Appendix

Glossary

Air Handling Unit (AHU) — A type of HVAC equipment that includes fans, dampers, heating/cooling coils, and filters for the purpose of supplying and returning air to a conditioned space.

Base load — The amount of energy consumed by equipment that is not affected by the outdoor temperature conditions. Examples of energy consuming equipment that is considered a base load include lighting, office equipment, domestic hot water systems, exhaust fans, and cooking equipment.

Benchmarking — Comparison of performance against similar facilities or an established level of performance. For example, energy benchmarking is a comparison of the energy consumption intensity for similar building types.

Bin weather data — Outdoor temperature data that contains the number of average hours of occurrence during a month or year for discrete groups of temperature conditions.

Building envelope — Exterior elements of the building that separate the conditioned space from the outdoor environment. This includes roofs, floors, exterior walls, exterior windows and doors.

Building scoping — A building evaluation intended to provide only enough technical and financial detail to obtain commitment for the follow-on building energy tune-up. Can be used as an internal sales tool to make the case to management for starting a tune-up project.

Building walkthrough — The task of periodically walking the building to observe the operating condition of equipment. systems, and the building envelope.

Capital projects	Building project that creates residual asset value for a company.
Changeover temperature	Temperature point at which a process variable is changed. For example, the outside temperature at which a heat pump system uses the back-up electric resistance heat.
Chilled Water Return Temperature (CHWRT)	The temperature of the chilled water returned to the chilled water plant after absorbing the heat in the building.
Chilled Water Supply Temperature (CHWST)	The temperature of the chilled water leaving the chilled water plant before absorbing the heat in the building.
Commissioning	The process of functionally testing building systems and equipment to verify that they perform per the design intent.
Data backup	Duplicated data maintained as a redundant copy
Direct Digital Control (DDC)	A micro-processor based building automation system that communicates through a local area network and can be programmed to control the operation of building systems and equipment.
Domestic Hot Water (DHW)	Hot water that is supplied to plumbing fixtures in the building such as lavatory sinks, service sinks, showers, etc.
Electric Load Factor (ELF)	The relationship between electrical consumption and electric peak demand for a given billing period. Electrical load factor is determined by dividing electrical consumption for the billing period by the electrical demand for the same billing period times the number of hours in the billing period

Electric resistance heat	Electric resistance heating elements used in air handling units, VAV terminal units, electric boilers, and portable space heaters.
Energy Charting and Metrics (ECAM)	Software for charting and analysis of energy use and point-level data from utility meters, building automation systems (BASs), and data loggers.
Energy Intensity	The quantity of energy required per unit output or activity, so that using less energy to produce a product reduces the energy intensity of the product.
Energy Management System (EMS)	A system that optimizes the operation, temperatures, and processes of a building's HVAC system. Generally, (except for some early versions), a BCS or BMCS includes all EMS functions.
Energy Use Index (EUI) *also, Energy Use Intensity*	A representation of annual energy usage per square foot of a facility. May appear in any basic or common unit (i.e. kWh/Ft^2, BTU/Ft^2, therms/Ft^2).
Interval Data, *also, Pulse Data, Daily Load Data*	Energy use data that is available in time intervals less than a monthly bill**.** Interval Data can be provided by the Utility Company or using the Energy Management System to collect this data at the electric meter. Also known as pulse or daily load data.
Level I Audit	A cursory analysis of a buildings energy use data and major energy using systems and equipment to identify energy saving opportunities.
Load shape	A plot of daily or monthly energy use on a chart or graph to identify energy consumption trends and profiles.
Lockouts	Threshold temperature, typically based on outside air temperature, where HVAC systems or equipment are set to be inoperative.

