



# MDMS UPDATE

~ METER DATA MANAGEMENT SYSTEM ~



US Army Corps of Engineers®

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## FROM THE PROGRAM MANAGER

Welcome to our December 2020 - January 2021 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 below details the new email notification for offline meters. You can opt-in and get daily notifications of offline meters at your installation.

The MDMS Training Webinars continue to be a great resource for our users. Detailed on pages 3-6 is the 16th course, *Advanced Metrics for Systems*, which was first offered at the end of September 2020. This class builds upon the *Evaluating the Energy Use Intensity (EUI) Report* and *Comparing EUI to Other Metrics* courses.

At the bottom of page 6, we brief the *Army Maintenance & Support contract* to provide guidance on getting sustainment

support throughout the program. The USACE contract support team works with each installation's Energy Manager (EM) on reporting issues. Assistance can be requested via the Army Meter Service Desk.

Lastly, we introduce the *Water Leak Notification* module. Users with water meters can opt-in to receive email notifications of potential leaks. Read more about that module on page 7.

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: [usarmy.coe-huntsville.cehnc.mbx.armymeterhelp@mail.mil](mailto:usarmy.coe-huntsville.cehnc.mbx.armymeterhelp@mail.mil)



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## OFFLINE METER EMAIL NOTIFICATION

Maintaining the Army's meter network requires a team effort. We have shared several articles that provide tips on how the Installation Energy Manager can assist the troubleshooting efforts and expedite the restoration of meters reporting to MDMS. Two excellent first indication modules for meter outages are the GIS and the Meter Status Roll-up report. In addition, the Meter Status Details report gives you the list of meters and their most recent reporting date/time. We now have an additional module to assist the Energy Manager in their efforts to keep meters reporting to MDMS.

The Offline Meter Email Notification module can be found on the MDMS Self Service page under the Email Notifications sub-menu. This report enables users to set up email notifications for offline meters and may be run for your default organization (as shown below), or at the HQDA, Command, Region, Installation or Site level. A notification is triggered

when a meter goes 7 days without a reading. The user name defaults at the top right and may not be changed. The user's default email address is automatically populated in the Email Address field. It is required, but can be changed, if desired. (Continued on pg. 2)

Self Service - Offline Meter Email Notification

**Default Organization:** FORT CARSON

**Location Selection:**

- HQDA
- Command
- Region
- Installation
- Site

**User Name:** joan.a.doe \* Required

**Email Address:**

[Save Notification](#)

**Email Notification Opt History**

User Name	Command	Region	Installation	Site	Actions	Opt-in Email	Opted-in	Opt-in/Opt-out Date



## MDMS UPDATE

## OFFLINE METER EMAIL NOTIFICATION (CONT. FROM PG. 1)

Once the notification is saved, the notification details appear in the Email Notification Opt History section, as shown below. The user may use the Opt-Out button to turn off the email notification. The details remain and the Opt-Out button is replaced by the Opt-In button. The user may change the email for notification by selecting the Edit Email button.

Self Service - Offline Meter Email Notification

**Default Organization:** FORT CARSON

**User Name:** joan.a.doe \* Required

**Email Address:**

**Location Selection:**

- HQDA
- Command
- Region
- Installation
- Site

**Email Notification Opt History**

User Name	Command	Region	Installation	Site	Actions	Opt-in Email	Opted-in	Opt-in/Opt-out Date
joan.a.doe	IMCOM	SUSTAINMENT	REDSTONE ARSENAL	REDSTONE ARSENAL	<input type="button" value="Opt-Out"/> <input type="button" value="Edit Email"/>	joan.doe@gdit.com	Yes	10/30/2020

An example of the email notification for offline meters, which comes from support@mdms.army.mil, is shown below.

