

STATE OF CALIFORNIA

Public Utilities Commission
San Francisco

M e m o r a n d u m

Date: June 9, 2014

To: The Commission
(Meeting of June 12, 2014)

From: Lynn Sadler, Director
Office of Governmental Affairs (OGA) – Sacramento

Subject: **AB 2649 (Mullin)–Public utilities: federal facilities: electrical charges.
As amended: May 28, 2014**

RECOMMENDED POSITION: SUPPORT IF AMENDED

SUMMARY OF BILL:

This bill:

- Exempts ‘independent generation facilities’ located on military bases and privatized military housing from associated interconnection fees and departing load charges under specified conditions, and grants these facilities the same expedited interconnection process available to net energy metering (NEM) projects through Public Utilities (PU) Code Section 2827.
- Allows independent generation facilities to be sized to offset part or all of the military’s electricity consumption and requires equipment to prevent the export of electricity to the electrical corporation’s distribution system.
- Requires military facilities to be assessed and charged for standby demand charges associated with the independent generation facility.

CURRENT LAW:

- Limits eligible customers, including military bases, from installing more than one megawatt of net energy metering (NEM) renewable generation on a customer’s owned, leased, or rented premises.

AUTHOR'S PURPOSE:

The purpose of this bill is to facilitate the deployment of self-generation on military bases and privatized military housing in support of the United States Department of Defense's renewable energy and security goals.

DIVISION ANALYSIS (Energy Division):

1. This Bill has the Potential to Support California's Renewable Energy Goals and Federal Policies Increasing Renewable Distributed Generation on Military Facilities, but Also Supports Generation with High Greenhouse Gas Emissions

As reflected in the 2008 statewide Energy Action Plan, a cornerstone of California's energy roadmap is the commitment to address the emerging effects of climate change through the aggressive procurement of renewable generation resources. This includes the state's goal to procure 33% renewable resources by 2020, the AB 32 (Nunez, 2006) Cap and Trade program, the California Solar Initiative, Self-Generation Incentive Program, Net Energy Metering, and Zero Net Energy goals.

Coinciding with these policies are several initiatives led by the United States Department of Defense (DoD) to reduce energy usage and enhance energy security on military bases, including a goal of installing three (3) gigawatts of renewable energy on Army, Navy, and Air Force installations, and requiring 25% of total facility energy consumption to come from renewable energy sources by 2025.^[1] Separately, the Navy and Marine Corps have instituted a goal of procuring 50% of their power from renewable energy sources by 2020.^[2]

Because the current version of the bill does not define 'independent generation facility' as a specific technology or fuel type, this bill will support both the procurement of on-site renewable generation resources as well as technologies that may increase greenhouse gas emissions relative to the grid. For example, diesel generators, or improperly maintained natural gas fired combined heat and power systems, could qualify for the interconnection fee and departing load exemptions included in this bill.^[3]

2. This Bill Does not Impact CPUC Programs, and Does not Appear to Require a Commission Rulemaking or a New Tariff

It does not appear that a new rulemaking or a new tariff will be required to enact this bill. As written, the bill would require electrical corporations to implement the provisions of

^[1] Source: <http://www.seia.org/research-resources/enlisting-sun-powering-us-military-solar-energy-2013>

^[2] Source: http://lgdata.s3-website-us-east-1.amazonaws.com/docs/1494/869864/dod_eere_factsheet_072711.pdf

^[3] As noted in the 2012 Self-Generation Incentive Program (SGIP) Evaluation and Program Outlook Report, natural gas combined heat and power systems can increase greenhouse gas emissions if not properly maintained. Source: http://www.cpuc.ca.gov/NR/rdonlyres/25A04DD8-56B0-40BB-8891-A3E29B790551/0/SGIP2012ImpactReport_20140206.pdf

this bill through an advice letter to the Commission adopting a standby charge based on the military facility's standby demand.

SAFETY IMPACT

No safety impacts identified.

