



SECRETARY OF THE ARMY  
WASHINGTON

31 MAR 2020

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Army Directive 2020-03 (Installation Energy and Water Resilience Policy)

1. For references, see enclosure 1. For definitions, see enclosure 2.
2. Purpose. This directive issues policy to strengthen energy and water resilience to reduce the risk to Army missions posed by utility disruptions affecting installations. This directive supersedes Army Directive 2017-07 (Installation Energy and Water Security Policy) and revises provisions in chapter 22 of Army Regulation (AR) 420-1 (Army Facilities Management). The directive also assigns the roles and responsibilities of Headquarters, Department of the Army Principal Officials; commanders and senior Army officials responsible for Army commands, Army service component commands, and direct reporting units; commanders of landholding commands; and senior and garrison commanders.
3. Background. Secure and reliable access to energy and water on Army installations is essential to the Total Army and its ability to deploy, fight, and win in a complex world. Threats, both man-made and natural, associated with the interdependent electric power grids, natural gas pipelines, and water resources and systems can jeopardize mission capabilities. The Army must identify and mitigate vulnerabilities and ensure installations can continue critical missions through any disruption of utility services. Resilient energy and water systems directly affect the success of the strategic support area in multi-domain operations.
4. Applicability. This directive applies to the Regular Army, Army National Guard/Army National Guard of the United States, and U.S. Army Reserve. It also applies to tenants on active Army installations.
5. Policy. This directive establishes energy and water resilience requirements for Army installations in support of the 2018 National Defense Strategy and Army Vision. To reduce mission risk, the Army will prioritize providing resilient energy and water supplies, facilities, and infrastructure that support critical missions. The Army will reduce risk to all other missions when it is life-cycle cost-effective. Army real property affected by this policy are installations, sites, and facilities operated and/or maintained by Federal funds in and outside the continental United States. This policy does not apply to Army contingency bases or U.S. Army Corps of Engineers civil works facilities.
  - a. The Army will sustain critical missions by being capable of withstanding an extended utility outage for a duration set by the senior commander or higher

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Jul 20 2021

SUBJECT: Army Directive 2020-03 (Installation Energy and Water Resilience Policy)

headquarters based on timeframes to accomplish, curtail, or relocate the critical mission(s). When the duration of the critical mission(s) has not been stipulated, the Army will plan to sustain energy and water for a minimum of 14 days.

(1) Energy and water supplies, facilities, and infrastructure supporting critical missions include energy and water sources; energy transmission and distribution systems; water treatment, distribution, and wastewater systems; and backup generation. Resilience timeframes for supplies, facilities, and infrastructure may vary across an installation based on critical mission requirements.

(2) Resilience considerations include secure on-site supplies of energy and water to support the sustainment of critical missions, as well as assured access to off-site energy and water resources and associated transmission; robust infrastructure to distribute energy and water; and effective system operation through planning, personnel, and equipment to support critical mission requirements.

(3) Reduction of risk to energy and water supplies, facilities, and infrastructure supporting critical missions will be conducted in accordance with procedures for cost-benefit analysis as outlined in AR 11–18 (The Cost and Economic Analysis Program). The cost-benefit analysis should include the evaluation of a variety of feasible courses of action to close capability gaps. This approach alleviates the requirement to show a cost savings, yet provides the means to determine the most effective and efficient use of resources to close the capability gap.

b. For energy and water supplies, facilities, and infrastructure supporting noncritical missions, the Army will take coordinated, prudent, and life-cycle cost-effective actions to reduce risks from a disruption. These actions include assuring access to offsite energy and water supplies, and maintaining infrastructure condition and system operation to support installation missions. For energy and water projects, life-cycle cost-effective analyses should be documented in a cost analysis/economic analysis as outlined in AR 11–18.

c. When life-cycle cost-effective, the Army will pursue energy and water efficiency and conservation to support installation resilience by reducing demand and operating costs. Efficiency and conservation efforts include reducing overall energy and water use, maximizing efficiency, implementing energy recovery and cogeneration opportunities, recycling and reusing water by shifting to alternative sources, recharging aquifers, and striving to offset remaining demand with on-site energy generation or water sources.

d. Requirements to assure access to off-site energy and water supplies may necessitate engagement with external utilities. U.S. Army Legal Services Agency represents the Department of the Army's consumer interests in regulatory matters, including proceedings involving rates and conditions for the purchase of services for

SUBJECT: Army Directive 2020-03 (Installation Energy and Water Resilience Policy)

utilities. This policy does not affect the provisions for the U.S. Army Legal Services Agency in AR 27–40 (Litigation). Energy and water resilience actions that require regulatory approval or affect provisions in AR 27–40, like new or amended rates, regulations, or conditions of service, must be referred to the Legal Services Agency.