Mixed Air Temperature (MAT)	Temperature of the mixture of return air and outside air before it has been conditioned.
Multi-point trend	Overlay graph of multiple data sources from data loggers or building automation systems. Other parameters such as weather or energy use data may be included in the overlay.
Occupancy factor	A ratio of the actual weekly building occupied hours divided the total hours in the week.
Operational improvements	Process improvements that could be made in daily operation of a building or facility and which do not require an investment from the organization's capital budget.
Operations and Maintenance (O&M)	Operations and Maintenance are the decisions and actions regarding the control and upkeep of property and equipment.
Outside Air Temperature (OSAT) ***also, OSA***	Temperature of air outdoors that has not previously circulated through a building HVAC system.
Portfolio Manager (Energy Star PM)	Free online software developed by Energy Star used to benchmark and track a building's energy use.
Preventive Maintenance (PM)	Pro-active maintenance following manufacturers requirements intended to extend equipment life.
Pulse meters	Data collection device connected to the Utility electric meter that allows the Energy Management Control System to access real time energy consumption.
Refrigerant "slugging"	Compressing liquid refrigerant which can damage the compressor.

Renewables	Energy resources that are naturally replenishing but flow-limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Renewable energy resources include biomass, hydro, geothermal, solar, wind, ocean thermal, wave action and tidal action. [DOE Energy Information Administration Glossary]
Return Air Temperature (RAT)	Temperature of air that is returned to the air handling unit from the conditioned space.
Seasonal load	The amount of energy consumed by heating and cooling systems including distribution systems.
Sequences of operation	A detailed description of the operating sequence of building systems and equipment.
Setpoint	The desired condition (temperature, humidity, static pressure, etc.) at which a controller, eg. thermostat, is set.
Single point trend	Graph of energy usage cycling load vs time data from one data source. Patterns may become evident when the single point trend is extended over a period of days.
Site energy	Energy that is consumed by a facility.
Shoulder months	Months during the year when heating and/or cooling demand is low due to mild outdoor temperatures.
Smart meters	Meters with the capability to communicate energy or water consumption data with the Utility and various devices in a building.
Source energy	Energy required to generate and deliver energy to the building plus energy consumed by the building (i.e., site energy).

Supply Air Temperature (SAT)	Temperature of the air supplied to a conditioned space via the HVAC system.
System checks	System assessment made under normal operating conditions to assure proper operation
System diagnosis tool	A compendium of frequently seen building equipment and system problems contributed by experienced energy engineers. The tool provides a step by step approach for diagnosing and troubleshooting each problem.
Systems Operations Map	A document that catalogs the types and condition of major energy using systems in a building. The System Operations Map also includes building occupancy schedules and information on building control systems.
Tune-up	A periodic process intended to fix problems and to improve operation. It is focused on low-cost operation and maintenance improvements to energy-consuming systems and equipment.
Variable Air Volume (VAV)	A type of HVAC system that varies airflow delivered to a spaced depending on heating or cooling loads.
VAV terminal unit control, ***also, Box control***	Control of Variable Air Volume (VAV) System damper that modulates to maintain the space temperature by increasing or decreasing the volume of air being delivered to the space. If the space is too warm, the damper is adjusted to allow more 55°F (13°C) air into the space. If the space is too cool, less air is delivered to the space.

Variable-Frequency Drives (VFD), ***also Variable Speed Drive (VSD), Adjustable Speed Drive, Adjustable Frequency Drive, AC Drive, Microdrive, and Inverter***

A motor controller that can vary the rotating speed of an electric motor by varying the electric frequency supplied to the electric motor. Other names for VFD are variable speed drive (VSD), adjustable speed drive, adjustable frequency drive, AC drive, microdrive, and inverter.

ENERGY STAR® Portfolio Manager Data Collection Worksheet

This worksheet was designed to help building owners and managers collect data to benchmark buildings using EPA's ENERGY STAR Portfolio Manager. The information in this worksheet will be used to establish your building's profile in Portfolio Manager, which is critical to calculate benchmarks of key metrics such as energy intensity and costs, water use, and carbon emissions. **All building types can be entered into Portfolio Manager and receive energy and water benchmarks, as well as a comparison of performance against a national average for buildings of a similar type.**

Some buildings will also receive an ENERGY STAR score. The ENERGY STAR score is a benchmark that indicates how efficiently buildings use energy on a 1-100 scale. A score of 50 indicates that energy performance is average compared to similar buildings, while a score of 75 or better indicates top performance, and means your building may be eligible to earn the ENERGY STAR label. To receive an ENERGY STAR score, the gross floor area of the building must be comprised of more than 50% of one of the following space types: bank/financial institution, courthouse, data center, hospital (acute care and children's), hotel, house of worship, K-12 school, medical office, office, residence hall/dormitory, retail store, senior care facility, supermarket/grocery store, warehouse (refrigerated and unrefrigerated), and wastewater treatment plant.

