The Gateway to Better Decision Making

The 2015–16 APPA/NACUBO Key Facilities Metrics Survey results are now available on the APPA website and summarized in the following pages. This year’s survey consisted of answers from 329 campuses—a 49 percent increase since the survey’s inception in 2013–14. Participants are from institutions of all sizes and from various regions.

The data shows the year-over-year comparison of results from the survey, as well as comparisons by type of institution. We encourage you to explore these next few pages as a starting point to better inform your campus decisions. We have also included campus tips that demonstrate how this data can be used to make significant changes on your own campus.

Compare Your Campus to Institutions Like Yours

When analyzing your own campus’s data, it is important to look at institutions that are similar to yours as an indicator of where your school stands. To assist campuses, we have created medians using the NACUBO categories for the 2015–16 survey of community colleges, small institutions, comprehensive/doctoral, and research universities.

The results are more informative than exact because of annual changes in weather, demographics, number of participants, and many other program factors beyond the raw consumption data supplied by vendors or utilities. The survey reports raw data by gross square feet (GSF) and by student full-time equivalent (SFTE). The raw data can be used to evaluate and reduce consumption.

2015–16 Survey Participants (By School Classification)

A large majority of participants in this year’s survey were from community colleges and comprehensive universities, with more campuses participating from these institution types than had in years past. Small institutions and research universities had fewer participants than in the past, but still made up for nearly 40 percent of survey responses. This varies slightly from last year’s participation in which comprehensive and research universities made up 67 percent of all survey respondents.

* Graph consists of an average of school type across all metrics

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Knowing your energy usage per square foot can assist in overall planning—whether it is in operations or incremental or long-term strategic planning. In the 2015–16 academic year, both comprehensive and research universities saw decreases in median kBtu/sq ft, while community colleges and small institutions each saw small increases in median kBtu/sq ft.

It is important to note that a campus might have a very high usage of energy as it operates on nights and weekends but a low usage if divided by student. The APPA website allows each campus to review its energy use by square foot or by FTE (student count). Leaders at campuses should review all data available to take steps toward continually lowering consumption and improving efficiency on campus. Creating an Energy or Utilities Master Plan is becoming critical for campuses, as many have aging physical plants that are inefficient.

**CAMPUS TIP:**

MICHAEL J. O’CONNOR | Appalachian State University

“Metrics are important. What started as an exercise using metrics to shed light on our large energy bill 10 years ago resulted in a 45 percent reduction in use and created cost savings of over $28M.”
Many of the campuses that participated in the 2015–16 survey saw a decrease in electrical usage from 2014–15. While some of this decrease is due to the prevalence of changing to more energy-efficient light bulbs, it is critical to have a focus on continued electrical savings.

Working with utility providers to understand and reduce peak load charges can benefit both the campus and the community. Consider investing in alternative fuel sources such as wind, solar, or geothermal. Encouraging students and staff to reduce usage is a proven methodology. Great strides are also being made in “Green Revolving Funds,” where the savings that are incurred from reducing electrical usage are then given back to fund additional energy projects.

“Cornell University utilizes data from over 1,200 meters and over 1.3 million building control data points to optimize both the central plant and building energy systems. The physical system data allows us to recognize opportunities for improvement and then verify performance in achieving desired outcomes.”

KELLEY YEOMANS | Cornell University
WATER USAGE RISES ON MOST CAMPUSES

Water usage among all campuses increased or remained the same between the 2014–15 and 2015–16 survey, except for community colleges, which saw a decrease. Decreasing water usage is not only a benefit for drought areas, but can be a significant cost reduction for any school. Sewage and water costs, as well as the impact on communities, are all justified to reduce water consumption.

Keeping faculty and students informed of water use can be critical. One campus noticed that high water usage was likely due to an extensive horticulture training and research program. The chief financial officer discussed this high water usage with the faculty, who then offered various creative water-saving methods. When these methods were implemented the campus benefited from lower water usage, as well as teaching students about strong conservation practices.

“The Key Facilities Metrics Survey allows us to not only see how we are performing year-to-year but also see how we are doing amongst our peer institutions. That helps us identify where we could see more savings through efficiency measures.”

KATIE GREER | Black Hills State University

WATER

MEDIAN GALLONS OF USE ON A DAILY BASIS ESTIMATED ANNUALLY PER FTE STUDENT ENROLLED

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<tbody>
<tr>
<td>COMMUNITY COLLEGES</td>
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<tr>
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<td>39</td>
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<tr>
<td>RESEARCH</td>
<td>28</td>
<td>29.7</td>
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CAMPUS TIP:

Save money for your campus by installing water conservation devices such as xeriscaping landscape, rainwater harvesting, low-flow toilets, and water miser faucets.
CAMPUS TIP:
Increase recycling on campus by adding more recycle stations, clearer signage, or implementing semi-annual shred days. Additionally, many institutions reduce garbage by composting organics.

“By actively having students and staff participate in Recyclemania, the campus recycles approximately 26,000 pounds of trash a year and saves about 32 metric tons of CO2.”

GENE GOOCH | McLennan Community College
CARBON FOOTPRINT INCREASES FOR CAMPUSES

While most campuses saw a decrease in their carbon footprints annually in the 2014–15 survey, this year’s survey saw an increase across all school classifications except for research universities.

Calculating your carbon footprint can seem daunting. While it is recommended that campuses conduct a more detailed study, not all can. Including basic metrics such as campus BTU and electrical in the Key Facilities Metrics Survey allows campuses to gauge their carbon footprint. This methodology includes only Scope 1 and 2 and is a preliminary gateway metric for an institution to understand its impact.

“We utilize the reporting metrics from both APPA and NACUBO as a means of monitoring our performance and enhancing our strategy. We have incorporated these types of measures in our balanced scorecard, and our management team fully embraces the value of managing through facts and data.”

JAMES A. ANGELOSANTE | University of Washington

CAMPUS TIP:

Utilize the Key Facilities Metrics Survey data to gauge your campus carbon footprint and advance and improve every year.
VIEW THE FULL 2015–16 RESULTS
www.appa.org/research/nacubo.cfm

If your campus filled out the 2015–16 survey, results can be reviewed with 13 different ratios using square foot or FTE and compared by region or institutional type. Choose the ratio that best explains your specific—and unique—campus consumption.

JOIN OTHER CAMPUS LEADERS

Benefit your campus by participating in this survey, open to all in higher education.

2016–2017 SURVEY
Opens in August | Closes December 11, 2017.
www.appa.org/nacubosurvey17/

Just as leaders can recite pertinent campus facts—cost of tuition, types of academic programs, and number of students—it is critical to know the five basic elements of BTU (energy), electrical, water, waste, and carbon to heighten awareness and improve strategic planning. It is not required that you are an APPA or NACUBO member to participate. Complete as many of the five items as possible.

If you would like assistance in evaluating, reviewing options for improvement, or getting suggestions for funding sources, contact Sally Grans Korsh at NACUBO: sgranskorsh@nacubo.org or 202-861-2571.

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