*The Department of Defense (DOD) Climate Resilience and Readiness Act*

**Senator Elizabeth Warren and Representative Veronica Escobar**

Section-by-Section Summary for 118th Congress

**Section 1—Title: Department of Defense Climate Resilience and Readiness Act**

**Section 2—Definitions**

- Climate change is a change of climate that is attributed directly or indirectly to human activity that alters the global atmosphere, including changes in climate observed over time.
- Net Zero Energy means producing as much renewable energy as total energy consumed.
- Resilience means anticipation, preparation for, and adaptation to utility disruptions and changing environmental conditions and the ability to withstand, respond to, and recover rapidly from utility disruptions while ensuring the sustainment of mission-critical operations.
- Non-Operational Sources (i.e., installation energy) are energy-emitting or energy-consuming assets of the Defense Department that are fixed military bases and other fixed military infrastructure that do not support combat operations, as well as military vehicles that are not used for such operations.[1]

**Section 3—Net Zero Energy by Non-Operational Sources of the Department of Defense**

- Requires the Defense Department to achieve Net Zero Energy, in the aggregate across the Department, by Non-Operational Sources in the United States and overseas by 2034.
    - Within one year, the Defense Department must provide a written strategy for achieving Net Zero Energy from non-operational sources, in consultation with the National Academy of Sciences and a federally funded research and development center (FFRDC).
    - Within no later than two years after creating the initial strategy for achieving Net Zero Energy from non-operational sources, and every two years afterward, the Defense Department must submit a status report to the Senate and House Armed Services Committees on its progress in achieving this goal, including any updates to the strategy.
- Waiver: Secretary of Defense may waive the requirements of this section only if: 1) he determines that achieving either goal would adversely affect the national security interests of the United States, including the safety of U.S. service members AND 2) he submits a written justification of the waiver to the Senate and House Armed Services Committees. This waiver can be renewed, but each waiver only lasts a maximum of 30 days.[2]

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[1] U.S. Department of Defense, Office of the Assistant Secretary of Defense For Energy, Installations, and Environment, "Annual Energy Management and Resilience Report (AEMRR) Fiscal Year 2017," July 2018, p. 1, https://www.acq.osd.mil/eie/Downloads/IE/FY%202017%20AEMR.pdf. For the purposes of this legislation, non-operational sources of energy are distinct from operational sources (i.e., operational energy), which are energy-emitting or energy-consuming assets of the Defense Department that involve training, moving, and sustaining members of the military and any weapons or other combat-related assets for operations and training. These sources also include generators and similar power systems at mobile DoD locations. U.S. Department of Defense, Office of the Assistant Secretary of Defense for Sustainment, "Operational Energy," https://www.acq.osd.mil/eie/OE/OE_index.html.

[2] This waiver is limited to Section 3 only.

**Section 4—Inclusion in Annual Energy Management and Resilience Report of Department of Defense of List of Military Installations that Emit the Most Carbon and Estimate of Energy Consumption by Department**

- The Defense Department produces an Annual Energy Management and Resilience Report (AEMRR), which assesses the Air Force, Army, Navy, and Marine Corps, and ten Defense Agencies for "managing … installation energy program, reducing energy demand, increasing distributed (on-site) and renewable energy, and enhancing energy resilience."[3] This section would require the Defense Department to include in every subsequent AEMRR, in consultation with the National Academy of Sciences and a federally funded research and development center (FFRDC): 1) a list of the ten military bases within each service that emit the most carbon, 2) an estimate of all energy consumption by the Defense Department, including greenhouse gas emissions, and 3) an assessment of greenhouse gas emissions at all military bases, separated by Operational Sources and Non-Operational Sources.

**Section 5—Climate-Conscious Contracting of Department of Defense**

- Starting October 1, 2025, the Defense Department must include a written estimate of the total energy consumption of all work to be performed under any contract, regardless of monetary value, including a statement of whether the contract will include investments by the contractor or the Department in renewable energy or energy-efficient sources.
- Requires the Defense Department to consider, when determining whether to enter into any contract, whether 1) the contractor verifiably produces as much renewable energy as the total energy it consumes in its operations and 2) the contractor has been found by the Environmental Protection Agency, the Department of Justice, or a State attorney general to have violated any U.S. environmental law or regulation. By Fiscal Year 2034, the Secretary will award no fewer than 50 percent of small businesses set asides to qualified, verifiably green contractors on a sliding scale.
- Requires every prospective contractor with the Defense Department, in order to bid for any contract regardless of monetary value, to submit to the Department a detailed statement including any risks to the contractor's operations posed by climate change, any established company process to manage climate change-related risks, and an inventory of annual Scopes 1, 2, and 3 greenhouse gas emissions. These requirements are similar to those included in Senator Warren's Climate Risk Disclosure Act, which would require publicly traded companies to disclose critical information about their exposure to climate change-related risks.[4]

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[3] U.S. Department of Defense, Office of the Assistant Secretary of Defense For Energy, Installation, and Environment, "Annual Energy Management and Resilience Report (AEMRR) Fiscal Year 2017," July 2018, p. 3, https://www.acq.osd.mil/eie/Downloads/IE/FY%202017%20AEMR.pdf.

