



**US Army Corps  
of Engineers®**

# ENGINEERING AND CONSTRUCTION BULLETIN

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**SUBJECT:** Electrification, Decarbonization, and Executive Order (E.O.) 14057.

**CATEGORY:** Directive and Policy.

## 1. References:

- a. [Implementing Instructions for Executive Order 14057 Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability](#), AUG 2022
- b. Electrification of Standard Building Operations DOD Memo, 29 MAR 2023
- c. Army Electrification Guidance for Military Construction (MILCON) Projects, 18 May 2023
- d. [Metrics and Standards for Energy Resilience at Military Installations](#), 20 May 2021

2. **Purpose.** This Engineering and Construction Bulletin (ECB) provides information on new Executive Order (E.O.) 14057, *Catalyzing Clean Energy Industries and Jobs through Federal Sustainability*.<sup>1</sup>, the Electrification of Standard Building Operations DOD Memo, and Army Electrification Guidance for Military Construction (MILCON) Projects.

## 3. Applicability.

This ECB applies to all Army renovation and modernization projects that had not started design as of March 29, 2023, all Army MILCON projects FY26 and beyond, and all projects as detailed in Attachment A.

This policy does not apply to systems and equipment used for unique agency research, manufacturing, industrial and process loads for which all-electric technology is not practicable. Where such systems and equipment will use fossil-fuels on-site, these loads must be separately sub-metered or estimated. Such determinations should be documented in writing and included in the project records. Backup power generation for emergency use only is not subject to this requirement.

## 4. Background.

Army Electrification Guidance for Military Construction (MILCON) Projects memo states: *“Incorporate building design techniques, building features, and proven efficiency technologies to ensure energy and water conservation and resilience in accordance with Army sustainable design guidance.”*

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<sup>1</sup> 86 Fed. Reg. 70935 (Dec. 13, 2021).

**ECB No.** 2023-8

**Subject** Electrification Decarbonization and Executive Order (E.O.) 14057

Electrification of Standard Building Operations DOD Memo states: *“Effective immediately, DoD Components must incorporate into building design, construction, repair, and operations, requirements that maximize the use of all-electric technologies to leverage the Department’s growing investment in microgrid technology to support mission assurance.”*

Electrification of Standard Building Operations DOD Memo states: *“For new military construction and major renovation projects that has not yet reached schematic design phase (up to 15 percent design), DoD Components will include in building designs the use of all-electric technologies for system components, including for space conditioning, water heating, cooking, and laundry, where market ready technologies exist.”*

Electrification of Standard Building Operations DOD Memo states: *“For existing buildings, DoD Components will implement the use of all-electric technologies where market ready technologies exist, for building system components, including space conditioning, water heating, cooking, and laundry systems, upon a system’s expected end of useful life, unexpected system failure, or when buildings will undergo major renovation where various system components will be replaced as part of facility restoration and modernization.”*

## **5. Policy.**

All AE contracted projects in Attachment A not designated in the “past the point of implementation” column must immediately initiate any necessary contract modification to incorporate the requirements of this ECB.

### *DOD Policy Requirements:*

All projects in Attachment A designated “incorporate all electric technologies” and all FY26 projects and beyond must incorporate into design all electric technologies for system components including space conditioning, water heating, cooking, and laundry and remove all fossil fuel consuming equipment from design.

All projects in Attachment A designated “design to enable future electrification” must be designed with the necessary infrastructure to enable future electrification of building systems for space conditioning, water heating, cooking, and laundry. Examples include increasing sizing of conduit runs, utility chases, electrical panels, and other design features that enable a building to convert to electric equipment with minimal disturbance to the physical building envelope.

All Renovation and Modernization projects that had not started design as of March 29, 2023 and have an in-scope requirement to replace fossil fuel burning space conditioning, water heating, cooking, and laundry systems, must incorporate all electric technologies, where electric market ready systems exist.

For buildings connected to a DoD-owned, non-electric powered district plant utility, DoD Components may continue to use the plant through the end of its useful life or until replacement becomes cost effective or advantageous to the Government. Components will not refit existing nonelectric powered district plants to extend their useful life or increase their capacity. All new district plants are subject to the same electrification requirements stated above for military construction projects.