Use this worksheet to collect the data for all space types applicable to your facility.

Required Data for ENERGY STAR Benchmarking

- Portfolio Manager username and password.
- The building street address, year built, and contact information.
- The building gross floor area and key operating characteristics for each major space type. Use this worksheet to collect this information before logging in to Portfolio Manager.
- 12 consecutive months of utility bills for all fuel types used in the building. If you don't have this information readily available, contact your utility provider(s) as most will be able to easily supply this historical information.

General Building Information

Facility name _____ Year built_____

Building address _____

City _____ State _____ZIP _____

Space Use Attributes

Before compiling the information noted in the boxes below, review the following important information:

- Specific definitions and instructions for each of the data fields listed in the boxes below can be viewed by navigating to Portfolio Manager Help, selecting "Space Type Definitions," choosing the appropriate building type, and selecting "Space Use Information."
- Some buildings may contain multiple space types within a single building (e.g. office, data center, and parking OR K-12 school and swimming pool). Complete the fields below for each applicable major space types within the building.
- For buildings with multiple tenants with the same space type, these spaces should be entered separately only when the number of weekly operating hours among tenants differs by more than 10 hours. For example, in a 100,000 square foot (SF) office building where 75,000 SF operates 60 hours a week and 25,000 SF operates 80 hours a week, please list as two separate spaces – one 75,000 SF space and one 25,000 SF space. As this is most common in office buildings, multiple office space fields are provided below to capture data for multiple tenants if necessary.
- Default values supplied by Portfolio Manager can be used for all space use characteristics with the exception of gross floor area. Using default values will result in an approximate energy performance score which can be a beneficial metric for estimating energy performance. If defaults are used for an initial score, it is recommended that actual data be added later to more accurately measure a facility's energy performance. Facilities using default values are not eligible to apply for the ENERGY STAR label. Leave any of the requested information below blank (except gross floor area) to use a default value for the field.

Bank/Financial Institution:

Required:

_____ Gross floor area (SF)

_____ Weekly operating hours

_____ # of workers on main shift

_____ # of personal computers

_____ Percent of floor area that is air conditioned (>=50%, <50%, or none)

_____ Percent of floor area that is heated (>=50%, <50%, or none)

Courthouse:

Required:

_____ Gross floor area (SF)

_____ Weekly operating hours

_____ # of workers on main shift

_____ # of personal computers

_____ Percent of floor area that is air conditioned (>=50%, <50%, or none)

_____ Percent of floor area that is heated (>=50%, <50%, or none)

Data Center:

Required:

_____ Gross floor area (SF)

_____ IT Energy Configuration – Select one from:

1. Uninterruptible Power Supply (UPS) Meter supports only IT Equipment. ***(Preferred)***
2. UPS Meter includes non-IT load of 10% or less.
3. UPS Meter includes non-IT load greater than 10%. Non-IT load is sub-metered.
4. UPS Meter includes non-IT load greater than 10%. Non-IT load is not sub-metered.
5. Facility has no UPS Meter.
6. IT Energy is not current metered at this facility – Apply Estimates.

