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STATEMENT OF

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READINESS
OF THE
HOUSE ARMED SERVICES COMMITTEE**

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INTRODUCTION

Chairman Ortiz, Congressman Forbes and distinguished members. I appreciate this opportunity to appear before you today to discuss the Department's installation energy efficiency and conservation efforts.

Installations are a critical component of our defense capabilities, directly affecting training, readiness, and quality of life. Besides maintaining the quality of our facilities, it is imperative for the Department to exercise good stewardship of our utilization of natural resources, not only because of the environmental impact, but also because there is a sound business case for minimizing the expenditure of these resources. As such, the Department is committed to reducing energy consumption, managing demand, and investing in energy savings initiatives.

As the Deputy Under Secretary of Defense for Installations and Environment, I have responsibility for policy and oversight of the Department's installation and non-tactical vehicle energy consumption. This represents almost 28 percent of the total energy consumption for the Department (25.2 percent for facilities and 1.5 percent for non-tactical vehicles). I am happy to report that for Fiscal Year 2007, facilities energy utilization decreased by 10.1 percent on a British Thermal Units (BTU) per square foot basis from the 2003 baseline, with a cost savings of \$80 million.

Policy and Legislative Guidance

The Department's energy effort is built upon a strategy that seeks to optimize management by conserving energy and water usage, and improving energy flexibility by

taking advantage of restructured energy commodities markets when opportunities present themselves. In doing so, we are guided by the provisions and goals of the Energy Policy Act of 2005, the recent enactment of chapter 173 (Energy Security) of title 10, U.S.C and Executive Order 13423. On January 24, 2007, President George W. Bush signed Executive Order (E.O.) 13423, "Strengthening Federal Environmental, Energy, and Transportation Management" to demonstrate leadership by the Federal Government in environmental and energy areas. It directs agencies to take action in a wide array of functional management areas including energy efficiency, water conservation, green procurement, toxics reduction, recycling, renewable energy, sustainable buildings, electronic stewardship, and fleet fuel efficiency. The Department is addressing the requirements through the establishment of our Implementing Executive Steering Committee, while leveraging our existing environmental management system efforts at installations world wide. We are committed to develop policies, guidance, and metrics to measure progress toward meeting these requirements as demonstrated by our recent development of a Toxic Chemicals and Hazardous Reduction Plan, which was submitted to the Office of the Federal Environment Executive on February 1, 2008. Further, the recently passed Energy Independence and Security Act of 2007 (EISA 2007) also contains a number of new requirements, which the Department is currently examining for implementation.

Energy Efficiency and Construction

In January 2006, the Department joined 16 other Federal agencies in signing a Memorandum of Understanding (MOU) for Federal Leadership in High Performance and

Sustainable Buildings. The “sustainable design” effort is guided by principles defined in the MOU that require the employment of integrated design principles, optimized energy performance, protection and conservation of water, enhancement of indoor environmental quality, and reduction of the environmental impact of materials in order to minimize energy and resource consumption and use environmentally preferred products and materials. Sustainable design has the potential to significantly reduce energy consumption. The Department is committed to incorporate sustainable design principles through a comprehensive approach to infrastructure management. Along this line, we are pursuing the attainment of the silver level of the Leadership in Energy and Environmental Design (LEED) program as a goal for 70 percent of the Fiscal Year 2009 Military Construction projects. In addition, the Department is working to assess and address existing facilities’ sustainable practices

Aside from construction of new facilities, we continue to invest in initiatives to improve efficiency in existing structures through the use of Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs) which enable more cost effective long-term facilities operation and maintenance with no up-front costs. The Department is also exploring additional enhanced-use leasing opportunities and public/private ventures to develop cost effective renewable energy sources.

