BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Implementation and Administration of California Renewables Portfolio Standard Program.	Rulemaking 11-05-005 (Filed May 5, 2011)

CALIFORNIA SOLAR ENERGY INDUSTRIES ASSOCIATION COMMENTS TO SECTION 399.20 RULING, DATED JUNE 27, 2011

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Table of Contents

I. INTRODUCTION

The California Solar Energy Industries Association (CALSEIA) sponsored Senate Bill 32[1] (Chapter 328, Statutes of 2009) to create a simple mechanism for small renewable generators, including building owners, to sell power to an electric utility for a guaranteed purchase price under a long-term contract with predetermined terms and conditions: a feed-in tariff (FIT).

In October 2010, the Federal Energy Regulatory Commission clarified how California can implement a FIT program in a way that avoids conflict with federal laws and regulations. Specifically, FERC said "a proposal to employ a multi-tiered resource approach for determining avoided costs, which would set different levels of avoided costs and thus different avoided cost rate caps for different types of resources, could comply with the Public Utility Regulatory Policies Act and FERC regulations."[2]

In the future, Senate Bill 2 1X (Chapter 1 of the Statutes of 2011) will become law, deleting mention of the Market Price Referent as the starting point for setting FIT prices. Neither the FERC clarification nor SB 2 1X's enactment, however, impede the California Public Utilities Commission's ability to implement the first phase of a FIT program by the end of 2011, using the 2009 MRP price.

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[1] **http://leginfo.ca.gov/pub/09-10/bill/sen/sb_0001-0050/sb_32_bill_20091011_chaptered.pdf**, Section 1

[2] "FERC clarifies California feed-in tariff procedures," October 21, 2010, **http://www.ferc.gov/media/news-releases/2010/2010-4/10-21-10-E-2.asp**.

II. CALSEIA'S PROPOSAL FOR A PHASED IMPLEMENTATION OF SB 32

In March 2011, CALSEIA filed opening and reply briefs under Rulemaking 08-08-009, recommending a phased implementation of SB 32, starting with projects 1 MW or less.[3,4] CALSEIA requests that its March 2011 briefs be incorporated by reference into these comments.

As proposed, the first phase of the FIT would include the following elements:

Proposed Program Element	**Rationale**
Limit maximum, eligible project size to no larger than 1MW	Minimizes program overlap. The utility PV procurement programs are limited to projects great than 1MW and the CPUC's reverse auction mechanism (RAM) program does not facilitate participation by small project developers or building owners. By limiting projects to 1MW and below, the first phase will target a renewable energy market segment, which has little on-site load, but which is located within urban load centers.
Require projects to be completed within 12 months; no extensions.	Encourages timely, but careful project construction. Demonstrates FIT's effectiveness relative to other procurement approaches in realizing installed generating capacity in a short time. Discourages developers from submitting applications prematurely, before they are ready for permitting and construction.
Exclude existing projects from eligibility, new projects only.	Creates new business opportunities and local jobs. For solar projects, enables Commission to postpone decision on issue of refund of CSI rebates, etc.
Impose a seller-concentration cap: no more than 10 MW per developer (seller) per year, statewide	Ensures a more competitive market and more diverse participation in the program. A FIT for rooftop solar, for example, was intended for building owners and small project developers similar to the German FIT experience. These building owners and small solar businesses do not compete in RAM or utility RPS solicitations.

[3] **http://docs.cpuc.ca.gov/efile/BRIEF/132250.pdf**
[4] **http://docs.cpuc.ca.gov/efile/BRIEF/132555.pdf**

Proposed Program Element	Rationale
Ban project sale or assignment to another developer until after the project is completed.	Minimizes speculative applications and "queue squatting." Makes room for newcomers by eliminating companies' unviable projects.
Prohibit 'daisy chaining' by developers seeking to work around the 1 MW project-size limit.	Blocks developers who may try to split larger projects into smaller ones so they can participate in the program. Existing programs (such as RAM) are available for these larger project developers.
Limit projects to those interconnecting to a utility's distribution system only.	Encourages siting of the easiest-to-interconnect projects first. Projects using rooftop solar generators, for example, are unlikely to require transmission interconnection, which is more time-consuming and costly.
Use Rule 21 interconnection procedures	CALSEIA recommends that the utilities use, to the maximum extent possible, the Rule 21 procedures that are currently used for self-generation (net-metered) facilities. This Rule 21-use could be accomplished by a modification of the FERC Wholesale Distribution Access Tariffs (WDAT). Utilities should be instructed to quantify the ratepayer/utility benefits of any necessary upgrades to ensure that costs are shared appropriately between the developer and the utility/and or ratepayer, when applicable. Utilities should be required to disclose an itemized estimated interconnection costs to provide transparency on engineering, equipment, and labor costs. Providing this cost detail would enable project developers and the Commission to monitor these costs.
Only count FIT procurement for FIT compliance.	The FIT program is not a RAM and should not count toward utility DG procurement goals in RAM.

