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SOLAR OFFSET PROGRAM PRE-RULEMAKING

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ABSTRACT

Public Resources Code Section 25405.5 Senate Bill 1 (Murray, Chapter 132, Statutes of 2006), requires the California Energy Commission to develop regulations to govern the requirements for alternatives to offering solar energy systems as an option for new production homes and to develop a solar offset program.

At its January 13, 2010 Business Meeting, the California Energy Commission approved an Order Instituting Rulemaking (Docket # 09-SOPR-1) to adopt guidelines, definitions, and other provisions necessary for the administration of the solar as an option and solar offset program. This rulemaking will develop and adopt regulations that are necessary to clarify ambiguities in the statute and create certainty and transparency in the administration of the program. The Renewables Committee will be overseeing this rulemaking process. The Renewables Committee consists of Vice Chair James D. Boyd, as Presiding Member, and Commissioner Robert Weisenmiller, as Associate Member.

The rulemaking process is divided into two phases: informal and formal. The informal phase presents issues and concerns that were raised with California Energy Commission staff and stakeholders. The informal phase is important because it provides an opportunity for the California Energy Commission staff and stakeholders to identify and resolve any issues with the regulatory concepts.

As part of the informal phase (pre-rulemaking process) California Energy Commission staff held meetings with interested stakeholders to begin to solicit comments. This paper presents the issues and possible alternatives under consideration, some of which were discussed during those meetings. This paper is being published to encourage all interested parties to help the Energy Commission identify issues and appropriate solutions for a successful "offer and offset" program.

The formal phase begins later with the posting of the Notice of Proposed Action and the Express Terms (Draft regulations) for a minimum 45-day public review and comment period. Associated documents (such as the Initial Statement of Reasons) are posted at the same time.

Keywords: Senate Bill 1, Solar Offset Program, Solar as an Option, Public Resources Code Section 25405.5, Rulemaking, Renewables Committee, solar photovoltaic, energy efficiency

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CHAPTER 1: Background

Senate Bill 1 (SB 1, Murray, Chapter 132, Statutes of 2006) is the codification of Governor Schwarzenegger's "Million Solar Roofs Initiative" and builds on the California Public Utilities Commission's California Solar Initiative (CSI) program, the California Energy Commission's New Solar Homes Partnership (NSHP), and existing publicly owned utility (POU) solar energy system incentive programs. SB 1 directs total expenditures of up to $3.3 billion by 2017 with goals to install solar energy systems with a generation capacity equivalent of 3,000 megawatts, to establish a self-sufficient solar industry so that in 10 years, solar energy systems are a viable mainstream option for homes and commercial buildings, and to put solar energy systems on 50 percent of new homes by the end of the program. The overall goal is to help build a self-sustaining solar electricity market combined with improved energy efficiency in the state's residential and non-residential buildings.

Three specific expectations established by SB 1 must be met for the ratepayer-funded incentives:

- High-quality solar energy systems with maximum system performance to promote the highest energy production per ratepayer dollar.
- Optimal system performance during peak demand periods.
- Appropriate energy efficiency improvements in the new and existing home or commercial structure where the solar energy system is installed.

To guide the state in developing a successful solar photovoltaic (PV) program that is consistent with the Governor's Million Solar Roofs Initiative, several principles were described in the *2005 Integrated Energy Policy Report* (IEPR). These principles include:

- Leveraging energy efficiency improvements should be a primary consideration in deploying PV systems. To participate in the PV program, new buildings should be required to exceed the current building standards, while existing buildings should be required to improve their efficiency. Combining energy efficiency measures with PV will ensure proper sizing of PV systems, contribute to the state's efficiency goals, and provide the maximum benefits to PV purchasers and electricity consumers.
- Rational targeting of PV deployment to achieve the greatest cost benefit should be a central feature of a large-scale solar program. Solar installations should be targeted to climate zones with high peak demands for air conditioning and where solar systems can provide the most benefit.
- Transitioning away from capacity-based incentives to performance-based incentives and integrating energy efficiency and time-of-use energy considerations should be a priority.

