DEPARTMENT OF DEFENSE
SITING CLEARINGHOUSE
FIRST ANNUAL REPORT TO CONGRESS

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DEPARTMENT OF DEFENSE SITING CLEARINGHOUSE STRATEGY

Although most renewable energy projects are compatible with the military mission, in some cases, they can interfere with military test, training, and operational missions. Until recently, the process through which the Department of Defense (DoD) reviewed proposed projects and handled disputes was opaque, time-consuming, and ad hoc, resulting in costly delays. Spurred in part by congressional direction, the Department created the DoD Siting Clearinghouse to develop a timely and transparent review process that allows for compatible energy siting. The overarching goal of all Clearinghouse activities is the protection of test, training, and operational assets vital to the national defense, while permitting mission compatible renewable energy development in America.

The Clearinghouse is led by a Board of Directors, comprised of the Military Departments and the Joint Staff, and is co-chaired by the Deputy Under Secretary of Defense for Installations and Environment; the Deputy Assistant Secretary of Defense for Readiness; and the Principal Deputy Director, Operational Test and Evaluation. The Clearinghouse's review process applies to renewable energy projects filed with the Secretary of Transportation, under section 44718 of title 49, U.S. Code (obstruction evaluation process), as well as other projects proposed for construction within military training routes or special use airspace, whether on private, state, or Federal property, such as Bureau of Land Management (BLM) lands.

The Clearinghouse is taking a proactive approach in keeping internal and external stakeholders informed of its activities through the development of an early outreach and engagement program. The Executive Director of the Clearinghouse, in close coordination internally and with other Federal agencies, meets frequently with industry and state and local government representatives, both to inform them of the existence and functions of the Clearinghouse and to seek their suggestions and cooperation in process improvement. The Clearinghouse is also developing a Web site, handbook, and other communications tools to promote early consultation with project developers, state and local government officials, and the general public.

The Clearinghouse has developed a rule for publication in the Federal Register to inform industry, state and local governments, and the public about how they should interface with the DoD in the review of proposed energy projects filed under section 44718. The regulation was published on October 20, 2011, as Part 211 of title 32, Code of Federal Regulations, as an interim rule. The DoD expects to amend and update the rule to further improve the review process after the Clearinghouse has finalized its strategy and obtained some initial experience. The rule is currently in the public comment period, which ends on December 19, 2011.

Finally, the Clearinghouse is reviewing and actively participating in all known DoD and interagency research and development efforts to study the impacts of renewable energy on military missions and to develop mitigation solutions. Most importantly, the Clearinghouse is jointly leading an effort with the Department of Energy and other Federal agencies to conduct an interagency field test evaluation of radar impacts and potential mitigations. In an effort to field solutions as rapidly as possible, tests will focus on off-the-shelf systems. Testing will begin in April 2012 and run for approximately 1 year. We are also cooperating with the Department of Homeland Security (DHS) in a 2-year effort to develop a comprehensive radar modeling tool to support Government analyses of impacts and provide the data to assist industry in locating projects in a way that does not compromise surveillance of the national airspace. In a related effort, the Clearinghouse is working on Global Information System-mapping tools to improve planning and evaluation.

PROJECT REVIEWS

To date, the most significant accomplishment of the Clearinghouse has been the review of 249 renewable energy projects, clearing the "backlog" of project reviews that existed prior to creation of the Clearinghouse. Of these projects, the Clearinghouse found that 229 proposed projects, covering 35 states and Puerto Rico, would have little or no impact on military missions. The Clearinghouse accordingly informed the Federal Aviation Administration (FAA) and BLM that the DoD had no objections to 183 projects submitted to FAA and 45 projects submitted to BLM. In addition, we cleared the Air Force proposal to build a mission-compatible wind turbine to power the Cobra Dane radar at Eareckson Air Force Station, Alaska.

The Clearinghouse identified the remaining 20 projects as ones that could potentially have an adverse impact on military test, readiness and operational missions. Further study and negotiations with the project developers, in consultation with the appropriate Federal agencies and state and local governments, are currently underway. Of those 20, another 9 projects have been mitigated and cleared as of the writing of this report, leaving only 11 for additional study and mitigation. The Clearinghouse's first effort will be to seek technical or operational mitigations that will permit the projects to go forward. In the case that mitigation is not feasible, Congress will be informed by the Deputy Secretary of Defense as to which, if any, projects will present an unacceptable risk to the national security. As of the date of this report, the Secretary of Defense has not made any determinations of unacceptable risk.

