

Welcome to the 2018-19 NACUBO/APPA Key Facilities Metrics Survey

Express Questions appear in bold and mint and Detail Questions appear in *italics and lavender*.

NACUBO/APPA Survey

If you do not have data for Carbon Footprint question, please leave blank.

Registration Questions

Question

Your Entry

A. All survey entries include or exclude auxiliaries:

Include Auxiliary Services
 Exclude Auxiliary Services

Definition: An auxiliary service is an entity that exists to furnish goods or services primarily to students, faculty, or staff, and that charges a fee directly related to, although not necessarily equal to, the cost of the goods or services. The distinguishing characteristic of auxiliary services is that they are managed as essentially self-supporting activities. Examples are: residence halls, food services, college stores, student health centers, golf courses, parking, and laundry.

B. Direct "Data Scrubbing" questions to:

B.1. Name

B.2. Email

B.3. Telephone Number

C. Indicate whether your entries are in GSF (gross square feet) or GSM (gross square meters):

GSF
 GSM

D. I give my permission to APPA/NACUBO to identify my institution's name to all KFM survey participants who also agree to share their institution's name in the published report:

Yes
 No

TIP:

Participants willing to share their identity will have their institution's name included in the participant version of the APPA/NACUBO KFM reports. For example, the function of selecting any two institutions and comparing their statistics is made more meaningful when the institution's name is known. Conversely, all institutions that choose NO will only be able to view alphanumeric codes for all participants in the published KFM report. You will only know your institution's alphanumeric code.

E. Carnegie Classification

Associate
 Baccalaureate
 Masters
 Doctoral/Research
 Research High
 Research Very High
 K-12
 Special
 Special/Medical

F. Number of student FTEs in Fall 2018:

Definition:

Use the number that your institution reports as its official Fall 2018 FTE enrollment. Normally, this is the enrollment as of a certain date in the Fall of 2018.

G. Total GSF maintained by facilities:

Definition:

The sum of all areas on all floors of a building included within the outside faces of its exterior walls, including floor penetration areas. Gross area is calculated by physically measuring the outside faces of exterior walls.

Actual Annual FY19 Consumption Data Questions

Question

Your Entry

1. Total energy consumption in MMBTUs (million BTUs):

Definition: This entry is a conversion of commonly used units of energy into British Thermal Units (BTUs) so that comparisons can be made on total energy consumption.

Please use the [MMBTU Calculation Worksheet](#) if you do not know your total energy consumption in MMBTUs

2. Electricity consumed in kilowatt hours:

Definition: Electrical energy is usually measured in kilowatt hours, while heat energy is usually measured in British thermal units (Btu).

3. Institution's annual water use in US gallons:

Definition:

Total water consumed in US gallons (as recorded). Note estimate of surface or groundwater or grey water or rainwater harvested reuse.

4. Recycled Waste in tons:

Definition:

Total amount of materials recycled in US tons (not metric tons).

5. Garbage (Solid) Waste in tons:

Definition:

Total amount of materials disposed of in a landfill or incinerator in US tons (not metric tons).

5a. If tons of garbage or recycle not known, indicate percentage diverted from landfill (i.e., compost/recycle). Enter a whole number without percent sign; e.g., 30 but not .30 or 30%:

6. Greenhouse Gas Emissions - Total MTCO₂e from Scopes 1 and 2:

Definition:

Scope 1 sources include: stationary sources, e.g. coal, gas, oil, biomass and other fuels; direct transportation sources, e.g. fleet vehicles; refrigerants and chemicals; fertilizer application and animal husbandry. Scope 2 sources include: purchased electricity, steam and chilled water.

6A. Please select the method used to calculate carbon footprint:

Campus has completed a thorough analysis of the campus carbon footprint.

Campus utilized a simple methodology (without third party analysis) such as Clean Air Cool Planet and their Campus Carbon Calculator

Campus may elect to multiply by their MMBTU by the natural gas factor of 0.058MT per Co₂ and the purchased electricity of 0.0007MT per Co₂

Campus elected not to utilize any of the above calculation methods and skipped the question

**Operating Costs and Staffing Ratios
Worksheet: Annual MMBTU Usage Calculation**

This worksheet converts commonly used units of energy into British Thermal Units (BTUs) so that comparisons can be made on total energy consumption. The conversion involves multiplying units of energy by factors and while this is simple arithmetic, it can be perplexing. For this reason, we request that you enter the name of the person to contact regarding BTU calculations in the actual Energy/Utilities module.

