicles
- Provide plug-ins for new hybrid models
- Consider instituting a ZIP car (or comparable) program
- Consider purchase of an alternative energy powered vehicle (or vehicles) for on-campus transportation of faculty/staff/students/visitors

Strategy 3: Continue to review and improve carbon reduction efforts during university-sponsored travel

- Review and consider changes to University travel policies and procedures to encourage Sustainable practices
- Institute the Green Passport Program for student travel abroad
- Continue seeking ways to minimize athletic travel

**Goal 6: Invest in Renewable Energy Projects**

Strategy 1: Identify, and when financially feasible, incorporate the most appropriate large-scale renewable energy projects to reduce the utilities budget and campus carbon footprint

Strategy 2: Work with other Indiana and regional universities to discuss and incorporate best alternative energy practices at DePauw and at other universities

Strategy 3: Work with Duke Energy to encourage a reduction in greenhouse gas emissions produced by their coal-fired power plants

Strategy 4: Pursue State and Federal funding to assist with renewable energy projects

## COMMUNITY AND COMMUNICATION

*If the success or failure of this planet, and of human beings, depended on how I am and what I do, how would I be? What would I do?*

- R. Buckminster Fuller

### *Underlying Values*

We recognize that climate change and saving the planet are very much rooted in being excellent and innovative environmental stewards. We also recognize how integrally related that effort is to the economic well-being of all of the planet's inhabitants and to the value that individuals live in a socially just environment. Humans cannot take good care of their part of the earth if they are oblivious to the environment. Even if they are aware of environmental needs, most cannot attend to those issues if they cannot make a living that sustains them and their families and/or are living where the air and water are fouled.

If we as humans are focused primarily on physiological and safety needs, we have little capability to consider larger and more complex issues such as climate change. We cannot have a healthy physical environment – be it in our own back yard or throughout the entire world – if we do not understand that stewardship of the earth depends on contributions by *all* people. And that in order for each person to make his/her contribution s/he must have the economic stability and freedom to do so.

To address these needs, DePauw will seek to lead as a community of responsive, compassionate global thinkers. We will continue to train leaders to live bravely, responsibly, and fully in the face of the challenges, opportunities, and ethical questions of an increasingly climate-disrupted world. We will seek to educate students who will promote social justice, understanding that a just world is one in which equitable opportunities are ensured for all people. We will continue to review University investment opportunities to seek opportunities for further inclusion of Sustainability-*focused* and Sustainability-*related* funds. Creating this community will increase DePauw's already excellent reputation as one of the country's best residential liberal arts

universities. Creating this community will allow us to even better compete among our peers for the best students and professors.

### *Assessment of Where We Are Now*

DePauw is intentional in creating a campus community reflective of these values: we share with each other, with the surrounding community, and with the world at large. Not only are these values reflected in our Sustainability program, they can be found in the mission statement of our Multicultural and International Life program, which says,

Our mission is to foster a community and climate that supports the empowerment, identity development and learning of all community members. We strive to accomplish this by:

- Supporting students in their intellectual exploration and holistic development
- Promoting intercultural dialogue, respect and inclusion
- Celebrating the cultures represented in our community
- Fostering a safe and affirming campus climate for all students
- Cultivating student engagement and success through advocacy, services, programming and advising
- Supporting the university mission of providing diverse learning and living communities and developing active citizens of the world

Equally, these values are found in the mission statement of The Janet Prindle Institute for Ethics, which states,

The Janet Prindle Institute for Ethics promotes critical reflection and constructive debate about the most important ethical questions: What is right, just, and good, and what must human beings do — now and in the future — to meet their moral responsibilities? The Institute seeks to explore with DePauw University students the moral challenges of the 21st Century and encourage them not to remain silent in the face of injustice.

And in our Civic, Global and Professional Opportunities program, which describes an experiential education at DePauw as

...one in which individuals are challenged to develop multiple skills, gain new knowledge and develop greater personal awareness through reflection and synthesis of diverse opportunities. Students actively engage in their own education, enhancing their ability to think critically and independently, drawing connections between what they know and what they experience. Promoting lifelong learning through experiential education, students move beyond what is

comfortable and familiar, developing greater intercultural and professional competency.

Civic, Global and Professional Opportunities articulates these values by providing a plethora of opportunities to experientially develop individual skills, knowledge and awareness; specifically through alternative breaks, the Bonner Scholar Program, the Civic Intern Program, the Community Outreach Program, Winter Term and Winter Term in Service experiences. Students are also assisted in applying to internships, off-campus study programs, graduate and professional schools, national scholarships/fellowships, and post graduate employment. Finally, students from other countries matriculating at DePauw are also supported through English language instruction and comprehensive support services designed to aid them in all aspects of their academic and social lives here.