## 6. Responsibilities

a. The Assistant Secretary of the Army (ASA) for Installations, Energy and Environment (IE&E) will maintain policy oversight related to this directive and establish strategic direction for the planning, programming, budgeting, and execution of requirements to address installation energy and water resilience.

b. The Deputy Chief of Staff (DCS), G-9 will take the following action:

(1) Support programming and plan and track the execution of resources to address risks to installation energy and water resilience. Concentrate efforts on reducing vulnerabilities to supplies, facilities, and infrastructure supporting critical missions.

(2) Promulgate supporting guidance to implement this directive, including updating guidance for installation energy and water plans (IEWPs) and maintaining energy and water resilience reporting through the Installation Status Report—Mission Capacity. Update the IEWP guidance no later than 120 days after issuance of this directive and will provide guidance on project justification.

c. Senior commanders, in coordination with Army commands, Army service component commands, direct reporting units, mission owners, Army and non-Army tenant organizations, and garrison staff, will identify and document energy and water requirements associated with critical missions in IEWPs.

d. Commanders of landholding commands will execute identified energy and water requirements by:

(1) programming and submitting requirements for consideration during the planning, programming, budgeting, and execution process and overseeing execution of resources to address risks to installation energy and water resilience.

(2) responding to senior commander requirements by making sure garrison commanders:

(a) complete IEWPs that address risks to installation energy and water resilience, with priority given to supplies, facilities, and infrastructure supporting critical missions.

SUBJECT: Army Directive 2020-03 (Installation Energy and Water Resilience Policy)

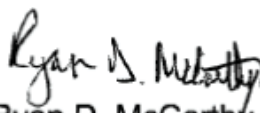
(b) develop and submit requirements to address energy and water risks to critical missions and prioritize and execute activities to reduce risk.

(c) keep senior commanders informed about the status of installation energy and water resilience through the installation planning board or an equivalent process.

e. The Commander, Corps of Engineers, in coordination with the ASA (IE&E) and DCS, G-9, will update Army design criteria and project specifications to implement energy and water resilience in construction, renovation, and repair projects, as appropriate.

7. Proponent. The ASA (IE&E) is the proponent for this policy. The DCS, G-9 will incorporate the provisions of this directive into AR 420–1 within 2 years of the date of this directive. The DCS, G-3/5/7 will incorporate the relevant provisions and definitions of this directive into AR 500–3 (U.S. Army Continuity of Operations Program Policy and Planning), AR 525–2 (The Army Protection Program), AR 525–26 (Infrastructure Risk Management), and AR 525–27 (Army Emergency Management Program) within 2 years of the date of this directive.

8. Duration. This directive is rescinded on publication of the revised regulations.



Ryan D. McCarthy

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## REFERENCES

- a. Public Law 115-91, National Defense Authorization Act for Fiscal Year 2018, 125 Stat. 1857–1859
- b. 10 U.S. Code, Chapter 169 (Military Construction and Military Family Housing), section 2801 (Scope of chapter; definitions)
- c. Department of Defense Instruction 4170.11 (Installation Energy Management), 11 December 2009, incorporating Change 2, 31 August 2018
- d. 2018 National Defense Strategy, 19 January 2018
- e. The Army Vision, 7 June 2018
- f. Army Directive 2017-07 (Installation Energy and Water Security Policy), 23 February 2017 (hereby superseded)
- g. Army Regulation (AR) 11–18 (The Cost and Economic Analysis Program), 29 August 2019
- h. AR 27–40 (Litigation), 19 September 1994
- i. AR 210-14 (Installation Status Report Program), 11 June 2019
- j. AR 420–1 (Army Facilities Management), 12 February 2008, including Rapid Action Revision issued 24 August 2012
- k. AR 500–3 (U.S. Army Continuity of Operations Program Policy and Planning), 18 April 2008
- l. AR 525–2 (The Army Protection Program), 8 December 2014
- m. AR 525–26 (Infrastructure Risk Management (Army)), 22 June 2004
- n. AR 525–27 (Army Emergency Management Program), 29 March 2019
- o. AR 600–20 (Army Command Policy), 6 November 2014
- p. Energy Security and Sustainability (ES<sup>2</sup>) Strategy, 1 May 2015
- q. Assistant Chief of Staff for Installation Management, DAIM-ZA memorandum (Guidance for Installation Energy and Water Plans (IEWPs)), 26 July 2018

## DEFINITIONS

**Assure access:** An Army installation resilience attribute that considers sources of energy and water supply to meet mission requirements during normal and emergency response operations. Assuring access includes building relationships with utility providers, as well as supply diversity, quality, redundancy, and reliability, with the goal to mitigate risk of loss of energy or water supply from either on or off the installation.