_____ IT Energy Data – 12 months of measured energy consumption data is required from either the UPS or PDU Meter, depending on IT Energy Configuration

Meter Type (select 1): UPS Output or PDU Input			
Month	Start Date	End Date	Energy Consumption (kWh)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Optional:

_____ UPS System Redundancy (N, N+1, N+2, 2N, greater than 2N, none of the above)

_____ Cooling System Redundancy (N, N+1, N+2, 2N, greater than 2N, none of the above)

Hospital (acute care and children's):

Required:

_____ Gross floor area (>20,000 SF)

_____ # of licensed beds

_____ Maximum # of floors

_____ Tertiary care facility – yes or no

Optional:

_____ Laboratory on-site – yes or no

_____ Laundry facilities on site – yes or no

_____ Number of Buildings

_____ Ownership Status (drop down of options)

House of Worship:

Required:

_____ Gross floor area (SF)

_____ Maximum seating capacity

_____ Weekdays of operation

_____ Hours of operation per week

_____ # of personal computers

_____ Presence of cooking facilities - yes or no

_____ # of commercial refrigeration/freezer units

Hotel:

Required:

_____ Gross floor area (SF)

_____ # of rooms

_____ # of workers on main shift

_____ # of commercial refrigeration/freezer units

_____ On-site cooking – yes or no

_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)

_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)

Optional:

_____ Hours per day the guests are on-site

_____ Number of guest meals served

_____ Square footage of full-service spas

_____ Square footage of gym/fitness center

_____ Laundry processed at site (drop down of options)

_____ Annual quantity of laundry processed on-site

_____ Average Occupancy (%)

K-12 School:

Required:

_____ Gross floor area (SF)

_____ # of personal computers

_____ # of walk-in refrigeration/freezer units

_____ High school - yes or no

_____ Open weekends – yes or no

_____ On-site cooking – yes or no

_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)

_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)

Optional:

_____ Months of use

_____ School District

Medical Office: *Required:* _____ Gross floor area (SF) _____ # of workers on main shift _____ Weekly operating hours _____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.) _____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)	**General Office 1:** *Required:* _____ Gross floor area (SF) _____ Weekly operating hours _____ # of workers on main shift _____ # of personal computers _____ Percent of floor area that is air conditioned (>=50%, <50%, or none) _____ Percent of floor area that is heated (>=50%, <50%, or none)
Multifamily Housing: *Required:* _____ Gross floor area (SF) *Optional:* _____ Number of units _____ Number of bedrooms _____ Number of floors _____ Percent of square footage devoted to individual units _____ Number of laundry hookups in each unit _____ Number of laundry hookups in common area _____ Number of dishwashers in each unit _____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.) _____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.) _____ Affordable or market rate	**General Office 2:** *Required:* _____ Gross floor area (SF) _____ Weekly operating hours _____ # of workers on main shift _____ # of personal computers _____ Percent of floor area that is air conditioned (>=50%, <50%, or none) _____ Percent of floor area that is heated (>=50%, <50%, or none)

Other: *Required:* _____ Gross floor area (SF) (must be less than 10% of gross building floor area in order for the building to be eligible for a rating) *Optional:* _____ # of personal computers _____ Weekly operating hours _____ # workers on main shift	**General Office 3:** *Required:* _____ Gross floor area (SF) _____ Weekly operating hours _____ # of workers on main shift _____ # of personal computers _____ Percent of floor area that is air conditioned (>=50%, <50%, or none) _____ Percent of floor area that is heated (>=50%, <50%, or none)
Parking: *Required:* _____ Gross floor area that is enclosed (SF) _____ Gross floor area that is not enclosed with a roof (SF) _____ Gross floor area that is open (SF) _____ Weekly hours of access	**Retail Store:** *Required:* _____ Gross floor area (SF) _____ Weekly operating hours _____ # of workers on main shift _____ # of personal computers _____ # of cash registers _____ # of walk-in refrigeration/freezer units _____ # of open & closed refrigeration/freezer cases _____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.) _____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.) _____ Exterior entrance to the public – yes or no

Residence Hall/Dormitory:

Required:

_____ Gross floor area (SF)

_____ # of rooms

_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)

_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)

Optional:

_____ Computer lab on-site – yes or no

_____ Dining Hall on-site– yes or no

Senior Care Facility:

Required:

_____ Gross floor area (SF)

_____ # of units

_____ Average Number of Residents

_____ Total Resident Capacity

_____ # of workers on the main shift

_____ # of PCs owned by the community (does not include PCs owned by residents)

_____ # of commercial refrigeration/freezer units

_____ # of commercial washing machines

_____ # of residential washing machines

_____ # of residential electronic lift systems

_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)