In fact, much of the early assessment of our current state focused on recognizing all of the many instances and types of contributions that we make to our campus and to the community at large. We easily came to consensus that faculty, staff and students are highly involved in the surrounding community of Greencastle and Putnam County, as substantiated by DePauw being named to the President's Higher Education Community Service Honor Roll since 2006, which is when the Service Honor Roll began. This program "annually recognizes institutions of higher education for their commitment to and achievement in community service. The President's Honor Roll increases the public's awareness of the contributions that colleges and their students make to local communities and the nation as a whole."<sup>12</sup>

Students at DePauw have excellent role models in our faculty and staff, who also volunteer their time and skills in activities ranging from providing supplemental classroom instruction and tutoring to K-12 students to acting as athletic coaches to refurbishing used computers for dissemination to needy individuals, families and organizations (with associated computer training). Faculty from our School of Music have used their unique skills to perform benefit concerts for local food banks and other communal organizations. Students are equally active, appearing as soccer coaches for community youth (ages 3-14), tutoring reading, language and

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<sup>12</sup> Taken from the Learn and Serve America website,  
[http://www.learnandserve.gov/about/programs/higher\\_ed\\_honorroll.asp](http://www.learnandserve.gov/about/programs/higher_ed_honorroll.asp)

computer skills. Our fraternities and sororities are especially active, developing and executing philanthropic programs that include tutoring, scholarships and special events. Our Bonner Scholars, the DePauw Nature Park, and special summer programs such as the DePauw Institute for Girls in Science (DIGS), the Summer Science Research Collaborations, and the K-12 Bridge Program. all work with K-12 students and their teachers to enhance teaching and learning.

### *Goals and Strategies*

The culture at DePauw is one that is decidedly service oriented, whether involved with those within the University, the community that surrounds us, or the world at large. We will continue to expand upon this value with the programs in existence and with others that will evolve. Sustainability has a natural and strong connection to other existing over arching programs in the University; i.e., ethics, diversity and civic/global/professional opportunities. We will continue our work with these programs to further leverage a collective positive effect. Finally, we will continue to celebrate and communicate our successes in all facets of Sustainability, while continuing to include all members of our community in finding creative ways to face and solve the associated challenges. Following are our specific Community and Communications goals and their associated strategies.

#### **Goal 7: Review University Investment Opportunities to Further Include Sustainability-*focused* and Sustainability-*related* Funds**

Strategy 1: To the extent consistent with our board-adopted investment policy which seeks maximum investment returns in order to provide operating capital for initiatives such as our Sustainability initiative, we will continue to seek investment opportunities in Sustainability-*focused* and Sustainability-*related* funds.

#### **Goal 8: Enhance Sustainability Service Opportunities and Create Local Carbon Offset Projects and Programs**

Strategy 1: Continue to promote “Sustainable Service” as a form of community outreach

- Focus on community outreach opportunities that will make DePauw, Greencastle and Putnam County a safe, welcoming and affirming place for all people
- Encourage/expand faculty/staff/student community involvement
- Expand the Bonner Scholars to include specific Sustainability projects.
- Annual Alternative Break Sustainability Project/s

- Increase Winter Term Sustainability-*focused* and Sustainability-*related* courses
- Increase Winter Term in Service Sustainability-*focused* and Sustainability-*related* courses
- Share University compost with the surrounding community

Strategy 2: Collaborate with Greencastle/Putnam County organizations to develop and maintain service programs and offset options

- Move-in/Move-out Days, which is a collaborative effort by the DePauw and Greencastle communities to recycle and repurpose unwanted items that students may have as they move out of their living units for the summer.
- Community Technology Enhancement program (CTEP)
- The Greencastle Sustainability Commission

Strategy 3: Review and improve policies and practices related to the well-being of students and faculty/staff

- Support/collaborate with the work of the Diversity and Equity Committee
- Support/collaborate with the work of other official and related University committees

### **Goal 9: Serve as a Regional Leader in the Comprehensive Promotion of Sustainability**

Strategy 1: Create and sustain a regional Sustainability leaders' network of campus and corporate Sustainability coordinators

