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Barriers/ Issues Impacting Renewable Energy Development in California

The Department of the Navy (DoN) is charged with executing the President's commitment to change the way energy is used and produced in the United States. The President has said it very clearly: energy reform is a national security imperative, an economic necessity, and the right thing to do as responsible custodians of our environment.

In support of the President's commitment, the DoN is aggressively pursuing the development of renewable energy (RE) generation on its installations in California. The DoN's perspective is that it makes smart operational sense to improve the reliability of service for the mission-critical loads on our installations, but as important, it makes good business sense to seek ways to reduce energy costs through the combined strategies of producing and/or purchasing less expensive electricity and participating in the utilities' demand response programs.

Although many of California's laws and regulations are intended to increase the viability of RE development, there are several statutory, regulatory, and policy barriers that restrict the implementation or expansion of renewable energy projects on DoN Installations. Below are the principal barriers encountered to the development of mid-size and large-scale renewable energy projects within California.

Transmission Constraints for Export Purposes

Situation: A number of DoN Installations could support renewable projects well in excess of their loads resulting in renewable power being available for export or, in some instances, shared with other DoN installations. President Obama in his 2012 State of the Union address announced that the DoN intends to develop or purchase a gigawatt of renewable power on our installations. The installations in southern California represent our highest potential for renewable generation because of the large expanses of land, the relatively high energy prices, the favorable incentive structure, and the strong support from California policymakers.

Barrier: Constraints on existing transmission infrastructure represent significant obstacles to the development of utility-scale RE projects on DoN Installations in southern California. The utilities have estimated that it will take at least 7-10 years before the transmission capacity can support significant increases in renewable projects.

Recommended Action: The DoN recommends the immediate formation of a stakeholder group of the appropriate state and federal agencies, including DoN representation, to identify regulatory and statutory changes that facilitate development of new transmission capacity in southern California.

1 MW Cap on Renewable Generation

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Situation: Within California, one megawatt of renewable generation is a common cap for several programs, rules, and policies, affecting the financial viability of renewable energy projects. Fourteen DoN Installations have a *base load* of at least 2 MW of renewable generation meaning the current incentive is immediately cut in half at the installations with the smallest loads. Much more potential is available at a majority of the larger installations. The smallest *peak load*, Seal Beach and Monterey, is 5 MW and the largest, Naval Base San Diego is 66 MW.

Barrier: The current capacity limit for net electric metering (NEM) is 1MW, regardless of the electric demand of the facility. DoN installations are typically considered to be a single "site" or "premise" per application of the utilities' Rule 1 definitions; this severely limits the ability of installations to develop more than 1MW of renewables, regardless of the installation's load or capacity to support renewable projects. For example, a recently installed 1.5MW wind turbine (MCLB Barstow) has been "turned down" to 1MW in order to qualify for the NEM program.

Recommended Action: Identify revisions to existing programs to include; Net Energy Metering (NEM); CA Renewable Energy Small Tariff (CREST); California Solar Initiative (CSI); and applicability of Departing Load charges that increase 1MW thresholds.

Rule 21 Requirements

Situation: Installing 1 MW or more generation capacity on an installation triggers significant interconnect procedures found in the utilities' Rule 21 requirements, such as real-time telemetry, without regard to the total load or size of the installation.

Barrier: Within southern California, all existing generation must be retrofit with telemetry once the 1 MW threshold is crossed, which is a significant expense and deterrent to implementing future projects. This telemetry is required even if the generation assets are well below the load of the installation and there is no possibility of export to the grid. For example, one installation is being required to install telemetry infrastructure (at a cost of over $800,000) on approximately 1MW of generation even though the minimum base load is 8MW and there is almost no possibility of generation ever exceeding the installation's load. Rule 21 also constrains the state's electric grid for mid-size RE projects that serve local loads because utility companies impose "instantaneous non-export" requirements on projects in congested areas. The requirement that no power can ever flow onto the grid limits the size of these projects and also increases costs for control systems to guarantee that the systems will curtail production if output approaches the installation load.

Recommended Action: CPUC direct the Rule 21 working group to facilitate workshops to aggressively address solution sets for these issues. The Navy is committed to participating in the working group.

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Existing Tariffs: Standby and Departing Load Charges

Situation: Standby and departing load charges were adopted to prevent remaining utility customers from bearing a greater portion of fixed costs when some customers were able to leave the utility system to take advantage of less costly service options. Military installations that are meeting a portion of their loads with renewable power will continue to pay the utility's transmission and distribution fixed costs, as well as the remaining portion of their generation costs, as contained in the utility tariffs. For example, the recently-awarded 14 MW project at NAWS China Lake, will cause the base to incur approximately $650,000 in departing load and $1M in standby charges annually. These charges will potentially be offset by a $2M reduction in demand charges, but the reductions will not be realized if the system does not produce at full capacity during times of peak demand.

Barrier: Tariffs that include standby and departing load charges create significant disincentives for installations to develop RE projects.

Recommended Action: Due to the varying economic impacts to mid-size and large renewable energy projects, the State should reevaluate the application of these tariffs in order to facilitate more widespread development opportunities.