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Optimizing Strategic Competition in the Climate Change Era: Energy Resiliency and Sustainable Procurement

Abstract 108
Introduction 108
I. Climate Change's Effects on Strategic Competition and Available Solutions 109
A. Strategic Competition 109
B. Climate Change in the Strategic Competition Context.. 110
C. Social Cost of Carbon 113
D. Technical Solutions 114
II. Regulatory Reform to Streamline the Development of Renewable Energy and Foster Energy Resiliency 116
A. Environmental Review Process Reform 117
B. Boosting Effectiveness of Sustainable Procurement 123
C. Potential Limitations and How to Overcome Them 126
III. Influence on Great Power Competition 129
Conclusion 130

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ABSTRACT

While near-peer strategic competition is increasingly apparent in the national security landscape, climate change acts as an operational inhibitor and creates opportunities for adversaries to exploit vulnerabilities. However, there are solutions that the Department of Defense (DOD) can implement in order to reduce operational risks from climate change and prevent adversaries from exploiting extreme climate events for their gain. The first solution is to reduce environmental regulatory compliance burdens to develop energy resiliency through renewable energy and microgrid concepts. The second solution is to use the social cost of carbon in procurement decisions in order to reduce harmful emissions of greenhouse gases and encourage the growth of sustainable industries in the United States. These solutions will help to reduce both the DOD's carbon footprint and the mission risks posed by climate change.

INTRODUCTION

Near-peer strategic competition and operational challenges exacerbated by climate change are two prominent national security challenges facing the Department of Defense (DOD). The United States is engaged in adversarial competition with near-peer competitors, such as Russia and China, across a spectrum of operational domains. At the same time, the effects of climate change create operational challenges. Adversaries take advantage of climate-related mission impacts to further engage in nefarious activity.

Not only is climate change caused by the emission of greenhouse gases from fossil fuel use, but it can also make fossil fuel electricity generation less reliable. As the largest consumer of energy in the federal government,[1] the DOD can make a difference in the transition to renewable energy. By becoming more reliant on renewable energy, the DOD would reduce climate change-causing emissions and would also gain operational superiority over strategic competitors through energy resiliency. The federal government should foster climate resiliency by removing regulatory barriers to clean energy development on military installations and by capturing externalities of the social cost of carbon in government procurement, using the Buy American Act as

1 *Comprehensive Annual Energy Data*, U.S. DEP'T OF ENERGY: FED. ENERGY MGMT. PROGRAM, https://ctsedwweb.ee.doe.gov/Annual/Report/HistoricalFederalEnergyConsumptionDataByAgencyAndEnergyTypeFY1975ToPresent.aspx [https://perma.cc/4HGY-5KDB] (last visited Nov. 20, 2025).

a model. This Article will examine climate change in the strategic competition context, discuss how to quantify the cost of greenhouse gas emissions, and propose solutions to encourage renewable energy development and the consideration of greenhouse gas emissions in procurement decisions. By applying the solutions discussed, the DOD can get ahead of adversaries by reducing operational risks from climate change.

I
CLIMATE CHANGE'S EFFECTS ON STRATEGIC COMPETITION AND AVAILABLE SOLUTIONS

Human activities that produce emissions of carbon dioxide, methane, nitrous oxide, sulfur dioxide, and other greenhouse gases from the burning of fossil fuels are responsible for climate change.[2] Emissions from fossil fuel consumption stem from energy production, industry, deforestation, agriculture, and transportation.[3] The effects of climate change include surface warming, temperature changes throughout the atmosphere, increases in ocean heat content, increases in atmospheric moisture, sea level rise, and increased melting of land and sea ice.[4] While this is happening, the United States is engaged in great power competition with near-peer competitors Russia and China. These near-peer competitors engage in activities that can take advantage of natural catastrophes exacerbated by climate change. Part A of this section provides a brief description of strategic competition and how it is manifested. Part B then discusses how climate change accelerates existing tensions within the context of strategic competition and how climate disasters can be taken advantage of by near-peer competitors. Part C presents the concept of the social cost of carbon, and Part D introduces solutions that the DOD can employ to improve climate resiliency.

A. Strategic Competition

Current great power competition involves a long-term adversarial relationship between the free and open international order and near-peer competitors, such as Russia and China, that want to "shape a world

2 NAT'L ACAD. OF SCIS., CLIMATE CHANGE: EVIDENCE & CAUSES: UPDATE 2020, at 5 (2020).

3 Kelvin O. Yoro & Michael O. Daramola, *CO_2 Emission Sources, Greenhouse Gases, and the Global Warming Effect*, *in* ADVANCES IN CARBON CAPTURE 3, 7–13 (2020).

4 NAT'L ACAD. OF SCIS., *supra* note 2, at 5.

consistent with their authoritarianism model" of governance.[5] A hallmark of strategic competition is the use of grey zone activities, which are aggressive actions among competing nations that take place below the threshold of a major war.[6] Grey zone activities can involve aggressive actions that deliberately avoid triggering an adversary's redline for engaging in conflict,[7] including actions carried out through proxies or intermediaries that may not be directly attributable to the actual aggressor.[8] Strategic competitors can also undertake grey zone activities in a manner that forces an opponent to either stand aside and accept the action or be the one to initiate conflict.[9] Cyberattacks that degrade operations but do not cause loss of life are a classic example of grey zone activities.

B. Climate Change in the Strategic Competition Context

Climate change is a threat accelerant that increases tensions within the construct of strategic competition, enabling adversaries to take advantage of climate-related events. Climate change will result in more extreme weather and natural disasters.[10] For example, many parts of the Middle East and South Asia, which are current battlegrounds in the strategic competition context, may become uninhabitable.[11] This will exacerbate resource competition as extreme weather and climate-fueled natural disasters lead to scarcity, price shocks, and food insecurity.[12] Environmental impacts include acidification of the oceans and extinction of coral reef ecosystems.[13] The debilitating consequences of climate change will accelerate refugee migration and

5 U.S. DEP'T OF DEF., SUMMARY OF THE 2018 NATIONAL DEFENSE STRATEGY OF THE UNITED STATES OF AMERICA 2 (2018).

6 LYLE J. MORRIS ET AL., GAINING COMPETITIVE ADVANTAGE IN THE GRAY ZONE 8 (2019); Van Jackson, *Tactics of Strategic Competition*, 70 NAVAL WAR COLL. REV. 39, 41–42 (2017).

7 Jackson, *supra* note 6, at 42.

8 *Id.* at 43.

9 *Id.* at 44–45 (discussing *fait accompli*, which are "unilateral acts that come at the expense of a competitor's preferences").

10 Mark P. Nevitt, *On Environmental Law, Climate Change & National Security Law*, 44 HARV. ENV'T L. REV. 321, 332 (2020).

11 *Id.* at 333–34.