From: support@mdms.army.mil <support@mdms.army.mil>  
 Sent: Tuesday, December 1, 2020 3:00 AM  
 To: Jane Doe <jane.doe@gdit.com>  
 Subject: Offline Meters as of 12/01/2020

See below for all meters that are offline for REDSTONE ARSENAL as of 12/01/2020.  
 Total Offline Meter Count for REDSTONE ARSENAL: 252

Meter: REDS\_BLDG\_3465\_METER\_1 Last Reading: 9/1/2020 4:45:00 AM  
 Meter: REDS\_BLDG\_3465\_METER\_2 Last Reading: 9/1/2020 4:45:00 AM  
 Meter: REDS\_BLDG\_3466\_METER\_1 Last Reading: 11/23/2020 3:30:00 PM  
 Meter: REDS\_BLDG\_3670\_METER\_1 Last Reading: 11/13/2017 2:45:00 PM  
 Meter: REDS\_BLDG\_3687\_METER\_1 Last Reading: 11/23/2020 3:30:00 PM  
 Meter: REDS\_BLDG\_3775S\_METER\_2 Last Reading: 6/18/2020 5:15:00 AM  
 Meter: REDS\_BLDG\_4424\_METER\_1 Last Reading: 11/23/2020 3:30:00 PM  
 Meter: REDS\_BLDG\_4459\_METER\_1 Last Reading: 2/2/2018 8:30:00 AM  
 Meter: REDS\_BLDG\_4459\_METER\_2 Last Reading: 2/2/2018 8:30:00 AM  
 Meter: REDS\_BLDG\_4506\_METER\_1 Last Reading: 11/23/2020 3:45:00 PM

Consistency of meter data reporting is important to your energy use metrics and analysis. And the longer a meter stays offline, the more smoothing and interpolation is required to fill in missing data. This is probably acceptable if your consistency is fairly high. If your consistency is mid-to-low range, then the validity and reliability of the interpolated data is questionable.

As of mid-January, only 6743 of the Army's total 14,635 meters in MDMS are currently reporting. That's only 46%.

If there is valid reason for a non-reporting meter to remain off-line from the MDMS, e.g., the building was demolished, please notify the AMSD via the Feedback/Help Request option under the Support menu in MDMS or you may e-mail them at:

[usarmy.coe-huntsville.cehnc.mbx.armymeterhelp@mail.mil](mailto:usarmy.coe-huntsville.cehnc.mbx.armymeterhelp@mail.mil) so that we can correct our records within MDMS. We will preserve the historical meter data for reference, but we don't want to continue reporting that building as being offline and have it reflected in the Army's metric for meter network reliability.

The AMSD also monitors the Meter Status Rollup Report on a daily basis to check for site-wide outages. If they do find a site has dropped off, they notify the MDMS Network Operations Team (NetOps). NetOps will login to the network to see if MDMS can connect to the Enterprise Energy Data Reporting System (EEDRS). If MDMS does not connect to EEDRS, or if MDMS connects to EEDRS, but there is no data captured, the AMSD creates a help desk ticket on behalf of the corresponding NetOps Program Manager (PM) and assigns it to the corresponding M&S contractor. If a connection cannot be made to the MDMS server, the AMSD creates a help desk ticket and assigns it to the NetOps Team.



## MDMS UPDATE

# ADVANCED METRICS FOR SYSTEMS

The Advanced Metrics for Systems course was first offered at the end of September and continues to be offered in the training webinar rotation. This class builds upon what is covered in the Evaluating the Energy Use Intensity (EUI) Report and Comparing EUI to Other Metrics courses. It combines a series of three metrics together into a stop-light chart. Each chart is tied to a category code for the 30 largest category codes in the Army. Then the charts are color-coded for each of the three metrics to show where they fall compared to their peers. There is an if-then logic for each category to tell you if your meter is bad, where you stand against other buildings i.e. top 25% or bottom 25 %, etc.

Breakdown of our EUI Courses:

- EUI
  - Gives you a general tool and direction for calling out the worst performing buildings
  - You can use the Energy Information Administration (EIA) database to compare to the Army
  - Compare by total, electric and gas
  - Run three Cat Code analysis models
- EUI vs Other Metrics
  - What are relevant parameters
  - Top 30 Cat Codes
  - Range of EUI for Army
  - Compare vs climate zone
- Advanced Metrics
  - Stop light chart
  - Other metrics

So, what are the various metrics that we've been using during the courses? We look at the internal metrics in the 1<sup>st</sup> Level Benchmarking class and apply those within an installation, within a Cat Code, within a climate zone, and then all of those combined. We analyze the external metrics in the Comparing EUI to Other Metrics course with excerpts from the EIA and Energy Star databases. Internal metrics in relation to Cat Codes is a hybrid, balanced approach that compares the baseload, % baseload of consumption and extrapolated EUI of your building to other buildings within that Cat Code and/or climate zone.