RELIABILITY IMPACT

One of the most important reliability concerns associated with the interconnection of distributed generation is the potential impacts that result when onsite generation is exported to the electric grid, during times when it is not serving onsite load. Because this bill would effectively prevent an independent generation facility from ever exporting electricity to the utility distribution grid, any potential reliability impacts resulting from this bill would be limited to onsite load fluctuations, such as when solar PV systems or wind turbines experience intermittency issues. As noted in the Commission's Biennial Report on the Impacts of Distributed Generation, customer-side distributed generation (DG) can have positive and negative impacts on the reliability of the distribution and transmission system.^[4] Impacts on the distribution system are highly dependent upon local feeder configurations and fluctuations in voltage and load.

RATEPAYER IMPACT

Similar to the Commission's implementation of current NEM policies that exempts eligible generators from certain fees, this bill would exempt military independent generation facilities from certain departing load charges (i.e., public purpose charges), interconnection application fees, and interconnection study fees.^[5] We quantify the potential ratepayer impact of this provision below.

On October 28, 2013, the Commission issued a report on the costs and benefits of the NEM program (2013 NEM Report), in compliance with AB 2514 (Bradford, 2012).^[6] Included in the report is an estimation of the applicable avoided public purpose charge in each rate for all NEM customers. Using data from the 2013 NEM Report, the following tables illustrate the avoided fees for an example 1 MW non-residential system that could be installed as a result of this bill. Although this bill also allows for generation facilities to be installed on privatized military housing, the vast majority of independent generation facilities that will be able to take advantage of this bill will be non-residential applications.

^[4] Biennial Report on the Impacts of Distributed Generation, page 4-1. Source: http://www.cpuc.ca.gov/NR/rdonlyres/29DCF6CC-45BC-4875-9C7D-F8FD93B94213/0/CPUCDGImpactReportFinal2013_05_23.pdf

^[5] Additional clarification for the exemption of these fees is provided in the 'Summary of Suggested Amendments' section below.

^[6] <http://www.cpuc.ca.gov/NR/rdonlyres/75573B69-D5C8-45D3-BE22-3074EAB16D87/0/NEMReport.pdf>

Table 1: Exempted Departing Load Charges for an Example 1 MW Non-Residential NEM System (\$/year)^[7]

Rate Component	Annual Cost
Public Purpose Charge	\$ 21,147
Nuclear Decommissioning Fund	\$ 641
Competitive Transaction Funds	\$ 11,535
Energy Cost Recovery	\$ 3,204
DWR Bond Charge	\$ 7,690
CPUC Surcharge	\$ 320
CEC Surcharge	\$ 320
CARE Surcharge	\$ 8,631
Total	\$ 53,508

Table 2: Exempted Interconnection Fees for an Example 1 MW Non-Residential NEM System (\$)^[8]

Interconnection Fees	Cost
Interconnection Request Fee	\$ 800
Supplemental Review (As Warranted)	\$ 2,500

FISCAL IMPACT

This bill would not require a significant expansion of existing CPUC workload. It does not appear that a new rulemaking is required to enact this bill, nor does the bill language explicitly direct the CPUC on procedure for implementation. As written, the bill could be implemented with limited conforming modifications to the investor-owned utility (IOU) tariffs. Conforming changes may also be necessary to the Self-Generation Incentive Program (SGIP) and California Solar Initiative (CSI) program handbooks.

ECONOMIC IMPACT

This bill could provide economic development in military communities, and bring the benefits of bill savings and renewable energy resources to veterans and their families. According to the California Solar Statistics, the average cost for solar photovoltaic (PV) installations within the government sector is \$5.10/Watt.^[9]

LEGAL IMPACT

No legal impacts identified.