12 Meridith Muth et al., *Climate Effects on U.S. International Interests*, *in* FOURTH NATIONAL CLIMATE ASSESSMENT 595, 613 (Diana Liverman ed., 2018) (discussing how food insecurity in Egypt from climate-related drought led to revolution and an increase in armed fighters in Egypt, Sudan, and Somalia).

13 Nevitt, *supra* note 10, at 333, 336–37 (quoting DAVID WALLACE-WELLS, THE UNINHABITABLE EARTH 10 (2019)).

require more military involvement in global relief efforts.[14] These factors present a chance of conflict that will ramp up already existing tensions among nations.[15]

The United States is affected by climate change, regardless of whether greenhouse gas emissions come from domestic or foreign sources.[16] Domestically, the United States' defense enterprise contributes to climate change, as it is a major emitter of greenhouse gases.[17] The military is also suffering operational interruptions due to extreme weather and natural disasters. Tyndall Air Force Base faced devastating impacts from a hurricane in 2018, requiring nearly $5 billion for rebuilding efforts and the relocation of stealth fighter aircraft.[18] In 2019, Offutt Air Force Base faced a disastrous flood requiring substantial rebuilding efforts, which were estimated to cost $650 million.[19] Even without property damage, climate-change-related weather events can disrupt operations. For example, blackouts during the 2021 Texas winter storm, intensified due to climate change, disrupted Air Force global personnel operations for two weeks.[20]

Further, China and Russia take advantage of climate impacts on military operations. In May 2023, a Category 4 typhoon hit the island of Guam, which hosts several strategic U.S. military installations. During the typhoon, the entire island, including the military installations, lost power, water, and internet service.[21] At the same time, China took advantage of the operational interruptions caused by the

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14 Muth et al., *supra* note 12, at 615.

15 Nevitt, *supra* note 10, at 326 (terming the current era the "Climate-Security Century").

16 *See id.* at 349 (discussing Massachusetts v. EPA, 549 U.S. 497, 519 (2007)).

17 Jim Garamone, *DOD Must Pivot to Counter Climate Change, Official Says*, DOD NEWS (Oct. 8, 2021), https://www.defense.gov/News/News-Stories/Article/Article/2805945/DOD-must-pivot-to-counter-climate-change-official-says/ [https://perma.cc/BS4L-GZ34].

18 Rachel S. Cohen, *USAF Fully Funded for Tyndall, Offutt Rebuilds*, AIR & SPACE FORCES MAG. (Feb. 18, 2020), https://www.airforcemag.com/usaf-fully-funded-for-tyndall-offutt-rebuilds/#:~:text=Air%20Force%20estimates%20for%20the,35s%20starting%20in%20September%202023 [https://perma.cc/YYD3-K8DK].

19 *Id.*

20 Joshua Busby et al., *Cascading Risks: Understanding the 2021 Winter Blackout in Texas*, ENERGY RSCH. & SOC. SCI., JUNE 2, 2021, at 1, 4 (2021) (discussing how rolling blackouts occurred because natural gas supplies, used for power generation, were not equipped to operate in extreme cold conditions).

21 Maggie Miller, *America's Potential Achilles' Heel in a Cyber Battle with China: Guam*, POLITICO (Sep. 16, 2023, at 7:00 ET), https://www.politico.com/news/2023/09/16/potential-cyber-threat-guam-00116354 (on file with the Journal of Environmental Law and Litigation).

typhoon to engage in cyberattacks on Guam's communications, maritime, and government sectors.[22] Similarly, Russia takes advantage of the melting polar ice caps to expand its operations in the Arctic to gain an advantage over the United States and Canada.[23] In addition to expanding operations in areas affected by climate change, near-peer competitors will likely use climate-caused operational interruptions to engage in actions to further degrade the United States' mission capability. As such, more disruptions to the United States' national security operations and new fronts in adversarial aggression from climate change can be expected in the future.[24]

The DOD recognizes the operational threat posed by climate change and the willingness of adversaries to exploit vulnerabilities.[25] In order to adapt to the challenges posed by climate change, reduce impacts, and promote resiliency, the DOD has developed a Climate Adaptation Plan with five lines of effort.[26] The first line of effort, "Climate-Informed Decision-Making," focuses on incorporating climate change into threat assessments, considering climate change impacts at strategic, operational, and tactical levels, and accounting for externalities caused by greenhouse gas emissions into cost-benefit decisions, including acquisition.[27] The second line of effort, "Train and Equip a Climate-Ready Force," involves training in extreme conditions, ensuring that equipment remains viable and that requirements used by buying commands account for realistic projections of climate change.[28] The third line of effort, "Resilient Built and Natural Installation Infrastructure," prioritizes installation resilience and readiness for extreme conditions, climate-informed natural resource management and land use decisions, and ecosystem resilience.[29] The fourth line of effort, "Supply Chain Resilience and Innovation," entails assessing supply chain resilience in the wake of climate change, promoting

22 *Id.*

23 Andrew Spafford & Samantha Olson, *The Melting Fortress: The United States, Canada, and the Race Against Time in the Arctic*, BREAKING DEF. (Sep. 27, 2024, at 10:53 PT), https://breakingdefense.com/2024/09/the-melting-fortress-the-united-states-canada-and-the-race-against-time-in-the-arctic/ [https://perma.cc/35VE-JKYW].

24 *See* Juliana v. United States, 217 F. Supp. 3d 1224, 1265 (D. Or. 2016) (predicting climate change will adversely affect the United States' defense operations).

25 U.S. DEP'T OF DEF., CLIMATE ADAPTATION PLAN 3 (2021) [hereinafter DOD Climate Adaptation Plan].

26 *Id.* at 4.

27 *Id.* at 6.

28 *Id.* at 9.

29 *Id.* at 12.

domestic source procurement, and leveraging the purchasing power of the DOD to support climate resilience and mitigation.[30] Finally, the fifth line of effort, "Enhance Adaptation and Resilience Through Collaboration," involves cooperation with other government agencies and partner nations on technology development, land use planning, and infrastructure resilience.[31] This Article will explore legal solutions to further bolster the DOD lines of effort to achieve climate resilience.

C. Social Cost of Carbon

From an economist's perspective, a root cause of climate change is that there is no cost to producers for causing greenhouse gas emissions, but society bears the impacts.[32] The concept of the social cost of carbon was developed to quantify the externalities of emissions and aid in regulating greenhouse gas emissions.[33] Based on scientific predictions about the impacts of climate change, economists calculated estimates of the marginal social cost of carbon per ton of emissions (see table 1).[34]

Table 1. Aggregate of 2030 Social Cost of One Ton of Greenhouse Gas, in 2024 Dollars[35]

Greenhouse Gas	CY 2030 Social Cost, in 2024 Dollars
Carbon Dioxide	$280.00
Methane	$2,930.00
Nitrous Oxide	$80,520.00

Quantifying the social cost of carbon is useful for regulating emission-producing activity because it provides governments with data

30 *Id.* at 16.