Strategy 2: Work with others to share our model of Sustainability

## **CONCLUSION**

The Office for Sustainability works with all sectors of the University and community to promote awareness and action toward an environmentally responsible, economically conscious, and socially just future. The Sustainability Master Plan is a framework through which a Sustainable DePauw can be realized. The Climate Action Plan, as a living document, is our strategy for reaching carbon neutrality by 2040. This document will be revisited *at least every five years* to ensure accurate measurements, reporting, promoting, celebrating, and critiquing of our programs and process. The implementation, continuous reevaluation, and redrafting of the Climate Action Plan will be guided by the Office for Sustainability and the Office of the President. It will include a broad partnership of leaders from across campus. Our Climate Action Plan was born from a community vision to address the urgency of climate change as a responsible leader of higher education. It is DePauw's mission to educate our students to make a positive difference as active citizens of the world. Through a positive institutional example, structural, curricular, and

community enhancement, DePauw aims to prepare its students to be eco-literate leaders of the future.

## APPENDIX A: GOALS AND STRATEGIES

### **Goal 1: Sustain and Enhance Sustainability-*focused* and Sustainability-*related* Curricular Opportunities**

Strategy 1: Explore and create strategies to focus on Environmental Science and Environmental Studies

Strategy 2: Sustain and expand the DePauw Environmental Policy Project (DEPP), as an example of bridging curricular and co-curricular activities

Strategy 3: Enrich current curriculum by providing Faculty Development funding and educational opportunities

- Encourage community-based scholarship/research projects
- Create workshops and incentives to encourage faculty to integrate climate change and related Sustainability topics into their courses
- Provide campus speakers to educate faculty about various aspects of Sustainability
- Consider the feasibility of a scholar in residence program
- Promote greater usage of the Prindle Ethics Institute, the Bartlett Reflection Center and the DePauw Nature Park for Sustainability-*related* programs

Strategy 4: Establish an Eco-Literacy tool/program

- Create a year-long education program for all students
- Include an incoming student Sustainability pledge and a graduation pledge

### **Goal 2: Sustain and Enhance Sustainability-*focused* and Sustainability-*related* Co-Curricular Activities**

Strategy 1: Heighten student awareness about Sustainability issues

- Create Eco-reps in University residence halls
- Further develop a Greek Sustainability Round Table and encourage all houses to have Sustainability/Environmental Chairs
- Encourage student leadership; i.e., students as “Energy Champions”

Strategy 2: Educate and encourage students to incorporate Sustainable living habits in their daily lives

- Continue and enhance “Start Green” program at First-Year
- Participate in the Student Activities Fair events the first week of each new year
- Teach First-Year seminars related to Sustainability
- Create a year-long program of Sustainability activities for all

Strategy 3: Develop additional student-led Sustainability projects (evolving from classroom projects); e.g.

- Native landscaping initiative
- Cob oven and other earthen building structures

Strategy 4: Support annual campus Sustainability events

- Focus the Nation
- Earth Week

- Energy Wars
- RecycleMania!

Strategy 5: Communicate accomplishments of the campus and alumni communities

- Coverage in The DePauw, our independent student-produced newspaper
- Stories on the DePauw home webpage
- Sustainability program website
- Develop a fact sheet about Sustainability at DePauw that would include directing people to existing resources
- Develop a Sustainability map of the campus to be used as part of campus tours
- Develop a newsletter
- DePauw magazine stories/updates
- Connect with alums through Alumni Relations

Strategy 6: Support student Sustainability-related organizations

- DEPP
- DePauw Environmental Club
- DePauw Water Initiative
- Feminista!
- Conservation Club

### **Goal 3: Create a Campus-wide Culture of Conservation**

Strategy 1: Enhance faculty/staff awareness

- Work with each department to create and maintain a Sustainability Liaison Program
- Create and implement a “Green Office” designation
- Include Sustainability (including waste minimization information) into new hire orientation and faculty orientation

Strategy 2: Create continuing opportunities for individuals and groups to be part of efforts to envision and improve Sustainability at DePauw

- Create a Green Advisory Council/Sustainability Council
- Create an online “suggestion box” or listserv
- Create an online “help desk”
- Ensure that University policies support Sustainability initiatives and conservation practices

Strategy 3: Encourage energy water conservation awareness programs and practices

- More and better signage in all buildings (e.g., turn off the lights when not in use, turn off computers/faxes, turn off fume hoods)
- Better signage in service areas (e.g., laundry facilities)
- Create energy savings campaigns (e.g., an “unplug your electronics” campaign)
- Create energy “bills” for students

Strategy 4: Participate in the Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking and Assessment Rating System (STARS®)

**Goal 4: Continue Improvements to Energy Efficiency**

Strategy 1: Expand and improve energy efficiencies

*Buildings (systems)* – Develop a systems approach to constructing and renovating buildings

