BILL ANALYSIS

(Without Reference to File)

SENATE THIRD READING
SB 1 (Murray)
As Amended June 29, 2006
Majority vote

SENATE VOTE : 30-5

HOUSING (vote not relevant)
APPROPRIATIONS (vote not relevant)

UTILITIES & COMMERCE 6-1

Ayes:	Levine, Blakeslee, Baca, Cohn, De La Torre, Keene		
Nays:	Bogh		

SUMMARY : Makes statutory changes necessary to expand the scope of a California Solar Initiative (CSI), a solar program implemented by the California Public Utilities Commission (PUC), to apply to all electricity utilities; imposes specific requirements on PUC in implementing CSI; and, requires developers to provide the option of solar panels on new homes. Specifically, this bill :

1)Requires PUC in implementing CSI to:

a) Authorize the award of monetary incentives for eligible solar energy systems that must decline by an average of 7% per year until the rebate is zero in 2017;

b) Only award monetary incentives for up to the first one megawatt (MW) of electricity generated by an eligible solar energy system;

c) Adopt a performance based incentive (PBI) program by 2010, such that 100% of incentives for installations of

solar energy systems that are larger than 100 kilowatts (kW) are performance based incentives (PBI) and that at least 50% of the incentives for installations of solar energy systems that are between 30 kW and 100 kW are PBI;

d) Require reasonable and cost effective energy efficiency improvements in existing buildings as a condition of providing incentives for the installation of solar energy systems;

e) Require time-variant pricing for all ratepayers with a solar energy system;

f) Not impose any charge on natural gas ratepayers to fund CSI; and,

g) Impose any charge necessary to fund CSI on all electricity ratepayers expect for specifically defined low income ratepayers.

1)Allows the PUC to allocating no more that $50 million for solar research, development, and demonstration projects.

2)Provides that the PUC can spend no more than $100,800,000 on solar thermal and solar hot water projects.

3)Requires PUC to submit an annual report to the Legislature on the success of CSI which includes specific information on funds allocated for solar thermal projects and for research and development.

4)Requires the California Energy Commission (CEC) to develop eligibility criteria for solar energy systems that qualify for the rebates, including:

a) The solar energy generated by the system must be used to offset part or all of the customer's electricity demand;

b) The solar energy system must have at least a 10-year manufacturer's warranty; and,

c) The solar energy system must be located on the same premises of the end-use customer where that customer's electricity demand is located.

5)Raises the net metering cap from 0.5% to 2.5%.

6)Requires CEC to:

a) Provide educational materials and assistance to builders to help them understand how to integrate solar energy systems into new construction;

b) Conduct random audits of installed solar energy systems to evaluate their operational performance;

c) Evaluate the costs and benefits of having an increased number of solar energy systems as part of the electrical systems with respect to the solar energy systems' impact on distribution, transmission, and the supply of electricity; and,

d) Initiate a public proceeding to determine under what conditions a solar energy system shall be required on new buildings.

7)Requires municipal utilities to adopt a similar program with proportionate expenditures.

8)Caps the total cost of CSI statewide at $3,350,800,000.

9)Requires sellers of production homes, as defined, to offer solar energy systems on new homes for which tentative subdivision maps are completed on or after January 1, 2011.

10)Requires the State Contractors Licensing Board to review and, if needed, revise its licensing classifications to ensure that contractors authorized to install solar energy systems have the requisite qualifications.

EXISTING LAW :

1)Specifies the development of a public goods surcharge to fund energy efficiency; renewable energy; and, research, development, and demonstration programs from January 1, 2002, to January 1, 2012. The surcharge is a nonbypassable element of the local distribution service and is collected on the basis of usage.

2)Establishes a net metering program whereby residential and

other customers can receive credits to their monthly electricity bills for up to 12 months for producing and placing electricity on the grid via photovoltaic or other renewable generation as specified in statute. Larger net metering programs require the customer to calculate how much electricity has been placed and taken off the grid via customer generation in order to calculate the appropriate generation charge to credit and collect public goods charges.

3)Establishes incentive programs for photovoltaic technologies within the CEC and PUC. These programs offer varying degrees of incentive payments per kilowatt for residential or commercial customers purchasing certain types of renewable technology like photovoltaic cells.