31 *Id.* at 19.

32 Richard Revesz & Max Sarinsky, *The Social Cost of Greenhouse Gases: Legal, Economic, and Institutional Perspective*, 39 YALE J. ON REGUL. 856, 889 (2022).

33 ENV'T PROT. AGENCY, EPA REPORT ON THE SOCIAL COST OF GREENHOUSE GASES: ESTIMATES INCORPORATING RECENT SCIENTIFIC ADVANCES 5 (2023) (discussing emissions of carbon dioxide, methane, and nitrous oxide).

34 *Id.* at 103–04.

35 *See id.* at 101 (explaining that the estimate in the table was calculated by adjusting the median two percent discount rate provided by the EPA, in 2020 dollars, adjusting for inflation since 2020 by a factor of 1.22, and rounding to the nearest $100.00). *See generally CPI Inflation Calculator*, U.S. BUREAU OF LAB. STATS., https://www.bls.gov/data/inflation_calculator.htm [https://perma.cc/P3ZP-VS2M] (last visited Nov. 20, 2025).

to impose costs on producers for what were previously uncharged activities.[36] Estimates of the social cost of carbon can also be used for agency decision-making, such as environmental impact analyses or procurement decisions. The social cost of carbon furthers enforcement efforts by providing a framework to quantify administrative penalties, compensatory damages, and punitive damages.[37] In alignment with the DOD Climate Adaptation Plan, the social cost of carbon will be critical to achieving the lines of effort relating to Climate-Informed Decision-Making and Supply Chain Resilience and Innovation.[38]

D. Technical Solutions

One technical solution to improve climate resiliency is the widespread development of microgrids with renewable energy generation and battery storage at military installations. Many installations have large, unused land holdings that could be used for solar energy production and battery storage.[39] Developed facilities, such as parking lots and rooftops, can also be used for solar energy production.[40] Combining on-site renewable energy generation with a microgrid would enhance energy resiliency during climate-related events, avoiding mission disruption and decreasing impacts from adversarial action.[41]

One success story of renewable energy development on a military installation is a 4,000-acre lease at Edwards Air Force Base (AFB) for the development of a solar energy generation and battery storage facility that will eventually "provide up to 1,252 MW of power to the

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36 Revesz & Sarinsky, *supra* note 32, at 889.

37 *Id.* at 873.

38 DOD Climate Adaptation Plan, *supra* note 25, at 6, 16.

39 *See* CAROL VINCENT, CARLA ARGUETA & LAURA HANSON, FEDERAL LAND OWNERSHIP: OVERVIEW AND DATA 6 (2017) (stating that DOD administers 26.1 million acres worldwide); ANDREA BREWER-ANDERSON ET AL., FINAL ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT FOR THE EDWARDS AFB SOLAR PROJECT 2-25 to -29 (2020).

40 *Compare* P.A. Tezuka, *Los Angeles AFB Goes 'Green' by Harnessing Solar Energy*, AIR FORCE (July 16, 2010), https://www.af.mil/News/Article-Display/Article/116118/los-angeles-afb-goes-green-by-harnessing-solar-energy/About-Us/los-angeles-afb-goes-green-by-harnessing-solar-energy/ [https://perma.cc/B2TJ-XFQF], *with* BREWER-ANDERSON ET AL., *supra* note 39, at 2-19 (2020).

41 Thomas Alford, *Off the Grid: Facilitating the Acquisition of Microgrids for Military Installations to Achieve Energy Security and Sustainability*, 8 GEO. WASH. J. ENERGY & ENV'T L. 97, 104 (2017).

grid."[42] The proceeds of the lease are used to improve energy conservation of facilities at the installation, further boosting energy resiliency.[43] When the installation faces weather impacts, such as high winds that cause commercial utilities to curtail power service to reduce wildfire risk, Edwards AFB will still be able to continue uninterrupted operations.[44]

Moreover, solar energy is only one option for renewable energy production. Coastal installations can potentially harness energy from the power of ocean waves as a renewable energy source. Marine Corps Base Hawaii-Kaneohe has been an instrumental partner with the Department of Energy and industry to support testing and development of wave energy power generation facilities.[45]

Another solution involves the application of the social cost of carbon to federal procurement, which would shift cost incentives to favor the acquisition of goods and services that contribute fewer emissions.[46] This would be applied by adjusting cost-reimbursement or fixed price bids to account for the social cost of carbon based on expected carbon emissions from a particular good or service, including the supply chain. For example, while electric vehicles or battery-powered drone aircraft may be more expensive from a cost standpoint, applying the social cost of carbon would shift the cost analysis in favor of the lower-emission alternatives.[47] Since contractors would need to include emissions information with their proposals, this would have the added benefit of driving contractors to calculate the emissions impact of their

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42 BREWER-ANDERSON ET AL., *supra* note 39, at 2-25 to -29 (2020); *Edwards Sanborn (Edsan) Solar Storage Phase 1A & 1B*, TERRA-GEN, https://terra-gen.com/edwards-sanborn/ [https://perma.cc/3WRW-YP2F] (last visited Nov. 20, 2025).

43 BREWER-ANDERSON ET AL., *supra* note 39, at 1-5.

44 *See Public Safety Power Shutoff*, S. CAL. EDISON, https://www.sce.com/outage-center/outage-information/psps [https://perma.cc/M8DB-UWUX] (last visited Nov. 20, 2025).

45 Lance Cpl. Brittney Vella, *Wave of the Future: Base Welcomes Newest Testing Buoy*, MARINE CORPS BASE HAW. (Feb. 20, 2015), https://www.mcbhawaii.marines.mil/Media-Room/News/Article/Article/566806/wave-of-the-future-base-welcomes-newest-testing-buoy/ [https://perma.cc/X3W2-Y7XT]; *Construction Progressing on Full-Scale Triton-C*, OSCILLA POWER (June 16, 2020), https://www.oscillapower.com/post/construction-started-on-full-scale-triton-c [https://perma.cc/EAL6-4PLK].

46 Revesz & Sarinsky, *supra* note 32, at 883–84.

47 *See* Maxwell Woody et al., *Electric and Gasoline Vehicle Total Cost of Ownership Across US Cities*, 28 J. INDUS. ECOLOGY 194, 196–97 (2024), https://onlinelibrary.wiley.com/doi/epdf/10.1111/jiec.13463.

activities.[48] A successful example of the application of the social cost of carbon is the 2014 procurement of delivery services by the General Services Administration (GSA). When awarding this contract, the GSA required offerors to calculate the carbon footprint associated with parcel delivery, and in making the source selection decision, the GSA modeled the social cost of carbon associated with each offeror's expected shipments.[49] Implementing this solution would influence procurement decisions under either a lowest-price technically acceptable or best value method.[50] The end result would be a reduction in emissions and the development of a more carbon-conscious industry.