What are the three factors to balance?

- Baseload
  - Not affected by weather
  - Minimum point of usage that establishes the base for non-variable usage
  - Very good factor for telling us certain things
  - Includes plug plus whatever systems were left on
  - Calculated in watts per square feet (Watts/sf)
- % Baseload of Consumption
  - Not affected by weather
  - Divided by your total consumption
  - Theoretically 10-18%
  - Average currently 45% of Army energy
  - Sets the base for energy savings potential
- Extrapolated EUI
  - Dependent on weather zone
  - Usage based on unit of size for comparison
  - Very good metric for the Army

Let's look at one example, generated by the Base Load Comparison module, where we've got all three factors for Company Headquarters (CO HQ) Category Codes (Cat Code). The yellow highlighted column shows the Watts/sf, the green column is the Baseload as % of Consumption, and the blue column is the Extrapolated EUI for 12 months. This is a very quick and easy way to do this comparison. (*Continued on pg. 4*)

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ADVANCED METRICS FOR SYSTEMS (CONT. FROM PG. 3)

Base Load Comparison										Average	0.432155	35.99954	44.36114	54.17696	84.13931
										Median	0.300	34.2655	24.419	29.708	100
										Base Load	12 Months Consumption	Baseload as % of Consumption	12 Months EUI	12 Months Extrapolated EUI	% of Data
Command	Region	Installation	Site	Building	RPAUID	Footage	Cat Code	(KW)	Watts/sf	(kWh)	tion	(Electric	(Electric	Availab	Climate
IMCOM	READINESS	FORT POLK	FORT POLI	2264 - 46TH CO HQ BLDG	190848	24720	CO HQ BLD	21.814	0.882	154809.2	84.883	21.369	31.074	68.767	3A
IMCOM	READINESS	FORT BLISS	FORT BLIS	20555 - CO HQ BLDG 20555	1061682	64845	CO HQ BLD	21.254	0.328	589157.2	31.689	31.001	30.917	100.274	3B
IMCOM	TRAINING	FORT RUCKEF	FORT RUC	5901 - WOCC HHC CO HQ BLDG	1106682	4730	CO HQ BLD	1.69	0.357	28103.36	34.638	20.273	30.832	65.753	3A
IMCOM	READINESS	FORT BRAGG	FORT BRA	23612 - CO HQ BLDG	582975	7821	CO HQ BLD	4.42	0.565	55098.84	55.448	24.038	30.465	78.904	3A
IMCOM	READINESS	FORT CARSOI	FORT CAR	7416 - CO HQ BLDG	592301	35730	CO HQ BLD	18.241	0.511	319730.6	50.114	30.534	30.45	100.274	5B
IMCOM	READINESS	FORT HOOD	FORT HOC	87016 - COMPANY HQ BLDG	182272	25186	CO HQ BLD	4.842	0.192	223346.3	19.042	30.258	30.176	100.274	2A
IMCOM	READINESS	FORT IRWIN	FORT IRW	276 - CO HQ BLDG	590831	4830	CO HQ BLD	1.051	0.218	32174.09	21.873	22.729	29.735	76.438	3B
IMCOM	READINESS	FORT HOOD	FORT HOC	27003 - COMPANY HEADQUARTE	1029772	57187	CO HQ BLD	23.02	0.403	381981.7	40.497	22.791	29.71	76.712	2A
IMCOM	READINESS	FORT BLISS	FORT BLIS	20425 - CO HQ BLDG 20425	996389	36727	CO HQ BLD	4.133	0.113	320641.1	11.322	29.789	29.708	100.274	3B
IMCOM	READINESS	FORT BRAGG	FORT BRA	B1825 - CO HQ BLDG	1049754	66612	CO HQ BLD	57.25	0.859	341038.6	87.024	17.469	29.52	59.178	3A
IMCOM	READINESS	FORT BLISS	FORT BLIS	20455 - CO HQ 20455	996400	64886	CO HQ BLD	9.756	0.15	561571.2	15.26	29.531	29.45	100.274	3B
IMCOM	READINESS	FORT CARSOI	FORT CAR	1447 - CO HQ BLDG	996786	81581	CO HQ BLD	33.88	0.415	704856.5	42.222	29.481	29.4	100.274	5B
IMCOM	READINESS	FORT BLISS	FORT BLIS	20515 - CO HQ BLDG, 20515	1041443	58813	CO HQ BLD	13.77	0.234	507151.5	23.851	29.423	29.343	100.274	3B
IMCOM	TRAINING	FORT BENNIN	FORT BEN	2883 - TF 1-28 CO HQ BLDG	281624	8181	CO HQ BLD	2.444	0.299	70287.3	30.546	29.316	29.235	100.274	3A