[4] Senator Elizabeth Warren, "Warren, Colleagues Unveil Bill to Require Every Public Company to Disclose Climate-Related Risks," September 17, 2018, https://www.warren.senate.gov/newsroom/press-releases/warren-colleagues-unveil-bill-to- require-every-public-company-to-disclose-climate-related-risks.

- Starting October 1, 2025, each contract, regardless of monetary value, awarded by the Defense Department to a contractor requires the contractor to pay a monetary fee equal to one percent of the value of the contract if the contractor is not verifiably producing as much renewable energy as the total energy it consumes at the time of contract solicitation. Explicitly prohibits any contractor from circumventing this fee by attempting to incorporate it into its contract proposal and passing the cost onto the DoD.
- Creates an Energy and Climate Resilience Fund, which contains the fees acquired from contractors that are not verifiably producing as much renewable energy as the total energy they consume. The Fund can only be used for improvements that adapt military networks, systems, installations, facilities, and other assets and capabilities to climate change.
- Waiver: The Secretary of Defense may waive the requirements of this section only if he determines that meeting these requirements would adversely affect the national security interests of the United States, including the safety of U.S. service members; OR he determines that the market conditions for a product or service make it difficult for the Department to acquire that product or service and the waiver will accelerate the Department's acquisition of the product or service. The Secretary must submit a written justification of the waiver to the Senate and House Armed Services Committees. This waiver can be renewed, but each waiver only lasts a maximum of 30 days.[5]

**Section 6—Annual Report on Effects of Climate Change on Department of Defense**

- Requires the Defense Department to submit an annual report, in consultation with multiple federal agencies and other entities (e.g., Environmental Protection Agency, Energy Department, National Oceanic and Atmospheric Administration, the Army Corps of Engineers, etc.) to the Senate and House Armed Services Committees assessing the vulnerabilities of military installations to climate change.
- The annual climate vulnerability report must include:
    - 1) an explanation of the methodology underlying the report's assessment;
    - 2) an assessment of how climate change affects low-lying military bases, Navy and Marine Corps bases, and training ranges;
    - 3) an assessment of how climate change affects access of members of the Armed Forces to training ranges;
    - 4) an assessment of the collaboration between the Department of Defense and the military or civilian agencies of the government of a foreign country's work to adapt to risks from climate change in countries where there are US military installations;
    - 5) an assessment of how climate change affects housing safety and food security on military bases;
    - 6) an assessment of the potential readiness benefits of isolating military infrastructure from the national electric grid and using energy-efficient, dispersed power grids in the United States and overseas to ensure affordable

[5] This waiver is limited to Section 5 only.

electricity supply;
    - 7) a list of the ten military bases within each military department that are most vulnerable to climate change;
    - 8) a Climate Vulnerability Score for each military installation of the Defense Department;[6]
    - 9) an overview of the current efforts to adapt the ten most vulnerable military bases within each service to climate change, as well as any future mitigation efforts that may be necessary;
    - 10) an assessment of how adapting to climate change impacts the readiness of the military to counter the threats posed by Russia, China, Iran, North Korea, and violent extremist organizations.
- An unclassified version of the annual report must be published on a publicly available Defense Department website. A classified annex may be submitted.

**Section 7—Incorporation of Climate Resilience into Existing Strategies of the Department of Defense**

- Codifies existing Defense Department Directive "Climate Change Adaptation and Resilience" into law.[7]
- Requires each "posture statement" (i.e., update on the state of, and the challenges facing, a military department) submitted to Congress by the Secretary of each military department to describe its implementation of the Directive, including the personnel charged with the carrying it out and the progress achieved.
- Requires the Defense Department, in coordination with the Intelligence Community and other federal agencies (e.g., Environmental Protection Agency, Energy Department, National Oceanic and Atmospheric Administration, the Administrator of the Federal Emergency Management Agency, Army Corps of Engineers, etc.) must incorporate climate change-related risks into the National Defense Strategy, the National Military Strategy, and operational plans of the Defense Department.
- Directs the Defense Department to establish "Cross-Functional Teams," an organizational structure to enhance the efficient performance of objectives, to implement the requirements of the Climate Change Adaptation and Resilience Directive.[8]

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[6] U.S. Department of Defense, Office of the Assistant Secretary of Defense
For Energy, Installations, and Environment, "Annual Energy Management and Resilience Report (AEMRR) Fiscal Year 2017," July 2018, p. 3, https://www.acq.osd.mil/eie/Downloads/IE/FY%202017%20AEMR.pdf.