_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)

Supermarket/Grocery Stores:

Required:

_____ Gross floor area (SF)

_____ Weekly operating hours

_____ Workers on main shift

_____ On-site cooking – yes or no

_____ # of walk-in refrigeration/freezer units

_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)

_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)

Optional:

_____ # of open or closed refrigeration/freezer cases

_____ # of registers and/or personal computers

Swimming Pool:

Required:

_____ Swimming pool size, choose from:
Olympic (50 meters x 25 meters)
Recreational (20 yards x 15 yards)
Short Course (25 yards x 20 yards)

_____ Indoor or outdoor

Optional:

_____ Months of use

Warehouse (refrigerated and unrefrigerated): Warehouse (Unrefrigerated): *Required:* _____ Gross floor area (SF) _____ Weekly operating hours _____ # of workers on main shift _____ # of walk-in refrigerators/freezer units _____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.) _____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.) *Optional:* _____ Distribution Center – yes or no Warehouse (Refrigerated): _____ Gross floor area (SF) _____ Weekly operating hours _____ # of workers on main shift	**Wastewater Treatment Plant:** *Required:* _____ Average influent flow (mgd) _____ Average influent biological oxygen demand (BOD_5) _____ Average effluent biological oxygen demand (BOD_5) _____ Plant design flow rate (mgd) _____ Presence of fixed film trickle filtration process – yes or no _____ Presence of nutrient removal process – yes or no
	Water Treatment and Distribution Utility: **Required:** _____ Average flow (mgd)

ENERGY STAR® Statement of Energy Performance

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ENERGY STAR® Score[1]

ACME Office

Primary Property Type: Office
Gross Floor Area (ft²): 100,000
Built: 1985

For Year Ending: December 31, 2019
Date Generated: March 30, 2023

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

Property & Contact Information

Property Address	Property Owner	Primary Contact
ACME Office Main Street Anytown, Washington 97204	_____ , (____)____-_____	____ _____ , (____)____-_____ _____

Property ID: 25389298

Energy Consumption and Energy Use Intensity (EUI)

Site EUI
94.4 kBtu/ft²

Source EUI
238.2 kBtu/ft²

Annual Energy by Fuel	
Natural Gas (kBtu)	1,500,000 (16%)
Electric - Grid (kBtu)	7,944,352 (84%)

National Median Comparison	
National Median Site EUI (kBtu/ft²)	69.7
National Median Source EUI (kBtu/ft²)	175.9
% Diff from National Median Source EUI	35%
Annual Emissions	
Total (Location-Based) GHG Emissions (Metric Tons CO2e/year)	840

Signature & Stamp of Verifying Professional

I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

LP Signature: _____Date: _____

Licensed Professional

____ _____
,
(____)____-_____
_____

Professional Engineer or Registered Architect Stamp (if applicable)