Now, we break it down further using stop light charts. The first one we look at is the Watts/sf for the top, middle and bottom range of the report results, shown below. We have sorted the report on the Watts/sf column, outlined with the purple box, in descending order. You can see the Median is 0.300 for ~394 buildings. Then, we've color-coded the cells based on their values against the median and other entries within that column. The red cells are greater than the 75<sup>th</sup> percentile and above (2-2.4 times the median). These indicate bad meters or a baseload that was not set properly. Yellow means it may or may not be a bad meter, but it definitely has excessive energy use. We apply the color-coding on the other two columns, the Baseload as % of Consumption and the Extrapolated EUI, and while we will get to those examples later, one thing to note here in this example is we have a row in the middle where all three of our factors are red. This indicates a very high likelihood that this is a bad meter.

Base Load Comparison										Top boundary	2.4	0.720	81.32	61.55	71.56
										bottom boundary	0.4	0.120	13.55	10.26	11.93
										Medians	0.300	33.89	25.65	29.82	
											92.000	86.000		120.000	
Command	Region	Site	Building	RPAUID	Footage	Cat Code	(KW)	Watts/S	12 Months Consumption	Baseload as % of Consumption	12 Months EUI	12 Months Extrapolated EUI			
IMCOM	PACIFIC RE	SCHOFIELD BARRA	2087 - COM	579669	17882	CO HQ BLDG (14185)	14.734	0.824	167394.6	57.67	31.941	42.705			
IMCOM	READINESS	FORT HOOD	18027 - CO	181609	5945	CO HQ BLDG (14185)	4.876	0.82	94322.47	45.29	54.051	54.051			
IMCOM	READINESS	FORT HOOD	29004 - CO	182000	21332	CO HQ BLDG (14185)	17.371	0.814	280816	54.04	44.918	45.041			
IMCOM	READINESS	FORT POLK	2391 - CO I	191506	24720	CO HQ BLDG (14185)	20.069	0.812	183747.7	73.66	25.363	32.945			
IMCOM	READINESS	FORT POLK	2268 - ADM	303010	24720	CO HQ BLDG (14185)	20	0.809	114791.2	85.72	15.845	28.211			
IMCOM	TRAINING	FORT BENNING	9174 - CO I	281887	6779	CO HQ BLDG (14185)	5.431	0.801	146315.7	32.61	48.556	48.424			
IMCOM	READINESS	FORT STEWART	731 - 1418	584816	6023	CO HQ BLDG (14185)	4.496	0.746	38926.58	54.88	22.053	40.653			
IMCOM	PACIFIC RE	TORII COMMUNIC	100 - 1-1ST	579964	34215	CO HQ BLDG (14185)	25.223	0.737	3332197	6.54	332.308	336.924			
IMCOM	EUROPE RE	GRAFENWOEHR	850 - CO H	1063139	11857	CO HQ BLDG (14185)	8.54	0.72	20287.6	58.60	5.838	36.741			
IMCOM	READINESS	FORT POLK	1355 - CO I	303013	23958	CO HQ BLDG (14185)	16.5	0.689	143942.8	75.66	20.501	27.21			
IMCOM	SUSTAINM	ABERDEEN PROVII	4403 - 179	230789	14314	CO HQ BLDG (14185)	9.666	0.675	13395.85	71.01	3.193	28.428			
IMCOM	READINESS	FORT CAMPBELL	K6770 - COM	580936	39986	CO HQ BLDG (14185)	27	0.675	434581.1	54.57	37.084	36.983			
IMCOM	READINESS	FORT BRAGG	26118 - La	296743	23410	CO HQ BLDG (14185)	15.63	0.668	1608941	7.44	234.512	268.329			
IMCOM	TRAINING	FORT BENNING	2932 - CO I	282545	6824	CO HQ BLDG (14185)	4.5	0.659	182810.5	21.62	91.409	91.159			
IMCOM	EUROPE RE	GRAFENWOEHR	930 - COM	1063179	11909	CO HQ BLDG (14185)	7.81	0.656	83782.94	38.70	24.005	50.647			
IMCOM	READINESS	JOINT BASE LEWIS	3487 - RAN	1041359	83253	CO HQ BLDG (14185)	54	0.649	663137.5	71.53	27.179	27.105			

