case study

Queens College: Daylight Hour Strategies & Outcomes Turning the lights off in daylit spaces for just one hour allowed Queens College to save 5,483 kWh, 5.5% of their daily electrical use





Visit daylighthour.org to learn more about the initiative. Join the movement. #daylighthour

primary energy figures

Daylight Hour electrical reduction:

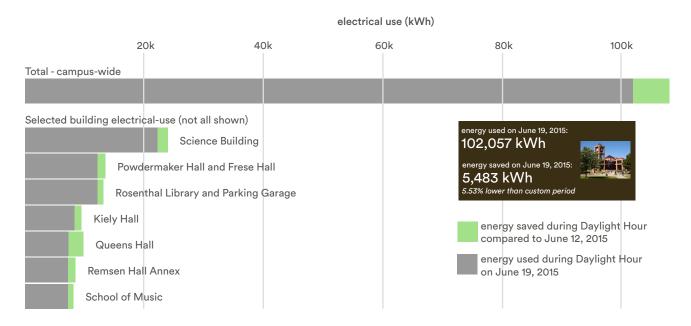
5.5%

kWh saved:

5,483 kWh

Daylight Hour electrical-use at Queens College

in comparison to the Friday prior, June 12, 2015



campus strategies & initiatives

- Utilization of Lucid Engineering's BuildingOS software
- Daylight sensors
- Solar energy production
- Participation in New York Power Authority's Peak Load Management program

benefits

- Accurate, real-time building energy use data
- Increased lighting efficiency
- Overall reduction in energy consumption
- Monetary savings
- Occupant comfort

project quote

Queens College's participation in Daylight Hour is a win-win for all involved. It was an interactive event that engaged students, faculty and staff, saved electrical costs, and promoted the well-being of buildings' occupants through natural light.

Bill Keller,
Vice President of Finance & Administration, Queens College

summary

Queens College's participation in Daylight Hour saved energy and inspired a year-long campuswide effort involving students, faculty, and staff.

City University of New York's Queens College was one of over 300 participants to take part in the Building Energy Exchange's 2015 Daylight Hour campaign. Daylight Hour is a global social media campaign that raises awareness about the availability of daylight. By turning off the lights in day-lit spaces for one hour throughout their 80-acre campus, Queens College saved 5,483 kWh, equivalent to 5.53% of their typical daily electrical use. Queens College continued to observe Daylight Hour every other Thursday for the rest of the summer. Additionally, they plan to expand their involvement in 2016 to include a student-run task force that will increase their social media presence and educate students and faculty.

campus features & initiatives

Queens College continuously pursues aggressive energy efficiency targets through facility upgrades and peak load management, receiving recognition by institutions and staff.

Queens College is one of 19 institutions that make up the City University of New York (CUNY). Located in Queens, New York, its 80-acre campus includes 43 buildings. The campus accommodates the activities of 19,000 students and 900 faculty members. Queens College's commitment to sustainability stems from CUNY's mission to address climate change by reducing energy use and greenhouse gas emissions.

Built into the fabric of the institution, pursuing aggressive targets towards energy efficiency has allowed Queens College to be recognized as a

sustainability leader. As part of CUNY Conserves, a university-wide energy initiative, the institution applied energy efficient measures throughout their buildings. This includes (but is not limited to): HVAC repairs and upgrades, solar energy production, daylight sensors in offices and classrooms, and a real-time energy management system.

Queens College, as well as many CUNY institutions, is part of New York Power Authority (NYPA)'s Peak Load Management (PLM) program to reduce energy-use during times of high citywide energy demand. To alleviate peak demand, the voluntary participants get notified by NYPA during these times and reduce their electricity use through various measures, including turning off non-essential lighting, unplugging personal electronics, and turning off any idle office equipment.

process & challenges

Led by their sustainability council, Queens College notified faculty and staff periodically and utilized their 75-person custodial team to ensure Daylight Hour's success.

Encouraged by the University Director of Sustainability at CUNY, Queens College, along with 5 other CUNY institutions, participated in Daylight Hour. The sustainability council of each college coordinated its participation.

Queens College's participation in Daylight Hour was similar to their involvement in NYPA's PLM program. They drastically reduced energy use within a specific time frame while educating students and faculty about the motive. As a result of participating in PLM, the campus already monitors real-time energy data and has a procedure to educate its community.

The sustainability council placed posters by elevators and doors to increase awareness about the campaign. In addition, the Vice President of Finance & Administration notified all faculty and staff about Daylight Hour three times: a week prior, a day prior, and the day of the event. These notifications emphasized safety and requested that occupants only turn off the lights where sufficient daylight is available. During Daylight Hour, Queens College's entire custodial team of 75 turned off any unnecessary lighting across all 43 buildings.

Because Queens College joined the initiative only a few weeks prior to the event, the sustainability council had limited time to work with the communications department to prepare a targeted education and outreach plan. In addition, there are no classes on Fridays during the summer (when Daylight Hour occurs), which prevented the sustainability council from involving students in the campaign.

performance benefits & savings

Queens College quantified their savings using realtime data from each building and comparing them with multiple time frames.

During Daylight Hour, Queens College campus saved an impressive 5,483 kWh, 5.53% of their typical daily total electrical consumption. The Campus Facilities team used Lucid Engineering's BuildingOS software to visualize the savings and quantify Daylight Hour's impact. This software collects real-time data of each building's energy use. Using the software's customized comparison tool, the team was able to compare the energy use from one-year prior (June 20, 2014) and one-week prior (June 12, 2015) to Daylight Hour (June 19, 2015). The BuildingOS software also indicated which buildings saved the most energy.

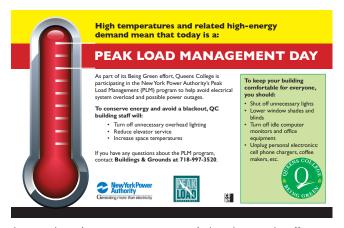
Due to significant savings from Daylight Hour, the sustainability council garnered support to observe the initiative every other Thursday for the remaining of the summer. This created an average 2-3% electrical savings per day. For Daylight Hour 2016, Queens College intends to involve students who will coordinate the campaign's educational and social media outreach and observe Daylight Hour once a month.

conclusion

Due to its success, Daylight Hour has become an annual event at Queens College.

Queens College launched a successful Daylight Hour campaign by leveraging their experience with NYPA's Peak Load Management program and dedicating staff to turn off the lights in day-lit spaces. Their primary challenge was not having sufficient time to coordinate the campus-wide education and outreach plan they envisioned. In 2016, the sustainability council will involve students to help produce educational posters and materials, as well as to coordinate a social media strategy to showcase Queens College's participation.

Queens College is a strong example of the over 300 participating organizations and companies that BEEx engaged for Daylight Hour. It is this enthusiasm that Daylight Hour's impact spanned 58 million square feet of office space, reaching over 1 million people on social media, and most importantly, saving enough energy in just one hour to power 15 New York households for an entire year.



A poster hung in common areas to remind students and staff about NYPA's peak load management program, an initiative similar to Daylight Hour.

contributors

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The building energy exchange connects the New York real estate and design communities to energy and lighting efficiency solutions through exhibitions, education, technology demonstrations, and research. We identify opportunities, navigate barriers to adoption, broker relationships, and showcase best practices at our resource center in the Surrogate's Courthouse.



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