ACME Building Utility Consumption Data

Electric

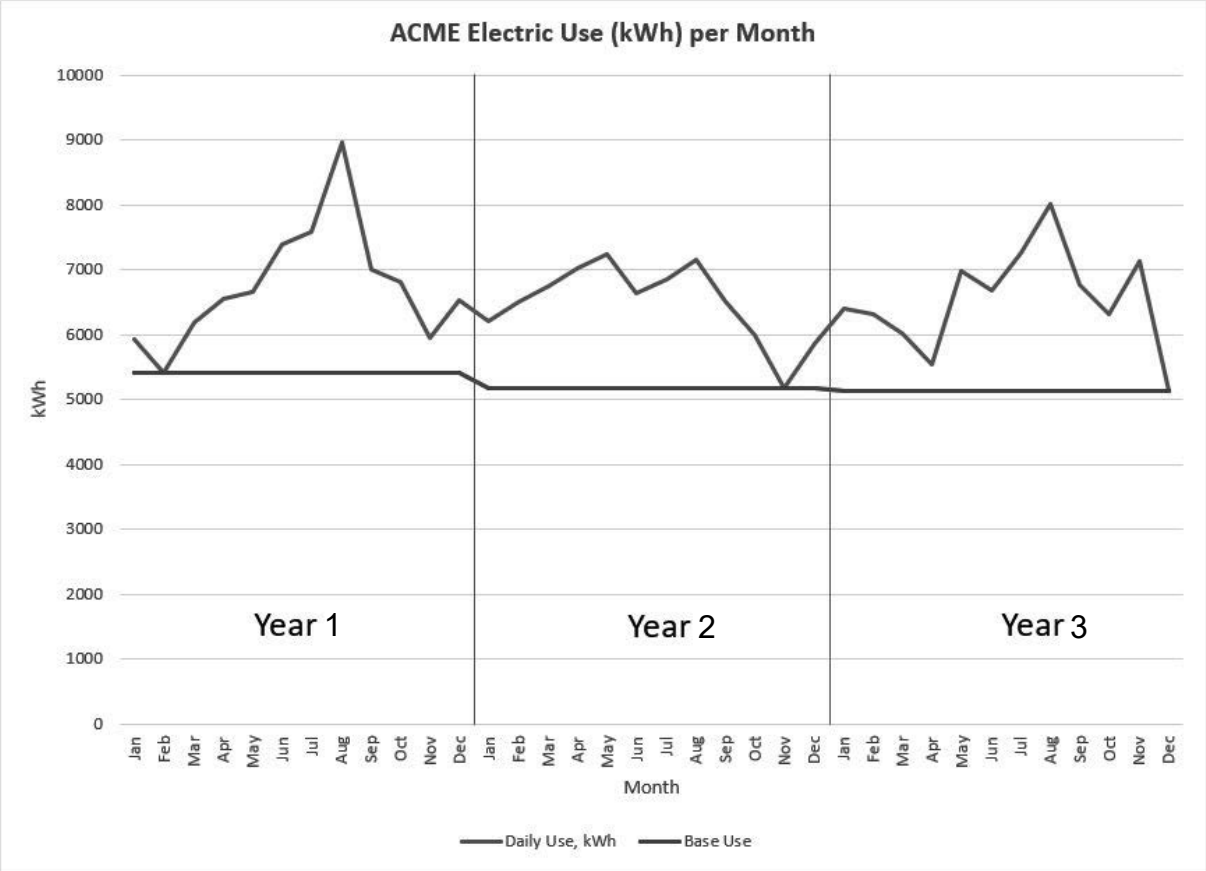
Year	Month	Bill Start	Bill End	Billing Period Days	Billed Use - kWh	Demand - kW	LF	Daily Use - kWh	Daily Base Use - kWh	Monthly Base Use	% Excess Use
Year 1	Jan	1/1/2017	1/31/2017	30	177,850	541	46%	5928	5,423	162,690	9%
Year 1	Feb	1/31/2017	2/28/2017	28	151,857	482	47%	5423	5,423	151,844	0%
Year 1	Mar	2/28/2017	4/1/2017	32	198,371	456	57%	6199	5,423	173,536	13%
Year 1	Apr	4/1/2017	4/29/2017	28	183,518	541	51%	6554	5,423	151,844	17%
Year 1	May	4/29/2017	5/31/2017	32	213,420	518	54%	6669	5,423	173,536	19%
Year 1	Jun	5/31/2017	6/28/2017	28	206,971	586	53%	7392	5,423	151,844	27%
Year 1	Jul	6/28/2017	7/31/2017	33	250,358	515	61%	7587	5,423	178,959	29%
Year 1	Aug	7/31/2017	8/30/2017	30	269,121	625	60%	8971	5,423	162,690	40%
Year 1	Sep	8/30/2017	9/30/2017	31	217,524	635	46%	7017	5,423	168,113	23%
Year 1	Oct	9/30/2017	10/29/2017	29	197,785	629	45%	6820	5,423	157,267	20%
Year 1	Nov	10/29/2017	12/2/2017	34	202,280	492	50%	5949	5,423	184,382	9%
Year 1	Dec	12/2/2017	1/1/2018	30	196,026	541	50%	6534	5,423	162,690	17%
Year 2	Jan	1/1/2018	1/31/2018	30	186,059	580	45%	6202	5,169	155,070	17%
Year 2	Feb	1/31/2018	3/3/2018	31	201,694	472	57%	6506	5,169	160,239	21%
Year 2	Mar	3/3/2018	4/1/2018	29	195,635	456	62%	6746	5,169	149,901	23%
Year 2	Apr	4/1/2018	4/30/2018	29	204,039	502	58%	7036	5,169	149,901	27%
Year 2	May	4/30/2018	6/2/2018	33	239,218	524	58%	7249	5,169	170,577	29%
Year 2	Jun	6/2/2018	6/28/2018	26	172,964	557	50%	6652	5,169	134,394	22%
Year 2	Jul	6/28/2018	7/30/2018	32	219,283	586	49%	6853	5,169	165,408	25%
Year 2	Aug	7/30/2018	8/29/2018	30	214,984	554	54%	7166	5,169	155,070	28%
Year 2	Sep	8/29/2018	9/30/2018	32	208,339	485	56%	6511	5,169	165,408	21%
Year 2	Oct	9/30/2018	10/30/2018	30	180,000	397	63%	6000	5,169	155,070	14%
Year 2	Nov	10/30/2018	11/28/2018	29	149,902	456	47%	5169	5,169	149,901	0%
Year 2	Dec	11/28/2018	1/1/2019	34	199,544	459	53%	5869	5,169	175,746	12%
Year 3	Jan	1/1/2019	1/31/2019	30	192,313	472	57%	6410	5,129	153,870	20%
Year 3	Feb	1/31/2019	2/28/2019	28	176,678	518	51%	6310	5,129	143,612	19%
Year 3	Mar	2/28/2019	3/30/2019	30	180,782	456	55%	6026	5,129	153,870	15%
Year 3	Apr	3/30/2019	4/30/2019	31	172,117	433	53%	5552	5,129	158,999	8%
Year 3	May	4/30/2019	5/30/2019	30	209,316	482	60%	6977	5,129	153,870	26%
Year 3	Jun	5/30/2019	6/30/2019	31	207,557	482	58%	6695	5,129	158,999	23%
Year 3	Jul	6/30/2019	7/31/2019	31	225,147	550	55%	7263	5,129	158,999	29%
Year 3	Aug	7/31/2019	8/30/2019	30	240,391	554	60%	8013	5,129	153,870	36%
Year 3	Sep	8/30/2019	9/30/2019	31	210,098	541	52%	6777	5,129	158,999	24%
Year 3	Oct	9/30/2019	10/31/2019	31	195,635	495	53%	6311	5,129	158,999	19%
Year 3	Nov	10/31/2019	11/30/2019	30	214,202	417	71%	7140	5,129	153,870	28%
Year 3	Dec	11/30/2019	1/2/2020	33	169,251	430	50%	5129	5,129	169,257	0%