The *IEPR* also recognized the common policy vision of the loading order adopted by California's principal energy agencies in the *Energy Action Plan* and the *2003 IEPR*. The loading order establishes the following priority for the development of energy resources: 1) energy efficiency and demand response, 2) renewable energy resources and distributed generation, and 3) clean, fossil fuel, central-station generation. The Governor highlighted the importance of the Million Solar Roofs Initiative and the aggressive pursuit of all cost-effective energy efficiency, consistent with the loading order in his energy policy to the Legislature.

To meet all of these policy directives, the goal of the SB 1 incentive programs is to create a self-sustaining market for solar buildings using high levels of energy efficiency and high performing solar energy systems. Combining high levels of energy efficiency and high solar energy system performance maximizes the major SB 1 investments, helps reduce greenhouse gas emissions, and maximizes the value of solar industry's products and services to California ratepayers and consumers.

Public Resources Code Section 25405.5

Public Resources Code Section 25405.5, as enacted by Senate Bill 1, provides:

> (b) A seller of production homes shall offer a solar energy system option to all customers that enter into negotiations to purchase a new production home constructed on land for which an application for a tentative subdivision map has been deemed complete on or after January 1, 2011, and disclose the following:
>
> (1) The total installed cost of the solar energy system option.
> (2) The estimated cost savings associated with the solar energy system option, as determined by the commission pursuant to Chapter 8.8 (commencing with Section 25780) of Division 15.
>
> (c) The State Energy Resources Conservation and Development Commission shall develop an offset program that allows a developer or seller of production homes to forgo the offer requirement of this section on a project, by installing solar energy systems generating specified amounts of electricity on other projects, including, but not limited to, low-income housing, multifamily, commercial, industrial, and institutional developments. The amount of electricity required to be generated from solar energy systems used as an offset pursuant to this subdivision shall be equal to the amount of electricity generated by solar energy systems installed on a similarly sized project within that climate zone, assuming 20 percent of the prospective buyers would have installed solar energy systems.
>
> (d) The requirements of this section shall not operate as a substitute for the implementation of existing energy efficiency measures, and the requirements of this section shall not result in lower energy savings or lower energy efficiency levels than would otherwise be achieved by the full implementation of energy savings and energy efficiency standards established pursuant to Section 25402.

In preparing this staff paper, California Energy Commission staff held informal meetings with stakeholders to begin seeking input into the development of a comprehensive set of regulations governing the solar offset program. As a result of those meetings, numerous issues and concerns were discussed. The intent of this staff paper is to provide information to be used as a

starting point on various issues and possible resolution alternatives, and seek insights, comments and feedback on issues that need to be addressed.
The Energy Commission encourages interested parties to provide comments on all sections of this paper and to identify and discuss other issues that are not addressed. The Energy Commission will develop draft regulatory language where clarification or specificity is necessary, and will release the draft regulatory language for public review before initiating the formal phase of this rulemaking.

For the purposes of this paper, the following definitions shall apply:

"kW" means kilowatts or 1,000 watts, as measured from the alternating current side of the solar energy system inverter consistent with Section 223 of Title 15 of the United States Code.

"MW" means megawatts or 1,000,000 watts.

"Production home" means a single-family residence constructed as part of a development of at least 50 homes per project that is intended or offered for sale.

"Solar energy system" means a solar energy device that has the primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, that produces at least one kW, and not more than five megawatts, alternating current rated peak electricity, and that meets or exceeds the eligibility criteria established pursuant to Public Resources Code Section 25782.

CHAPTER 2: Solar as an Option

Pursuant to Public Resources Code Section 25405.5(b), "a seller of production homes shall offer a solar energy system option to all customers that enter into negotiations to purchase a new production home constructed on land for which an application for a tentative subdivision map has been deemed complete on or after January 1, 2011, and disclose the following:

> (1) The total installed cost of the solar energy system option.
> (2) The estimated cost savings associated with the solar energy system option, as determined by the commission pursuant to Chapter 8.8 (commencing with Section 25780) of Division 15."

