

**STATEMENT OF**  
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**DIRECTOR**  
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**BEFORE THE**  
**HOUSE ARMED SERVICES COMMITTEE**  
**READINESS SUBCOMMITTEE**  
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Chairman Garamendi, Ranking Member Lamborn, distinguished members of this committee, thank you for the opportunity to appear before you today to discuss how operational energy can help us address logistics challenges. I appreciate your time and willingness to discuss this important topic and its implications to our Joint Forces. I am pleased to be joined by Lieutenant General Duane Gamble, Vice Admiral Rick Williamson, Lieutenant General Warren Berry, and Lieutenant General Edward Banta, who I know will provide you additional context from their service perspectives.

Before addressing the topic at hand, I want take a minute to express my pride in all the women and men of the U.S. Armed Forces, particularly those in the Joint Logistics Enterprise (JLEnt). Whether conducting the largest airlift evacuation in history, caring for refugees across the globe, or supplying and sustaining operations abroad, our logistics professionals are simply the best in the world. These professionals need the nation's support and resources to provide the most efficient, resilient, and adaptive operational energy architecture to train, move, and sustain military forces across the globe.

Which brings us to the topic today, "Minding the Gap: How Operational Energy Can Help Us Address Logistics Challenges." Operational energy is imperative to all warfighting. It is the energy required for training, moving and sustaining military forces and weapons platforms. In a sense, it is one of the greatest enablers of our warfighting power and a primary focus of our logistics networks. In today's contested environment and in the future fight, ensuring the availability of operational energy by reducing our demand, increasing our resiliency, leveraging alternative sources and developing revolutionary operational strategies is crucial to achieving our national goals and missions.

As the Joint Force prepares for the full range of military operations from the homeland to the point of execution, we are continually reviewing operational plans to ensure energy considerations are incorporated. The Joint Staff, through posture, planning, concept development and the joint capabilities development process, informs logistics and operational energy requirements. We also partner with the Combatant Commands and Services to test and refine operational energy requirements and plans through exercises, wargames, modeling and simulation, and analyses, as well as through leadership in key Department of Defense logistics boards and working groups. These efforts shape our future warfighting capability and investment strategy, while also evaluating the risks to energy supportability in future posture, Joint concepts, and operational plans.

I would like to provide a few examples to help paint the picture of our ongoing efforts. Through exercises and wargames, the Joint Staff evaluates risks to future posture and operational plans. We recently conducted two Joint Force Energy Wargames that brought together 30 warfighters from 10 organizations to include the Services, Combatant Commands and our Allies and Partners to explore and assess strengths, weaknesses and consequences of alternative approaches to operational energy. We explored the potential “seams” between the Services, Combatant Commands, and Agencies. In addition, the Joint Staff J-4 team leads an annual wargame series, Advancing Globally Integrated Logistics Effort (AGILE), intended to improve understanding of the capabilities and challenges across the Joint Logistics Enterprise. This wargame provided a venue to test logistics concepts, challenge assumptions and vet limiting factors— such as operational energy. The AGILE event held in May 2021 explored contested logistics concepts with a focus on operational energy and munitions supply chains. Finally, Joint Staff J-4 just completed a table-top exercise analyzing the potential contributions of Allies and

Partners in addressing gaps in sustainment and supply of energy requirements. We recognize our Allies and Partners provide us an asymmetric advantage, but only if all parties have an accurate and shared understanding of each other's military and commercial capabilities. These wargames provided the Joint Staff, Services and Combatant Commands the opportunity to explore future concepts and capabilities to inform planning efforts as well as strategic investment strategies for logistics and operational energy solutions as part of our overarching force design and developmental efforts. To put it plainly, the days of "hand-waving" logistics risks and limitations in our wargaming and exercises are over. Indeed, future success in contested environments depends on robust and accurate assessments of logistics capabilities.

The Logistics Functional Capabilities Board (FCB) is a key component of the Joint Staff's top down, threat-driven capabilities development process and it provides the forum to facilitate coordination between the Office of the Secretary of Defense, Combatant Commands and Service logistics leaders while also informing logistics investments. This past year, the Logistics FCB facilitated several Joint Force capabilities in support of operational energy. We established a joint operational planning team to draft the Joint Petroleum Over the Shore (JPOTS) Initial Capabilities Document (ICD) which outlines the requirement to provide a capability to deliver petroleum to the Joint Force in both permissive and contested environments. The Logistics FCB approved this capability document in October 2021 and it is routing for Joint Requirements Oversight Council approval. We also established an Unmanned Aerial Systems joint operational planning team to draft an ICD to develop a common requirement for effective aerial distribution platforms with a primary focus on minimizing their energy footprint while increasing operational resilience and agility. As we continue to analyze our logistics capability

portfolios, the Logistics FCB will provide top down direction to resource logistics gaps and drive joint energy focused solutions.