The worksheet is organized as follows: The first part of the worksheet asks for your total energy purchased or consumed on campus (include auxiliaries regardless of your auxiliaries designation). The second part contains entries on total energy distributed to or consumed by auxiliary services. The third part contains entries on total energy sold or distributed to external entities.

When the entries in this worksheet are saved, your calculated MMBTU will be automatically populated into survey Module 4. Energy/Utilities. Please review the Live report for Module 4 Energy/Utilities to view your MMBTU ratios and measures. You may change entries in this worksheet and re-submit your new MMBTU calculation if you find you have made errors in some of the data fields below.

The BTU calculation is based on conversion factors for each type of energy. A default factor is shown but you can override the default factor by entering a substitute BTU conversion number. **DO NOT CHANGE THE UNIT OF MEASURE.**

MMBTU stands for millions of BTUs. Two MMBTU entries are made in the survey. One which includes auxiliary services and one that excludes auxiliary services. Both are computed on the worksheet if you enter all requested information.

LEGEND OF UNITS:

kLbs = 1,000 pounds of steam; Therm = 100,000 BTUs;
kTon-h = 1,000 ton-hrs;
MCF = 1,000 cubic feet of gas

Question

Your Entry

INSTRUCTIONS: *This worksheet automates the conversion from commonly used energy source units of measure to British Thermal Units (BTUs). Enter the quantity without changing the unit of measure. Do not abbreviate your entries or use symbols such as "*

TOTAL ENERGY PURCHASED OR CONSUMED INCLUDING AUXILIARIES:

Oil

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

1. Gallons of Oil #1

1.a. Oil#1 Default factor is 138,000 BTUs/Gallon. You can override this factor by entering a substitute BTU/gallon factor number here.

1.b. CALCULATION: Oil#1 Energy in MMBTUs

2. Gallons of Oil #2

2.a. Oil#2 Default factor is 139,000 BTUs/Gallon. You can override this factor by entering a substitute BTU/gallon factor number here.

2.b. CALCULATION: Oil#2 Energy in MMBTUs

3. Gallons of Oil#3

3.a. Oil#3 Default factor is 140,000 BTUs/Gallon. You can override this factor by entering a substitute BTU/gallon factor number here.

3.b. CALCULATION: Oil#3 Energy in MMBTUs

4. Gallons of Oil#4

4.a. Oil#4 Default factor is 150,000 BTUs/Gallon. You can override this factor by entering a substitute BTU/gallon factor number here.

4.b. CALCULATION: Oil#4 Energy in MMBTUs

5. Gallons of Oil#5

5.a. Oil#5 Default factor is 145,000 BTUs/Gallon. You can override this factor by entering a substitute BTU/gallon factor number here.

5.b. CALCULATION: Oil#5 Energy in MMBTUs

6. Gallons of Oil#6

6.a. Oil#6 Default Factor is 150,000 BTUs/Gallon. You can override this factor by entering a substitute BTU/gallon factor number here.

6.b. CALCULATION: Oil#6 Energy in MMBTUs

Coal

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

7. Tons of Coal

7.a. Coal Default Factor is 24,000,000 BTUs/Ton. You can override this factor by entering a substitute BTU/Ton factor number here.

7.b. CALCULATION: Coal Energy in MMBTUs

Wood

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

8. Tons of Wood

8.a. Wood Default factor is 12,000,000 BTUs/Ton. You can override this factor by entering a substitute BTU/Ton factor number here.

8.b. CALCULATION: Wood Energy in MMBTUs

Electricity

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

9. kWh of Electricity

9.a. Electricity Default factor is 3,412 BTUs/kWh. You can override this factor by entering a substitute BTU/kWh factor number here.

9.b. CALCULATION: Electricity Energy in MMBTUs

Steam

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

10. kLbs of Steam

10.a. Steam Default factor is 1,000,000 BTUs/Klbs. You can override this factor by entering a substitute BTU/kLbs factor number here.

10.b. CALCULATION: Steam Energy in MMBTUs

Hot Water

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

11. Therm of Hot Water

11.a. Hot Water Default factor is 100,000 BTUs/Therm. You can override this default factor by entering a substitute BTU/Therm factor number here.

11.b. CALCULATION: Hot Water Energy in MMBTUs

Chilled Water

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

12. Kton-h of Chilled Water

12.a. Chilled Water Default factor is 12,000,000 BTUs/Kton-h. You can override this factor by entering a substitute BTU/Kton-h factor number here.

12.b. CALCULATION: Chilled Water Energy in MMBTUs

Natural Gas

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

13. MCF of Natural Gas

13.a. Natural Gas Default factor/MCF is 1,000,000 BTUs/MCF. You can override this default factor by entering a substitute BTU/MCF factor number here.