*Army Policy Requirements:*

All projects in Attachment A designated “incorporate all electric technologies,” all FY26 projects and beyond and all Renovation and Modernization projects that require congressional reporting (currently those over \$7.5M) that had not started design as of May 18, 2023, must incorporate into design the following:

- a. Each facility must meet all established energy savings, water use, resiliency, and sustainability targets, and do so in the most cost-effective manner.
  - (1) For low rise residential, achieve IECC 2021. For all other facilities, achieve or exceed the ASHRAE 90.1 2019 baseline energy reduction as described in 10 CFR 433.100.<sup>2</sup> The goal for energy reduction is 30% below the ASHRAE 90.1 baseline. Any energy reduction less than 30% must be documented in the design analysis and approved by the AHJ.
  - (2) Water savings targets are provided in UFC 1-200-02 section 2.4 indoor water use and 2.5 outdoor water use.
  - (3) Resilience targets are provided in Metrics and Standards for Energy Resilience at Military Installations, 20 May 2021.
  - (4) Army Sustainability targets are defined by UFC 1-200-02 High Performance and Sustainable Buildings requirements, 1 JUN 2022.
  - (5) Army projects must meet LEED Silver for third party certification.
- b. Perform a Life Cycle Cost Analysis on a minimum of three substantially differing integrated design configurations. Use life cycle cost analysis to determine the most cost-effective manner to achieve the 5 goals above. Conduct and document life-cycle cost analyses consistent with UFC 1-200-02 using only all electric technologies among the options considered. If designers cannot achieve the goals above, a waiver/exemption must be submitted early in the design process. [Army Sustainability Implementation Guide](#) provides guidance for waiver submission process.
- c. Provide carbon emission free renewable energy generation and battery storage designed and sized to support critical operational needs of buildings to reduce installation grid demand when Life Cycle Cost Effective. Otherwise, provide adequate infrastructure capability for future implementation of these technologies. Energy generation and storage shall be assessed through LCCA. This applies to critical operations power systems designed according to NFPA 70 Article 708 that, if lost, will lead to failure of an identified mission-critical system. Reference the 10 USC 2920(h)(3) definition of critical missions and consult with affected mission owners.

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<sup>2</sup> 10 CFR 433.100 establishes minimum percentage reduction below the ASHRAE 90.1 baseline but does not establish a maximum. Army designs may achieve an energy consumption level at or better than the maximum level of energy efficiency that is life cycle cost effective.

**ECB No.** 2023-8

**Subject** Electrification Decarbonization and Executive Order (E.O.) 14057

- d. Consider impact of building electrification on utility systems in project planning. Notify appropriate stakeholders and utility providers of electrical power requirements and any known utility deficiencies so that remediations may be included in the project scope or the scope of future infrastructure projects.

HQUSACE is aware there are potential criteria conflicts; designers should do their best to accomplish this electrification policy in the context of existing criteria. The UFCs and UFGSSs will be updated as needed. If this policy is in direct and unavoidable conflict with UFCs and UFGSSs, please submit an exemption request to USACE Headquarters E&C per [ECB 2021-5](#) and a Criteria Change Request on the Whole Building Design Guide ([WBDG](#)) website to the impacted document. UFC 1-200-02 High Performance Sustainable Buildings will be updated to include criteria from Electrification of Standard Building Operations DOD Memo.

#### **6. Policy Exceptions.**

Exceptions to the Army and DoD electrification policies can be granted by the Assistant Secretary of the Army for Installation, Energy, and Environment in cases where all electric technology, energy savings, water use, resiliency, and sustainability targets are impracticable. Examples would be where the climate zone makes electrification technically infeasible or where existing installation electrical capacity is insufficient to support all-electric equipment. Exceptions require documentation that all practical systems have been implemented and a written analysis of alternatives assessed for any system for which an exception is requested. Coordinate these requests with HQ USACE through the POC below.

7. **Date of Applicability.** This ECB is effective immediately.
8. **Point of Contact.** HQUSACE point of contact for this ECB is Edward Citzler, CECW-EC, (817) 886-1769.

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PETE G. PEREZ, P.E., SES  
Chief, Engineering and Construction  
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Encl.

Attachment A – FY24 and FY25 Project Electrification Implementation

FY24 and FY25 AFH, MCA and MCAR Projects- Electrification Guideline Implementation