**Cost analysis:** The act of developing, analyzing, and documenting cost estimates through various analytical approaches and techniques. It is the process of analyzing and estimating incremental and total resources required to support past, present, and future systems. In its application to future resource requirements, it becomes a step in selection of alternatives by the decision maker. (AR 11–18)

**Cost-benefit analysis:** A structured methodology for estimating and comparing the anticipated costs and benefits of alternative courses of action to identify the optimum solution for achieving a stated goal or objective. A cost-benefit analysis identifies courses of action for solving a problem; determines their costs and benefits; and, with a sound rationale, identifies the best course of action. The purpose of a cost-benefit analysis is to produce a strong value proposition, which is a clear statement that the benefits of a recommended course of action justify the costs, risks, and bill-payers associated with that course of action. A cost-benefit analysis is a narrowly focused economic analysis that applies rigorous analytical techniques to complement, but not replace, experience, judgment, and subject matter expertise. (AR 11–18)

**Critical mission:** A mission of such high importance that its incapacitation or destruction would severely degrade the ability of the Army to support task-critical assets, or execute mission-essential tasks or mission-essential functions it supports in all operating environments.

**Economics analysis:** A systematic approach to identify, analyze, and compare costs or benefits of alternative courses of action that will achieve a given set of objectives. This approach is taken to determine the most efficient and effective manner to employ resources. In the broad sense, the systematic approach called economic analysis applies to new programs, as well as to the analysis of ongoing actions. (AR 11–18)

**Energy and water resilience:** The ability to avoid, prepare for, minimize, adapt to, and recover from anticipated and unanticipated energy or water disruptions to ensure energy and water availability and reliability sufficient to provide for mission assurance and readiness, including task-critical assets and other mission-essential operations related to readiness, and to execute or rapidly reestablish mission-essential requirements.

**Garrison commander (manager):** The garrison commander is a military officer, lieutenant colonel or colonel, selected by Headquarters, Department of the Army. The garrison commander is the senior commander's senior executive for installation



activities and is responsible for day-to-day operation and management of installations and base support services. When a civilian holds this position, he or she is known as the garrison manager and has the same responsibility and authority as the military counterpart with the exception of Uniform Code of Military Justice and command authority. (AR 600–20)

**Infrastructure condition:** An Army installation resilience attribute that considers the capacity and reliability to deliver energy and water to meet installation requirements. Infrastructure condition includes efficient, reliable, flexible, and redundant distribution networks; automated controls; and on-site energy and water storage.

**Installation:** An aggregation of contiguous or near contiguous real property holdings commanded by a centrally selected commander. An installation may be made of one or more sites. (AR 420–1)

**Life-cycle cost-effective:** The sum of the present values of investment, capital, installation, energy and water, operating, maintenance, and replacement costs, as estimated for the lifetime of the project, product, or measure. The sum does not exceed the base case (current or standard) for the practice, product, or measure.

**Mission-essential function:** Any function that is vital to the continuation of operations of the organization or agency. These functions include those required by statute or Executive order, and other functions deemed essential by the head of each organization. Mission-essential functions are those continuing activities that must be performed without interruption to execute critical Army missions. They may be prioritized, which allows for a graduated response and relocation to the Emergency Relocation Facilities with minimum interruptions to operations during a national or local emergency or during normal operations. (AR 500–3)

**Mission-essential task:** A mission task a commander selects that is deemed essential to mission accomplishment and defined using the common language of the universal joint task list in terms of task, condition, and standard. A mission-essential task differs from a joint mission-essential task in that it may portray mission tasks within the authority of a sole Department of Defense Component's authority. (AR 525–2)

**Risk:** A concept used to give meaning to things, forces, or circumstances that pose a danger to people or the things they value. It is normally stated as the probability or likelihood of failing to achieve a particular outcome or the consequences or effects of failing to achieve that outcome. (AR 525–26)

**Senior commander:** An officer designated on orders from Headquarters, Department of the Army as the senior commander of an installation. It is normally the senior general officer at the installation. (AR 600–20)

**System operation:** An Army installation resilience attribute that considers the personnel and procedures needed to maintain effective system operation. System



operation includes trained personnel; backup maintenance equipment and system components; and operational procedures for energy and water planning, conservation, operations, exercises, testing, and sustainment activities.

**Vulnerability:** A weakness or susceptibility of an installation, system, asset, application, or its dependencies that could cause it to suffer a degradation or loss (incapacity to perform its designated function) as a result of being subjected to a certain level of threat or hazard.