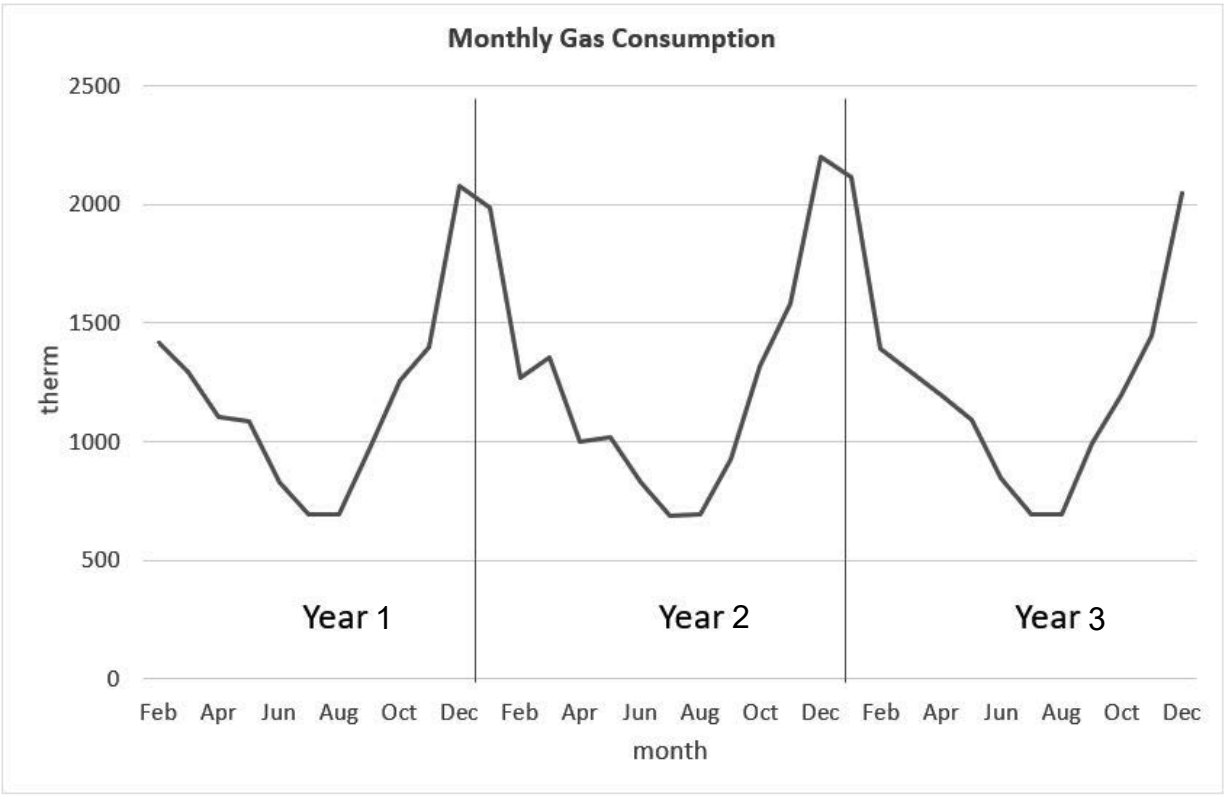
Year	kWh*y/ft²	kBtu*y/ft²	Days	Total kWh	Peak kW	Avg LF	Daily Base Use, kWh	Total Base Use, kWh
Year 1	24.65	84.11	365	2,465,081	635	51.59%	5,423	1,979,395
Year 2	23.72	80.92	365	2,371,661	586	54.27%	5,169	1,886,685
Year 3	23.93	81.67	366	2,393,485	554	56.30%	5,129	1,877,214