The ALJ's June 27, 2011 ruling did not consider a phased approach to implementing the FIT program. Instead, it only solicited comments on which aspects or issues of the FIT program might be postponed until the beginning of 2012.

CALSEIA strongly urges the Commission to consider CALSEIA's proposal to implement the FIT program in phases, starting with the smallest projects first and using the 2009 MPR as the base price. These first-phase projects would be installed on commercial and institutional buildings in urban areas (such as in transmission-constrained load pockets) and interconnected to an electric utility's distribution grid. These projects can be designed and built quickly, using the workforce and supply channels that have evolved under the California Solar Initiative (CSI) and Self Generation Incentive Programs. Furthermore, the database of solar PV projects receiving CSI incentives could be expanded to include FIT projects, thereby expanding public access to this world-class source of solar market information.[5]

Projects sized 1 MW or less can be permitted quickly in urban areas, since they only require building permits; they do not require local government land-use permits, which trigger the need for some level of environmental impact assessment. As shown in the graph below, most of the installed FIT projects in Germany are rooftop solar PV systems. CALSEIA learned from a German government official that one reason for this technology-and-location preference was because Germany has limited farm land and open space available for ground-mounted solar projects.

[5] This database is posted at **http://www.californiasolarstatistics.ca.gov/**.

Entwurf EEG-Erfahrungsbericht 2011 (Stand 3.5.2011)

