



**US Army Corps
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ENGINEERING AND CONSTRUCTION BULLETIN

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Subject: Advanced Metering and Connectivity

Applicability: Guidance & Directive

1. **References:**

- a. Energy Policy Act of 2005
- b. Energy Independence and Security Act of 2007
- c. Execute Order 028-12, Program Management of the Army Central Meter Program, HQDA
- d. Execute Order 0214-0301, Standardized Architecture Design for the Army Central Meter Program, NETCOM
- e. National Defense Authorization Act for FY2010 (NDAA 2010)
- f. DoD Instruction (DoDI) 4170.11 (Dec 2009) Installation Energy Management
- g. Undersecretary of Defense Utilities Meter Policy (Apr 2013)
- h. DoD Instruction 8500.01 Cybersecurity (Mar 2014)
- i. DoD Instruction 8510.01 Risk Management Framework (RMF) for DoD Information Technology (Mar 2014)
- j. Army Regulation (AR) 25-1, Army Information Technology (Apr 2013)
- k. AR 25-2 Information Assurance (Oct 2007, RAR 001 Mar 2009)
- l. UFC 1-200-02 High Performance and Sustainable Buildings

2. **Purpose:** This ECB provides guidance to support the implementation of utility metering as outlined by the Undersecretary of Defense Utilities Meter Policy, dated 16 April 2013, and to aid in developing secure system configurations with respect to applicable cybersecurity requirements.

3. **Background:**

a. Pursuant to Public Law 109-58, Section 103 of the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007, the Army has established the Army Metering Program (AMP) to achieve meter installation in qualified existing facilities, and report this data to the Army's Meter Data Management System (MDMS) (<https://mdms.army.mil>).

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b. In 2013, UFC 1-200-02 High Performance and Sustainable Building Requirements was published requiring that utility meters be installed at each building for each utility serving the building for projects associated with new or existing facilities. UFC 1-200-02 also requires that meters be connected to a base-wide utility monitoring and control system (UMCS), using the installation's advanced metering protocols.

c. In conjunction with the tri-services, USACE is developing a unified facilities guide specification (UFGS) for advanced meters. This UFGS is anticipated to be published in FY15.

d. In installing meters under the AMP, existing Utility and Monitoring Control System (UMCS) assets and infrastructure have been utilized where possible. At some locations, issues have arisen on facilities lacking the necessary communication infrastructure. There have also been challenges with meters connecting to the Network Enterprise Center's (NEC) Installation Campus Area Network (ICAN) per Department of Defense (DOD) and Army Information Assurance (IA) requirements.

4. Guidance:

a. The Utility Monitoring and Control System (UMCS) Mandatory Center of Expertise (MCX) has developed guidance for Advanced Metering specifications, developed an Advanced Meter Points List, and established standards based on specific configurations and data transfer requirements. The latest revision of this guidance may be found at <https://mrsi.erdcdren.mil/sustain/metering/Pages/Policy-and-Guidance.aspx>. This guidance should be used until a unified guide specification is published.

b. Six Server/Client configurations have undergone Information Assurance (IA) testing and certification as of September 2014. Five of the standardized solutions have an Authority to Operate (ATO). The sixth configuration has an Interim Authority to Operate. The accredited configurations include servers, workstations, building/facility points of connection, and meters. These configurations represent the Enterprise Energy Data Reporting Systems (EEDRS) which reports the data to the MDMS. These configurations do not include the controls for building automation systems or UMCS. Secure configuration guidance can be obtained from the Army Central Meter Program.

c. Currently, there is no Army Metering Program approved technical solution that utilizes wireless communication. Each installation and the associated NEC exercise their local approval authority with respect to the cybersecurity risks of radio frequency. There are accredited systems with ATOs, however this does not ensure an acceptance by the Authorizing Official (AO). Additionally, wireless must operate under an approved and maintained Wireless Intrusion Detection System (WIDS); ensure your site is protected accordingly since NETCOM will not

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approve wireless without WIDS. If wireless is desired, coordinate with the local NEC in the early planning stages.

d. An informative discussion of cybersecurity for Industrial Control Systems is available at <http://www.wbdg.org/resources/cybersecurity.php>.

5. **Directive:** All USACE Districts planning or implementing metering or energy monitoring systems must contact the Army Central Meter Program for consultation and review of technical specifications, including meter data reporting methodology and architecture. The Army Central Meter Program point of contact is Ms. Porscha Porter, CEHNC-IST, (256) 895-1663, Porscha.N.Porter@usace.army.mil.

6. **Point of Contact:** HQUSACE POC for this ECB is Ms. Elaine Wales, CECW-CE, (256) 895-1732, Elaine.M.Wales@usace.army.mil.

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