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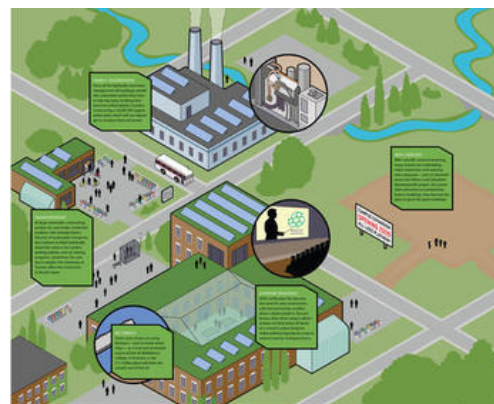
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Carbon Neutral U

In the age of global warming, the greening of the American college campus is a largely grassroots effort driven by students, faculty, and in-house staff dedicated to sustainable thinking.

By Andrew Blum

Posted February 20, 2008

2 comments

In late 2005 Yale University president Richard Levin exercised the considerable prerogative of his office and announced that his institution—with its 5,500 residents, 21,000 commuters, and 1.7 million square feet of office space—would slash its greenhouse-gas emissions. His chosen target seemed attainable enough: a 43 percent reduction by 2020, which would bring the university ten percent below 1990 levels, thereby exceeding Kyoto Protocol goals. More than two years later Yale's carbon graph is a beautiful site in an otherwise Sisyphean struggle. The university has already cut emissions 17 percent, with projects under way expected to cut another 17 percent by 2009—putting Yale a decade ahead of schedule in reaching its target. The even better news is that Yale is far from alone among universities: nearly 500 schools have signed the American College & University Presidents Climate Commitment, which sets them toward climate neutrality by a specified date (although it's toothier than it sounds).

But Levin isn't smug. An economist by training, if anything he's frustrated by the wide view. "We're showing it can be done, but our carbon savings are miniscule compared to what needs to happen," he says on the telephone one morning. "And even if you put all the educational institutions in the world together, it still doesn't add up to much. The answer has to come from governments, and I think the major reason for doing this is to enlighten the public so that ultimately governments will get serious about it."

Yale and other schools are being spurred to action by a catch-22: the environmental moves they make on campus matter far less than what they teach their students—and what their students teach the world. But presidents and professors realize that the best way to teach students is through what they do on campus. Today's campus sustainability movement is balanced be-tween nuts and bolts and big ideas. Local action has replaced global symbolism.

Higher education has emerged as a thrilling proving ground for a sustainable society. Schools of all statures and sizes—from the Ivies to red-state community colleges—are making the most of their fiefdoms, leveraging their educated and politically engaged populations, long-term outlooks, and self-managed (the often significant) physical footprints to make substantial changes. But with those changes comes a surprising reversal in academe's typical stance: the mechanics of the campus are occupying the brightest spotlight. Students, administrators, and faculty are obsessing over the cleaning products the janitors use, how dining-hall potatoes are grown, and which dorms consume the least energy. Infrastructure is hot—hotter arguably than research or teaching about sustainability. It is as if the ivory tower has looked out to the world and seen a choking planet, and its first response is to look inward again at its own activities—building designs, power plants, and transportation systems.

Schools are also looking to one another for help, increasingly collaborating in realms where they have traditionally competed. "There's long been an incredible amount of peer benchmarking across higher education, but that's not the same as collaboration," says Mark Orłowski, executive director of the Sustainable Endowments Institute, the publisher of the College Sustainability Report Card 2008, which evaluated 200 schools on their environmental activities. "Collaboration, while quite widespread in the academic side of the university, has been less prevalent in operations," he adds.

But that's changing—a trend apparent from the vantage point of the newly renovated Yale Office of Sustainability, occupying a small suite of rooms above a pizza place in downtown New Haven. "We're all tackling the same problems," says Julie Newman, Yale's director of sustainability, sitting with the lights out in a conference room that smells pleasantly of the pine flooring salvaged from an old mill building. "There's a competitive nature that exists—for recruitment of students or establishing research centers. But where the collaborative nature comes in is that it's silly to force each of us [universities] to reinvent the wheel when we're tackling global issues that have an impact on all of us."