FY	Installation	Project Name	Notes	Incorporate All Electrical Technologies	Design To Enable Future Electrification	Project Past Point Of Implementation
FY25	Ft. Meade	PN 23730 Child Development Center	At 35% Design			x
FY25	Pulaski Barracks	PN 53906 Child Development Center	At 35% Design			x
FY25	Ft. Irwin	PN 63703 Training Support Center	At 35% Design			x
FY25	CCAD	PN 71597 Powertrain Facility (Inspections)	At 35% Design; NAVFAC DCA			x
FY25	Fort Hamilton	PN 75662 Child Development Center	At 35% Design			x
FY25	Wheeler Army Airfield	PN 76898 Aircraft Maintenance Hangar	At 35% Design			x
FY25	Joint Base Lewis-McChord	PN 80995 UEPH Barracks	At 35% Design; Mass Timber Pilot Project. 35% reduction starting now	x		
FY25	Watervliet Arsenal	PN 81503 Fire Station	At 35% Design			x
FY25	Letterkenny Army Depot	PN 86433 Missile/Munitions Distribution Facility	At 35% Design			x
FY25	Fort Gordon	PN 88727 Cyber Instructional Fac (Clssrms/Aud	At 35% Design			x
FY25	Detroit Arsenal	PN 93746 Manned/Unmanned Tactical Vehicle Lab	At 35% Design			x
FY25	Eglin AFB	PN 94972 Barracks	At 35% Design			x
FY25	Fort Polk	PN 96728 Unaccompanied Enlisted Personnel Housing (UEPH	At 35% Design			x
FY25	Fort Bragg	PN 97211 Child Development Center	At 35% Design; has Code 6			x
FY25	Fort Jackson	PN 97510 Child Development Center	At 35% Design			x
FY25	Fort Campbell	PN 99384 Automated Record Fire Range	At 35% Design			x
FY25	Grafenwoehr	PN 100842 Underground Electric Lines	At 35% Design			x
FY25	West Point Military Reservation	PN 101130 General Instruction Building	At 35% Design			x
FY25	Fort Wainwright	PN 66143 Automated Multipurpose Machine Gun Range	At 35% Design			x
FY25	Vicenza Fam Hsg	PN 92838 Family Housing Replacement Construction	At 35% Design; NAVFAC DCA			x
FY25	Chievres Air Base	PN 93241 Family Housing New Construction	At 35% Design			x
FY25	Baumholder Fam Hsg	PN 93304 Family Housing Replacement Construction	At 35% Design			x
FY25	Camp Zama Japan	PN 101565 AFH Improvement Project	At 35% Design; Renovation project			x
FY25	Rock Island Arsenal	PN 86453 Child Development Center	At 35% Design			x
FY25	Smith Barracks	PN 98087 Barracks	At 35% Design			x
FY25	Joint Base Lewis-McChord	PN 97462 Supply Storage Activity Warehouse	At 35% Design			x
FY25	Joint Base Lewis-McChord	PN 97463 Secure Operations Facility	Less than 15% Design	x		
FY25	JBMHH	PN 98052 Barracks	At 35% Design			x
FY25	Fort Drum	PN 99913 Automated Record Fire Range	At 35% Design			x
FY25	Camp Bull Simons	PN 98090 Child Development Center	At 35% Design			x
FY25	Fort Leonard Wood	PN 71684 AIT Barracks	At 35% Design; Directed Design			x
FY25	Hainerberg Hsg and Shop Ctr	PN 101149 Child Development Center	At 35% Design			x
FY25	Shape AFH Fac	PN 100209 Youth Center	At 35% Design			x
FY25	Fort Hood	PN 91761 Vehicle Maintenance Shop-TEMF	At 35% Design; Directed Design			x
FY25	Fort Bragg	PN 93099 Aircraft Maintenance Hangar	At 35% Design			x
FY25	Red River Army Depot	PN 72987 Vehicle Paint & Prep Shop	At 15% Design		x	
FY25	Smith Barracks	PN 98089 Tactical Equipment Maintenance Facility	At 15% Design		x	
FY25	Barton Barracks	PN 102272 Barton Barracks UEPH	At 15% Design		x	
FY25	Barton Barracks	PN 102273 Barton Barracks UEPH	At 15% Design		x	
FY25	Tobyhanna Army Depot	PN 102929 EMF Range Expansion	At 15% Design		x	
FY25	JBMHH	PN 99223 Family Housing Improvement Construction	At 35% Design Directed Design			x
FY25	MOTCO	PN 93343 Ammo Holding Area	At 35% Design			x
FY25	Ft Riley	Air Traffic Control Tower	At 100% Design			x
FY25	Anniston Army Depot	PN 96018 Component Rebuild Shop	At 0% Design	x		
FY25	Letterkenny Army Depot	PN 68976 Component Rebuild Shop	At 0% Design; OTA/Net Zero/Decarb project	x		
FY25	Guam	PN 102549 Battalion HQ	At 0% Design; NAVFAC DCA	x		
FY25	Guam	PN 104219 Tactical Sites	At 0% Design; NAVFAC DCA	x		
FY25	Wilkes Barre, PA	PN 93895 Area Maintenance Support Activity Equipment, MCAR	Past 35%			x
FY25	Dobbins Air Force Base	PN 85736 Army Reserve Center, MCAR	Past 35%			x
FY25	Ft Buchanan	PN 96391 Collective Training Barracks, MCAR	Between 15% but less than 35%		x	
FY25	Defesne Supply Center Richmond	PN 90034 Area Maintenance support Activity/VMS MCAR	Between 15% but less than 35%		x	
FY25	Parks RFTA	PN 103323 Advanced Skills Training Barracks, MCAR	Between 15% but less than 35%		x	
FY25	Devens AR	PN 103324 Collective Training Enlisted Barracks, MCAR	Between 15% but less than 35%		x	
FY24	Aliamanu Military Reservation	PN 103966 FY 24 Water Storage Tank	No Charette, Code 1	x		
FY24	Ft Bragg	PN 103069 FY24 Barracks (Facility Prototyping)	0% Design, OTA Authority	x		
FY24 Projects All Others		All FY24 AFH, MCA and MCAR projects except PN103966 and PN103069	All FY24 Have Code 6 ,7, or 7			x