MDMS UPDATE

~ METER DATA MANAGEMENT SYSTEM ~

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FROM THE PROGRAM MANAGER

Welcome to our December 2021 - January 2022 issue of the *Meter Data Management System Update (MDMS),* designed to keep you informed on the growth and latest developments of the Meter Data Management System and the Army Metering Program.

Our first article discusses the recent progress on external meter data integration—via Secure File Transfer Protocol (SFTP)—into MDMS. We have welcomed four new sites, added another commodity for an existing site, and are currently in the process of working with three more.

On page two we address the importance of accurate facility data. With a large number of MDMS meters (including SFTP) being unassigned, it is important to have the Army's Real Property Asset Unique Identifier for buildings properly associated to meters in order to provide more accurate usage per square feet metrics for the Army.

Our last article describes new capability for configuring the minimum valid usage for a meter. For electric meters where interval usage of 0 (or lower than 0.000001) kWh is valid, the MDMS team can lower this parameter so that those values are marked as valid and are not estimated.

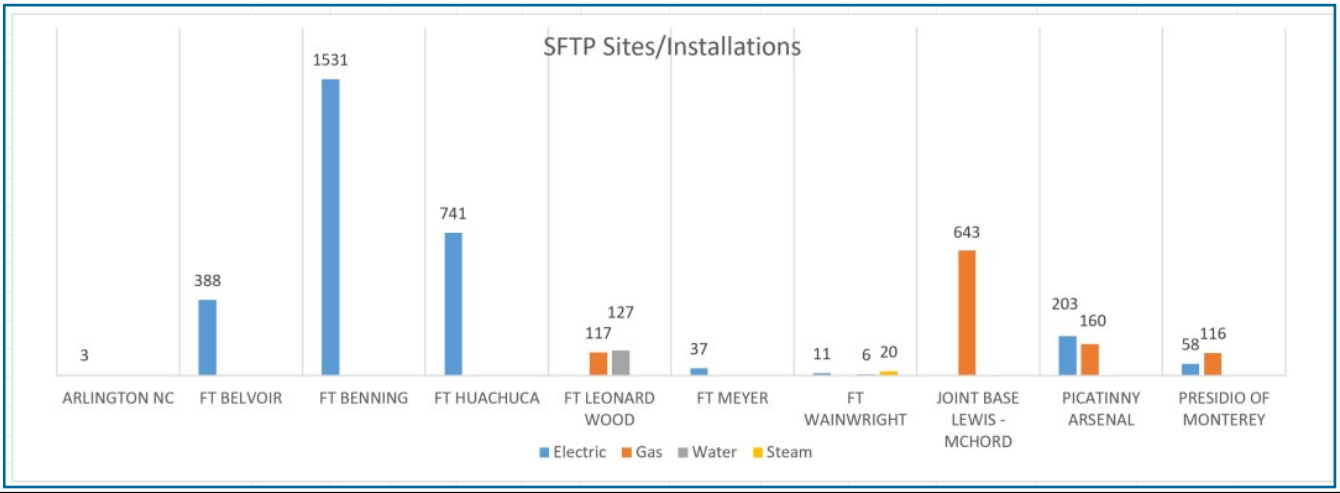
As always, our mission is to improve the MDMS experience for end users. Your input is valuable, and we welcome your feedback via the Army Meter Service Desk (AMSD) at: cehnc-army-meter-help@usace.army.mil

ADDITIONAL SFTP SITES

Your MDMS Program Team has continued to work with more sites/installations on integrating their external meter data into MDMS. Since we last wrote about this topic in the April - May 2021 newsletter, we are excited to report that Fort Huachuca, Fort Leonard Wood (addition of water), Fort Wainwright, Joint Base Lewis-McChord and Presidio of Monterey all have their external meter data integrated into MDMS. See diagram below for all sites and meter counts.

The MDMS Team is currently working with Fort Campbell, Fort Stewart and Red River Army Depot to bring in their external utility meters.

The MDMS Team is available to assist any Army Energy Manager willing to explore the possibility of acquiring meter data from their UP, BAS, or other means. If you have external meter data that you would like integrated into MDMS, reach out to the AMSD, log a ticket for assistance and the MDMS Program Team will be in touch.



THE IMPORTANCE OF ACCURATE FACILITY DATA

Most would agree that meter data without building information is pretty useless. For MDMS, the only authorized source of facility data is the Army's Real Property Inventory (RPI) Database, for which updates are received quarterly. This database includes the building number, street address, square footage, category use code, year constructed, the type of construction and numerous other data fields. By design, MDMS does not permit anyone to manually enter facility data. The purpose of this restriction is to preserve the integrity of the RPI as the only database of record for all Army real property.

Every building within the RPI has a Real Property Asset Unique Identifier (RPAUID). The appropriate RPAUID must be associated with each meter installed on a building. This association is created when a meter installation is initially connected/configured to MDMS. Afterward, the installation Energy Manager (EM) should include the RPAUID along with building number when submitting an Army Meter Service Desk (AMSD) ticket to add another metered facility to MDMS or to have an incorrectly assigned or unassigned meter resolved. The RPAUID can be obtained from the local or MACOM's Real Property Management Office (RPMO).

