FEDERAL FACILITY ASSESSMENT GUIDE

Metering Site Assessment Guidance

**General Automated Metering Assessment Procedure:**

1. Conduct a site assessment to determine the current number of standard electric, natural gas, fuel oil, steam, and water meters.
2. If the facility has a standard (mechanical meters with no automated meter reading capabilities) electric, natural gas, fuel oil, steam or water meters, calculate the cost effectiveness of installing an advanced meter using the following equation
* As a first order approximation assume that the meter will reduce the electric, natural gas or water utility costs by 2% *(See table below)*

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* Use the following table to approximate the installed cost of the metering system



* Use the following calculation to determine the cost effectiveness of installing an advanced meter

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Metering **Checklist**

**Install Advanced Electricity, Natural Gas, and Steam Metering**

Advanced meters are those that have the capability to measure and record interval data (at least hourly for electricity) and communicate the data to a remote location in a format that can be easily integrated into an advanced metering system. For electrical meters, they measure electrical demand (kW) over a predetermined interval—commonly every 15 minutes to match utility billing intervals. This data can be used to measure, verify, and optimize building performance, identify retrofit projects, monitor power quality problems, and develop energy use indices (EUI).

Walk through each building or facility and identify the number and type of electrical, natural gas, fuel oil, and steam meters. Identify the meters that need to be retrofit with a solid state meter with automated metering reading and data collection capability.

**Install Smart Energy Metering**

Smart energy metering (solid state or digital) can provide more accurate and more detailed information about energy use and power quality. This data can be used to measure, verify, and optimize building performance, identify retrofit projects, monitor power quality problems, and develop energy use indices (EUI).

Walk through each building or facility and identify the number and type of electrical meters. Identify the electrical meters that need to be retrofit with a solid state meter.

**Install Smart Water Metering**

Smart water metering (positive displacement, differential pressure, velocity) can provide more accurate and more detailed information about water use. This data can be used to measure, verify, and optimize building performance, identify retrofit projects, and monitor problems.

**Install Communication and Data Storage Technology**

Communication and data storage is vital to building operation. New technologies allow sensor to meter communication and data storage allows for real-time information on building operating conditions. Communication and data storage technology should be installed in buildings to improve information and identify energy saving potentials.