

Case study

Delaware Valley College

Bucks County, Pennsylvania



Curtailment incentive contributes to a more sustainable college campus

Originally founded in 1896 as the National Farm School, Delaware Valley College is a private, four-year, co-educational college located on more than 570 acres in Bucks County, Pennsylvania, 35 miles north of Philadelphia. The school offers more than 40 academic programs including counseling psychology, criminal justice, business administration, equine studies, conservation and wildlife, small animal science and horticulture.

The opportunity

Delaware Valley College was first introduced to the EnergyConnect™ demand response programs in 2006, when the school enrolled in a voluntary program to reduce electricity use during times of peak demand or high energy prices.

The money that Delaware Valley College has earned by participating actively in demand response has been integral to the introduction and funding of a broad range of activities and capital improvements that contribute to a more sustainable campus.

The solution

Enrollment in EnergyConnect's FlexConnect™ voluntary demand response is credited for having launched a campus wide spirit of energy conservation that continues to gain momentum and generate income.

As part of their load shedding strategy, the campus's automated temperature controls for chillers and fans allow them to shed load in response to a curtailment event. The automatic pumps for the campus's 50,000 gallon water tower can also be switched to an emergency generator during times of peak electricity demand.

“Partnering with EnergyConnect’s demand response has revolutionized the way we manage our energy consumption, allowing us to reduce our overall energy use and generate new cash streams that can be directed towards future energy efficiency efforts.”

TED STANIEWICZ
DIRECTOR OF PHYSICAL
PLANT OPERATIONS



At a glance:

- Available load shed: Up to 400 kW
- Power: Equivalent capacity to power 320 homes
- Earnings: \$25,000 in first few months plus additional cost savings of over \$250,000

To achieve even more load shedding, director of Physical Plant Operations, Ted Staniewicz, sends out a campus wide e-mail alert requesting that students and faculty turn off all unneeded equipment such as lighting, copying machines and coffee pots. The campus response has exceeded expectations and led to more than double the projected earnings from participating in EnergyConnect’s demand response.

Getting EnergyConnected

Delaware Valley College’s success with FlexConnect would not be as profitable without the easy, hands-on access to EnergyConnect’s GridConnect™ integrated demand response platform which allows them to leverage their existing building automation systems to shape, adjust and shed load in response to real time prices in the energy market. GridConnect puts electricity consumption patterns and real-time information about the wholesale electricity market in one place, making it possible to remotely access the program at anytime, from anywhere.

Delaware Valley College has become so adept at shifting its energy load and reducing energy consumption that it can drop between 200 kW and 400 kW of load at any given time, depending on the time of year.

With access to the college’s various building systems and electricity market data available on one comprehensive platform, the school’s facility manager devotes only a few minutes each day to identify demand response opportunities and decide which load shifting strategies to deploy.

After programming the load shedding strategy, the facilities manager sends emails to the entire campus on days when electricity prices are high,

requesting that everyone “power down.” In this way, the energy team successfully affects a change at all levels of the organization, including the most discretionary electricity load.

Getting rewarded

With demand response embraced and supported at all levels of the organization, from the office of the president to the facilities director and the students, Delaware Valley College has leveraged its success with GridConnect to spur innovation and leverage operational savings rather than invested capital to fund a wide range of initiatives, enhancements and upgrades to the campus infrastructure, including:

- Identifying a way to save approximately \$40,000 by reducing storm water infiltration into the campus’s storm drains
- Saving \$10,000 by renegotiating their natural gas contract initially and expect to save over \$250,000 next year from more efficient operations
- Installing 150 motion detectors throughout the campus so that lights go on when people enter rooms and turn off when people exit rooms, to minimize wasted electricity from lighting unoccupied spaces
- Purchasing new, better insulated windows
- Offset the expenditures surrounding a campus wide project to insulate pipes
- Leveraging a recent building control system upgrade to help initiate demand response

For more information,
call 866-488-7642 or visit
[www.johnsoncontrols.com/
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