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ACQUISITION,
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AND LOGISTICS

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MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, ENERGY AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY (ENERGY, INSTALLATIONS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE (INSTALLATIONS, ENVIRONMENT AND LOGISTICS)
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTORS OF THE DOD FIELD ACTIVITIES

SUBJECT: Utilities Meter Policy

In order to effectively manage energy and water use across the Department of Defense (DoD) facilities portfolio, it is critical to develop an accurate and detailed understanding of how the Department uses energy and water on its installations. The Department recognizes that DoD Components (hereafter referred to as "Components") have significant differences in the number and types of facilities, buildings, and operations. This policy directs Components to develop a Meter Data Management Plan (MDMP) specific to the attributes of their installations to establish unique Component-specific metering goals. The intent is that these plans will improve management of energy and water consumption, resulting in reduction in use, improved mission assurance, and increased reliability. This policy implements the Deputy Secretary of Defense's direction, given at the Deputy's Management Action Group on April 17, 2012, to increase the metering of DoD facilities in order to promote better energy and water management.

Expand Meter Deployment

Effective immediately, it is the Department's policy to install advanced meters on individual DoD-owned facilities in order to meet the following objectives:

- For Electricity: Components shall install sufficient advanced meters on individual facilities to accurately capture a minimum of 60% of electricity use with a goal of 85% of electricity use at the Component level by the end of Fiscal Year 2020. Final Component goals will be based on MDMPs described above. Where practical, energy-intensive buildings should be sub-metered to identify electricity use by major mechanical and electrical subsystems.

- For Natural Gas: Components shall install sufficient advanced meters on individual facilities to accurately capture a minimum of 60% of natural gas use with a goal of 85% of natural gas use at the Component level by the end of Fiscal Year 2020. Final Component goals will be based on MDMPs described above.

- For Steam: Components shall install sufficient advanced meters on facilities connected to district steam systems to accurately identify individual facility steam use and system losses by the end of Fiscal Year 2020.

- For Both Potable and Non-Potable Water: DoD Components shall install advanced meters on all water-intensive facilities by the end of Fiscal Year 2020. At a minimum, these facilities include, district heat and chiller plants, barracks, galleys/kitchens, dining facilities, swimming pools, gyms, golf courses, piers, dry docks, vehicle wash stations, industrial facilities, hospitals, water-intensive laboratories, and landscaping systems. In addition, DoD Components shall install sufficient meters or other leak detection devices on distribution systems to effectively identify system losses by the end of Fiscal Year 2020.

- For Bases with Privatized Utilities: Components should partner with distribution system owners to share existing meter data or negotiate acceptable terms for new meter installation and cost sharing. Additionally, each installation shall have the capability to monitor base-wide energy and water use through an advanced meter shadowing the utility meter or through a data sharing agreement with the utility.

While meters do not save energy or water directly, they create the conditions necessary to identify saving opportunities, benchmark and optimize building performance, and drive meaningful behavior change and occupant engagement. OSD encourages components to maximize cost-effective deployment of meters, using a programmatic approach to life-cycle costing to capitalize on the intangible and systemic benefits of a wide network of integrated advanced meters. Components shall use an energy savings factor of at least 5%.

Meter Data Management

For the purposes of this policy, advanced meters are electronic meters that have the capability to, at a minimum, measure and record regular interval use and communicate that data to an advanced metering system (AMS). An AMS must automatically and reliably collect and analyze regular interval data from advanced meters, and distribute information to key stakeholders as determined by Components. Meters that cannot be connected to an AMS due to remoteness or security concerns should store data internally for manual incorporation into an AMS. Existing analog meters fitted with pulse counters and virtual meters that have the capabilities defined above are considered advanced meters.

An AMS not only provides facility managers an accurate picture of installation energy and water use, but also provides leadership an enterprise-level visibility of consumption, and enables enhanced resource management. Additionally, accurate meter data is fundamental to DoD's Enterprise Energy Information Management (EEIM) capability, which will enable energy professionals within each Component to identify cost-effective energy investments and greatly reduce staff time associated with manual entry of utility data and reporting. Components shall ensure their EEIM implementation strategy leverages their AMS' capability to automatically capture facility energy and water use.

Not later than 1 year after publication of this policy, Components shall develop a MDMP, to be approved by the Deputy Under Secretary of Defense for Installations and Environment DUSD(I&E), which describes how each Component plans to deploy advanced meters/AMS and intends to use their meter data to manage energy and water use. MDMPs shall be informed through a bottom up review of installations and shall explicitly establish a Component-specific metering goal for electricity and natural gas, based on distinctive attributes of Component buildings and operations. Component metering goals shall be a minimum of 60%.

Maximize the Value of Metering

Components should seek to maximize the impact of their investments in advanced meters and minimize the overall cost of purchasing and installing meters. Strategies to accomplish this include:

- Ensuring meters provide only the necessary capability for the targeted facility. Utility-grade meters capable of measuring harmonics, power factors, reactive power and other advanced capabilities may not be necessary for many facilities covered by this policy.

- Leveraging building automation systems or energy management control systems to create accurate virtual meters where possible.

- Fitting existing analog meters with pulse counters which can communicate with AMS.

- Contracting for meter installation in installation-wide or regional projects. Smaller Components should consider partnering with host installations to benefit from larger contracts.

- Considering wireless meter configurations. A significant portion of the cost associated with advanced meter installation across the DoD to date has been attributed to wired network infrastructure. This cost can be significantly reduced if Components certify and accredit wireless configurations in accordance with the guidelines identified below.

- Incorporating meters in larger capital improvement projects. As directed by previous guidance, continue to include advanced meters on new construction projects, major renovation projects, Energy Conservation Investment Program projects, and third party-financed projects.

Information Assurance

Advanced meters and AMS must maintain compliance with DoD's Information Assurance/Cyber Security 8500 series of directives and instructions and the Committee for National Security Systems Instruction 1253 standard overlay, Appendix K, (collectively the Information Risk Management Framework). These documents address information assurance,

information security, and operations security for an Advanced Metering Infrastructure. In addition, Components can leverage the certification and accreditation work performed by others through Reciprocity as outlined in, "DoD Information System Certification and Accreditation Reciprocity," memorandum dated July 23, 2009, thereby reducing the time and cost of certification.

No portion of this policy is intended to violate any Component information sharing restrictions. If Component restrictions exist which prevent carrying out any portion of this policy, please include a discussion of those restrictions and their impacts in Meter Data Management Plan.

Conclusion

A widely-distributed and integrated network of advanced meters is foundational to gaining an in-depth understanding of how DoD uses energy and water. This understanding is essential to development of a strategic approach to reducing consumption, maintaining mission assurance, and providing reliable power to critical loads. This policy promotes the maximum propagation of metering technology, resulting in accurate, near real-time information on energy and water consumption that allows targeting of opportunities to save energy and water that have previously been impossible to identify. Collection of such information creates the conditions necessary to drive meaningful and lasting behavior change, identify underperforming buildings, and optimize building performance. My office will provide additional guidance to assist in implementing this policy.

John Conger
Acting Deputy Under Secretary of Defense
(Installations and Environment)