II
REGULATORY REFORM TO STREAMLINE THE DEVELOPMENT OF RENEWABLE ENERGY AND FOSTER ENERGY RESILIENCY

Despite the current political environment in the United States,[51] legal authority still exists to implement the proposed solutions in this Article. In order to promote energy resiliency, 10 U.S.C. § 2911 requires military services to "consider" renewable energy development and microgrids for federal installations and sets a "goal" to use renewable sources to fill at least 25% of the installation's energy needs.[52] Although the Trump Administration seeks to deny the reality of a changing climate caused by greenhouse gas emissions,[53] Congress has not disturbed the renewable energy goals for the Department of Defense. Anecdotally, the DOD and military services continue to support energy resiliency projects as long as they are couched in terms of ensuring warfighter lethality or operational readiness.[54]

Until the second Trump Administration, the federal government had shown initiative through policy to encourage sustainable procurement

48 *See, e.g.*, *Supply Chain Case Study: General Services Administration*, GW OFF. OF THE PROVOST, https://provost.gwu.edu/general-services-administration-1 [https://perma.cc/D59S-TL7B] (last visited Nov. 20, 2025).

49 *Id.*

50 Revesz & Sarinsky, *supra* note 32, at 884.

51 *See, e.g.*, THE WHITE HOUSE, NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA 14 (2025), https://www.whitehouse.gov/wp-content/uploads/2025/12/2025-National-Security-Strategy.pdf [https://perma.cc/W8E3-GQ54].

52 10 U.S.C. § 2911(g)–(h).

53 *See, e.g.*, U.S. DEP'T OF ENERGY, A CRITICAL REVIEW OF IMPACTS OF GREENHOUSE GAS EMISSIONS ON THE U.S. CLIMATE (2025).

54 *See generally Secretary Hegseth's Message to the Force*, U.S. DEP'T OF WAR (Jan. 25, 2025), https://www.defense.gov/News/Releases/Release/Article/4040940/secretary-hegseths-message-to-the-force/ [https://perma.cc/X2HW-DJSQ].

and energy resiliency. For example, in Executive Order 14057, President Biden promulgated a policy goal to achieve 100% of federal electrical energy use from carbon-free sources and procurement of zero-emissions vehicles for light-duty vehicle acquisitions.[55] The order also directed agencies to "pursue procurement strategies to reduce contractor emissions and embodied emissions" in procured products.[56] While the Trump Administration has rolled back many policies that pursued energy resiliency, this Biden-era initiative forms a roadmap for implementing reforms to foster energy resiliency and carbon-conscious procurement.

A. Environmental Review Process Reform

The National Environmental Policy Act (NEPA) is an overarching statute that applies to virtually any federal project. NEPA requires review and public comment for major actions (such as acquisitions, basing decisions, or permitting decisions) that may generate significant environmental impact.[57] The federal agency proposing the action must conduct an environmental review analyzing the action's potential environmental impacts and alternatives to the action.[58] While the Council on Environmental Quality (CEQ) regulations have been repealed, the NEPA statutory requirements remain for federal agencies, though inconsistent practices between agencies will be more commonplace.[59] Most agencies promulgate their own regulations for compliance with NEPA, which results in different procedures and practices between agencies.[60]

Under NEPA, three levels of environmental review determine the potential impacts of federal actions: environmental impact statements (EISs), environmental assessments (EAs), and categorical exclusions. An EIS is the most detailed and comprehensive analysis required for major federal actions that are expected to significantly affect the quality

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55 Exec. Order No.14057, 3 C.F.R. 236 §§ 203–204 (2021).

56 *Id.* § 208; *see also* Federal Acquisition Regulation, 48 C.F.R. § 23.002 (2024).

57 42 U.S.C. § 4332.

58 *Id.*

59 Pamela Goodwin, Andrew T. Bockis & John R. Dixon, *The Three Things You Should Know About the Council on Environmental Quality's Removal of Its National Environmental Policy Act Implementing Regulations*, SAUL EWING (Mar. 5, 2025), https://www.saul.com/insights/alert/three-things-you-should-know-about-council-environmental-qualitys-removal-its (on file with the Journal of Environmental Law and Litigation).

60 *Id.*

of the human environment.[61] An EIS requires rigorous analysis, public input, and examination of environmental baselines and alternative actions.[62] An EA is a more concise document with a more streamlined review as compared to an EIS.[63] If the EA concludes that there are no significant impacts, a Finding of No Significant Impact (FONSI) is issued; otherwise, an EIS is required.[64] A categorical exclusion applies to actions that have been previously determined not to have significant environmental effects, either individually or cumulatively.[65] These actions are excluded from the need for an EA or EIS, though some level of documentation and justification may still be necessary.[66]

As part of the Trump Administration's NEPA overhaul in June 2025, the individual services' NEPA regulations were repealed and replaced with DOD-wide NEPA procedures.[67] Per the Department of Defense NEPA implementing procedures, an EIS is required for proposed agency actions that "have a reasonably foreseeable significant effect on the quality of the human environment."[68] Otherwise, an EA is required unless the action is categorically excluded from analysis and will "not have a reasonably foreseeable effect on the quality of the human environment, or if the significance of such effect is unknown."[69] Agencies determine which actions can be categorically excluded from

61 COUNCIL ON ENV'T QUALITY, A CITIZEN'S GUIDE TO NEPA: HAVING YOUR VOICE HEARD 12–13 (2021), https://ceq.doe.gov/docs/get-involved/citizens-guide-to-nepa-2021.pdf [https://perma.cc/H9XX-X9TG].

62 *Id.*

63 *Id.* at 10–11.

64 *Id.*

65 *Id.* at 10.

66 *Id.*

67 90 Fed. Reg. 27857 (June 30, 2025).

68 *Compare* U.S. DEP'T OF DEF., NATIONAL ENVIRONMENTAL POLICY ACT IMPLEMENTING PROCEDURES § 2.1 (June 30, 2025), https://www.denix.osd.mil/nepa/denix-files/sites/55/2025/06/DOD-NEPA-Procedures-FINAL.pdf (on file with the Journal of Environmental Law and Litigation) [hereinafter DOD NEPA Implementing Procedures], *with* 32 C.F.R. § 989.16 (2024) (stating that where there is the "potential for significant degradation of the environment" or "substantial environmental controversy" over the impact of an action, an Environmental Impact Statement (EIS) is required). The repealed regulations at 32 C.F.R. Part 989 previously implemented the Department of the Air Force's Environmental Impact Analysis Process under the National Environmental Policy Act.