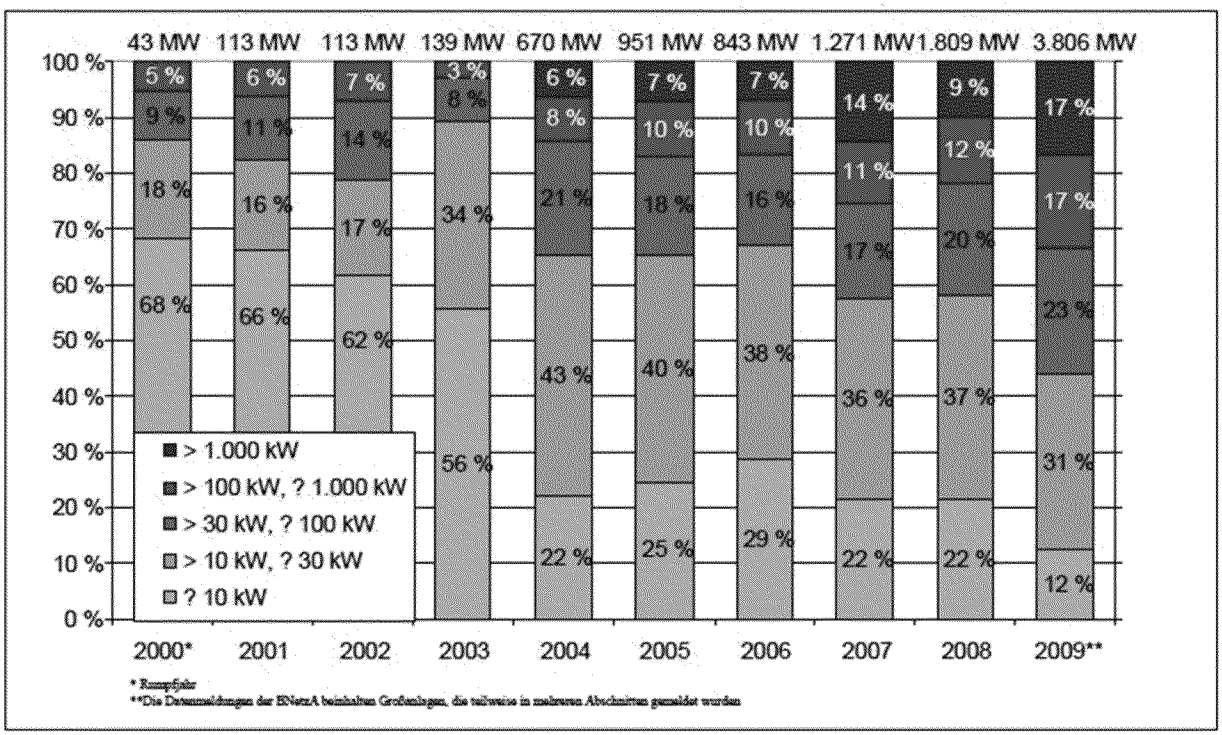

Abb. 3-15: Verteilung der seit 2000 jährlich installierten Leistung von Photovoltaikanlagen nach Anlagengrößenklassen.

In California, local planning agencies are crafting a model solar ordinance to expedite permitting of ground-mounted solar PV facilities by designating preferred sites. This effort, while important to California's large-scale solar industry, is still underway. Once completed, individual county governments must still conduct their own public processes before adopting some version of this model solar ordinance.

Despite on-going efforts to overcome local government permitting barriers, CALSEIA's members awarded 13 "excellent" grades to selected city and county building departments, based

on their familiarity with permitting solar PV systems.[6] These jurisdictions would be ideal locales for the first phase of FIT program implementation.

Lastly, these projects can be interconnected quickly, because they would tie into the utility's distribution grid under the expedited interconnection process called Rule 21. The Commission could enhance Rule 21 further so that it becomes the "expedited interconnection process" required by SB 32 for projects 1MW or less by removing the "screen" that makes a distinction between net-metered projects and projects that are intended for wholesale generation.

California's investor-owned utilities have already published on-line maps for distributed generation project developers, indicating approximate sites with available distribution-system capacity. These maps could be refined further to show the utilities' preferred sites for FIT-project interconnections.

The only outstanding question is whether commercial and institutional property owners are ready and willing to install renewable generation on their roofs or premises in exchange for a long-term, guaranteed revenue stream from the sale of electricity. Anecdotally, CALSEIA is aware of property owners, who manage millions of square feet of warehouse and triple-net-lease office space and who are simply waiting for the SB 32 FIT program to begin. In addition, school districts and local jurisdictions regard the FIT as a potential source of revenue, which would help fund their operations.

Funding for small-scale projects could come from local banks and credit unions, thereby creating additional local jobs and retained interest earnings within communities for use by others. In Germany, local banks were the primary source of funds for FIT projects after the government trained the banks' loan officers about the FIT program and solar technology.

[6] See CALSEIA members' list of "excellent" building departments at **http://calseia.org/local-permits.html**.

III. RESPONSES TO ISSUES RAISED IN RULING SETTING FORTH IMPLEMENTATION PROPOSAL FOR SB 32 AND SB 2 1X AMENDMENTS TO SECTION 399.20

Below are CALSEIA's responses to the issues raised in the ruling.

A. Definition of Market Price

CALSEIA requests the Commission define a market price for solar electric generation technology that is installed on commercial and institutional rooftops in urban areas (load centers) and sells electricity under 20-year contracts. The technology includes solar photovoltaic, but may also include solar thermal electric systems. In addition, CALSEIA requests that a separate market price be set for solar electric systems below 250 kW and one for systems between 250 KW to 1 MW. Setting a price for systems below 250 kW will expand the market for rooftop solar among building owners.

B. Continued Reliance on Market Price Referent

For purposes of implementing the first phase of the FIT in the service territories of California's investor-owned utilities, CALSEIA supports using the 2009 MPR, plus adders. Using the 2009 MPR would enable the Commission to implement the FIT quickly, rather than taking time to develop the "multi-tiered resource approach for determining avoided costs, which would set different levels of avoided costs and thus different avoided cost rate caps for different types of resources…" outlined by FERC. The drawback of using the 2009 MPR is that it is out of date. CALSEIA has no comment, however, on whether it should be updated for use in future phases of FIT implementation.

C. Technology-Specific Rates and Product-Specific Rates

CALSEIA supports setting FIT rates that acknowledge differences in the costs and benefits of different renewable technologies and energy products.