LEGISLATIVE HISTORY

This bill originated as an amendment to the NEM statute, and has since developed into a separate section of the PU Code. The NEM statute was first established in response to

^[7] 2013 NEM Report, Chapter 6, and the E3 NEM Summary Public Model

^[8] Rule 21

^[9] http://californiasolarstatistics.ca.gov/reports/quarterly_cost_per_watt/ (June 3, 2014).

AB 656 (1996), and was subsequently modified by: AB 1755 (1998), AB 918 (2000), AB X1-29 (2001), SB 1038 (2002), AB 2228 (2003), AB 1214 (2004), SB 1 (2006), AB 920 (2009), AB 510 (2010), SB 489 (2011), SB 594 (2012), and AB 327 (2013).

PROGRAM BACKGROUND:

The CPUC oversees a range of complementary policies that support self-generation under existing state laws:

1. **Rebates:** Rebates through the California Solar Initiative (CSI) and SGIP. The CSI program provides rebates for solar PV systems up to 1 MW (and allows systems up to 5 MW), with the exception of certain state-owned facilities (per AB 2724, 2010). SGIP provides incentives to wind turbines, fuel cells, combined heat and power (gas turbines, micro-turbines and internal combustion engines), waste heat capture, small conduit hydro, advanced energy storage, and pressure reduction turbines. Similar to SGIP, the CSI and program is designed to reduce a customer's onsite load.
2. **Simplified Interconnection:** Reduced interconnection costs are available under utility Rule 21 tariffs that exempt qualified self-generation renewable energy systems under 1 MW from most studies and fees. Rule 21 also offers these systems accelerated interconnection timelines. Separately, the CPUC exempted renewable self-generation systems from standby charges in 2003.
3. **Net Energy Metering:** Per PU Code 2827, NEM customer-generators who take service from the investor-owned utilities (IOUs) have their monthly net generation valued at the full retail rate at the time the energy is exported, and may elect to receive compensation of any net surplus generation above annual load. PU Code 2827.10 sets out a separate program for eligible fuel cell customer-generators that have their monthly net generation valued at the generation rate only. An installed NEM project provides a subsidy to the customer-generator that will be of increasing importance to new customer-generators as CSI and SGIP incentives decline. Pursuant to AB 327 (Perea, 2013), the CPUC must design a new tariff or contract to replace the current NEM program by December 31, 2015. The current NEM tariff will be available for new customers in a given utility service territory until the earlier of July 1, 2017, or until the capacity of NEM systems reach five percent of the utility's "aggregate customer peak demand" (Public Utilities Code Section 2827(c)(1)). AB 327 further clarifies that the five percent NEM cap is the sum of individual customers' non-coincident peak demands.

OTHER STATES' INFORMATION

NEM is currently available in 44 states around the country. Each state has its own version of NEM, including customer, technology, and system size eligibility terms; in numerous states NEM is available for larger projects and other technologies (See www.freeingthegrid.org for a guide to the differences among state net metering policies).

States such as Arizona, Colorado, Hawaii and Texas do not impose the one megawatt NEM system size limitation on military installations.

SUMMARY OF SUPPORTING ARGUMENTS FOR RECOMMENDATION:

This bill would enable the military to more accurately size onsite disturbed generation systems relative to their onsite load, and supports federal and state policies to procure renewable energy resources and enhance energy security. However, as currently written, the bill also supports generation that could result in high greenhouse gas emissions relative to the electric grid.

SUMMARY OF SUGGESTED AMENDMENTS:

1. Limit Eligibility for the Exemptions Provided by this Bill to Facilities that Generate Electricity from a Renewable Resource

As previously stated, a cornerstone of California's energy roadmap is the commitment to address the emerging effect of climate change through the aggressive procurement of renewable generation resources. Providing exemptions to non-renewable resources that may actually increase emissions relative to the grid is clearly against the spirit of the state's Energy Action Plan.

Proposed Amendment

The definition of 'independent generation facilities' should be amended to mean a facility that generates electricity from a renewable resource listed in paragraph (1) of subdivision (a) of Section 25741 of the Public Resource Code.

