

Level 2 Step 2.2.3 Example Types of Energy Management Data

Type of Data	Description	Collection Frequency	Expected Sources for Data	Data Storage Location
Utility Bills	Utility invoice that includes quantity consumed or purchased, billing period or delivery date, demand, and other related factors such as power factor, fuel shrinkage, meter or account charges. NOTE: Beware of "estimated" consumption because the only truly accurate consumption rates are derived from meter readings.	Usually monthly although fuel deliveries may be more or less frequent.	From utility invoices and utility supplied billing history.	Usually held in Purchasing Department, Building/ Office Manager's files
Utility Interval Data	Interval energy data is a fine-grained record of energy consumption, with readings made at regular intervals throughout the day, every day. The record of consumption during an interval period presents a picture of the variation in energy demand throughout the year. Electricity and natural gas meters may collect interval data for the purpose of billing based on "peak demand."	Data is collected continuously, but is usually reported for a 12 month (annual) period.	Provided by request from the Utility.	Data held by the Utility
Utility Rates, Tariffs	Utility rates and tariffs are the schedules which are used to determine the cost of supplied utilities. Rates and tariffs provide insight into the component costs involved in utility pricing and allow the marginal cost of each component to be determined.	Can be acquired as needed, but only the "current" rate is relevant. Regular contact with a Utility representative will ensure that current rates have been acquired.	Available from the Utility or Public Service Commission for regulated utilities.	Utility rates and tariffs stored with utility contracts in either Legal or Purchasing Department
Production Units	Production output is the amount of finished product leaving a plant or moved to inventory. For plants with single output, units are easily found. For plants with multiple products, common characteristics should be considered as a method to combine, i.e. pounds or square yards of output instead of units.	Must be matched to utility billing interval to get accurate estimate of energy per unit of production.	Production Managers or Production clerical staff	Production Department output reports

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Operating Schedule/Hours	The hours that production operates reported on a monthly or annual basis. Hours an organization is operating.	Collect as required to correlate with utility and/or production data.	Production managers or staff schedules, Building management system, time sheets, time clock	Production records, Building management system, time records
Meteorological Data	Weather data including hours of occurrence for temperature, humidity or dew point associated with each temperature, wind velocity, and precipitation is often useful in developing energy models.	Collected continuously but reported hourly and usually available in monthly or annual blocks.	http://www.ncdc.noaa.gov/oa/ncdc.html	On-line
Rated Capacity of Prominent Energy Systems	Electrical and fuel-fired equipment has rated capacities normally shown on a nameplate or tag. Electrical equipment can be rated by horsepower or kilowatts. Electrical cooling equipment is often rated in tons where 1 ton of cooling is equal to 12,000 Btuh. Thermal equipment may be rated in max Btuh and often a min Btuh is also given. European equipment can be rated in kilowatts where 1 kW equals 3,412 Btuh.	Because most equipment does not change often, equipment capacities need only be collected once unless there is a change or replacement.	Maintenance staff and equipment user guides Can be extrapolated from daily or weekly operating records.	Equipment guides, Purchasing records
Submeter Data	Submeters are installed on equipment, systems, processes or facilities for required energy information. A common application is consumption measurement at a more granular level than utility meters but meters also measure flow, temperature, gas properties, etc.	Collection frequency varies depending on the data need.	Meter read outs	Production department, Building Management System, reports, files
Financial Data	Financial information is often relevant to energy management. Information may include expected return or payback for energy-related projects. Financial data such as the expected borrowing rate for debt financed projects is also important.	Collected as needed, usually on an annual basis.	Finance Department, Lending Institutions	Contained in financial reports