CALSEIA commissioned an economic analysis of the "value proposition" of rooftop solar photovoltaic systems to inform discussion of a suitable feed-in tariff price under SB 32.[7] A copy of this study is attached to these comments as Attachment A. The results of this analysis produced the following size-adjusted prices, which do not include a utility's time-of-delivery adjustments:

	Projects less than 250kW	Projects 250kW to 1MW	Greater than 1MW (for second phase)
PG&E (Except San Joaquin Valley, SJV)	$0.22/kWh	$0.17/kWh	$0.12/kWh
PG&E (San Joaquin Valley)	$0.22/kWh	$0.17/kWh	$0.12/kWh
SCE	$0.22/kWh	$0.17/kWh	$0.12/kWh
SDG&E	$0.22/kWh	$0.17/kWh	$0.12/kWh

CALSEIA recommends that the Commission use these prices – plus an adjustment to each utility's time of delivery – to implement the first phase of the feed-in tariff program for small-scale rooftop solar photovoltaic systems under 20-year contracts. These prices were based on the 2009 Market Price Referent plus environmental and other adders identified in the CALSEIA-commissioned report. Accepting these prices would enable FIT implementation to begin soon. The Commission should consider setting a special (that is, slightly higher) rate for building owners who are non-taxable entities, such as non-profit hospitals and government facilities. The special rate would be similar in concept to the higher incentive levels developed for non-taxable entities under the California Solar Initiative. This special rate is needed, because these entities do not benefit from federal tax credits, depreciation deductions, and other business expense deductions.

D. Market-Based Rate

CALSEIA does not support setting rates based upon competitive solicitations, such as the Reverse Auction Mechanism, because winning prices may be too low to support financeable projects and may not

[7] "Implementing the Feed-In Tariff for Small-Scale Solar Photovoltaics in California as Authorized by SB 32 (2009, Negrete-McLeod, D-Chino)," **http://calseia.org/wp-content/uploads/2010/05/pv-above-mpr-methodology-final-20100423.pdf**.

result in well-built installations. The FIT is a long-term contract, so installed systems must be built to last.

E. Rate Based on Power Purchase Agreements

CALSEIA does not support using RPS power purchase agreement prices to set FIT prices, because these prices are not publicly disclosed. Neither the utility nor the developer is willing to share this information; utilities do not want to disclose what they are willing to pay and developers do not want to inform their competitors how to bid in future solicitations. It is also important to note that developers with RPS contracts can return to the utility, asking to renegotiate higher prices. The Commission would be unwise to set the FIT's fixed prices on these moving targets.

CALSEIA recommends that the Commission not link FIT prices for rooftop solar systems with utility-scale solar photovoltaic contract prices. Utility-scale systems are too large to equate to small solar energy systems. Furthermore, economies of scale may not result in lower-cost projects. CALSEIA commends the Division of Ratepayer Advocates for its report comparing price trends for distributed solar generation with utility-scale solar generation.[8] This report found that prices for rooftop distributed solar generation were dropping, which utility-scale solar generation was increasing due to a number of factors.

F. Additional Pricing Questions

CALSEIA has no further comment on these questions at this time.

G. Ratepayer Indifference

CALSEIA has no further comment on this issue at this time.

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[8] *California's Solar PV Paradox: Declining California Solar Initiative Prices and Rising Investor Owned Utility Bid Prices*, Division of Ratepayer Advocates, October 2010, **http://www.dra.ca.gov/NR/rdonlyres/5A0E254D-47E0-4625-BACF-F1049CEAB924/0/ParadoxPaperFinal_v2.pdf**.

H. FERC Order 134

CALSEIA has no further comment on this matter at this time.

I. Compliance with SB 32

The Commission should adopt a schedule that provides for partial implementation by the end of 2011. CALSEIA recommends that the Commission initiate, if not complete, work on the following issues by the end of 2011 so that the first phase of FIT programs (for projects 1 MW or smaller) can begin construction by the start of 2012:

- 10-day internet posting requirement for new tariff requests
- Adjust program cap to 750 MW
- Contract termination provisions
- Coordination with publicly owned utilities
- Denial of tariff requests
- Determine price
- Eliminate retail customer requirement
- Eliminate separate tariffs
- [Implement] Exemption for small electric utilities
- [Establish process for] Expedited interconnection

CALSEIA recommends the Commission postpone work on the following issues until 2012:

- Refund of other incentives
- Yearly inspection and maintenance reports

J. Increase Size of Eligible Facility to 3 MW

CALSEIA has no comment on this issue at this time.

