

The greening of a campus

VCU Medical Center
VIRGINIA COMMONWEALTH UNIVERSITY
MCV Campus
James A. Kontos
Medical Sciences Building

Virginia Commonwealth University is one of hundreds of institutions of higher learning nationwide committed to sustainability. April Terreri is your guide to learn more





Colleges and universities across the nation are joining the initiative of the American College & University Presidents Climate Commitment (ACUPCC) to reduce their respective carbon footprints. Virginia Commonwealth University (VCU), with over 32,000 students, is one of over 600 of these institutions who have made a commitment to become carbon neutral.

“It was our Center for Environmental Studies that truly got the university on the track of sustainability,” says Jacek Ghosh, director of sustainability for VCU in Richmond, Virginia. Coincidentally, The Wallter L. Rice Education Building at the 343-acre VCU Rice Center recently received certification as the first LEED Platinum building in Virginia. The 4,900-square-foot building is located on one of the largest river research field stations at an educational institution in the country. In fact, it is situated offshore of the breeding grounds of the threatened Atlantic sturgeon on the James River.

As the third-largest employer in Virginia, with about 50,000 people on campus at any given time, VCU is committed to acting responsibly to reduce its

carbon footprint. The university, founded in 1968, consists of two campus locations totaling 140 acres.

The Center originally urged the university to sign the Talloires Declaration in 1992. This was one of the first official statements made by university administrators committing to a sustainable future in higher education. The declaration incorporates sustainability and environmental literacy in teaching, research, operations and outreach at colleges and universities worldwide. It has been signed by more than 350 university presidents in over 40 countries.

Today, the ACUPCC is continuing that original charge and has drafted its sustainability initiative on the premise of achieving climate neutrality at university and community college campuses throughout the nation. The ACUPCC is supported by the Association for the Advancement of Sustainability in Higher Education (AASHE), founded in 2006, with a mission to promote sustainability in all sectors of higher education.

VCU originally signed the Presidents Climate Commitment on April 1, 2008. “Within two months of signing the commitment, we had to post online how we planned to institutionalize the VCU

Architecture Engineering Planning Interior Design



Virginia Commonwealth University
Medical Sciences Building II

Partnering with our clients in
Sustainable Design

833 Chestnut Street
Suite 1400
Philadelphia, PA 19107

215.446.0900
ballinger-ae.com

Ballinger

 **Sustainable Design**
Consulting



We are pleased to have provided LEED process management services for the first and second LEED Platinum projects in Virginia!

We provide expert green building design, construction and operations technical guidance for a wide variety of public and private sector building types and neighborhoods.

We also offer corporate greening services, carbon footprint assessments, green curriculum development, green building case studies, and assistance with application for financial incentives for green building projects.

We are a small, woman-owned business with offices in Richmond, Virginia and Washington, DC.

Sandra Leibowitz Earley, Principal • Sustainable Design Consulting, LLC
1421 Lombardy Alley, 1st Floor • Richmond, VA 23219

P: 804-644-3880 • Fax: 804-644-3881

www.sustaindesign.net

THE PYRAMID GROUP

DESIGN/BUILD
CONSTRUCTION SERVICES
REAL ESTATE DEVELOPMENT



AP Pro-Construction Services

**PYRAMID
DEVELOPMENT**

ONE SOURCE
COMPLETE SATISFACTION

- ▲ Hospital & Medical Facilities
- ▲ Historic Renovations
- ▲ Commercial/Retail
- ▲ Institutional & Industrial
- ▲ Renewal & Development of Commercial Properties

1707 Summit Avenue
Richmond, VA 23230
www.proconstruction.com

800.789.6102

Fax: 804.358.2059

e-mail: info@proconstruction.com



Kirby MEX.
MANUFACTURA

Kirbymax, S.A. de C.V.
Carretera Torreón Mierles s/n Km. 6.5
Torreón, Coahuila; C.P. 27400 • México
P: 011-52-871-732-8273 through 75 •
F: 011-52-871-732-8269
micobeez@yahoo.com.mx;
carlos_branas@prodigy.net.mx
www.kirbymex.com.mx

sustainability process as well as hiring a director of sustainability, which VCU did last July when it hired me,” explains Ghosh. “A year after we signed, we had to have completed a greenhouse gas emissions inventory of our carbon footprint, which we did, and that is also posted online on the AASHE website.”