2 comments



At Yale, Newman's comments now amount to official policy. Since last spring, the school has been one of a dozen members of the Ivy Plus Sustainability Working Group, founded to help the growing cadre of campus sustainability coordinators compare strategies and solutions. "Ivy Plus" refers to an existing loose confederation of the nation's top schools: the old Ivy sports league plus Johns Hopkins, MIT, Stanford, and the University of Chicago. As sustainability increasingly became a topic of conversation among the institutions' leadership, Levin convened the group last year to shape a shared sustainability agenda. An initial meeting last April brought together a handful of environmental representatives from each school. Since then, Ivy Plus has been connecting through monthly conference calls, with plans shaping up for a second annual meeting this spring. The group is far from the only one of its kind in higher education (New England colleges have their own group, for example), but Ivy Plus stands out for the massive institutional weight behind it. If by no other measure than their combined endowments in excess of \$100 billion, when it comes to sustainability initiatives these are the schools with the potential to do the most the fastest.

The range of projects is staggering. After a decade of bring-your-own-coffee-mug student environmentalism, the opening salvo of a new, more glamorous era in campus sustainability came in 2001, when the daughter of famed Berkeley, California, chef Alice Waters enrolled as a freshman at Yale. Waters's initial disgust at the cafeteria steam tables evolved into the Yale Sustainable Food Project, which today manages an organic campus farm, directs a sustainable dining program, and serves as the base for a series of academic classes. It's also been a lightning rod for PR—"A Dining Hall Where Students Sneak In," crowed the New York Times—and dozens of schools have launched similar programs. More recently, as campuses have turned their attention to carbon reduction, no detail is too small: dorms are providing laundry racks for no-energy clothes drying, offering free bike maintenance as well as shared bikes, encouraging students to disconnect their dorm appliances over vacations, and recycling their organic potato French fry grease into biodiesel fuel for campus buses.

Then there's the LEED parade. Harvard is storming ahead with LEED-certified projects (12 completed so far, a task managed by a full-time staff of 18) and is seeking Gold (or equivalent standards) for the entirety of its new 130-acre campus across the Charles River from Cambridge, in Allston, which will see the addition of 10 million square feet of new space over the next 50 years. Similarly, Columbia's new Manhattanville campus (a measly 17 acres) in West Harlem is participating in the LEED for Neighborhood Development pilot program, with Renzo Piano, SOM, and James Corner calling the design shots. And that 50-year time line is indicative of the long-range thinking on campuses—which, unlike corporations, are assured of longevity thanks to massive endowments.

The biggest steps are still to come, particularly as universities entertain the idea of being fully carbon neutral—which no amount of lightbulb ex-change programs will achieve. Cornell, with its city-size campus in a rural location, is among the earliest to tackle the challenge of generating large amounts of its own low-carbon power. "The rate of change has been so quick that we were pushing for low-hanging fruit for years and years, and now we're talking about major initiatives that cost tens of millions of dollars," says Dean Koyanagi, Cornell's sustainability coordinator. In 2009 the university's new 30,000 kW heat-and-power cogeneration plant opens and will knock Cornell's coal use in half, bringing it 30 percent below 1990 levels. Those big moves are a tradition: the school's founder, Ezra Cornell, built a hydroelectric turbine in the nineteenth century, and its descendent still provides the university with three percent of its energy. In 1991 the school opened its Lake Source Cooling plant, which uses water from nearby Cayuga Lake as a chiller—reducing electrical needs for air-conditioning by 86 percent. "That's a big chunk that we had already gotten out of the way long before we claimed we were going to go climate-neutral or even reach the Kyoto goals," Koyanagi notes. Cornell's challenge now is pacing itself. At a recent retreat for facilities managers, attendees taped up a sheet of paper for each new sustainability initiative in an attempt to get a handle on everything. "The entire room is covered in these sheets of what different groups are doing, and we're like, OK, this is everything we do," Koyanagi recalls. "How do you call that an initiative when everything we're doing involves sustainability?"