- New buildings and renovations will be constructed at (the minimum) LEED Silver level
- When building/renovating, consider alternative energy sources such as geothermal, solar, green roof/wall gardens
- On existing buildings (and on future buildings) conduct energy audits, evaluate building emissions, insulate buildings well to ameliorate energy loss
- Consider/assess the feasibility of the development of co-generation options on campus
- Incorporate new energy-saving technologies and systems when they become technically and economically viable
- Automate the energy data collection system and share the data with the campus community
- Increase the number of energy data monitoring systems on campus
- Continue upgrades to campus utility systems
- Use solar powered outdoor lighting and better directed lights for less light pollution
- Upgrade energy control systems

*Facilities Operations (ongoing maintenance)* – Continuously review operational and maintenance practices to increase their Sustainability

- Continue installation of waterless urinals
- Continue installation of hydration stations
- Evaluate regularly the need to re-commission building systems to ensure maximum operating efficiencies: continue improvement of operating efficiency of lighting systems, Heating/Ventilating and Air Conditioning (HVAC) systems
- Create a systematic approach to divesting/razing unused/underused buildings
- Continue and expand use of CFL lighting
- Buy Energy Star (or other comparable efficiency) appliances where available
- Evaluate space utilization; maximize space utilization
- Motion sensor lights
- Lock and cover thermometers to control temperature
- Set maximum kWh usage for the entire campus each semester
- Buy “kill-a-watts” for use around campus (devices to measure energy use real time)

- Hire work study students to turn out lights/turn off fume hoods on campus
- Return amounts saved in energy costs to Facilities and Operations for further energy improvements

*Information Technology*

- Purchase/lease IT and A/V equipment and systems with continued improved energy efficiencies
- Implement more Sustainable practices in the use of information technology
- Set computers and printers/copiers to shut down after a period of no use
- Continue printer/copier culture shift with new technologies

Strategy 2: Continue and expand improvements to ensure the Sustainability of our physical environment

*Landscaping*

- Continue Sustainable watering practices campus wide; enhance these practices by installing meter irrigation systems
- Harvest water
- Expand use of low maintenance landscaping that includes native plants
- Continue and expand water saving landscaping strategies such as those used on our athletic fields
- Plant many more (native) trees on the campus and in areas connecting the campus with the surrounding community
- User fewer pesticides/alternative pesticides

*Waste Minimization*

- Continue and expand composting infrastructure
  - Compostable concessions
  - Educate Greeks and Independents on composting
  - Provide excess compost to the community
- Continue use and improvement of the campus recycling program
- Create standards to reuse furniture
- Give away and/or repurpose excess materials
- Develop a Vendor Code of Conduct, ensuring that our suppliers enforce safe working conditions, treat their workers with respect and dignity, and that their manufacturing processes are environmentally responsible.
- Decrease junk mail
- Continue review and improve use of green cleaning products

Strategy 3: Continue and expand Sustainable food practices

- Continue with the goal of serving 20% local foods
- Continue buying fair trade food and products
- Continue buying cage-free egg products and add to that similar products
- Continue and expand on Vegetarian and Vegan food offerings

**Goal 5: Create a More Sustainable Campus Transportation System**

Strategy 1: Educate the campus community about carbon emissions generated by vehicles; encourage less automobile use

- Close selected streets to create a more pedestrian-focused campus

- Relocate parking areas to the periphery of campus
- Maintain Rural Transit for off-local off-campus transportation needs
- Work with the surrounding community to assess and institute mass transit systems (specifically train based) between Greencastle and cities such as Indianapolis, Crawfordsville and Bloomington
- Organize a ride sharing program
- Charge faculty/staff/student automobile registration fees to discourage casual car use on campus; charge lower registration fees for vehicles that are more carbon efficient
- Consider a policy change that would restrict first-year students from having a car on campus
- Assess the feasibility of a car share program
- Institute a bicycle program (rental, lease, purchase for all students; procurement for first-year students)
- Evaluate and (potentially) continue with a campus-wide shared bike program
- Encourage ride sharing between faculty/staff commuting to campus for work
- Consider telecommuting options

Strategy 2: Continue efforts to obtain more efficient transportation options

- Continue to convert the campus fleet to more energy-efficient vehicles
- Provide plug-ins for new hybrid models
- Consider instituting a ZIP car (or comparable) program
- Consider purchase of an alternative energy powered vehicle (or vehicles) for on-campus transportation of faculty/staff/students/visitors