Now, we look at the middle range, as shown below, which shows values all the way down to the mid-point or our median in the blue cell. The beige highlighted cells above the median may have some savings, but they could be hard to find or justify since these are just slightly above the median. The green highlighted cells indicated good energy management, as they are in the top 50 – 75%. (Continued on pg. 5)



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ADVANCED METRICS FOR SYSTEMS (CONT. FROM PG. 4)

										Top boundary	2.4	0.720			81.32	61.55	71.56
										bottom boundary	0.4	0.120			13.55	10.26	11.93
Base Load Comparisor										Medians		0.300			33.89	25.65	29.82
												92.000			86.000	120.000	
Comma	Region	Site	Building	RPAUID	Square Footage	Cat Code	Base Load (KW)	Watts/Sq Ft	12 Months Consumpt ion (kW)	Baseload as % Consumption	12 Months EUl (Electric)	12 Months Extrapolat ed EUl (Electric)					
IMCOM	PACIFIC RE	TORII COMMUNIC	100 - 1-1ST	579964	34215	CO HQ BLDG (14185)	25.223	0.737	3332197	6.54	332.308	336.924					
IMCOM	EUROPE RE	GRAFENWOEHR	850 - CO H	1063139	11857	CO HQ BLDG (14185)	8.54	0.72	20287.6	58.60	5.838	36.741					
IMCOM	READINESS	FORT POLK	1355 - CO I	303013	23958	CO HQ BLDG (14185)	16.5	0.689	143942.8	75.66	20.501	27.21					
IMCOM	SUSTAINM	ABERDEEN PROVIV	4403 - 179	230789	14314	CO HQ BLDG (14185)	9.666	0.675	13395.85	71.01	3.193	28.428					
IMCOM	READINESS	FORT CAMPBELL	K6770 - COM	580936	39986	CO HQ BLDG (14185)	27	0.675	434581.1	54.57	37.084	36.983					
IMCOM	READINESS	FORT BRAGG	26118 - La	296743	23410	CO HQ BLDG (14185)	15.63	0.668	1608941	7.44	234.512	268.329					
IMCOM	TRAINING	FORT BENNING	2932 - CO I	282545	6824	CO HQ BLDG (14185)	4.5	0.659	182810.5	21.62	91.409	91.159					
IMCOM	READINESS	FORT CARSON	7416 - CO I	592301	35730	CO HQ BLDG (14185)	18.241	0.511	317290.3	50.50	30.301	30.218					
IMCOM	READINESS	FORT HOOD	39020 - CC	180977	25168	CO HQ BLDG (14185)	12.796	0.508	332183.9	33.74	45.036	45.036					
IMCOM	READINESS	FORT BRAGG	A5145 - CC	1066449	15665	CO HQ BLDG (14185)	7.95	0.508	505220.2	10.91	110.047	138.986					
IMCOM	TRAINING	FORT BENNING	9185 - CO I	281893	16334	CO HQ BLDG (14185)	8.154	0.499	184796.9	38.76	38.604	38.498					
IMCOM	PACIFIC RE	SCHOFIELD BARRA	766 - CO O	594873	17451	CO HQ BLDG (14185)	7.25	0.415	55373.78	43.68	9.745	25.59					
IMCOM	READINESS	FORT CARSON	1447 - CO I	996786	81581	CO HQ BLDG (14185)	33.88	0.415	695910.6	42.76	29.107	29.027					
IMCOM	PACIFIC RE	SCHOFIELD BARRA	2089 - COM	573476	19221	CO HQ BLDG (14185)	7.773	0.404	146723.3	34.71	26.047	34.824					
IMCOM	READINESS	FORT BRAGG	C2219 - CC	296638	15948	CO HQ BLDG (14185)	6.444	0.404	2469923	1.98	528.45	610.394					
IMCOM	READINESS	FORT HOOD	27003 - CC	1029772	57187	CO HQ BLDG (14185)	23.02	0.403	390040.2	39.66	23.272	30.337					
IMCOM	READINESS	FORT CARSON	7464 - CO I	994738	19972	CO HQ BLDG (14185)	8	0.401	158564	44.32	27.09	27.016					
IMCOM	READINESS	FORT CARSON	9427 - CO I	1077645	46613	CO HQ BLDG (14185)	18.547	0.398	214063.1	76.11	15.67	15.627					
IMCOM	PACIFIC RE	SCHOFIELD BARRA	2080 - COM	617407	19485	CO HQ BLDG (14185)	7.738	0.397	106860.9	47.45	18.713	25.019					
IMCOM	READINESS	FORT HOOD	39050 - CC	586500	24200	CO HQ BLDG (14185)	7.343	0.303	297906.9	21.59	39.91	39.91					
IMCOM	READINESS	FORT CARSON	7418 - CO I	573122	35730	CO HQ BLDG (14185)	10.75	0.301	242070	39.01	23.117	23.054					
IMCOM	READINESS	FORT BRAGG	E1952 - CO I	586754	6642	CO HQ BLDG (14185)	2	0.301	94375.1	18.62	48.483	48.35					
IMCOM	READINESS	FORT CARSON	1280 - CO I	1171980	46608	CO HQ BLDG (14185)	14	0.3	380283.4	32.34	27.84	27.764					
IMCOM	READINESS	FORT HOOD	91234 - CC	286142	5968	CO HQ BLDG (14185)	1.784	0.299	37134.2	42.21	21.231	21.173					
IMCOM	TRAINING	FORT BENNING	2883 - TF 1	281624	8181	CO HQ BLDG (14185)	2.444	0.299	67024.71	32.03	27.955	27.878					