Disclosing Solar as an Option to Prospective Home Buyer

The requirement to offer solar as an option should help achieve the SB 1 goals of 400 MW of solar on new homes by the end of the program period (end of 2016) and the installation of PV systems on 50 percent of all new homes. This will feed into the overall goal of 3,000 MW for all PV installed under SB 1. Currently, when a prospective home buyer is in the market to buy a home, a list of options is made available to them. These options may include particular carpeting, window coverings, kitchen counters, etc. The prospective home buyer is also informed how much each option will cost. To comply with the PV offer requirement mandated by Public Resources Code Section 25405.5, sellers will need to include solar PV in this list of options. Moreover, sellers will need to disclose certain information, as described in detail below, concerning the offer.

Proposed Offer Requirements:

The Energy Commission staff proposes that the seller disclose the following information when offering solar as an option:

- Total installed cost of the solar energy system.
- Estimated cost savings associated with the solar energy system option, as determined by the Energy Commission.
- Information about California solar energy system incentives.
- Refer potential home buyers to the Go Solar California website [http://www.gosolarcalfornia.org].

Discussion:

The Energy Commission is considering developing a brochure that explains the minimum disclosure requirements noted above and provides information about available incentives and the Go Solar California website. The seller would be encouraged to make such a brochure available to potential homebuyers as part of the solar as an option disclosure. This would provide the seller with a convenient method of complying with the offer requirement.

As noted, sellers offer a broad range of options to potential home buyers. Stakeholders confirmed that options are often sold at a high mark up and are a significant source of profit to the seller. According to some stakeholders, although solar is currently offered as an option by many sellers, only a few home buyers choose to have PV systems installed due to the purportedly high upfront costs. Further, some stakeholders are concerned that if the solar option is substantially marked up, the cost will steer potential home buyers away from this option.

Stakeholders also wanted to know if the option requirement would require the seller to offer solar energy systems on every single home in the development. Stakeholders noted that not all homes would be optimal locations for solar energy systems – such as homes with excessive shading, or homes with north facing roofs.

Proposed Reporting Requirements:

The Energy Commission currently keeps a record of all solar energy systems installed through state incentive programs. In order to keep this information up-to-date the seller will be required to report to the Energy Commission the aspects of the solar as an option program they are implementing specified below. Although the Energy Commission currently collects data from the NSHP program, this requirement will allow the Energy Commission to keep track of systems installed in POU territory. Additionally, this information will be useful in allowing the Energy Commission to gauge the impact of offering solar as an option on the overall deployment of solar energy in California. The seller of production homes will be responsible for reporting the following data to the Energy Commission on an annual basis:

- Subdivision location and community identified.
    - Number of homes in each subdivision.
    - Number of homes for which the solar as an option was offered.
    - Number of homes for which the solar as an option offer was taken.
- Size of solar energy system installed.
- Number/amount of incentives taken.
    - If incentive received, which incentive program (NSHP, POU).
    - Utility territory of development where offer was made.
- The total installed cost of the PV system to home buyer per AC watt (both offered and paid price).

Discussion:

It is imperative that the reporting process be thorough, yet not burdensome. Therefore staff has limited the proposed reporting requirements. The Energy Commission plans to develop a spreadsheet to be updated annually that will capture the collected data. This information will be posted on the Energy Commission's website here: [http://www.energy.ca.gov/sb1/index.html].

Proposed Effective Date for Offer Requirements:

California Public Resources Code Section 25405.5(b) provides: "a seller of production homes shall offer a solar energy system option to all customers that enter into negotiations to purchase a new production home constructed on land for which an application for a tentative subdivision map has been deemed complete on or after January 1, 2011 . . ."

Discussion:

Energy Commission staff is interested in comments regarding if the effective date as stated in Section 25405.5(b) presents any obstacles or if a firm date should be established.

Energy Commission Verification of Solar as an Option Offer

In order to understand if the PV installation goals of SB 1 are being met, it is important to know how solar as an option is helping to meet those goals. Energy Commission staff believe that a verification process can inform and help determine if future improvements to the program are warranted or if the program is working as intended.

Proposed:

The Energy Commission may annually review the solar as an option materials delivered to the prospective home buyer. A verification form could be developed that the seller would submit to the Energy Commission as proof of the solar as an option offer. This form could also require the developer to explain why they are not offering solar as an option.

