

# Adding Real-World Numbers to the FPI Journey

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Those of you who know me professionally know that I have been a fan of the APPA Facilities Performance Indicators (FPI) program since joining the University of Texas at Austin facilities management (FM) team in 1999. After 26 years as a naval officer managing facilities for the United States Navy, with access to a wealth of standards and written documentation for managing Navy facilities, it was a relief to learn that there was a keeper of a higher education FM body of knowledge in the form of APPA. I was particularly relieved to learn that a source of performance indicators populated with real-world data existed in the form of the APPA FPI Report.

Long after retiring from the Navy and from my position as physical plant director at the University of Texas at Austin, I remain an FPI fan and continue to use it when conducting FM assessments for colleges and universities. So I when I read Jim Cowell's article, "Cal Tech's FPI Journey" (*Facilities Manager* November/December 2016), I couldn't help but be pleased with the encouraging story about his institution's experience with the FPI and the compelling case he made for every institution in the country to participate.

## THE VIEW FROM 10,000 FEET

While it is not possible to improve upon Jim's article, I would like to give you a broader perspective as we climb to "10,000 feet" and look at the data for all of the FPI participating institutions as a whole, adding some real-world numbers to your knowledge base. We will pose some high-level questions and answer them using numbers from the currently published FPI Report.

Let's start by examining the FM budget for the 292

institutions that participated in the latest FPI Report. What is the average amount of funding expended at the institution (the FPI refers to this as the "Adjusted Gross Institutional Expenditure" or "GIE")? How much of the GIE is expended on operating and maintaining the facilities, excluding purchased utilities (Annual Facilities Operating Expenditure or AFOE)? What is the current replacement value (CRV) of the facilities being maintained by the facilities organization? What is the total number of gross square feet (GSF) of building space the facilities services organization is responsible for maintaining (Total GSF Maintained)? And what is the total number of gross square feet of buildings owned and rented (Total Building GSF Owned & Rented)? The answers for all the FPI participants and the average for a large variety of summary groups are at your fingertips within the FPI Report. Table 1 below, taken directly from the "Detailed Data Reports" area of the FPI, answers the above questions for the overall average for all participants.

While raw data as shown in Table 1 is useful to provide a perception of scale, more useful questions revolve around the APPA FPI "Ratios and Measures" section of the Detailed Reports, which contains the performance indicators. What is the ratio of funds expended on facilities operations and maintenance compared to the current replacement value (AFOE/CRV)? What is the ratio of funds expended on operations and maintenance compared to total operating funds expenditure by the institution (AFOE/GIE)? And what is the operating and maintenance cost per



Table 1.

Significant Supporting Data	Annual Fac Op Expnds (AFOE)	Adj Gross Institutional Expnds	Current Replmt Value	Total Bldg GSF-GSM Maintained	Total Bldg GSF-GSM Owned & Rented
Overall for All Participants	\$18,661,968	\$523,849,215	\$1,217,293,650	3,194,278	4,168,067

**Table 2.**

Ratios and Measures	AFOE/ CRV	AFOE/ GIE	AFOE/ GSF-GSM
Overall for All Participants	1.37%	5.80%	\$5.00

**Table 3.**

Significant Supporting Data	Engy Total GSF-GSM	Purch Utilities	MMBTUs
Overall for All Participants	3,143,243	\$7,345,825	489,613

**Table 4.**

Ratios and Measures	PU/ MMBTU	PU/ Engy Total GSF-GSM	PU/ Student FTE	Engy BTU/ Engy Total GSF-GSM	MMBTU/ Student FTE
Overall for All Participants	\$19.47	\$2.04	\$601.91	120,201	39.79

gross square feet (AFOE/GSF)? Table 2, from the FPI Report, answers all of the above questions and provides normalized data you can use to compare with that from your own institution.

Keep in mind that while in this article I am asking questions at the 10,000-foot level and providing answers that apply to overall averages of all participants, you can do the same for individual institutions and for virtually any summary group you wish to construct. Since I am not a celebrity and this is not a

TV commercial, I won't ask you "What's in your wallet?" but as an FM professional at your institution, it is probably wise for you to learn about your institution's AFOE/CRV, AFOE/GIE, and AFOE/GSF.

**THE TIP OF THE ICEBERG**

The above series of questions were chosen from only a single module of the FPI Report, for illustration purposes only. And they represent only the tip of the iceberg—there are an almost unlimited number of



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relevant questions you can answer with the FPI. The report contains 16 sections representing the core FM functions (Administration; Construction/Renovation/Architecture and Engineering; Custodial; Energy/Utilities; Landscape/Grounds; Maintenance) and other FM areas.

Since this issue of *Facilities Manager* highlights sustainability, let's ask a few questions from the report that relate to that subject. We all know that energy consumption is one of the key considerations in determining an institution's sustainability performance (the FPI "Energy/Utilities" section). So let's ask how many MMBTUs are consumed? How many GSF of space are being provided with energy and how much does it cost? The answers from the FPI Report are found in Table 3.

Having answered questions about energy to give you a perception of scale, let's now ask some questions that will allow you to see how your institution compares with the overall APPA FPI participant group. How many BTUs are consumed per gross square feet (BTU/GSF)? How many MMBTUs are consumed per student (MMBTU/Student FTE)? How much do purchase utilities cost per MMBTU (PU/MMBTU)? How much do purchase utilities cost per GSF (PU/GSF)? How much do purchase utilities cost per student full-time equivalent (PU/Student FTE)? The answers from the FPI Report are in Table 4.

Of the performance indicators referenced above, the two with the most implications for sustainability are BTU/GSF and MMBTU/Student FTE. Obviously if these two indicators are significantly higher for your institution than the average for appropriate summary groups, you would be wise to ask and answer additional questions that might contribute to energy consumption reduction and enhanced sustainability.

#### THE DESCENT TO GROUND LEVEL

In closing, using the FPI Report you can descend from 10,000 feet all the way down to ground level. You can ask and answer an almost inexhaustible number of pertinent FM questions about your institution, any other participating institutions, and

any summary subgroup you wish to construct. These answers will contribute significantly to your ability to add value to the FM operations at your institution. ☺

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