And, lastly, we look at the bottom range, as shown below. The light blue cells indicate exceptional energy use, probably the top 75 percentile. However, this could also indicate that the meter could be bad. The red highlighted cells indicate that most likely the meter is bad, although it could be a wrong meter multiplier or meter connectivity issue—as in the meter is not successfully reporting to MDMS enough to produce a good baseline. (Continued on pg. 6)

										Top boundary	2.4	0.720			81.32	61.55	71.56
										bottom boundary	0.4	0.120			13.55	10.26	11.93
Base Load Comparisor										Medians		0.300			33.89	25.65	29.82
												92.000			86.000	120.000	
Comma	Region	Site	Building	RPAUID	Square Footage	Cat Code	Base Load (KW)	Watts/Sq Ft	12 Months Consumpt ion (kW)	Baseload as % Consumption	12 Months EUl (Electric)	12 Months Extrapolat ed EUl (Electric)					
IMCOM	READINESS	FORT HOOD	39050 - CC	586500	24200	CO HQ BLDG (14185)	7.343	0.303	297906.9	21.59	39.91	39.91					
IMCOM	READINESS	FORT CARSON	7418 - CO I	573122	35730	CO HQ BLDG (14185)	10.75	0.301	242070	39.01	23.117	23.054					
IMCOM	READINESS	FORT BRAGG	E1952 - CO I	586754	6642	CO HQ BLDG (14185)	2	0.301	94375.1	18.62	48.483	48.35					
IMCOM	READINESS	FORT CARSON	1280 - CO I	1171980	46608	CO HQ BLDG (14185)	14	0.3	380283.4	32.34	27.84	27.764					
IMCOM	READINESS	FORT HOOD	91234 - CC	286142	5968	CO HQ BLDG (14185)	1.784	0.299	37134.2	42.21	21.231	21.173					
IMCOM	TRAINING	FORT BENNING	2883 - TF 1	281624	8181	CO HQ BLDG (14185)	2.444	0.299	67024.71	32.03	27.955	27.878					
IMCOM	READINESS	FORT BRAGG	C1138 - CC	296641	9988	CO HQ BLDG (14185)	2.936	0.294	1364646	1.63	466.196	538.486					
IMCOM	PACIFIC RE	SCHOFIELD BARRA	355 - COM	578295	66304	CO HQ BLDG (14185)	15.317	0.231	88936.54	57.46	4.578	12.022					
IMCOM	READINESS	FORT CARSON	2630 - CO I	984379	87254	CO HQ BLDG (14185)	20	0.229	373991.1	46.97	14.625	14.585					
IMCOM	READINESS	FORT BLISS	20535 - CC	1041439	64845	CO HQ BLDG (14185)	14.841	0.229	478667.4	27.24	25.187	25.119					
IMCOM	READINESS	FORT HOOD	16010 - CC	181782	12180	CO HQ BLDG (14185)	2.752	0.226	175831.5	13.71	47.883	47.883					
IMCOM	PACIFIC RE	SCHOFIELD BARRA	770 - CO O	611255	17377	CO HQ BLDG (14185)	3.918	0.225	38757.25	33.73	7.61	19.984					
IMCOM	READINESS	FORT BRAGG	M7123 - CC	1051645	26622	CO HQ BLDG (14185)	6	0.225	188305.7	22.10	24.135	30.482					
IMCOM	READINESS	FORT BRAGG	26120 - Srr	297346	8927	CO HQ BLDG (14185)	2	0.224	220741.3	6.35	84.373	105.467					
IMCOM	READINESS	JOINT BASE LEWIS	16210 - CC	1041339	52135	CO HQ BLDG (14185)	11.54	0.221	235933	42.96	15.441	15.399					