Discussion:

The Energy Commission may require disclosure of information which is necessary to verify compliance. To verify that the seller has offered solar as an option to the home buyer, the Energy Commission may require the seller to submit a signed attestation stating that solar has been offered as an option to potential homebuyers interested in particular developments.

The Energy Commission could also explore the use of the Go Solar California website [http://www.gosolarcalifornia.org] to publish those developers that are "solar friendly." The Go Solar California website is a comprehensive hub of information regarding California's solar incentives. The site is an excellent communication platform to disseminate renewable energy information to consumers and stakeholders.

Energy Commission staff seek comment on these proposals for 'solar as an option' and welcome alternative suggestions.

CHAPTER 3: Solar Offset Program

Pursuant to Public Resources Code Section 25405.5(c), "the State Energy Resources Conservation and Development Commission shall develop an offset program that allows a developer or seller of production homes to forgo the offer requirement of this section on a project, by installing solar energy systems generating specified amounts of electricity on other projects, including, but not limited to, low-income housing, multifamily, commercial, industrial, and institutional developments. The amount of electricity required to be generated from solar energy systems used as an offset pursuant to this subdivision shall be equal to the amount of electricity generated by solar energy systems installed on a similarly sized project within that climate zone, assuming 20 percent of the prospective buyers would have installed solar energy systems."

Solar Offset System Design

Calculation tools already exist for PV systems under the current NSHP program that are appropriate for the solar offset program. It is prudent to use those same tools and keep consistency across the program.

Proposed:

The amount of electricity required to be generated at the offset location will be determined using the California Energy Commission PV (CECPV) calculation engine[1], which has been implemented by the NSHP program for estimating the expected energy production of flat plate photovoltaic modules. The Energy Commission will use the default installation characteristics from the California Flexible Installation option within the NSHP program as the base system for calculating expected energy.[2] Energy equivalency will be determined using the Time-Dependent Valuation (TDV) weighting of the expected hourly generation, which is consistent with the NSHP program and the Title 24 California Building Energy Efficiency Standards.

The base solar energy system will be comprised of modules/inverters that have been most commonly used in the NSHP program. All major system components must be new and must not have been previously placed in service in any other location or for any other application. System components must satisfy the eligibility requirements specified in the most recent approved edition of *Guidelines for California's Solar Electric Incentive Programs (Senate Bill 1)*.[3] Approved major components will be posted on the Energy Commission's lists of eligible equipment available at: [http://gosolarcalifornia.ca.gov/equipment/index.html].

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[1] The NSHP calculator, which is a specific implementation of the CECPV calculation engine, may be found here: http://www.gosolarcalifornia.org/nshpcalculator/index.html.

[2] This is an azimuth of 170 degrees, a tilt of 22.6 degrees (5/12 pitch roof), and minimal shading. Minimal shading is defined as no existing, planned or potential shading obstructions that are closer than a distance of twice the height that the obstruction extends above the nearest point on the array.

[3] Guidelines can be found here: http://www.energy.ca.gov/sb1/meetings/index.html

Staff referred to Public Resources Code Section 25405.5(a)(3) in order to establish the baseline "average solar system size." A solar energy system, "produces at least one kW, and not more than five megawatts, alternating current rated peak electricity." Determining an average solar energy system size is necessary in order to ascertain the amount of electricity required to be generated at the solar offset location. Staff reviewed data from CSI, the Emerging Renewable Program (ERP)[4] and NSHP programs to determine the median sized solar PV systems installed on a residence participating in these programs. The following data was collected in February 2010:

Table 1: Median PV System Sizes of Various Programs

Program	**Median Size Installed Residential Solar PV System**
California Solar Initiative	3.6 kW
Emerging Renewable Program	3.1 kW
New Solar Homes Partnership	Custom Homes: 4.45 kW Large Developments[5]: 1.86 kW

Based on the historical data noted above, a 2 kW solar energy system could be used as the baseline for determining the expected TDV weighted equivalent energy of the solar energy system for the offset location. This is consistent with the median size solar energy system installed on a residence in a large development that has participated in the NSHP program.