4)Establishes tax exemptions for property taxes, interest on loans, or personal or corporate income tax credits for customers as a result of increasing energy efficiency or purchasing renewable technology like solar or wind.

5)Requires investor-owned utilities (IOUs) to increase their existing level of renewable resources by 1% of sales per year until a portfolio of 20% renewable resources is achieved by no later than 2017. PUC regulations have accelerated this goal to 20% by 2010. Municipal electric utilities are not subject to these standards, but are required to implement and enforce their own renewable resource procurement programs.

FISCAL EFFECT : Unknown

COMMENTS : In December 2005, PUC approved a decision that created CSI as a $3.2 billion solar program with the goal of installing 3,000 MW of solar power by 2017. CSI was similar to the Million Solar Roofs Initiative (MSRI) proposed in an earlier version of SB 1. Since the PUC jurisdiction is limited to IOUs and since certain aspects of the MSRI in SB 1 required specific statutory changes, CSI differs from MSRI in several key aspects:

	Million Solar Roofs Initiative (August 18, 2005 version)	California Solar Initiative
Costs	Caps total IOU costs at $1.8 billion. Anticipates that municipal utilities will contribute $700 million for a total cost of $2.5 billion.	Total funding for CSI will be $3.2 billion with no municipal utility contribution. There is no hard cost cap.
Builder's Mandate	Builders of new home projects of 50 or more homes, for which applications for tentative maps are completed after Jan. 1 2010, shall offer solar systems to all buyers.	No builder's mandate. This would require legislation.
Funding	Orders PUC to open a proceeding to determine how to fund the solar program. PUC then has authority to increase electricity rates to fund the program. The rate increase would apply to all customers including those that use less than 130% of baseline. The rate increase would not apply to CARE customers (income below 180% of poverty level) or FERA customers (families under 220% of poverty level).	Costs would be paid by electricity and natural gas customers. Contains exemption for CARE customers but not FERA. Will exempt customers whose use is below 130% of baseline. Legislation would be needed to change the rate structure.
Rebate Mechanism	Rebates starting at $2.80 per watt in 2007. ($5,600 per average residential unit) and decline by 7% per year until the rebate is $0 in 2015.	Declining rebate programs similar to MSRI. Will look into idea of increased rebates for new construction energy efficient homes.
Performance Based Incentives (PBI)	Requires that by 2010 at least 50% of all rebate money be used for performance based incentives.	Agencies will work on developing PBI. Incentives may be limited only to largest customers. Appears that PBI will only apply to retrofits and not new construction.
Rebates	At least 10% of the funds	Sets aside 10% of funding

for Affordable Housing	must be set aside for affordable housing.	for affordable housing.
Technologies Allowed	1)SB 1 only applies to solar systems that produce electricity. 2)Caps size of units to no larger than 1 MW.	1)Will also apply to solar heating and cooling systems. 2) Caps the size at 5 MW.
Municipal Utilities	Requires municipal utilities to adopt their own solar homes program consistent with the Million Solar Roofs program.	No requirements for municipal utility participation. Legislation would be needed to include municipal utility participation.
Net Metering Cap	Raises the current cap on net metering from 0.5% of total peak load to 2.5% of total peak load in each IOU's service territory.	Legislation would be needed to raise net metering cap.
Misc. Provisions	1)Requires CEC to annually report to the Legislature. 2)Requires PUC to create time-variant pricing tariffs for all customers.	1)No reporting requirements. Though annual evaluations will be conducted by third parties. 2)PUC will require time variant pricing for

	3)Requires new installation standards for solar panels.	commercial customers. Will study time variant pricing for residential customers. 3) No requirements for new installation standards.
Energy Efficiency	Requires CEC to develop standards for energy efficiency improvements on buildings where solar systems are installed.	1)Requires energy efficiency audits to receive solar incentive funding. 2) Requires new construction applications to participate in utility's energy commission programs.