69 *Compare* DOD NEPA Implementing Procedures, *supra* note 68, § 1.5(a), *with* 32 C.F.R. § 989.14 (2024), *and* 32 C.F.R. § 989.13 (2024). *See* 36 C.F.R. pt. 989, app. B (2024) (providing a list of Air Force categorical exclusions).

the analysis,[70] subject to challenge through the Administrative Procedure Act.[71]

NEPA provides a useful tool for citizens and environmental groups to ensure that federal agencies analyze and disclose the potential environmental impacts of agency actions. The regulations implementing NEPA require agencies to provide an opportunity for public comment and to respond to comments.[72] Involved citizens reviewing a project can publicly comment throughout the NEPA process.[73] If citizens' concerns are not addressed, they may sue for an injunction on the proposed action to ensure that the responsible agency considers all the environmental impacts.[74] Citizens and environmental groups are occasionally successful in obtaining injunctions against the military's proposed actions, such as aircraft basing or military training activities.[75]

NEPA does not require an agency to select the least harmful alternative to the environment.[76] As long as the agency analyzes the impact the action will have on environmental resources, the agency can select an option that destroys an environmental resource.[77] NEPA ensures only that federal agencies fully analyze an action's impacts on

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70 *See, e.g.*, DOD NEPA Implementing Procedures, *supra* note 68, at app. A (containing each military department's individual categorical exclusions).

71 *See* Nat'l Audubon Soc'y v. Dep't of the Navy, 422 F.3d 174, 185 (4th Cir. 2005) (providing an overview of all stages in the EIS process and discussing the requirement for agencies to publish their final decision).

72 *See, e.g.*, DOD NEPA Implementing Procedures, *supra* note 68, § 1.8.

73 *See, e.g.*, *id.* § 1.8(b)(1).

74 *See, e.g.*, Davis Mts. Trans-Pecos Heritage Ass'n v. U.S. Air Force, 249 F. Supp. 2d 763, 769 (N.D. Tex. 2003), *vacated*, 116 F. App'x 3 (5th Cir. 2004) (alleging that the Air Force failed to take into account noise levels for expanding bomber training range over plaintiffs' lands).

75 *See, e.g.*, Wash. Cnty. v. U.S. Dep't of the Navy, 357 F. Supp 2d 861, 878 (E.D.N.C. 2005), *aff'd in part, vacated in part*, 422 F.3d 174 (4th Cir. 2005) (enjoining action by the Navy because the Navy failed to properly analyze environmental impacts to waterfowl and wetlands as a result of proposed new training airspace and construction of a landing strip in North Carolina).

76 Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350–51 (1989); *NEPA Environmental Review Requirements*, HARV. ENV'T & ENERGY L. PROGRAM (Aug. 15, 2018), https://eelp.law.harvard.edu/2018/08/nepa-environmental-review-requirements/ [https://perma.cc/TTG3-3SLS].

77 *Id.*; *see* Winter v. Nat. Res. Def. Council, 555 U.S. 7, 23 (2008) (providing that DOD has an interest in effective, realistic military training that may outweigh irreparable harm to the environment).

the environment.[78] Additionally, consultations under other laws, such as the Endangered Species Act and the National Historic Preservation Act, occur simultaneously with NEPA, and the same analysis developed through consultation under those laws can be used to meet NEPA requirements.

The timeline for NEPA compliance is a major drawback for many projects approved or conducted by agencies. The median EIS preparation timeline across federal agencies is three and a half years, with most EIS completions taking two to six years.[79] An EIS can cost millions of dollars.[80] An EA, which is less strenuous than an EIS, can add one to two years and up to $200,000 in costs to a project.[81] A recent change to NEPA allows agencies to adopt categorical exclusions among agencies involved in a project, which removes more actions from environmental review.[82]

Environmental law supports national security priorities by reducing greenhouse gas emissions and mitigating the climate and security risks exacerbated by climate change. Streamlining regulations to ease the regulatory burden while maintaining adequate environmental protection ensures that environmental law is compatible with national security concerns. Agencies such as the Department of the Air Force can streamline regulations to provide broader categorical exclusions from NEPA.[83] Reducing the time and cost required to comply with

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78 William S. Eubanks II, *Damage Done? The Status of NEPA After Winter v. NRDC and Answers to Lingering Questions Left Open by the Court*, 33 VT. L. REV. 649, 657 (2009); WildWest Inst. v. Bull, 547 F.3d 1162, 1168 (9th Cir. 2008) (providing that an agency cannot take action that creates environmental impact or limits alternatives prior to issuing decision under NEPA).

79 COUNCIL ON ENV'T QUALITY, EXEC. OFF. OF THE PRESIDENT, ENVIRONMENTAL IMPACT STATEMENT TIMELINES 1 (2020), https://ceq.doe.gov/docs/nepa-practice/CEQ_EIS_Timeline_Report_2020-6-12.pdf [https://perma.cc/997Y-STMR].

80 MARK RUTZICK, REG. TRANSPARENCY PROJECT OF THE FEDERALIST SOC'Y, A LONG AND WINDING ROAD: HOW THE NATIONAL ENVIRONMENTAL POLICY ACT HAS BECOME THE MOST EXPENSIVE AND LEAST EFFECTIVE ENVIRONMENTAL LAW IN THE HISTORY OF THE UNITED STATES, AND HOW TO FIX IT (2018), https://rtp.fedsoc.org/wp-content/uploads/RTP-Energy-Environment-Working-Group-Paper-National-Environmental-Policy-Act.pdf [https://perma.cc/K44N-DET8].

81 *Id.*

82 42 U.S.C. § 4336c.

83 *Compare* DOD NEPA Implementing Procedures, *supra* note 68, at app. A.I(b)(1) (providing Army categorical exclusions, such as construction projects meeting screening criteria with less than five acres of land disturbed), *with* 32 C.F.R. pt. 989, *and* DOD NEPA Implementing Procedures, *supra* note 68, at app. A.II(14) (providing more restrictive Air Force categorical exclusions, such as equipment installation with less than one acre of land disturbed). If the Air Force regulations matched the Army, this could potentially lead to an

environmental standards for certain projects that support renewable energy generation and distribution will enable the United States to catch up to the speed of operational decision-making that competitors like China enjoy.[84]

The Department of the Air Force should promulgate new categorical exclusions for renewable energy generation, battery storage, and electric vehicle charging infrastructure within previously disturbed areas, such as parking facilities. Currently, there are a few existing categorical exclusions that could apply to certain renewable energy projects. For example, categorical exclusions are available for "interior and exterior construction within the 5-foot line of a building,"[85] installing utility systems that use existing rights of way, easements, distribution systems, or facilities,[86] or installing equipment on less than one acre of previously developed land.[87] However, other services have more generous categorical exclusions that could allow for a greater amount of renewable energy generation and storage. For instance, the Army has a categorical exclusion that permits "[c]onstruction of an addition to an existing structure or new construction on a previously undisturbed site if the area to be disturbed has no more than 5.0 cumulative acres of new surface disturbance."[88] The Navy permits "[n]ew construction that is similar to or compatible with existing land use (i.e., site and scale of construction are consistent with those of existing adjacent or nearby facilities) and, when completed, the use or operation of which complies with existing regulatory requirements."[89] While the Navy regulation does not include a size limitation, the express test from the regulation is "whether the proposed action generally fits within the designated land use of the proposed site."[90]

Because the lack of standardization in military services' NEPA approaches has previously resulted in inefficiencies, streamlining NEPA should be beneficial. For example, there are some renewable

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approximately twenty-five percent reduction in the number of Environmental Assessments the Air Force conducts under NEPA.