The developer/seller who elects the solar offset program option will need to notify the Energy Commission and will need to disclose the following information in order to determine an accurate expected TDV weighted equivalent energy calculation:

- System installation specifications and characteristics, including but not limited to: module make and quantity, inverter make and quantity, azimuth, tilt, and shading obstructions.

Proposed Reporting Requirements:

After the offset system has been installed, developers/sellers of production homes will be required to report the following data to the Energy Commission:

- Expected TDV weighted energy generation from the CECPV.
- Number of homes offset and location and community identified.
- Operational date of offset system.
- Number/amount of incentives taken.
    - If incentives received, which incentive program (CSI or POU).
    - Which utility company.

[4] The ERP program paid incentives for solar energy system installations from 1998 to 2007. The data noted is the median for solar energy systems installed during that time period.

[5] A Large Development is defined as six or more homes and where solar will be installed on at least 50 percent of the homes.

- Installed cost data for the offset system, broken into the following components: modules, inverter(s), permitting fees, and balance of system.

Discussion:

The Energy Commission will use the CECPV calculation engine to determine the expected TDV weighted energy generation at the offset location. CECPV is a detailed hourly calculation tool based on the 5-parameter model developed by the Solar Energy Laboratory at the University of Wisconsin. CECPV incorporates detailed inverter performance modeling and uses weather data from the 16 climate zones in California (as used by the Title 24 compliance calculations).

A Microsoft Excel interface to the calculation engine will be provided by the Energy Commission for download and will allow the user to select specific PV modules and inverters from a library of eligible equipment. The expected monthly kWh production and annual TDV weighted energy production for the specified system will be calculated.

There was also an exchange of ideas with stakeholders regarding the following questions:

- If the offset systems are installed on other buildings, will they also be required to be designed to address the electrical demand of that building? Commission staff does not recommend this extra complexity, but is interested in comments on this idea.
- If large, ground mount solar energy systems are eligible as the offset, what limitations, specification and rules are needed? Some stakeholders envision such systems as the best solution for their successful offset alternative.

An offset program will place solar energy systems on different buildings than the original homes or as ground mounted systems. The NSHP was designed to offer incentives for systems placed on new construction homes. Should developers be allowed to take advantage of incentives from the CSI program for systems placed on alternative buildings? Commission staff believes if an incentive is taken from the CSI program for an offset to the NSHP program, then 'double counting' occurs. A PV system should count in only one program or the goal of achieving 400 MW of PV on new homes and the overall goal of 3,000 MW for all PV installed under SB 1 is diminished. Staff seeks comments on whether PV installed as an offset to new homes should be eligible for an incentive, and if so, should that incentive come from CSI, NSHP or POUs. Commission staff will conduct further investigation of whether the NSHP can legally offer incentives under these circumstances. It is not clear if any incentives are available if the offset PV is ground mounted. Staff seeks comments from all stakeholders and the California Public Utilities Commission regarding this incentives issue.

Location of Offset System

The location of the offset system will affect how a calculation is made to determine the specifications of the offset system. Additionally, problems may arise if the offset system is located in a different utility territory than the homes the system is intending to offset.

Public Resources Code Section 25405.5(c), requires a technical determination of a, "similarly sized project within that climate zone."

Proposed:

The offset system will be located within the same utility territory as the offset housing development.

Discussion:

The Energy Commission could allow an offset system to be installed in another climate zone other than that of the housing development, however for tracking and verification purposes, the offset system should remain within the same utility territory as the housing development. When determining the calculation across climate zones, the Energy Commission will use the equivalent expected TDV weighted energy production. Using TDV will be consistent with NSHP and California Building Energy Efficiency Standards.

Some stakeholders stated that the intent of SB 1 was that an offset system would be placed within close proximity to the housing development so that the local community would benefit from the solar installation. Stakeholders also suggested that the use of virtual net metering[6], or a model similar to SMUD's "Solar Shares"[7] program, could be used. This would allow a large centralized PV system to be installed and have the electricity generated be credited to subscribing homeowners interested in solar, but were not given the option to install solar at the time of purchase of a new production home.