For the cadre of campus sustainability coordinators, "creating a culture of sustainability" is one of the measures of success. The administrative structures for sustainability offices vary school by school, with some coordinators reporting through facilities, some through the provost or president's offices, and some through both. But they all have the mandate to bridge the university's operational initiatives to its teaching and research—to make the nuts and bolts count toward the big teachable ideas. With the wave of interest sweeping the students and faculty, new projects are coming from everywhere. The sustainability coordinator plays traffic cop, diplomat, and "facilitator." As Yale's Newman puts it, "What's so fascinating about these positions is that we don't directly oversee any of these functions. We have no power to do any of it. Our role is to be a sustainability generalist and then to develop questions and frameworks to understand how these systems work independently and together—so that, in the aggregate, does it lead to a sustainable Yale?"

The collective expertise of each institution is breathtaking. Columbia University's director of environmental stewardship, Nilda Mesa, an EPA official during the Clinton



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administration, points out for example that the Lamont-Doherty Earth Observatory discovered El Niño and identified the role of ocean currents in global warming. These are not people who will stand for under-the-rug carbon offsets—they instead may bring in a new biofuel. Mesa both pushes new projects out to the community and pulls others in. “Part of how I will know that this office has succeeded is by seeing the ideas that come in from other parts of the university,” she says. This breadth is one reason the sustainability coordinators eagerly seek one another’s help, as with the Ivy Plus group. “The stigma of being one of the Ivies is that you’re supposed to be a leader in everything,” Cornell’s Koyanagi says. “But at the same time there are pieces of those competitive areas that we really need each other’s help on.”





No doubt there’s more than a little peer pressure in all of this—a rivalry of the greenest. (For the record, Dartmouth and Harvard claim that honor among the Ivies, according to the Endowments Institute.) Yet, as academic institutions, they happily engage with the complexity and enormity of the challenges, realizing that those are in large part why they exist. Some business magazines may be grappling with green as something other than a fad, but higher education—if only in the last year—is presenting a remarkably united front, both in real reductions and in asking the hard questions.

For Anthony Cortese, who is called “the grandfather of higher-ed sustainability,” this is the sweet fruit of 15 years of active lobbying. A former commissioner of the Massachusetts Department of Environmental Protection, in 1993 he opened Second Nature, a higher-education sustainability consulting firm, with Senator John Kerry and Teresa Heinz Kerry; he later cofounded AASHE, the Association for the Advancement of Sustainability in Higher Education, and most recently has been codirecting the Presidents Climate Commitment, which has been staggeringly successful in soliciting pledges from a wide gamut of schools—468 at press time, representing nearly 25 percent of American students. (But to Cortese’s chagrin, that includes only two of the Ivy Plus schools, who by nature march to their own drummers.)

What’s changed, Cortese believes, is the realization by universities that global warming can no longer be considered an independent issue but is actually germane to their core functions. “The presidents who have led this effort see that one of the most important roles, and the purpose of higher education, is to provide the knowledge necessary for a thriving civil society. That’s our function. But to do that, to fulfill that mission, we have to deal with the unhealthy, unsustainable, and ineffable challenges that are occurring in the world today.” The students are right there in the thick of it, partly because they want to be part of an institution committed to slowing climate change (rah rah!). “But the real issue,” Cortese says, speaking for the presidents, “is because we only exist to help students find a way to make a contribution that will lead to a good quality of life for themselves as well as for society.”

For a 21-year-old today—who will likely live to see the ice caps melt—this is not an idle question. At Yale, just before the start of the semester’s final exams, I meet with Kate Gasner, a junior from California who is the codirector of STEP, the Student Taskforce for Environmental Partnership. An environmental engineering student, she is quite literally preparing herself for the century’s tasks. (And it’s amazing how much better prepared she’ll be than, say, Julie Newman, who in the 1990s had to concoct her own graduate program in environmental policy.) Fully aware of the kind of environmentalist she is not at the moment, Gasner opens her laptop to the month’s dorm energy-usage statistics and explains STEP’s strategy. “We’re trying to change behavior and make people responsible and definitely environmentally conscious, but not necessarily environmentally passionate,” she says. “This is not rabble-rousing, crazy, you-have-to-feel-the-same-way-I-do, save-the-polar-bears! We try to bring environmental issues to the dorm and to campus with a more day-to-day approach.” A decade ago—much less four decades ago—this may have sounded like a compromise. Today it is what universities are for.

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