ACME Building Utility Consumption Data

Gas

Year	Month	Therms
Year 1	Jan	1998
Year 1	Feb	1415
Year 1	Mar	1294
Year 1	Apr	1106
Year 1	May	1087
Year 1	Jun	826
Year 1	Jul	694
Year 1	Aug	694
Year 1	Sep	968
Year 1	Oct	1254
Year 1	Nov	1398
Year 1	Dec	2074
Year 2	Jan	1987
Year 2	Feb	1267
Year 2	Mar	1356
Year 2	Apr	1002
Year 2	May	1015
Year 2	Jun	828
Year 2	Jul	690
Year 2	Aug	693
Year 2	Sep	926
Year 2	Oct	1315
Year 2	Nov	1578
Year 2	Dec	2198
Year 3	Jan	2116
Year 3	Feb	1394
Year 3	Mar	1294
Year 3	Apr	1194
Year 3	May	1094
Year 3	Jun	844
Year 3	Jul	694
Year 3	Aug	694
Year 3	Sep	994
Year 3	Oct	1194
Year 3	Nov	1444
Year 3	Dec	2044


ACME Electric Use (kWh) per Month
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
kWh
Year 1
Year 2
Year 3
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Month
Daily Use, kWh
Base Use


Monthly Gas Consumption
2500
2000
1500
1000
500
0
therm
Year 1
Year 2
Year 3
Feb Apr Jun Aug Oct Dec Feb Apr Jun Aug Oct Dec Feb Apr Jun Aug Oct Dec
month