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Binghamton University

Day 5: Greenest

From an outsider's perspective, Binghamton University looks like a quiet and peaceful college town that is bordered with rolling green hills and generous acres of lush, green forests that are teeming with wildlife. But what outsiders least expect from this picturesque university is the boundless energy that teems underground, travelling from miles beneath the earth to the very heartbeat of the school. It doesn't matter if it is the dead of night or if it is five o'clock in the morning, the campus always buzzes with the quiet hum of electricity through its veins, powering the street lamps that light up the pathway, illuminating rows of library shelves and computer stations, all the while highlighting moments where we are able to glimpse into the lives of its busy college students, awashed with the digital blue glow from their laptops and phones, hunched over their thick textbooks, and scribbling furiously on endless stacks of assignments and projects. Binghamton University never sleeps, and neither do its students.



Binghamton University Library Tower Lit Up at Night

When one takes a bus from the Binghamton University Union to go off campus, no matter where their destination is, there is no doubt that they will pass by a hulking monolith of a building that lies near the gates of the university. Gray and drab with a massive column sticking out from one side, it is hard not to stare at it when it rolls into view through a bus window. Tucked away from the main heart of campus, Binghamton University's very own power plant is hidden from plain sight of the students, shrouded with trees on one side and an empty parking lot across from it. It strays far from lecture halls and academic buildings and the residential halls, but

do not make the mistake of taking its quietness as dormancy, as the beast that single-handedly powers the university never rests.

The power plant on Binghamton University's campus was once the center of controversy in 2009 when the Sierra Club campaigned to change sources of energy in colleges across the country. Founded in 1892 by John Muir and his supporters, the Sierra Club is one of the oldest and largest grassroots environmental organization in the United States, with over 1.3 million members. Considered a "Big Green" environmental group member, a term that is often used to describe heavily-staffed, well-funded non-profit corporations with offices in Washington D.C., and other various cities, the Sierra Club undoubtedly holds a lot of clout in the political world. Thus, when the Sierra Club began its joint efforts with Sierra Student Coalition and Campuses Beyond Coal to call for the retirement of campus-owned coal plants and the end of schools' dependence on coal-generated energy in order to move towards a new goal of finding clean energy solutions, college students across from America responded to its call, rallying thousands of people at once, protesting for change, right here, right now. At Binghamton University, it was the student group, BU Beyond Coal.

BU Beyond Coal called upon the university to stop using coal to generate its electricity, and after three long months of bitter campaigning and staying steadfast to its core values, much to the delight of the student body, the student-led group had claimed victory against the school. The university agreed that by 2020, they would change the energy source of the power plant, making the switch from coal to a combination of natural gas and wood chips. However, to the students, time was of the essence, and there was not a single moment to be wasted. Thus, the students took up to arms again and campaigned harder than before for a tighter deadline, attempting to shave off a couple years, so that Binghamton University would move the date to 2015. While changing the energy source of the power plant is an important aspect of conserving energy, Binghamton University has also taken many steps to use clean energy saving projects and initiatives.

One example of Binghamton University taking energy saving initiatives includes a recent addition to the campus, a \$70 million dollar building constructed to LEED standards. LEED, which stands for Leadership in Energy and Environmental Design, is the most widely used green building rating system in the world, providing a framework to create healthy, high efficient and cost-saving green buildings by using a points system across several categories, such as energy use and air quality. Thus, the more points earned, the higher the rating level: ranging



Smart Energy Research and Development Facility at Binghamton University

from Certified, Silver, Gold, and Platinum. What makes this building so fascinating is its Gold LEED standard, a feat that is almost unprecedented for a research facility due to the amount of air changeover required in chemistry and physics.

Built at the Innovative Technologies Complex, Smart Energy Research and Development Facility spans a massive 114,000 square-feet, containing state-of-the-art facilities, such as a photovoltaic rooftop, hydronic radiant heating, and constant monitoring of the facility to produce the least amount of energy. The grand opening of Smart Energy Research and Development Facility was hailed as a massive historical moment by Binghamton University President Harvey Stenger, as well as state senator, Fred Akshar, and assemblywoman, Donna Lupardo. This building includes laboratories, classrooms, and offices, creating spaces for faculty, students, and industry scientists and engineers to work side by side to create new energy technologies that will help expand the regional workforce.

Additionally, the university has taken other initiatives in the buildings on campus to reduce energy consumption. Through the use of a sophisticated Energy Management System (EMS), the campus monitors energy use in buildings such as operating when lights are turned off and on. The EMS is improved continuously in an effort to reach a balance between comfort and energy efficiency. Lights in buildings have been switched to LED lighting or non-LED energy efficient light sources. Small changes such as using the outside air to cool the building rather than air conditioning are ways to conserve energy. Inside buildings, boilers have also been replaced to consume natural gas and there is constant monitoring of gas and water consumption.

Other signs of Binghamton University's strides towards becoming more eco-friendly include endorsing the American College and University Presidents Climate Commitment (ACUPCC), which was signed in 2007 by former Binghamton University's President, Lois B. DeFleur. Binghamton University was a charter signatory in this act, and to this date, over 640 universities nationwide have signed to work towards a goal of climate neutrality.

Over the past few years Binghamton University has taken multiple steps to counter the energy crisis on the planet. The power plant located on campus has changed its energy source from coal to wood chips and natural gas. Innovative steps have been taken, such as building a smart energy building on campus. But smaller daily steps are also taken to ensure that the least energy is consumed in daily life on campus. While the new buildings and initiatives are taken to conserve energy, I feel as though the students can also become more connected to the energy they use daily. While it seems like little influence can an individual student muster to drastically change the type of energy consumed on campus, there are steps that can be taken to begin the change. Through educational programs such as Project Green, daily habits can be implemented in one's own dorm such as using power strips to conserve energy. Change begins from the individual and mobilizes towards the entire campus. Together with the administration and students on campus taking part in reducing energy consumption, the date is slowly being moved back for a brighter future.

Our article will be published in a Binghamton newsletter on the upcoming Tuesday that we have confirmed with an administrative advisor through physical appointment. We will email the proof when the newsletter is published.