13.b. CALCULATION: Natural Gas Energy in MMBTUs

Other

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

14. Other Energy Source quantity

14.a. Other energy source conversion BTU factor

14.b. Describe Other energy source and the unit of its conversion factor.

14.c. CALCULATION: Other Energy in MMBTUs

Total MMBTU (Gross Purchased Energy)

RESALE: SALES TO AUXILIARIES

Definition:

An auxiliary service is an entity that exists to furnish goods or services primarily to students, faculty, or staff, and that charges a fee directly related to, although not necessarily equal to, the cost of the goods or service

Enter the total energy distributed to or consumed by campus auxiliary services below.

Electricity

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

15. kWh of Electricity

15.a. Electricity Default factor is 3,412 BTUs/kWh. You can override the default factor by entering a substitute BTU/kWh factor number here.

15.b. CALCULATION: Auxiliaries Electrical Energy in MMBTUs

Steam

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

16. kLbs of Steam

16.a. Steam Default factor is 1,000,000 BTUs/kLbs. You can override the default factor by entering a substitute BTU/kLb factor number here.

16.b. CALCULATION: Auxiliaries Steam Energy in MMBTUs

Hot Water

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

17. Therms of Hot Water

17.a. Hot Water Default factor is 100,000. You can override the default factor by entering a substitute BTU/Therm factor number here.

17.b. CALCULATION: Auxiliaries Hot Water Energy in MMBTUs

Chilled Water

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

18. Kton-h of Chilled Water

18.a. Chilled Water Default factor is 12,000,000. You can override the default factor by entering a substitute BTU/Kton-h factor number here.

18.b. CALCULATION: Auxiliaries Chilled Water Energy in MMBTUs

Natural Gas

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

19. MCF of Natural Gas

19.a. Natural Gas Default factor is 1,000,000. You can override the default factor by entering a substitute BTU/MCF factor number here.

19.b. CALCULATION: Auxiliaries Natural Gas Energy in MMBTUs

Other

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

20. Other energy source quantity

20.a. Other energy source conversion BTU factor

20.b. Describe Other energy source and the unit of its conversion factor.

20.c. CALCULATION: Auxiliaries Other Energy in MMBTUs

Total MMBTU (Resale to Auxiliaries)

RESALE: SALES TO EXTERNAL ORGANIZATIONS

Definition: External organizations are those which are not part of the institution. Examples are private businesses in a college research park, a utility company that is purchasing energy from the campus, a Veteran's Administration Hospital on a campus, etc.

Enter total energy sold or distributed to external organizations below.

Electricity

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

21. kWh of Electricity

21.a. Electricity Default factor is 3,412 BTUs/kWh. You can override the default factor by entering a substitute BTU/kWh factor number here.

21.b. CALCULATION: Ext. Org. Electricity Energy in MMBTUs

Steam

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

22. kLbs of Steam

22.a. Steam Default factor is 1,000,000 BTUs/kLbs. You can override the default factor by entering a substitute BTU/kLb factor number here.

22.b. CALCULATION: Ext. Org. Steam Energy in MMBTUs

Hot Water

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

23. Therms of Hot Water

23.a. Hot Water Default factor is 100,000. You can override the default factor by entering a substitute BTU/Therm factor number here.

23.b. CALCULATION: Ext. Org. Hot Water Energy in MMBTUs

Chilled Water

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

24. Kton-h of Chilled Water

24.a. Chilled Water Default factor is 12,000,000. You can override the default factor by entering a substitute BTU/Kton-h factor number here.

24.b. CALCULATION: Ext. Org. Chilled Water Energy in MMBTUs

Natural Gas

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

25. MCF of Natural Gas

25.a. Natural Gas Default factor is 1,000,000. You can override the default factor by entering a substitute BTU/MCF factor number here.

25.b. CALCULATION: Ext. Org. Natural Gas Energy in MMBTUs

Other

Note: This field represents a value that can only be generated in the actual online survey. Please review the online survey to ensure this value is populated correctly.

26. Other energy source quantity

26.a. Other energy source conversion BTU factor

26.b. Describe Other energy source and the unit of its conversion factor.

26.c. CALCULATION: Ext. Org. Other Energy in MMBTUs

Total MMBTU (Resale to External Organization)

Total energy consumption in MMBTUs EXCLUDING external organizations

Total energy consumption in MMBTUs EXCLUDING sales to auxiliary services and external organizations

This concludes the question set for the 2018-19 Key Facilities Metrics Survey

Thank you for your participation!