2. Delete Public Utilities Code Section 389.3 (d) from the Bill

The bill currently has two sections related to the exemption from departing load charges. PU Code Section 389.3 (d) of the bill states: "For a facility with an independent generation facility, the costs provided in Sections 330, 366.1, 367, 368, 375, 376, 379.6, and 381 shall be applied based on the amount of electricity purchased from an electrical corporation or alternative supplier of electricity that delivers electricity through the distribution system line 27 of an electrical corporation."

Separately, PU Code Section 389.3 of the bill (f) states: "Any activities undertaken on a facility's premises that reduce demand for an electrical corporation's supplied electricity, such as energy efficiency, load reduction, or independent generation are not subject to charges assessed on electricity delivered from the electrical corporation's distribution system or other charges of any kind that would increase the facility's costs beyond those of other customers in the rate class to which the facility would otherwise be assigned if the independent generation facility was not installed at the facility."

Proposed Amendment

Because section (f) of the bill essentially grants independent generation facilities from all possible departing load charges, the following language in section (d) of the bill is superfluous and should be deleted:

~~For a facility with an independent generation facility, the costs provided in Sections 330, 366.1, 367, 368, 375, 376, 379.6, and 381 shall be applied based on the amount of electricity purchased from an electrical corporation or alternative supplier of electricity that delivers electricity through the distribution system line 27 of an electrical corporation.~~

STATUS:

AB 2649 is pending hearing in the Senate Rules Committee.

SUPPORT/OPPOSITION:

Support: California Center for Sustainable Energy (CCSE)
California Solar Energy Industry Association (CalSEIA)
Department of Defense, Regional Environmental
Coordinator, District 9
Environmental Entrepreneurs (E2)
Natural Resources Defense Council (NRDC)
San Diego Military Advisory Council (SDMAC)
Solar Energy Industries Association (SEIA)
SolarCity
Sunrun, Inc.
Vote Solar

Opposition: California Coalition of Utility Employees (CCUE)
California State Association of Electrical Workers
California State Pipe Trades Council
Pacific Gas and Electric (PG&E)
Southern California Edison (SCE)
Southern California Public Power Authority (SCPPA)
Western States Council of Sheet Metal Workers

VOTES:

May 29, 2014 – Passed by the Assembly to the Senate (Vote: Y:75 N:0 A:3).

May 23, 2014 – Passed Assembly Appropriations (Vote: Y:16 N:0 A:1).

April 28, 2014 – Passed Assembly Utilities & Commerce (Vote: Y:10 N:2 A:3).

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BILL LANGUAGE:

SECTION 1.

Article 9.5 (commencing with Section 389) is added to Chapter 2.3 of Part 1 of Division 1 of the Public Utilities Code, to read:

Article 9.5. Federal Facilities

389.

The Legislature finds and declares all of the following:

- (a) The United States Department of Defense provides national defense and global security that benefits Californians and California's economy.*
- (b) The United States Department of Defense facilities located in California provide more than seventy billion dollars (\$70,000,000,000) in direct spending and 300,000 jobs in California.*
- (c) The United States Department of Defense is working to achieve energy efficiency and renewable energy goals to meet both presidential and departmental directives.*
- (d) The amount of electricity that the United States Department of Defense facilities located in California seek to generate on their own premises will serve their own electricity needs and will not export electricity.*
- (e) Military bases approximate small cities in electrical load, diversity of land uses, and size.*
- (f) Given the crucial contribution of our military, California should assist military facilities in California in achieving their energy independence goals.*
- (g) The military owns and maintains its electric distribution system. Generation serving the military's own electricity load without export should not require upgrades to this distribution system. Even if upgrades are necessary, the military, not the ratepayers, will bear these costs.*
- (h) At the request of the Governor and the electrical corporations, military bases have historically demonstrated their commitment and ability to provide demand reduction management at times of grid emergencies.*
- (i) Development of additional energy facilities on military bases and military family housing will create opportunities for jobs for veterans at a time when many California service members are reentering the workforce and can provide skilled workers. Established programs, such as "Helmets to Hardhats," also provide valuable and needed transition from the battlefield to the civilian community.*

389.3.