K. Proportional Share and Increased Program Cap to 750 MW

CALSEIA urges the Commission to decide by the end of 2011 how much of the 750 MW will be allocated to investor-owned utilities, relative to the state's publicly owned utilities, which

also have a share of the 750 MW allocation under SB 32 (that is, those serving 75,000 customers or more).

In its opening brief under Rulemaking 08-08-009, CALSEIA proposed the following allocation, based on each utility's contribution of the state's non-coincident peak demand in 2009:

	Number of Customers	Peak Demand MW (2009)	Percent of Non-Coincident %	Percent of Coincident %*	Proportion of 750 MW	MW Allocation (Rounded)
PG&E	n/a	19,773	32	33	246	250
SCE	n/a	20,899	34	35	260	260
SDG&E	n/a	4,487	7	7	56	60
LADWP	1,400,000	5,812	9	10	72	75
SMUD	592,490	3,039	5	5	38	40
Anaheim	175,004	559	1	1	7	10
Modesto ID	110,000	646	1	1	8	10
Riverside	106,000	588	1	1	7	10
Burbank	100,000	304	0	1	4	5
Turlock ID	99,453	553	1	1	7	10
Glendale	84,500	335	1	1	4	5
PG&E	n/a	19,773	32	33	246	250
SCE	n/a	20,899	34	35	260	260
SDG&E	n/a	4,487	7	7	56	60
Statewide non-coincident peak		61,841	94	96	720	750

*Percentage of coincident peak demand provided for comparison purposes only.

The drawbacks of this methodology are:

- The statute did not define which state "peak" demand to use: coincident or non-coincident.
- This methodology assumes that all renewable energy projects would be developed to displace the state's peak demand, whereas some renewable resources will supply off-peak energy.

L. Separate Tariffs

CALSEIA has no comment on the next steps to consolidate utilities' rate schedules into one FIT. CALSEIA would like to use this opportunity, however, to share an English translation of the German FIT application and contract, which is attached to these comments as Attachment B. This simple form could be a model for FIT implementation in California.

M. Retail Customer Requirement Eliminated

CALSEIA has no comment on this issue at this time.

N. Yearly Inspection and Maintenance Report

CALSEIA has no comment on this issue at this time.

O. 10-Day Reporting Requirement of Request for Service Under Tariff

CALSEIA supports expanded use of the CSI database for disclosing project information. The CSI program for commercial and multi-family solar PV installations was based on the German FIT, that is a performance-based incentive. The CSI database, therefore, would need little modification to include FIT rooftop solar projects.

P. Publicly Owned Electric Utilities

CALSEIA suggested MW allocations for the affected publicly owned utilities above.

Some POUs have already implemented or begun work to implement FITs. The experiences of these FIT program staff may be useful to designing and implementing the FIT in the IOU service territories.

Q. Utility Discretion to Deny Tariff

CALSEIA requests this issue be included within the first phase of FIT program implementation. In its Program Elements matrix, above, CALSEIA proposed rules that would exclude projects (for example, projects that have been "daisy chained.") These rules should be incorporated into the criteria used to deny tariffs.

R. Tariff or Contract Termination Provisions

CALSEIA has not comment on this issue.

S. Expedited Interconnection Procedures

CALSEIA believes the Commission needs to address this issue before the end of 2011, rather than in 2012. As stated above, implementing the FIT program in phases, starting with the smallest projects first, would result in quickly interconnected projects. This outcome is likely, because projects sized 1 MW or less would be required to interconnect to the utility's distribution grid and would be able to use Rule 21.

The Commission staff is already working on improving Rule 21 so that small-scale renewable projects are interconnected quickly and safely without affecting grid reliability.

T. Adjustments for Small Electric Utilities

CALSEIA has no further comment on this issue at this time.

U. Refunds of Other Incentives

CALSEIA agrees with the Commission that this issue can be postponed until 2012 (that is, after the Commission has implemented CALSEIA's proposed first phase of FIT.)

CALSEIA thanks the Commission for making SB 32's implementation a priority under this Renewables Portfolio Standard proceeding.

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Attachment A: Implementing the Feed-In Tariff for Small-Scale Solar Photovoltaics in California as Authorized by SB 32 (2009, Negrete-McLeod, D-Chico)

Attachment B: German Model Solar PV Contract