Several necessary aspects of a successful statewide solar program cannot be implemented through PUC action and instead requires legislation. SB 1 now addresses several of these issues:

1)For solar panels to be economically feasible to the customers, they must be able to sell unused power back to the utility through a process know as net metering. Current law caps the amount of power that can be net metered in Pacific Gas and Electric's (PG&E) and Southern California Edison's (SCE) service territory to 0.5% of total peak load in the service territory and in San Diego Gas and Electric's service territory to 50 MW. However, the cap will be reached in PG&E's service territory this year and within the next two years for SCE's service territory. This bill raises the cap to 2.5%.

2)CSI does not apply to municipal utilities since PUC has no authority to require municipal utilities to implement a solar program. Since municipal utilities represent 27% of the total load served in California, a successful statewide solar program must include municipal utilities. PUC has tried to address this problem by imposing a surcharge on all IOU natural gas customers in the state to help fund CSI. All natural gas customers that pay the surcharge are then eligible

for solar rebate programs. Since most Californians who are customers of municipal electric utilities receive natural gas from the IOUs, this surcharge mechanism is a rough way of capturing municipal utility customers and creating a statewide solar program. The problem is that it results in ratepayers who receive both their natural gas and electricity from an IOU paying the surcharge twice and ratepayers who receive their electricity from a municipal utility and natural gas from an IOU only paying one surcharge even though all customers would be equally eligible for the same rebates. SB 1 now corrects this problem by requiring municipal utilities to implement their own solar programs consistent with the goals of SB 1 and eliminates the natural gas surcharge.

3)MSRI developed in the 2005 version of SB 1 a builder's mandate that required builders of new developments of 50 or more homes to offer the option of installing solar energy system to all buyers. PUC could not implement this provision, but it continues to be a provision of this bill.

CSI can be made better. There are multiple areas where further legislative action is not necessary to implement CSI but should be addressed to help guarantee that CSI reaches its goals of creating 3,000 MW of solar power in California and of creating a self-sustaining solar market. SB 1 now implements some of these provisions.

This bill requires that the rebates must decline over time and shall be zero by 2017, and codifies that a portion of the rebates shall be used for performance based incentives where rebates are only given for power that is actually produced. While PUC's CSI contains these provisions, some parties are concerned that it is too easy for PUC to change these provisions if prices for solar panels do not fall. Codifying these provisions will send a strong message to the solar industry that they must lower their costs.

This bill also requires that, as a condition of receiving solar rebates, building owners must make reasonable and cost-effective energy efficiency improvements in their existing buildings. CSI requires new buildings to meet certain energy efficiency standards but does not require existing structures to make needed upgrades. Requiring energy efficiency upgrades helps maximize overall ratepayer benefits from the solar program. Some parties have argued that requiring energy efficiency

upgrades would increase the overall project costs of installing a solar energy system and thus make it uneconomical in some cases. However, PUC has also required the IOUs to spend $2 billion on energy efficiency programs over the next three years, and these programs can be used in conjunction with the CSI funds to pay for needed energy efficiency upgrades.

The MSRIs also required CEC to develop design and installation standards for eligible solar energy systems to ensure that ratepayer money was only used to fund panels that were built and installed to maximize output. The PUC did not specifically address this issue in the CSI. SB 1 will require CEC to develop these standards.

The MSRI contained in SB 1 capped the total amount of ratepayer funds that could be used on a rebate program at $2.5 billion ($1.8 billion from IOU ratepayers, $700 million from municipal utilities). This cap was developed based on information provided to the Legislature from the solar industry and solar advocates on what was the maximum potential cost. The cap was intended as a means of signaling developers that they must lower their costs over time or the program funding would end and as a means of insuring that costs did not spiral out of control. PUC states that CSI will cost $3.2 billion. SB 1 now caps the statewide cost of the program at $3.2 billion.

Current law prohibits PUC from increasing rates for electricity usage below 130%. Consequently, in implementing the CSI, PUC was able to exempt low income ratepayers from the CSI surcharge, but could not impose the surcharge on the below 130% of baseline customers. This results in the costs of the program being shifted to larger residential customers and business customers. To avoid this cost shift, the committee may wish to consider amending the bill to restore the prior SB 1 language that required all ratepayers, excluding low income ratepayers, to fund CSI.

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