Energy Efficiency on Installations

The Department’s efforts to conserve energy are yielding significant benefits. As stated above, in Fiscal Year 2007 military installations reduced consumption by 10.1

percent from the 2003 baseline, exceeding the energy conservation goal of six percent. Energy conservation projects accomplished through Energy Savings Performance Contracts (ESPCs) typically account for more than half of all facility energy savings. An ESPC does not require up front capitalization by DoD, but rather is paid for through energy savings. By 2005, the Department reduced facilities energy use by 28.3 percent from the 1985 baseline (measured by energy use per square foot). The Energy Policy Act of 2005, Executive Order 13423, and EISA 2007 combined to reset the baseline and increased the target reductions. As previously stated, facilities energy utilization decreased by 10.1 percent through 2007.

Renewable Energy.

The Department is in the forefront of federal agencies in its use of renewable energy and has significantly increased its focus on purchasing renewable energy and developing renewable resources on military installations. While renewable energy projects are consistently more expensive than similar conventional energy sources, which can limit opportunities that are life cycle cost effective, we are working toward a goal established by my predecessor in 2005 to procure or produce renewable energy equivalent to 25 percent of the total electricity demand by 2025. The National Defense Authorization Act of 2007 restated this same goal for the Department. To that end, the Department has increased the use of Energy Conservation Investment Program (ECIP) funds for renewable energy projects from \$5 million in Fiscal Year 2003 to over \$40 million out of the \$80 million proposed Fiscal Year 2009 ECIP budget. Plans call for

ECIP to increase \$10 million per year, up to \$120 million in FY 2013, and renewable energy projects will continue to be a high priority. These projects have produced an historical average savings of \$2.44 for every dollar invested. Further, the Department exceeded the Energy Policy Act of 2005 renewable energy goal of 3 percent in Fiscal Year 2007, achieving 5.5 percent. The Department's total renewable energy produced and procured accounted for 11.9 percent of all electricity use, which places on a glide path to the 25 percent goal by 2025.

While the Department purchases some of its "green energy" locally, there are a number of base-level renewable projects that are very cost effective. One example is the 270-megawatt geothermal power plant at the Navy's facility at China Lake, California. This plant provides enough energy to operate the entire base. The Navy is constructing a second plant at Naval Air Station Fallon in Nevada. Three additional plants are planned in the southwest, two in California at the Naval Air Facility, El Centro and the Marine Corps Air Ground Combat Center at 29 Palms, and one at Chocolate Mountain aerial gunnery range at Marine Corps Air Station, Yuma, Arizona. The Army is also pursuing geothermal at Hawthorn Army Depot in Nevada. In addition, there are several wind-powered facilities operating at a variety of locations that include Naval Base Coronado, San Clemente Island California; FE Warren Air Force Base, Wyoming; Ascension Island; and many additional projects are under consideration. The Department has multiple solar facilities and initiatives at several locations, including bases in California, Texas, and Arizona; and North America's largest solar array, which recently began energy production at Nellis Air Force Base, Nevada. This renewable source provides one third

of the base's requirement by generating 14 megawatts of electricity. This project was accomplished through an innovative power purchase agreement, with no up-front cost to the Air Force and with significantly lower electric rates for the foreseeable future.

Next week, there will be a Pacific Region Energy Forum, focused on Hawaii, but applicable to the entire region. Personnel from all branches of the Department, as well as the Department of Energy, General Services Administration, Pacific Northwest National Lab, the National Renewable Energy Lab, the State of Hawaii, and multiple private sector companies will participate. This event is indicative of the push to integrate and accelerate the development of renewable resources in the region through partnerships with multiple interested parties.

The Department continues to pursue innovative renewable energy technologies. For instance, the Navy has funded a Small Business Innovative Research (SBIR) project for an Ocean Thermal Energy Conversion (OTEC) program. OTEC is being tested at Diego Garcia Naval Base in the Indian Ocean. The OTEC project seeks to use temperature differences between the ocean surface and deeper water to produce electricity. While it is still too early to determine how effective OTEC will be, it demonstrates the Department's interest in exploring and funding innovative renewable energy concepts. The Department has begun investing a portion of the ECIP budget into emerging technology demonstration projects by leveraging funding from the Environmental Security Technology Certification Program (ESTCP). By combining funding from these two programs, both can accomplish stated goals more effectively.