Strategy 3: Continue to review and improve carbon reduction efforts during university-sponsored travel

- Review and consider changes to University travel policies and procedures to encourage Sustainable practices
- Institute the Green Passport Program for student travel abroad
- Continue seeking ways to minimize athletic travel

### **Goal 6: Invest in Renewable Energy Projects**

Strategy 1: Identify, and when financially feasible, incorporate the most appropriate large-scale renewable energy projects to reduce the utilities budget and campus carbon footprint

Strategy 2: Work with other Indiana and regional universities to discuss and incorporate best alternative energy practices at DePauw and at other universities

Strategy 3: Work with Duke Energy to encourage a reduction in greenhouse gas emissions produced by their coal-fired power plants

Strategy 4: Pursue State and Federal funding to assist with renewable energy projects

### **Goal 7: Review University Investment Opportunities to Further Include Sustainability-focused and Sustainability-related Funds**

Strategy 1: To the extent consistent with our board-adopted investment policy which seeks maximum investment returns in order to provide operating capital for initiatives such as our Sustainability initiative, we will continue to seek investment opportunities in *Sustainability-focused* and *Sustainability-related* funds.

### **Goal 8: Enhance Sustainability Service Opportunities and Create Local Carbon Offset Projects and Programs**

Strategy 1: Continue to promote “Sustainable Service” as a form of community outreach

- Focus on community outreach opportunities that will make DePauw, Greencastle and Putnam County a safe, welcoming and affirming place for all people
- Encourage/expand faculty/staff/student community involvement
- Expand the Bonner Scholars to include specific Sustainability projects.
- Annual Alternative Break Sustainability Project/s
- Increase Winter Term *Sustainability-focused* and *Sustainability-related* courses
- Increase Winter Term in Service *Sustainability-focused* and *Sustainability-related* courses
- Share University compost with the surrounding community

Strategy 2: Collaborate with Greencastle/Putnam County organizations to develop and maintain service programs and offset options

- Move-in/Move-out Days, which is a collaborative effort by the DePauw and Greencastle communities to recycle and repurpose unwanted items that students may have as they move out of their living units for the summer.
- Community Technology Enhancement program (CTEP)
- The Greencastle Sustainability Commission

Strategy 3: Review and improve policies and practices related to the well-being of students and faculty/staff

- Support/collaborate with the work of the Diversity and Equity Committee
- Support/collaborate with the work of other official and related University committees

### **Goal 9: Serve as a Regional Leader in the Comprehensive Promotion of Sustainability**

Strategy 1: Create and sustain a regional Sustainability leaders’ network of campus and corporate Sustainability coordinators

Strategy 2: Work with others to share our model of Sustainability

## **APPENDIX B: PRIMARY CONTRIBUTORS TO THE SUSTAINABILITY MASTER PLAN**

*The following individuals participated in the implementation, data gathering, analysis, and discussions that contributed to the development of our Sustainability Master Plan*

Carol Steele, Sustainability Director  
Missy! Orr, Assistant Sustainability Director

Jennifer Everett, Chair, Curricular and Co-Curricular Education Committee  
Ted Fares, Chair, Facilities and Operations Committee  
Sarah Ryan, Chair, Community and Communications Committee

Doug Cox, Co-Chair, Transportation Subcommittee  
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## **APPENDIX C: MATHEMATICAL UNDERPINNINGS TO CLIMATE ACTION PLAN**

Below are the steps taken by Margaret Baber, '11 to create the Climate Action Plan (CAP) graphs. They are also written at the bottom of the attached spreadsheet. It will help to look at the spreadsheet when going through the steps. The spreadsheet is organized and color-coded along with the steps. References are also made to several numbers on the excel sheet for clarification.

### FORMATION OF CAP GRAPHS

1. Evaluate the relative impact of each project (1-5, 5 being the highest impact)
2. Separate projects by year (Now, 1-5, and 6-15) and category (recycling, transportation, buildings/grounds, curricular, co-curricular, and policy/culture)
3. Calculate total impact number by adding relative impacts of all years and categories (K110=227 in attached spreadsheet)
4. Pick arbitrary relative impact for yet to be determined projects for 2030 to 2040. This is based on 20% of total =225, so relative impact of 2030-2040 is 45.
5. New total relative impact =  $225+45=270$ .
6. Find percentage of relative impact by categories in each year group.
7. Find total in CO2 metric tons assuming starting point is 38,700 CO2 metric tons.
8. Find percentage of relative impact by category by year.
9. Find total in CO2 metric tons assuming starting point is 38,700 CO2 metric tons.