84 *Compare* COUNCIL ON ENV'T QUALITY, *supra* note 79, *with* Mark P. Nevitt, *Defending the Environment: A Mission for the World's Militaries*, 36 U. HAW. L. REV. 27, 28, 60–61 (2014).

85 DOD NEPA Implementing Procedures, *supra* note 68, at app. A.II(8).

86 *Id.* at app. A.II(12).

87 *Id.* at app. A.II(14).

88 *Id.* at app. A.I(b)(1).

89 *Id.* at app. A.III(33).

90 *Id.*

energy and electric vehicle charging infrastructure projects where the Army or Navy could complete a categorical exclusion, but the Air Force would have to conduct an environmental assessment, which adds cost and time to the project.[91] In this case, standardizing categorical exclusions between services would streamline the process for installing renewable energy generation and electric vehicle charging infrastructure. For example, providing a categorical exclusion that would allow for small solar generation facilities, solar canopies over parking facilities, and widespread electric vehicle charging station installation would provide project efficiencies, reduce greenhouse gas emissions from transportation, and promote climate resiliency through the availability of renewable energy and storage. Alternatively, if the Air Force and Navy change their NEPA regulations to match the Army's five-acre construction categorical exclusion, most smaller renewable energy, battery storage, and transportation grid electrification projects would be covered.

From an economics perspective, reducing the regulatory burden for renewable energy projects would reduce the long-run average costs imposed by environmental assessments or environmental impact statements that are borne by the developer and agency. Removing this cost by increasing the availability of categorical exclusions would increase the profit margin for renewable energy projects, stoking market entry by potential developers. This would increase demand for leases from military installations, leading to increased land values and more funds available for energy efficiency projects. Overall, this would support achievement of the first, second, and third lines of effort in the DOD Climate Adaptation Plan, which are (1) climate-informed decision making; (2) train and equip a climate-ready force; and (3) resilient built and natural installation infrastructure. Achieving these lines of effort would improve the climate resiliency of military installations and ensure mission accomplishment, including warfighter readiness and lethality in extreme conditions.[92]

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91 *Compare* DOD NEPA Implementing Procedures, *supra* note 68, at app. A.II(8) (permitting application within five-foot line of existing building), *with* DOD NEPA Implementing Procedures, *supra* note 68, at app. A.I(b)(1) (applying for a site up to five acres), *and* DOD NEPA Implementing Procedures, *supra* note 68, at app. A.III(33) (providing no site size parameters).

92 *See* DOD Climate Adaptation Plan, *supra* note 25, at 6–15.

B. Boosting Effectiveness of Sustainable Procurement

Additional exceptions are provided for contracts performed outside the United States, military equipment, combat equipment, weapon system procurement, spacecraft systems and launch support equipment, and intelligence activities.[93] Contracts for activities exempted from sustainable procurement, such as space platforms and major weapons systems, form the bulk of defense procurement.[94] Due to the large scope of exceptions and exemptions in defense procurement, the loopholes to disregard sustainable procurement end up swallowing the rule. Finally, the FAR requires contractors that receive at least $7.5 million in awards to provide information on whether they publicly disclose greenhouse gas emissions or have a reduction goal, but do not require disclosure.[95]

The proposal in this Article would explicitly require the application of the social cost of carbon when making price reasonableness determinations in the mold of the Buy American Act. Additionally, to ensure that the DOD buying commands account for the social cost of carbon, this proposal would remove the defense, intelligence, and space activity exceptions to standardize rules across all federal agencies, achieving greater accountability.

The Buy American Act of 1933 provides a model for how to incorporate the social cost of carbon into government procurement decisions.[96] The Buy American Act requires that items purchased for use by the federal government must have been "mined, produced, or manufactured" in the United States.[97] This applies along the entire supply chain for a given product.[98] Similar to sustainable procurement regulations, there are several exemptions and exceptions, including when the cost is unreasonable or when a sufficient quantity or quality of the sought item is not domestically available.[99] To implement domestic preference under the Buy American Act and determine if an exception is available for unreasonable cost, the federal government

93 *Id.* §§ 23.105–.106.

94 *See* U.S. DEP'T OF DEF., OFF. OF THE UNDERSECRETARY OF DEF. (COMPTROLLER)/ CHIEF FIN. OFFICER, DEFENSE BUDGET OVERVIEW (Apr. 4, 2024), https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2025/FY2025_Budget_Request_Overview_Book.pdf (on file with the Journal of Environmental Law and Litigation).

95 48 C.F.R. § 23.501 (2024).

96 *See* 41 U.S.C. § 8302.

97 *Id.*

98 *Id.*

99 *Id.*

adjusts the pricing for purposes of considering the best value or lowest price technically acceptable for awarding a contract.[100] For example, for procurement of supplies where a domestic source is not the lowest bid, source selection officials must perform a price adjustment to add 20% to the foreign-sourced bid if the lowest domestic-sourced bid is from a large business, and 30% if the lowest domestic-sourced bid is from a small business.[101] If the domestic source's price is below the adjusted price of the foreign source, then the price of the domestic source is deemed reasonable.[102] This prevents source selection officials from arbitrarily deeming a domestic source's price as unreasonable, ensuring wider application of domestic preference mandated by the Buy American Act.

This same approach is useful in the context of sustainable procurement. Since the social cost of carbon is quantifiable, pricing adjustments can be performed during source selection to ensure that agency decision-making regarding the cost reasonableness of carbon-conscious options accounts for climate impacts in a standardized manner.[103] A complication is that, unlike the bright-line percentages set for procurement under the Buy American Act, the social cost of carbon is unique to each product or service. However, it is possible to directly compare the carbon impact (and social cost of carbon) of alternative proposals. For example, a gas-powered vehicle has a different social cost of carbon than an electric-powered vehicle.[104] Offerors will have to quantify the anticipated carbon emissions from production, the supply chain, and the use of the final product. This will provide procurement officials with a clearer picture of the climate impacts of different products, improving decision-making. The inclusion of the social cost of carbon would work as a pricing adjustment, as shown in table 2:

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100 DAVID H. CARPENTER & BRANDON J. MURRILL, THE BUY AMERICAN ACT AND OTHER FEDERAL PROCUREMENT DOMESTIC CONTENT RESTRICTIONS 5–6 (2021).