That said, we likely agree that planning and programming often lags the pace of scientific development. Advances in modern material science, computing, and engineering offer emergent opportunities to mitigate risks and capitalize on reduced energy demands for joint operations, reducing risk to force and risk to mission in contested environments. The ability to operate for extended periods, over longer distances, or with greater speed and payload directly increases capability and reduces the adversary's opportunity to disrupt our operations. We are leaning forward to embrace these developments and in coordination with the Deputy Secretary of Defense and the Services, we are refining the Energy Key Performance Parameter (eKPP) to be used in all logistics and operational programs to address energy consumption in future acquisition programs. I am sure the services will provide additional examples and highlight their current successes in demand reduction and describe their plans to exploit emergent technologies in the future.

In addition, new energy sources provide the opportunity to reduce our need for petroleum while increasing mission capability. The joint force is exploring the use of alternatives to fossil fuels, including electricity, low carbon fuels, nuclear power, and hybrids. As part of the broader conceptual development, the Joint Staff considers demand reduction as a critical attribute of the joint force's ability to sustain distributed operations against our potential adversaries. Planning and investing in capabilities that may not appear to be energy-related will contribute to that overall reduction as well. For example, precise lethality with extended reach relieves the burden (and energy cost) of mass munitions and the maneuver needed to bring those weapons within range. Additive manufacturing and small unit water purification allows production at the point

of need and eliminates the energy required to distribute supplies over distance. Pre-coordinated contracts and agreements, as well as prepositioned equipment, could also provide greater numbers of energy sources closer to the point of need. There are numerous and interesting conceptual developments regarding the role of energy in warfighting and I would welcome the opportunity to discuss those details further in a future classified setting.

The Joint Logistics Board, which I co-chair with the Assistant Secretary of Defense for Sustainment, in partnership with the Services, United States Transportation Command and the Defense Logistics Agency, established a working group to provide a coordinated approach for fuel distribution. The working group is focusing on efforts to improve the management and delivery of bulk fuels in a contested environment to include publishing a DoD Global Fuel Strategy and developing systems to provide an enhanced common operating picture for bulk fuel. For the common operating picture, we are leveraging a data management and analytics platform to improve visibility of our most critical logistics resources – including bulk fuel inventories and requirements and expect to deliver an initial capability by Dec 31<sup>st</sup> of this year. These efforts will deliver data and tools that improve bulk fuels management and enhance our ability to ensure operational energy for the fight today, while we continue to work on reducing the requirement in the future.

As the Joint Force looks to a future marked by rapid shifts in the geopolitical environment and technological advancements, we also need to recognize the benefits and hazards of the interconnectedness of contemporary civilization. A cyber-attack on the Colonial Pipeline halted delivery of fuel to most of the United States' Eastern Seaboard. One tanker run aground in the Suez Canal halts billions of dollars of international trade. A pandemic, and the accompanying volatility in consumer demand and employment, drives an international supply

chain crisis not seen in generations. These are all examples of Contested Logistics, but are ***not*** the most alarming instantiation of that phenomenon.

As our competitors vie for increased influence, they will actively exploit seams in our logistics and operational energy architectures to work to outcompete or defeat the United States and our Allies and Partners. Consequently, the Joint Force will continue to build our partnerships, collaborate across the Defense Industrial Base, and work toward overcoming shared logistics challenges rather than focusing on discrete solutions. We know that refining the Joint Force's operational energy demands will play a critical role in overcoming those shared challenges. We will continue to foster relationships with our innovative industry and interagency partners through organizations such as the Readiness and Sustainment Industry Working Group and Whole of Government Logistics Council as we develop and field the systems required to defend our nations now and in the future. Finally, and perhaps most important, we will continue to prioritize our most vital asset: our people. The nation's warfighting logistics professionals are silent warriors who quietly go about their business most days, months, and years without much fanfare—until recently. As the recent Non-combatant Evacuation Operation highlighted, they are the linchpin to America's ability to pursue its national objectives across the globe—anytime, anywhere. Developing and training the logistics professionals who manage the operational energy architecture of the joint force remains every bit as critical as the advances in conceptual development, articulation of requirements, and revision of plans I have spent most of my time on today. I am honored to serve with women and men of such selflessness and professionalism.

Thank you, again, for the opportunity to speak today. I look forward to the statements of my fellow military leaders and any questions from the committee.