Unassigned meters are those that have yet to be, or cannot be, associated with a facility. Unassigned meters are associated with a site, but not to a particular building. This could be correct — the meter could be installed on a substation or something other than a building. In many instances an unassigned meter has a building name or number as part of its meter ID string. For some reason, the information provided in the meter ID string could not be correlated to a real property record within the Army's RPI. In addition, with many SFTP sites where the meter name is based off of other information, we need the RPAUID in order to correctly match the meters to buildings.

Incorrectly assigned meters are those that are associated to the wrong facility. Those can be reassigned to the proper building with the RPAUID.

Why should you care about incorrectly or unassigned meters?

For unassigned meters that are installed on a building, it is important to have the meter assigned to the building's RPAUID in MDMS so that when reports such as the Energy Use Intensity (EUI), baseload and cat code comparison, and organization-level usage reports are run, the total square footage (SQFT) for that building is appropriately included. For example, if a meter for a 50,000 SQFT building is unassigned — or even assigned to the wrong building, such as a small carport — many MDMS reports will not report EUI, baseload comparison, and usage correctly, as they will be missing that SQFT in the calculations. This is really important to the Army-wide metrics for usage.

Please coordinate with your RPMO to get the RPAUID for those unassigned meters. Unassigned meters can be found using the steps below:

- From the Home Dashboard in MDMS, select Network Status on the green navigation panel/pulldown menu.
- Select Meter Status Rollup from the report options on the left of the page.
- Drill down to the site you want from the Meter Status Rollup report and click on the hyperlinked name of the site.
- This will give you a list of meters at your site.
- Select "Export to Excel" and once exported, sort the data in descending order on the "Building" column or select "Unassigned" as the filter value filter within the "Building" column.
- Work with your RPMO to get the corresponding RPAUIDs for the unassigned meters and add them to the spreadsheet.
- Send the annotated spreadsheet to the AMSD. A ticket will be created for MDMS resolution.

Occasionally, some of the facility data in the RPI may be incorrect or out of date. Likewise, whenever errors are discovered, EMs should contact the installation or MACOM RPMO.

The MDMS team continues to work with sites/installations on resolving both unassigned and incorrectly assigned meters. As of this writing, out of the total 20,775 meters within MDMS (including SFTP), 2,438 are currently unassigned. Again, some of these may be substation or master meters that do not need to have building assignments. However, if you have done the above steps to generate your list of unassigned meters and have secured the corresponding RPAUIDs, please submit a ticket with the AMSD and attach the spreadsheet. We will take it from there.

CONFIGURABLE MINIMUM VALID USAGE

MDMS has added the capability to configure a "minimum valid usage" value for all meters. Historically, interval usage of 0 has been evaluated as valid for gas, water, and steam meters, but marked as invalid and estimated on electric meters. With this new enhancement, the default minimum value for gas, water, and steam meters is still 0. The default minimum value for electric meters is now 0.000001 kWh. For meters where interval usage of 0 (or lower than 0.000001) kWh is valid, the MDMS team can lower this parameter so that those values are marked as valid and are not estimated.

There are only a few scenarios where this may be appropriate:

- An equipment sub-meter
- A generation source feeding to a building behind the building meter
- A building that is shutdown when not in use
- A loop that has meters on each side

An equipment submeter on a building is used to read the exact output for a meter that may be inactive on occasion. For example, if you are measuring a water tower and the water tower is off at night then the reading for that meter would have zeros in its reading. The same is true for a meter on a piece of production equipment. It will only show usage when that piece of equipment is actively engaged in the process. In this case a meter may show the equipment at zero usage for most of the time.

A generation source is added to a building in many cases. A generation source could be solar, wind, cogeneration or even generation. To save costs, that generation source is tied into the panel which is almost always behind the meter. This means that the generation from the source is subtracted from the building usage because the generation is consumed by the building before it reaches the meter. In some cases, the generation source will exceed the usage by the meter. In fact, if the generation is greater than the usage the building usage will be negative.

The third bullet above came from an example of zero usage on a building that is only used when troops are training. In those cases, the building will be shut down at the main panel when not in use and the building will show zero usage. If you do not shut down the panel, you will show some usage. There are always sacrificial loads on a building that show up, so shut down the building so these lower usage values are not estimated, or the energy is not wasted when it is not required for use.

The last example is a set of meters on each side of a loop or feeder. There are several examples in this situation. One is a building that is critical therefore has two feeds into the building. Each feed is metered so only one feed has usage values at a time. These both need to have the meter set so there is no smoothing for zero values. The second example is on a loop that has a switch and meter on each end. These are usually on substations but could have a building number. We need to understand when that happens so they are shown as substations on our data, as these will generally be a duplicate of other buildings. We also need to be aware so that the data is not smoothed when it is off and producing zeros.

Do not reset to zero just to keep the meter form showing up on a data quality listing. In this case you are circumventing the system checks to ensure meters are working properly.

To lower the minimum interval usage value for a meter, please file a help desk ticket with the Army Meter Service Desk (AMSD) via the Feedback/Help Request option under the Support menu in MDMS or you may e-mail them at: cehnc-army-meter-help@usace.army.mil.