[7] U.S. Department of Defense, "DoD Directive 4715.21 – Climate Change Adaptation and Resilience," https://dod.defense.gov/Portals/1/Documents/pubs/471521p.pdf. The Directive states: "The DoD must be able to adapt current and future operations to address the impacts of climate change in order to maintain an effective and efficient U.S. military. Mission planning and execution must include: a. Identification and assessment of the effects of climate change on the DoD mission. b. Taking those effects into consideration when developing plans and implementing procedures. c. Anticipating and managing any risks that develop as a result of climate change to build resilience."

[8] National Defense Authorization Act for Fiscal Year 2017, S. 2943, https://www.congress.gov/114/plaws/publ328/PLAW- 114publ328.pdf. The National Defense Authorization Act (NDAA) for Fiscal Year 2017 described the purpose of "cross- functional teams" as an organizational structure "(A) to provide for effective collaboration and integration across organizational and functional boundaries in the

**Section 8—Research, Development, and Demonstration on Energy Storage, Hybrid Microgrid, and Energy Resilience**

- Requires the Defense Department, in consultation with the Energy Department, National Laboratories, existing programs, states, Indian tribes, colleges and universities, including historically black colleges and universities and other minority-serving institutions, local governments, private companies, and other relevant stakeholders, to conduct new research, development, and demonstration activities for microgrids[9] and electric grid energy storage to improve the Department's energy efficiency and climate resilience, complementing existing work on the subject required by law.
- The research, development, and demonstration program for microgrids and electric grid energy storage must prioritize a variety of factors, including, but not limited to: integrating renewable energy sources, such as wind, solar, and hydropower into microgrid and hybrid microgrid systems; additive manufacturing; energy storage; location generation of zero- carbon fuels; developing and using fuel-efficient engines; empirical and science-based industry standards; using microgrid and hybrid microgrid systems to make Defense Department critical infrastructure more resilient; the capacity of the Defense Department workforce to maintain and repair a microgrid system; electricity storage device safety and reliability, and mitigation measures; and grid interconnectivity and interoperability of electricity storage devices.
- Authorizes escalating appropriations for the research, development, and demonstration program for microgrids and electric grid energy storage: $10 million for FY 2026, $25 million for FY 2027, $50 million for FY 2028, $75 million for FY 2029, $125 million for FY 2030, $200 million for FY 2031, and $250 million annually from FY 2032 to FY 2034.
- Requires the Defense Department to submit an annual report to the Senate and House Armed Services Committees, and made available to the public, until 2034 on efforts to implement the research, development, and demonstration program for microgrids and electric grid energy storage.
- Directs the Defense Department to ensure that its use of funds to carry out the research, development, and demonstration program is coordinated with the Energy Department and avoids measures that would duplicate or conflict with existing energy reliability laws or standards.

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Department of Defense; (B) to develop, at the direction of the Secretary, recommendations for comprehensive and fully integrated policies, strategies, plans, and resourcing decisions; (C) to make decisions on cross-functional issues, to the extent authorized by the Secretary and within parameters established by the Secretary; and (D) to provide oversight for and, as directed by the Secretary, supervise the implementation of approved policies, strategies, plans, and resourcing decisions approved by the Secretary."

[9] A microgrid is "an integrated energy system consisting of interconnected loads and distributed energy resources (including generators, energy storage devices, and smart controls) that can operate with the utility grid or in an intentional islanding mode." Ike Skelton National Defense Authorization Act for Fiscal Year 2011, H.R. 6523, https://www.govinfo.gov/content/pkg/PLAW-111publ383/pdf/PLAW-111publ383.pdf.

**Section 9—-Conditions on Base Realignment and Closure Activities Funded Through Base Closure Account of Department of Defense**

- Requires the Defense Department to consider current and potential vulnerabilities of military installations to climate change, as well those installations' resilience to climate change, in any future process of base realignment and closure (BRAC), in which the Department closes, reduces, relocates, or otherwise reorganizes its installation infrastructure (e.g., a base, camp, post, station, yard, homeport facility for any ship, etc.