Energy Efficiency

Pursuant to Public Resources Code Section 25405.5(d), "the requirements of this section shall not operate as a substitute for the implementation of existing energy efficiency measures, and the requirements of this section shall not result in lower energy savings or lower energy efficiency levels than would otherwise be achieved by the full implementation of energy savings and energy efficiency standards established pursuant to Section 25402."

Proposed:

The Energy Commission places great importance on ensuring that residential buildings are as energy efficient as possible. Therefore, if the developer/seller elects to participate in the offset option they will be required to build homes that have at least 15 percent greater efficiency than

[6] In order for virtual net metering to be allowed by investor owned utilities action would be required by the California Public Utilities Commission. Similarly, each publicly owned electric utility (POU) would have to authorize the use of virtual net metering in their respective territories.

[7] http://www.smud.org/en/community-environment/solar/pages/solarshares.aspx.

the base level of the Building Energy Efficiency Standards (Title 24, Part 6) for the entire housing development.

Discussion:

California energy policy places great emphasis on energy efficiency because it is the most cost effective means to meet the state's energy and environmental needs. Energy efficiency measures will reduce the amount of energy a new home will need while maintaining comfort.

The Energy Commission has a long history of strongly supporting energy efficiency. In the *2005 Integrated Energy Policy Report*, the Energy Commission placed energy efficiency as the first priority in California's loading order. More recent goals from the Energy Commission include the target of zero-net-energy homes by 2020. The Energy Commission will continue to support expanding energy efficiency standards.

Diminishing energy savings achieved by solar energy systems installed at the offset location is not the intent of the solar offset program. This is consistent with the following provisions of Public Resources Code Section 25782(b)(1), (b)(2) and (b)(3) which state that,

> The commission shall establish conditions on ratepayer funded incentives that require all of the following:
>
> (1) Appropriate siting and high quality installation of the solar energy system by developing installation guidelines that maximize the performance of the system and prevent qualified systems from being inefficiently or inappropriately installed. The conditions established by the commission shall not impact housing designed or densities presently authorized by a city, county, or city and county. The goal of this paragraph is to achieve efficient installation of solar energy systems to promote the greatest energy production per ratepayer dollar.
> (2) Optimal solar energy system performance during periods of peak electricity demand.
> (3) Appropriate energy efficiency improvements in the new or existing home or commercial structure where the solar energy system is installed.

Stakeholders expressed mixed feelings on this subject. Some stakeholders had concerns that the Energy Commission lacks the authority to impose additional energy efficiency requirements, and where the requirements are applicable (development or offset location), and that applying additional energy efficiency requirements could stop the development of this program. Other stakeholders have advocated for implementing energy efficiency requirements and that the offset system be located near the development, which is consistent with the intent of SB 1.

Verification of Offset System Installation

Regardless of whether a PV system is installed on a home, on another building, or even as a ground mount system, verification of proper installation and expected energy production remain important.

Proposed:

Energy Commission proposes using existing verification and inspection procedures from NSHP.[8]

Discussion:

Verification of an installed solar energy system to be used for offset purposes is necessary to ensure that the system was installed on an alternative location in a manner that is likely to deliver the expected energy production used to establish the equivalent energy offset amount. Solar energy system installation, equipment and performance shall be verified by the installing contractor and a qualified Home Energy Rating System (HERS) rater.

Commission staff seeks ideas for verification rules that would apply to ground mount PV systems if such systems become an acceptable offset alternative.

Grandfathering

Developers have asked that systems they install on alternative buildings or as ground mount systems, in advance of adopted offset regulations, be allowed as offsets for home developments that fall under the requirement to offer solar on homes constructed on land for which a subdivision map plan was approved on or after January 1, 2011. They are also seeking to be able to use the offset alternative for subdivisions even in advance of that date.

Proposed:

The Energy Commission should consider developing regulations regarding grandfathering.

Discussion:

The statute does not authorize or prohibit grandfathering. Issues of ownership, location, system size, etc., need to be determined in a rulemaking proceeding before a proposed offset system would be grandfathered. Once these issues have been resolved, the Energy Commission may choose to give the regulations retroactive effect, thereby effectively grandfathering certain projects into the offset program.