101 48 C.F.R. § 25.106 (2024).

102 *Id.*

103 Since the sustainable procurement regulations at FAR 23.103 have an exception for unreasonable cost, it is important to quantify what is reasonable to avoid arbitrary decisions across agencies.

104 *See, e.g.*, Noah Horesh, David Trinko & Jason Quinn, *Comparing Costs and Climate Impacts of Various Electric Vehicle Charging Systems Across the United States*, NATURE COMMC'NS, June 1, 2024, at 1, 5.

Table 2. Example of Procurement When Applying the Social Cost of Carbon

Bid	Price	Carbon Adjustment	Comparison Price
Offeror #1: Carbon Free	$1,000.00	$0.00	$1,000.00
Offeror #2: Carbon Intensive	$800.00	$300.00	$1,100.00
Offeror #3: Middle Ground	$850.00	$100.00	$950.00

Including the social cost of carbon as a variable in procurement will enable buying commands to make more sustainable procurement decisions. Additionally, consistent with the Buy American Act, this will support the domestic clean technology industry to ensure that the United States has a reliable source of components necessary for a reduced-carbon future, reducing reliance on Chinese production.[105] From an economics perspective, leveraging the purchasing power of the federal government would increase demand for carbon-efficient products and services in an efficient capital market. Increased demand would lead to producer surplus and increased profit, encouraging more competition and investment by firms in carbon-efficient products. In the end, this would foster achievement of the first and fourth lines of effort in the DOD Climate Adaptation Plan: increasing the supply of carbon-efficient products in the greater economy, reducing prices for all consumers, and promoting climate resiliency through greater emissions reductions.[106]

From a technological and data analytics standpoint, there are standardized and verifiable methods that companies can use to track and submit greenhouse gas emissions.[107] Quantifiable greenhouse gas

105 Johannes Scnitzer, *Environmentally Sustainable Public Procurement to Strategically Reshape Markets and Effect Lasting Change*, MCKINSEY & CO. (Mar. 14, 2024), https://www.mckinsey.com/featured-insights/in-the-balance/environmentally-sustainable-public-procurement-to-strategically-reshape-markets-and-effect-lasting-change [https://perma.cc/C9WX-7SMZ].

106 *See* DOD Climate Adaptation Plan, *supra* note 25, at 6–8, 16–18.

107 *See, e.g.*, WORLD RESS. INST. & WORLD BUS. COUNCIL, THE GREENHOUSE GAS PROTOCOL: A CORPORATE ACCOUNTING AND REPORTING STANDARD 62–73 (2004); WORLD RESS. INST. & WORLD BUS. COUNCIL, GREENHOUSE GAS PROTOCOL: PRODUCT LIFE CYCLE ACCOUNTING AND REPORTING STANDARD 92–107 (2011); WORLD RESS. INST. & WORLD BUS. COUNCIL, GREENHOUSE GAS PROTOCOL: CORPORATE VALUE CHAIN (SCOPE 3) ACCOUNTING AND REPORTING STANDARD 112–23 (2011).

emissions include direct emissions onsite by the company ("Scope 1"), indirect emissions by the company's energy usage ("Scope 2"), and supply chain emissions ("Scope 3").[108] By capturing Scope 2 and Scope 3 emissions and quantifying those impacts through the social cost of carbon, contractors that rely on renewable energy sources and pursue carbon emissions reductions through their supply chain will gain an advantage in federal procurement.

Submissions by contractors regarding greenhouse gas emissions could be subject to independent verification by the federal government. Deficient reporting could be handled through procedures for contractor surveillance and accountability,[109] as well as bid protest by contesting unsuccessful offerors.[110] By requiring potential government contractors to provide standardized reporting of greenhouse gas emissions, federal agencies would be able to quantify the impacts of competing options and apply a social cost of carbon adjustment to foster the use of renewable energy sources in both government-procured end products and contractors' supply chains.

Since Congress designated the Federal Acquisition Regulatory Council with plenary authority to issue and maintain the government-wide procurement regulation, updating FAR Subpart 23 in accordance with this social cost of carbon pricing adjustment would be within the Council's purview of statutory authority.[111] Such an update could be accomplished through rulemaking in accordance with the Administrative Procedure Act.[112]

C. Potential Limitations and How to Overcome Them

The current political environment in the United States poses an obstacle to renewable energy and sustainable procurement, though

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108 Kate Gibson, *How Businesses Can Measure & Reduce Carbon Emissions*, HARV. BUS. SCH.: BUS. INSIGHTS (July 11, 2024), https://online.hbs.edu/blog/post/how-to-reduce-carbon-emissions [https://perma.cc/Y8KT-K7RC].

109 U.S. DEP'T OF DEF., DCMA MANUAL 2303-01: SURVEILLANCE, at 30–41 (2022) (discussing Defense Contract Management Agency oversight of federal contractors' performance).

110 48 C.F.R. § 33.102 (2024) (discussing agency consideration of bid protests).

111 41 U.S.C. § 1303. The Federal Acquisition Regulatory Council is a group of government officials, including DOD, GSA, and NASA, responsible for maintaining and updating the Federal Acquisition Regulation, which governs the procurement process for the federal government. *See also* 41 U.S.C. § 1302 (designating the Administrator of General Services, Secretary of Defense, and NASA Administrator as members of the Federal Acquisition Regulatory Council).

112 5 U.S.C. § 553. *See also* Media Coalition v. FCC, 816 F.2d 785, 788 (D.C. Cir. 1987) (upholding agency powers to make rules within the bounds of statutory authority).

streamlining NEPA requirements is currently in vogue.[113] Assuming that political will exists for the federal government to take action for climate resiliency and sustainable procurement, the recommendations of this Article can be implemented within the current legal and regulatory framework. While there is anathema for climate change and renewable energy in the current political environment, there is an appetite for projects that promote warfighter readiness and resiliency for mission accomplishment.[114]

Implementing each solution would involve regulatory rulemaking, which has the potential for being challenged in court. Under the Administrative Procedure Act, agencies have the authority to formulate policy and make rules to carry out statutory responsibilities.[115] Agencies have wide latitude to fashion rules within any limitations imposed by the Constitution or by Congress.[116] Agencies must first publish proposed rules in the Federal Register and provide a public comment period.[117] Once the comment period has closed, the agency promulgates a final rule that takes effect no earlier than thirty days from the final rulemaking.[118] Parties potentially affected by a new rule may challenge the rulemaking in federal court to obtain an injunction against enforcement of the new rule.[119] Bases for challenges to rulemaking include improper interpretation of statutory provisions, agency interpretation of its own regulations, arbitrary and capricious action, and failure to follow procedural requirements.[120] Rulemaking based on environmental issues has been ripe for challenge under the Administrative Procedure Act.[121] Additionally, since the recent *Loper*

113 *See* U.S. DEP'T OF ENERGY, *supra* note 53; 90 Fed. Reg. 10610 (Mar. 5, 2025) (repealing Council on Environmental Quality NEPA regulations).