IMCOM	READINESS	FORT BRAGG	A2467 - Dc	288178	23554	CO HQ BLDG (14185)	4.1	0.174	891931.1	3.52	129.209	147.841					
IMCOM	READINESS	FORT BLISS	20525 - 20	1041441	35918	CO HQ BLDG (14185)	6.228	0.173	260126.9	21.03	24.712	24.644					
IMCOM	READINESS	FORT CARSON	2557 - CO I	618799	23617	CO HQ BLDG (14185)	2.959	0.125	79155.5	32.84	11.436	11.405					
IMCOM	READINESS	FORT HOOD	39054 - CC	586501	24200	CO HQ BLDG (14185)	3	0.124	43984.55	32.25	6.202	11.49					
IMCOM	READINESS	FORT BRAGG	C4131 - CC	1175822	17260	CO HQ BLDG (14185)	2	0.116	44037.03	31.83	8.706	10.882					
IMCOM	TRAINING	FORT BENNING	9155 - CO I	281880	13260	CO HQ BLDG (14185)	1.541	0.116	54985.27	24.624	6.911	6.892					
IMCOM	PACIFIC RE	SAGAMI GENERAL	103 - HQ 5	588111	33580	CO HQ BLDG (14185)	3.8	0.113	34147.66	97.75	3.47	3.46					
IMCOM	READINESS	FORT BLISS	20425 - CC	996389	36727	CO HQ BLDG (14185)	4.133	0.113	339091.4	10.71	31.503	31.417					
IMCOM	READINESS	FORT IRWIN	257 - CO H	598615	24502	CO HQ BLDG (14185)	2.702	0.11	32401.2	49.83	4.512	6.614					
IMCOM	READINESS	FORT BLISS	20475 - CC	996407	55796	CO HQ BLDG (14185)	6	0.108	359771.7	14.65	22.001	21.941					



## MDMS UPDATE

### ADVANCED METRICS FOR SYSTEMS (CONT. FROM PG. 5)

We then repeat these same analysis steps on the top, mid, and bottom ranges for both the % Baseload of Consumption and the Extrapolated EUI factors.

The next step is to perform an integrated analysis of the three factors. Looking at the top range, as we stated in our first example, if there are three red highlighted cells across all three metrics, then it is a high probability that you have a bad meter. If there are two red cells, it is most likely an improperly set baseload. Go to your Benchmark interval chart for the building and see if the baseline kisses the bottom edge of your curve and that the curve is symmetrical. If these are correct then you probably have a bad meter.

Yellow highlighted cells for 2 or 3 metrics indicates the building needs to be looked at for excessive energy use or possibly a meter issue. The beige highlighted cells that are slightly above the median may have some savings, but these are probably the last buildings to evaluate as the savings potential is low.

Analyzing the bottom range, green cells in 2-3 of the metrics indicate good energy management. If you have 2-3 metrics in the light blue cells it confirms this building has exceptional energy use—top 25%. If you have 2-3 metrics in the red cells it indicates a bad meter, or a wrong meter multiplier or a meter connectivity issue—as in the meter is not consistently reporting to MDMS enough to produce a good baseline.