The programs collaborated on four specific projects in Fiscal Year 2008, with similar results expected in Fiscal Year 2009. The demand for renewable energy technology should increase its usage, driving its price down.

The Department recently entered into a strategic partnership with the Department of Energy (DoE) on Energy Efficiency and Renewable Energy, coordinating on three related programs. The first is development of a planning process for net zero installations for the future. A net zero installation would produce at least as much energy as it consumes. DoE provides expertise from the National Laboratories to conduct energy audits of specified installations in order to map areas for efficiency and potential sources for renewable energy. Test sites will be used to develop a planning process and then additional test sites will be used to validate the process. The partnership is also working to simplify and add transparency to the alternative energy financing process. Currently, alternative energy projects take too long to develop and are very complicated to implement. The working group is attempting to develop methods for overcoming these hurdles. A third working group is developing methods for the research organizations within DoD and DoE to better share information and deploy promising technologies throughout both organizations.

Non-tactical Vehicles

The Energy Policy Act of 2005, Executive Order 13423, and EISA 2007, all contain provisions relating to management of non-tactical vehicle fleets. The Department has exceeded legislative requirements to use alternative and flexible fuel vehicles of least

75 percent of new vehicles in metropolitan service areas, but has not seen development of alternative fuel infrastructure from which to fuel those vehicles. Though the consumption of alternative fuel increased 12.9 percent in Fiscal Year 2007, it amounted to only 3.2 percent of the total fleet consumption. This is in large part due to a lack of infrastructure to fuel the vehicles. During the same period, consumption of petroleum decreased 5.4 percent, well exceeding the required 2 percent as specified in Executive Order 13423. We are investigating innovative methods for providing alternative fuel infrastructure in the future, including partnerships with the Army and Air Force Exchange Service and private sector suppliers in areas with a concentration of flexible fuel vehicles. The Department anticipates working with other agencies to implement sections of EISA 2007 that will allow our existing programs of replacing standard cars with neighborhood electric vehicles to assist the Department in meeting alternative fuel goals.

Legislation Related to Installation Energy Management

With ESPCE authority permanently reauthorized in EISA 2007, the Department has launched an aggressive awareness campaign and is well on its way to meeting the energy reduction requirements under EISA 2007. Though the Department remained on track for achieving energy reduction goals, use of ESPCs declined in 2007. As a result, my office issued a policy memorandum requiring components to provide a plan in future Annual Energy Reports for use of ESPC as a tool in the reduction effort.

The EISA 2007 contains provisions which are being carefully evaluated by the Department. Of particular concern is the requirement to deploy energy managers at most facilities to perform annual energy audits on 25 percent of the infrastructure which is a challenge in the midst of a budget year. Recently the Department has begun to rely on contracted Resource Efficiency Managers at many installations to perform such tasks. It will be difficult to develop the contract vehicles or hire new employees and implement the required programs in the time frame allowed.

EISA 2007 also requires a reduction of fossil fuel use in new and renovated buildings of 55 percent in 2010, increasing to 100 percent in 2030. The Department is concerned that the technology is not currently available to decrease consumption intensity by these levels and some locations will not have sufficient renewable resources to make up the difference. Since project development is already well underway for facilities in the Fiscal Year 2010 Military Construction (MILCON) program, reaching these milestones presents a significant challenge.

CONCLUSION

In closing, I thank you for this opportunity to highlight the Department's energy management of our installations and non-tactical vehicle fleet, our successes and our plans for the future. Your support of the Department's energy initiatives and investments is greatly appreciated, and I look forward to continuing to work with this Committee as we increase energy security and reduce operating costs for the Department.