(a) For the purposes of this article, the following shall apply:

(1) "Facilities" means either of the following:

(A) Military bases and facilities.

(B) Privatized military housing.

(2) "Independent generation facility" means an electrical generation installation located on a facility that is interconnected and operated in parallel with an electrical corporation's distribution system, sized to offset part or all of the facility's own electrical requirements, and that contains equipment to prevent the export of electricity to the interconnected electrical corporation's distribution system.

(3) “Military bases and facilities” mean those establishments under the jurisdiction of the United States Army, United States Air Force, United States Navy, United States Marine Corps, or the United States Coast Guard.

(4) “Privatized military housing” means housing facilities managed by a private entity for the purpose of providing housing to active duty service members and their family members that are not individually metered for purposes of calculating electricity charges paid to an electrical corporation.

(5) “Standby demand” means the entire reserved capacity needed to serve the electrical load of a facility that is regularly served by the facility’s independent generation facility when that generation facility experiences a partial or complete outage.

(b) To the extent authorized by federal law, an operator of an independent generation facility shall notify the electrical corporation pursuant to subdivision (b) of Section 119085 of the Health and Safety Code.

(c) Notwithstanding the limitation on the maximum generation capacity imposed pursuant to Section 2827, an electrical corporation shall use the expedited interconnection process specified in subdivision (e) of Section 2827 and any commission order or rule implementing that provision for a facility with an independent generation facility.

(d) For a facility with an independent generation facility, the costs provided in Sections 330, 366.1, 367, 368, 375, 376, 379.6, and 381 shall be applied based on the amount of electricity purchased from an electrical corporation or alternative supplier of electricity that delivers electricity through the distribution system of an electrical corporation.

(e) On or before April 1, 2015, and to the extent authorized by federal law, the commission shall, for a facility, do both of the following:

(1) (A) Require an electrical corporation to calculate the standby charge for a facility that is currently subject to a standby charge based on the facility’s standby demand. The standby demand shall be designated by the facility and remain at that level for a minimum of 12 months unless the electrical corporation determines that the standby demand needs to be adjusted to meet the actual demand.

(B) Upon an electrical corporation’s determination that the facility’s designated standby demand is too low and does not reflect the actual level of needed reserved capacity, over any 15 minute period or through onsite verification, the electrical corporation shall increase the standby demand to reflect the actual needed reserve capacity.

(C) Upon an electrical corporation’s determination that the facility’s designated standby demand is too high, over any 15 minute period or through onsite verification, the electrical corporation shall decrease the standby demand to reflect the actual needed reserve capacity.

(D) If the standby demand is adjusted by the electrical corporation, another adjustment in the standby demand shall not be made for 12 months from the adjustment.

(E) To the extent authorized by federal law, a facility shall notify the electrical corporation of permanent or material changes in the size, type, and operations of the facility for future adjustments to the standby demand.

(2) Require electrical corporations to implement the provisions of this subdivision through advice letters submitted prior to April 1, 2015.

(f) Any activities undertaken on a facility’s premises that reduce demand for an electrical corporation’s supplied electricity, such as energy efficiency, load reduction, or independent generation are not subject to charges assessed on electricity delivered from the electrical corporation’s distribution system or other charges of any kind that would increase the facility’s

costs beyond those of other customers in the rate class to which the facility would otherwise be assigned if the independent generation facility was not installed at the facility.

389.5.

Notwithstanding this article, facilities, at their sole discretion, may develop eligible energy generation projects authorized pursuant to Section 2827 or 2827.1 or through an electrical corporation's Generation Facility Interconnection Rule 21, as applicable and pursuant to applicable rules and tariffs.

SEC. 2.

No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.