In summary, you can use the stop light chart breakdown to help you do analysis. We have a chart for each of the top 15 Cat Codes in number of buildings. You can use these charts to get a general feel for where your buildings stand within the Army's Cat Codes. The rule of thumb is anything above 1.7 times the median value indicates a bad meter. On the lower end, below 0.5 times the median value also indicates a bad meter.

## ARMY MAINTENANCE & SUPPORT CONTRACT

Army Maintenance and Support (M&S) contract provides the Army Metering Program (AMP) with the technical support required to assist the AMP Project Managers in the execution of the multiple AMP task orders within the Program. The requirement is to provide sustainment support for each of sites/installations to cover all of the Land Holding Commands. Sustainment support includes technical assistance for hardware and software specific for advance metering program not covered under Command, Control, Communications, Computers, and Information Management (C4IM) services list by the G6.

The USACE contract support team works with each installation's Energy Manager (EM) on reporting issues. The USACE contract support team reviews meter connectivity status then takes steps to regain connectivity for the non-reporting meter. The contract team does this through remote connectivity, telephone conversations with installation staff or on-site assistance. EMs can request support by contacting the Army Meter Service Desk (AMSD) via the Feedback/Help Request option under the Support menu in MDMS or by email at:

[usarmy.coe-huntsville.cehnc.mbx.armymeterhelp@mail.mil](mailto:usarmy.coe-huntsville.cehnc.mbx.armymeterhelp@mail.mil). This assistance covers various requirements: meter troubleshooting, site visit request, integration of meters installed by the EM through other contracts, etc.

The contract support has not only been to increase the reporting of the Army's advanced meters and reduce the number and duration of meters being offline, but also to save funds through remote connection with the installation's Enterprise Energy Data Reporting System (EEDRS). The feature of the contract allows the contractor to fix the metering issues so the EM can focus on the data provided by the advanced meter through the MDMS reports and meter data analysis to monitor energy usage for facilities, identify priorities for energy savings, and measure and verify progress of energy savings projects. Currently, both the ARNG and Reserves are utilizing the M&S contracts.



## MDMS UPDATE

# WATER LEAK NOTIFICATION

A new water leak notification email module has been added to MDMS at: Self Service > Email Notifications > Water Leak Notification. The interface is identical to the Offline Meter Notification detailed on page 1 of this newsletter. You can opt-in for email notifications of possible leaks. The meters identified in the email notifications passed multiple meter data quality checks in the MDMS algorithm before they could be identified as a potential leak.

The email notification states the following:

*“You are receiving this water meter leak alert message, indicating that you have a potential leak, because the meter(s) identified below registered usage continuously for all readings recorded over a 24-hour period. This usage could be a measurement that equates to a very small drip or possibly a larger, more expensive leak. You have been notified of this potential leak to prevent a larger, unexpected water and/or sewer usage charge on the next water bill. If you do not have a known reason why the meter would register usage for every interval recorded on the day the meter behavior was analyzed, we recommend you notify the maintenance staff to investigate the cause.”*

*Please Note: An alert does not necessarily mean your water meter leak is large or there is an actual leak. This message indicates that the meter(s) identified below are showing consecutive interval usage over a 24-hour period no matter if it was very small or large amount of water usage.”*

After thorough testing, the functionality is now live and we are receiving notifications at the HQDA level, which gives us multiple sites and buildings that might have potential leaks. The MDMS Outreach Team has sent email notifications to each of the sites recommending research into the identified buildings and meters. If you have water meters at your site/ installation, we recommend you opt-in for the email notifications to keep abreast of possible leaks.

Once you have opted in and actually receive a notification of a possible leak, you can do further analysis by pulling up that meter/building in the Interval Usage Data Quality module. This module is found on the MDMS Energy Management page under the Usage Details sub-menu.

In the Interval Usage Data Quality example below, you can see the water is running a 40-60 gallon baseload most of the time. Then, beginning on January 4, most likely when people returned to work after the holidays, you see spikes in usage. However, the usage never goes down to 0, which we would expect especially at night. So, this is something for the Energy Manager to look into with maintenance personnel.