Stakeholders raised questions that grandfathering would allow developers to receive credit for solar energy systems that already would have been installed without a development to offset. If such previously installed system received incentives, additional fairness and double counting issues arise. Commission staff seeks comments and solutions for these concerns.

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[8] See Appendix 2 of the New Solar Homes Partnership Guidebook
http://www.energy.ca.gov/renewables/06-NSHP-1/documents/index.html

Banking

Banking is similar to grandfathering, except that installation of 'banked' PV would happen after the regulations for offsets are adopted. It is typically thought of as the installation of large amounts of PV from which the developer would 'draw down' PV credits for use as offsets for homes in their individual or numerous developments.

Proposed:

Allow developers to install large solar energy systems and have that project count for multiple offset projects.

Discussion:

If banking is allowed, the Energy Commission will need to develop a tracking system and guidelines to monitor the deposits and withdrawals from this TDV weighted energy equivalency bank.

Stakeholders in favor of banking state that they would like to establish a bank as soon as possible so that projects could begin in the near future, and when the housing market improves solar energy systems might be installed on homes as well. Establishment of a bank will allow the building industry to better plan for future projects.

CHAPTER 4: Other Issues

Future Ordinances Requiring Solar

Many cities and counties adopt ordinances governing new construction designed to exceed state level requirements. Regulations adopted by the Energy Commission for the PV offset program should consider the interaction of such regulations with local ordinances.

Proposed:

The Energy Commission will include language in the solar offset regulations which will provide that any ordinance that requires the installation of solar energy systems will supersede the solar offset regulations.

Discussion:

Commission staff does not wish to take away the ability of local governments to establish appropriate construction ordinances. Staff seeks comments on how to best balance the goals of the offset program with the goals of local government construction ordinances.

Meeting Senate Bill 1 Solar Installation Goals

SB 1 has a goal to install solar energy systems with a generation capacity equivalent of 3,000 MW by the end of 2016.

Proposed:

The Energy Commission will gather solar offset program data from the CSI, NSHP and POU incentive programs on an annual basis.

Discussion:

If the developer/seller elects the solar offset program, and *does not* receive an incentive, the amount of kW/MW installed at the offset location will be added towards the 3,000 MW goal of the Million Solar Roofs Initiative. Currently the Energy Commission gathers solar PV distributed generation data on an annual basis from the CSI, NSHP and POU incentive programs[9]. The information gathered includes: megawatt goals and funding for the life of these incentive programs, incentives paid to date, and yearly progress of kW/MW installed. A new field could be added to this spreadsheet, titled, "Solar Offset Program" that will display the kW/MW installed at the offset locations.

[9] This data is located on the Energy Commission's website [http://www.energy.ca.gov/sb1/pou_reports/index.html]

If the developer/seller installs a solar energy system on an existing commercial building, they will be eligible (if they chose and qualify) to receive rebate incentives from the CSI or POU programs (dependent on utility territory). If the developer/seller *does* receive an incentive, the kW/MW numbers will be added towards the program that paid the incentive (either CSI or POU), and will be made available to the Energy Commission on an annual basis.

The Energy Commission could develop a regulation which provides that any home participating in the solar offset program must have 15 percent greater efficiency than the base level of the California Building Energy Efficiency Standards (Title 24, Part 6). This opens up the possibility that the kW/MW numbers of the installed offset system could count toward NSHP goals.

Next Steps

We encourage stakeholder input on any issues presented in this staff paper, or any other issues not discussed, in order to develop and adopt the most effective regulations for the solar offset program. The issues and discussion presented in this paper reflect staff views and do not obligate the Commission to adopt regulations that manifest these views.

Participants will have an opportunity to share their points of view at a workshop that will be held on May 20, 2010, at the following location:

California Energy Commission
1516 Ninth Street, Hearing Room A
Sacramento, California 95814

9:00 am to 12:00 pm

Because time is often limited in these forums, in addition to verbal participation, stakeholders are strongly encouraged to submit written comments to:

California Energy Commission
Docket No. 09-SOPR-1
Docket Unit, MS-4
1516 Ninth Street
Sacramento, California 95814-5512