The enclosed tables provide additional information on all 249 projects.

RISK ASSESSMENTS REQUESTED BY CONGRESS

LOSS OF MILITARY TRAINING ROUTES

There are 713 military training routes that use airspace and 1,034 special use airspace areas across the United States. Many of these airspace assets are designed for specific purposes to provide training in specialized missions or to support weapons testing and evaluation. Due to the many varieties of missions performed by both fixed and rotary-wing aircraft in these areas, assessment of risk must be performed on a case-by-case basis, and quantification of such risk is extremely difficult. The Clearinghouse and DoD Components are working together, with the FAA, to assess these risks and develop criteria to quantify their measurement.

EFFECTS OF GLINT ON MILITARY READINESS

Scientific studies published by Sandia National Laboratories in 2009 and 2010 and several project-specific technical studies recently conducted for the California Energy Commission conclude there is very little chance of harm to pilots from concentrating solar technologies. Therefore, the Clearinghouse has focused its initial efforts on determining the effects of electromagnetic interference.

EFFECTS OF ELECTROMAGNETIC INTERFERENCE ON MILITARY READINESS

Testing and evaluation of weapons, sensors, command and control networks, and other sensitive technologies often require the most pristine electromagnetic environment possible. The DoD is responsible for 128 testing and training ranges located within the United States and its territories. Without a rigorous, deliberate process to address electromagnetic interference, the capabilities of these

ranges can be adversely affected. For example, wind farms along the Tehachapi Mountains in California limit the ability to test certain airborne radar systems, along certain vectors of approach to simulated targets.

Many of the Nation's most productive wind and solar energy resources exist in close proximity to some of the DoD's most critical test ranges, presenting unique analytical challenges. The DoD is working to identify projects that may present electromagnetic interference issues and to develop criteria to assess and evaluate the associated risks and impacts.

THREATS TO LONG RANGE SURVEILLANCE RADARS

Since 2005, the DoD has cooperated with the DHS to manage a Joint Program Office dedicated to evaluating the impacts of all types of obstructions on long-range radar and other types of radar. The North American Aerospace Defense Command, the U.S. Northern Command, and other DoD Components work closely with DHS through the Joint Program Office to assess both current and potential impacts on our ability to detect and interdict airborne threats. However, ongoing land-based wind energy growth, along with the imminent development of off-shore wind resources for energy production, may have cumulative impacts on long-range radar that we cannot predict. To date, we have been successful in minimizing the impacts of turbines on four radar sites through operational mitigations. These sites are Fossil, Oregon; Dodge City, Kansas; Oilton, Texas; and Joliet, Illinois.

IMPROVEMENTS TO DOD PRESCREENING PROCESSES

Due to the wide variety of missions and variability of impacts on different types of technology, it is not possible to apply a "one-size-fits-all" distance to prescreen applications under the obstruction evaluation process. Therefore, the Clearinghouse has requested and received "super user" privileges in the FAA's Obstruction Evaluation/Airport Airspace Analysis computer system, and is working with the FAA to receive automatic notifications of every application for a wind turbine, solar tower, or meteorological tower filed in that system. Additionally, the Clearinghouse, in compliance with paragraph (d)(2)(B) of section 358, is cooperating with the U.S. Navy and U.S. Air Force to develop a geographic information system called the Mission Compatibility Analysis Tool (MCAT). The MCAT provides DoD users with the ability to adjust graphical representations of impacts according to the demands of unique missions, and display those impacts on maps. This tool will be used to communicate with industry, state and local government, other Federal agencies, and the general public, when discussing impacts around a specific DoD installation, radar facility, range, airspace, or military training route. It will also provide the Clearinghouse and DoD Component subject matter experts tasked with assessing mission impacts or negotiating mitigations with a powerful visualization device to understand the complex relationships between the physical and electromagnetic characteristics of both military missions and renewable energy projects.