114 *Compare* U.S. DEP'T OF ENERGY, *supra* note 53, *with* U.S. DEP'T OF WAR., *supra* note 54.

115 Morton v. Ruiz, 415 U.S. 199, 231 (1974).

116 Vermont Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, 435 U.S. 519, 543 (1978).

117 5 U.S.C. § 553.

118 *Id.*

119 5 U.S.C. § 702 (waiving sovereign immunity to suit when plaintiff is seeking an injunction); *see* Joel Beauvais, Steven P. Croley & Elana Nightingale Dawson, *Judicial Challenges to Federal Agency Action*, *in* ENVIRONMENTAL LITIGATION: LAW AND STRATEGY 13–15 (2d ed. 2019) (discussing the injury-in-fact requirement for standing and "zone of interests" standing to challenge rules under statutes authorizing citizen suit).

120 *See* Beauvais, Croley & Dawson, *supra* note 119, at 22–38.

121 *See, e.g.*, West Virginia v. EPA, 597 U.S. 697, 735 (2022) (holding that EPA's Clean Power Rule to regulate greenhouse gas emissions exceeded statutory authority under

Bright decision, which overturned long-standing judicial deference to agencies' statutory interpretation under *Chevron*, federal courts may take a more activist approach to question an agency's determinations underlying its rulemaking.[122]

Despite the litigation risk, implementation of the proposals outlined in this Article would be likely to withstand challenge under the Administrative Procedure Act. A rulemaking by military services to standardize NEPA categorical exclusions in line with the Army's more liberal five-acre standard would be likely to survive challenge since it is based on an existing model. In a different vein, changes to the FAR to require agencies to consider the social cost of carbon in procurement decisions, and the requirement for offerors to submit carbon emissions information in proposals, could face challenge by affected government contractors. Since such requirements could impose a cost or administrative impact on contractors, these rules would require a public comment period.[123] A foreseeable line of challenge would be similar to the rationale used to challenge the SEC rules: that requiring publicly traded companies to disclose greenhouse gas emissions fell beyond the agency's scope of authority.[124] However, the proposed FAR approach discussed here would be likely to survive judicial scrutiny because it is consistent with the wide latitude of plenary statutory authority from Congress to set rules for federal procurement and builds on existing requirements.[125] Both of the approaches suggested in this Article would likely withstand scrutiny under the Administrative Procedure Act.

Clean Air Act); Paul Davies, Sarah Fortt & Betty Huber, *The Case Against the SEC's Final Climate Rules Begins in Earnest (and What It Means)*, HARV. L. SCH. F. ON CORP. GOVERNANCE (Apr. 20, 2024), https://corpgov.law.harvard.edu/2024/04/20/the-case-against-the-secs-final-climate-rules-begins-in-earnest-and-what-it-means/ [https://perma.cc/2RTA-2HU5] (discussing challenge to SEC rulemaking mandating emissions disclosures for publicly traded companies).

122 Loper Bright Enters. v. Raimondo, 144 S. Ct. 2244, 2261 (2024) (overruling Chevron U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837 (1984)). *Chevron* had provided that when Congress has not unambiguously expressed intent over a matter, then courts provide deference to the agency's interpretation of a statute. *Chevron*, 467 U.S. at 842–43.

123 41 U.S.C. § 1707.

124 *See* Davies, Fortt & Huber, *supra* note 121.

125 41 U.S.C. § 1303 (providing authority of the Federal Acquisition Regulatory Council to issue and maintain regulations); 41 U.S.C. § 1121 (providing authority for development of government-wide procurement policy).

III
INFLUENCE ON GREAT POWER COMPETITION

These solutions will influence strategic competition by fostering resiliency in military operations during climate-related events and contemporaneous grey-zone activities. The first action—streamlining NEPA review for renewable energy generation and vehicle fleet electrification projects—would advance the twin interests of promoting energy resiliency and reducing carbon emissions from operations, thereby decreasing the DOD's climate impact. This supports lines of effort from the DOD Climate Adaptation Plan, which include (1) climate-informed decision-making, (2) training and equipping a climate-ready force, and (3) installation and infrastructure resiliency.[126] Taking climate change into account in informed decision-making and training, and equipping a climate-ready force, will advance the current Secretary of Defense's goals of ensuring warfighter readiness. These lines of effort ensure that personnel are trained and equipped for more extreme weather and austere operational environments that warfighters are likely to encounter as adversaries move into the Arctic and Indo-Pacific regions. Additionally, promoting installation and infrastructure resiliency will ensure that extreme climate outcomes, such as more frequent storms and severe heat, will not diminish installation readiness and effectiveness. Further, energy resiliency will limit the ability of adversaries to exploit extreme weather events, ensuring uninterrupted operations and mission accomplishment.

The second action—using the social cost of carbon to influence federal procurement—would standardize contractors' greenhouse gas emissions reporting and would result in reductions to greenhouse gas emissions throughout the federal procurement supply chain, as companies that rely on renewable energy would gain market advantages. This would further the first, second, and fourth lines of effort in the DOD Climate Adaptation Plan, which are (1) climate-informed decision-making, (2) training and equipping a climate-ready force, and (4) supply chain resilience and innovation.[127] This will ensure that the equipment and weapons systems that the military procures will not further contribute to greenhouse gas emissions, which drive climate change. Also, equipment will remain functional in austere environments, such as the Arctic, and during more frequent

126 DOD Climate Adaptation Plan, *supra* note 25.

127 *Id.*

severe weather and heat waves. To the extent that the United States government moves more quickly on these efforts than its adversaries, it will gain an advantage by increasing operational resiliency during climate-disruptive events and building an innovative industrial base for sustainable technologies.

CONCLUSION

From a national security perspective, the United States faces threats posed by climate change within the framework of near-peer strategic competition from Russia and China. Climate change spawns operational risks—including extreme storms, rising sea levels, and the interruption of legacy electrical grids—that adversaries will seek to exploit. By adapting for a carbon-free future through energy resiliency and carbon-conscious procurement, the DOD will blunt the impact of climate change, reduce mission risks, and develop a strategic advantage. From a legal standpoint, these goals can be achieved through two distinct avenues. The first approach is to reduce regulatory barriers to the construction of renewable energy generation and electric vehicle charging station networks under NEPA, thereby encouraging the development of renewable electricity generation and energy resiliency through a microgrid concept. The second approach is to reform procurement regulations to lower overall supply-chain carbon emissions by mandating consideration of the social cost of carbon. Together, these actions will ensure that the DOD achieves its Climate Adaptation Plan goals of gaining climate resiliency and a strategic advantage over adversary nations—and in doing so, alleviates the mission risk posed by climate change.