



**DEPARTMENT OF DEFENSE  
SITING CLEARINGHOUSE  
ANNUAL REPORT TO CONGRESS**

**Pursuant to Section 358(f) of the Ike Skelton National Defense  
Authorization Act for Fiscal Year 2011,  
Public Law 111-383**

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## DEPARTMENT OF DEFENSE SITING CLEARINGHOUSE STRATEGY

The Department of Defense (DoD) is committed to maintaining an effective, consistent, transparent, and timely process for evaluating impacts of renewable energy projects on military test, training, and operational missions. This is the core responsibility of the DoD Siting Clearinghouse (Clearinghouse), created by DoD in 2010 and shaped by Congress in the Ike Skelton National Defense Authorization Act for Fiscal Year 2011.

As we reported last year, the Clearinghouse is a collaborative organization comprised of representatives from across DoD. The Clearinghouse is led by a Board of Directors, which is 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 for Operational Test and Evaluation. The Clearinghouse's review process applies to 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 lands.

Building on the successful establishment of the organization and review process in its first year, the Department has dramatically reduced the backlog of pending projects; built key relationships with state and local governments, other Federal agencies, Indian Tribes, and industry; engaged both industry and mission partners to identify solutions to potential impacts of proposed energy projects; and begun assessing regions proactively for compatibility. Individual DoD Components are actively pursuing analytical planning tools to aid in their mission impact assessments and support this process.

The Clearinghouse's early outreach and engagement program has been a critical element of its success, keeping internal and external stakeholders informed and harvesting early information on project development. Specifically, 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. As a result, DoD engages with industry earlier in the development cycle, facilitating incorporation of mutually beneficial changes to projects and mitigating their impact on DoD missions.

Nowhere is this outreach and engagement more important than in the desert southwest. In accordance with section 358(d)(2)(B), Public Law 111-383, the Clearinghouse is funding a study to validate the potential adverse mission impact of proposed renewable energy projects to the region that is home to Naval Air Warfare Center Weapons Division, China Lake, and Edwards Air Force Base (AFB) in California, and Nellis AFB and the Nevada Test and Training Range in Nevada. These installations are home to some of the most critical and unique test and evaluation assets in DoD, with sensors so sensitive that the electromagnetic interference from a single wind turbine could potentially degrade capabilities. This study will be conducted by a consortium of Federally Funded Research and Development Center institutions that will develop a methodology and produce scientific data to assess the adverse impact of renewable energy projects on test missions and to identify areas where the projects will impose that impact on particular ranges. While the Clearinghouse will continue to review all proposed projects, early identification of such adverse impact zones will provide critical information for industry plans and investments in advance of project definition, allowing selection of sites outside these areas and increasing the likelihood of approval.

Further formalizing the role of the Clearinghouse, we published an interim rule on October 20, 2011, as Part 211 of title 32, Code of Federal Regulations. This regulation informs industry, state and local governments, and the public about how they should interface with DoD in the review of proposed energy projects filed under the Federal Aviation Administration (FAA) obstruction evaluation process. DoD is now amending and updating the rule based on external comments received and internal lessons learned.

Finally, the Clearinghouse is jointly leading an effort with the Department of Energy and other Federal agencies to conduct an interagency field test evaluation of techniques and technologies to mitigate wind turbine interference on radars. These tests will focus on off-the-shelf systems in the interest of fielding mitigations as soon as possible. We continued our cooperation 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 while protecting critical national security assets.

## **PROJECT REVIEWS**

The Clearinghouse review process is steadily improving, serving to clear a backlog of renewable energy projects submitted through December 15, 2011, and positioning the team to begin processing new project proposals as received. The Clearinghouse coordinated the Military Services' review of 506 project applications through the 3<sup>rd</sup> Quarter of FY 2011. Of this total, 486 projects were cleared as having acceptable or no impacts to military readiness. Seventeen projects were considered a major impact to military missions, but mitigation is possible. Further analysis of mitigation options and negotiations are underway by Mitigation Response Teams. Three projects present a major impact to military readiness and likely cannot be mitigated, requiring further analysis to determine if the impacts will present an unacceptable risk to the national security of the United States.

As always, the goal of DoD in identifying projects that could potentially have an adverse impact on military test, readiness, and operational missions is, first and foremost, the protection of those missions. In addition, DoD will make every effort to seek technical or operational mitigations that will permit the projects to go forward in close consultation with the project developers, appropriate Federal agencies, state and local governments, and other stakeholders. In the rare case where mitigation is not feasible, Congress will be informed by the Deputy Secretary of Defense as to which projects will present an unacceptable risk to the national security. As of the date of this report, the Deputy Secretary of Defense has made no determinations of unacceptable risk.

## **RISK ASSESSMENTS REQUESTED BY CONGRESS**

### *LOSS OF MILITARY TRAINING ROUTES*

Many of the 713 military training routes that use airspace and 1,034 special use airspace areas across the United States are impacted or potentially impacted by renewable energy projects. Many of these airspace assets are designed for specific purposes to provide training in specialized missions or to support weapons testing and evaluation. To date, only eight projects have been identified that pose a major risk of mission failure, and of those, five are in negotiation to mitigate those impacts. DoD is gratified by the positive response from industry in working to protect important test and training assets to date. The Clearinghouse and DoD Components are continuing our work with the FAA to assess these risks and develop criteria to quantify their measurement.

### *EFFECTS OF GLINT ON MILITARY READINESS*

To date, no serious threats to military readiness have been identified due to glint or glare from concentrating solar technologies. 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. However, it must be noted that a number of solar tower projects proposing huge fields of mirrors remain in development, and the potential for degraded mission impact exists.

### *EFFECTS OF ELECTROMAGNETIC INTERFERENCE ON MILITARY READINESS*

As noted above, DoD is vigorously pursuing both study and outreach to protect critical test and evaluation assets in the Northern Mojave Desert from electromagnetic interference. Similar efforts will follow in the Chesapeake Bay region and near other important test and evaluation assets across the nation. Without a rigorous, deliberate process to address potential electromagnetic interference, the capabilities of these ranges may be adversely affected. DoD is working proactively and positively to encourage the development of compatible renewable energy generation technologies near these ranges.

### *THREATS TO LONG RANGE SURVEILLANCE RADARS*

FAA, DoD, and DHS cooperatively manage multi-use, long-range radars through a Joint Program Office (JPO). The North American Aerospace Defense Command (NORAD) and the U.S. Northern Command, along with other DoD Components, work closely with JPO to assess current and potential impacts on our ability to detect and interdict airborne threats. JPO and NORAD have recently cooperated to modify the analysis processes and are excellent examples of how DoD has endeavored to meet its statutory requirements under section 358(f) of Public Law 111-383. DoD is striving to further understand the cumulative impacts wind turbines have on our aerial surveillance systems; our goal is to identify long-term mitigation solutions to ensure wind energy and radar systems are able to effectively function in close proximity to each other.

### **IMPROVEMENTS TO DOD PRESCREENING PROCESSES**

Due to the wide variety of missions and variability of impacts from different types of renewable energy technology, it is not possible to apply a “one-size-fits-all” distance to prescreen applications under the obstruction evaluation process. Indeed, we believe proactive outreach identifies and mitigates potential problems before projects enter development. This is why the Clearinghouse is developing a comprehensive outreach strategy that goes beyond the requirements of section 358 and is actively supporting outreach efforts of DoD Components at all command levels.