The final step in the process will be to produce a climate action plan in the second year after signing, by May 2010. “We’re in the planning stage now, and in our plan we will address other components of the commitment, including community engagement, educational curricula and research,” Ghosh reports. The goal of the ACUPCC is to sign on 1,000 institutions by December 2009. Signatories must agree that their planning is transparent and that their data will be posted to the AASHE website so their progress over time is made public. The goal is to develop a body of knowledge resulting from the experiences of the thousand or so institutions. The AASHE website acts as a clearinghouse of information on the various campus projects throughout the country.

The online profiles at the AASHE website present information about each university and news regarding initiatives under way by each university’s sustainability committee. VCU hired a third-party consultant to conduct the greenhouse gas emissions inventory as well as to define exactly what the geographical boundary of the VCU carbon footprint is. “There are a set of reporting protocols around defining one’s carbon footprint, and the Climate Registry is a resource,” says Ghosh. “There are three categories, or scopes of emissions, guiding the inventory, which includes any fuels we burn on campus, the amount of electricity we purchase to power the university, and the fuel we use to commute to and from the university—this also includes any air travel by the faculty. In our case, our greenhouse gas emissions were approximately 137,000 metric tonnes in 2008.”

About 56 percent of the VCU greenhouse gases result from using purchased electricity. “In our case, we buy our energy from Dominion Virginia Power, and their mix of electricity is 80 percent from coal and 20 percent from nuclear energy,” reports Ghosh. “The coal they use to fire their plants is softer coal with higher greenhouse gas emissions. To reduce our footprint, we would have to reduce our consumption of electricity phenomenally, which is probably not going to happen in the short

term. Or we can hope Virginia Power changes its mix of available electricity, which could include renewable energy. This might come from legislation at some point.”

Ghosh says that the VCU sustainability committee will gear up in the fall to develop a climate action plan that will be submitted to VCU’s president. The plan will likely include measures to reduce greenhouse gas emissions by planning to design new construction to LEED Silver status or better. “A LEED Platinum building could even be a net producer of energy,” he says.

An executive order from the Commonwealth of Virginia recently mandated all new state buildings must be designed to LEED Silver, so these new buildings will not produce as much carbon. “The issue we have is with the 220 buildings we have within our campus, of which about 20 are new,” says Ghosh. “We’ll have to decide how to deal with the other 200 buildings. There is a version of LEED-EB [Existing Buildings] that is a mechanism to determine the energy consumption of existing buildings and then decide how to retrofit them for maximum energy efficiency. The problem with this is that some of the solutions are expensive.”

VCU has 40 years to reach climate neutrality, according to its chosen date of 2050. “I don’t know if that’s what we’ll decide finally, but we needed some bookends to our planning process,” explains Ghosh. “There are different ways of getting there, such as buying offsets or RECs.” He adds that the university’s 343-acre plot of land could very well play into the carbon equation. “The other issue we haven’t spent much time on is making some assumptions for future growth at VCU. We haven’t wrestled with that issue yet, but we’ll evaluate it during our planning phase.”

Sustainability is really about good business practices, Ghosh says. “There’s no waste involved. I think the goal of this commitment will be for all the institutions, if not to outdo each other, at least share information. As the 15 or so institutions in Virginia arrive at the point of getting their plans integrated and approved, one goal is to unite with them and their presidents if we should bump into administrative, legal or bureaucratic obstacles. At that point we might need to lobby the state legislature as a group for some of the changes we’ll require to get us to the next level of sustainability.”

– Editorial research by Vincent Kielty ■