ANALYSIS

CALIFORNIA PUBLIC UTILITIES COMMISSION

SB 542 (Wiggins)
Solar and Energy Efficiency for Multi-tenant Residential and Commercial buildings
(As Amended April 2, 2009)

SUMMARY

This bill would require the CPUC to do the following five things:

(1) Develop and implement a cost-effective strategy to expand the participation of multi-tenant residential and commercial properties in ratepayer funded energy efficiency and solar energy programs by July 1, 2010.
(2) Prepare and submit a report to the Legislature on the program strategy by July 1, 2010.
(3) Ensure that the strategy developed and implemented does not result in any additional ratepayer surcharges and is funded through existing utility energy efficiency programs and the California Solar Initiative.
(4) Ensure that the strategy developed and implemented is cost effective for utility customers.
(5) Consider, in developing the strategy, whether synergies exist between its energy efficiency programs and the solar energy programs that can make energy efficiency and solar investments cost effective for utility customers in multi-unit residential or commercial rental properties.

CPUC POSITION AND SUPPORTING ARGUMENTS

Oppose Unless Amended. This bill is similar to SB 1460 (Wiggins, 2008) that the CPUC supported with amendments, most of which are included or reiterated here. Since last year, the Commission has made considerable progress in the energy efficiency strategic planning process and in the development of virtual net metering (VNM) for CSI. It is now clearer that this bill would complicate, not complement, an already active and complex landscape of demand side programs.

DIVISION ANALYSIS (Energy Division):

Multi-tenant properties face a number of challenges in deploying demand side management (DSM) technologies, including energy efficiency and solar distributed generation. SB 542 states that a considerable portion of the state's residential units (43%) are rental properties. Additionally, according to the Building Owners and Management Association, commercial building energy use accounts for up to 40% of all commercial energy consumption. The CPUC's development of a strategy to target solar and energy efficiency programs at multi-tenant residential and commercial properties may result in significant energy savings. The state has a long history of both solar and energy efficiency programs, and while multi-tenant properties are eligible for solar and EE programs, these properties face a well understood number of barriers to maximizing their effective participation.

The most commonly referred to barrier is the "split incentive" barrier where the landlord has little incentive to invest in upgrades that reduce energy consumption when the energy bill is paid for by the tenant, not the landlord. Commercial and residential tenants have little incentive to invest in improving energy efficiency or installing onsite generation since such capital improvements would be largely left with the owner when the tenant leaves. Likewise, owners have little incentive to spend more on capital improvements for energy efficiency or onsite generation, as the energy savings typically accrue to tenants who are individually metered and pay the energy bills. Building owners who are master metered may reap the benefits of capital improvements if they are willing to invest in them, yet in these cases incentives for tenants to actually conserve energy are minimized. Thus, there are numerous “split incentives” or even disincentives for the designers, builders, owners, and tenants. These are longstanding issues that are well known to demand-side program designers, who have been working on strategies to address them for more than 30 years. Addressing this problem is not nearly as simple as this proposed legislation appears to suggest.

(1) The CPUC is already pursuing multifamily property participation in both solar and energy efficiency programs, as well as synergies between the programs.

SB 542 would be more effective in explicitly supporting the implementation and integration of existing programs and efforts at the CPUC (described below) than in requiring the creation of a new, narrowly defined strategy with seemingly parallel priorities and reporting requirements.

Multi-tenant Energy Efficiency. The CPUC’s approach to energy efficiency encompasses multiple programs that are developed and implemented by the IOUs with CPUC oversight and approval. This bill refers to the CPUC’s “energy efficiency program,” without distinguishing them for their diversity and practical implementation of each. The IOUs currently offer energy efficiency programs targeting multi-tenant buildings. The CPUC currently requires the IOUs to submit portfolios of programs for Commission consideration, and the programs span a three-year time horizon. In the current 2006-09 EE programs utilities included a number of programs that serve multi-tenant residential and commercial buildings. These include the:

- "Direct Install" programs that install basic EE measures at no cost to existing small commercial customers, regardless of whether they are a stand-alone building or many small businesses in one building.
- A wide range of incentives that reduce the cost of energy efficient lighting and appliances are paid either to the manufacturers of these goods to sell them at lower prices in California, or to consumers and buildings owners at the time they purchase these measures.

For 2009-2011 the Commission already has authorized the utilities to spend approximately $300 million per year for low income EE programs that install a range of efficiency measures at no cost to the existing occupants. Multi-family dwellings are fully eligible to receive these services for eligible households meeting the income limits. A substantial number of those assisted are living in multi-family dwellings.
The IOUs are currently developing and seeking approval for their energy efficiency plans for the 2009-2011 program cycle. In CPUC Rulemaking (R.) 06-04-010, the CPUC is currently considering an integrated demand side management (IDSM) strategy to better coordinate the efforts of the IOUs’ energy efficiency, demand response and distributed generation programs, as part of the Statewide Strategic Plan. 2009-2011

program development. Decision (D.) 07-10-032 in that proceeding directed the CPUC "to develop a strategy to integrate energy efficiency offerings with demand response and renewable distributed generation solutions in order to determine the best combination of resources to meet a particular customer's needs. The CPUC is also directed by this bill to prepare a strategy to integrate consumer demand side programs in a manner that is cost effective and avoids confusion to customers." This combination of resources should also include integration supporting technologies such as smart meters, storage, and smart grid technologies. This bill, as written, would unnecessarily narrow the scope of that strategy and possibly add to implementation costs by arbitrarily setting deadlines.

Multi-tenant Solar. All multi-tenant properties are currently eligible for solar incentives under the existing California Solar Initiative (CSI). The program is not currently tracking which residential or commercial properties that have engaged in the program are multi-tenant facilities, but there is some participation by these facilities in both sectors. Furthermore, under the CSI program, ten percent of the budget is set aside for low-income programs, and half of that budget is specifically for the Multi-family Affordable Solar Housing (MASH) program. The MASH program has just started, and the Commission has created a new tariff referred to as "Virtual Net Metering (VNM)" to address some instances of the split incentive problem. In D.08-10-036 (p. 39-40), the Commission has already committed to consider whether virtual net metering is appropriate to be extended to other multi-tenant properties (other than those that go through the MASH program). The VNM model adopted in the CSI multifamily affordable housing program could become a model for solar on all (i.e. residential and commercial) multi-tenant buildings, however further work in the rulemaking is planned to consider the issue. Additionally, the VNM program only addresses the metering issue with respect to solar, it does not address cost-recovery for system investment, and that still needs to be worked out separately between the building owner and the tenant, in accordance with otherwise applicable tenancy laws.

Integrated Demand Side Management (IDSM) is a goal for the CPUC that involves all DSM programs, not just solar and energy efficiency. This bill unnecessarily limits the scope of the proposed strategy to energy efficiency and solar and pursuing "synergies" between those two programs. The CPUC is currently working to integrate the efforts of all of its demand side management programs. It would seem more appropriate if the program proposed in this bill would also seek to integrate the full array of the CPUC's demand side management programs such as other kinds of renewable distributed generation (wind, renewable fuel cells, biogas, etc.) and demand response. In addition, the CPUC has specifically asked the IOUs to develop an integrated audit tool to be used by the energy efficiency programs, but also made available to DG programs like the CSI and the DR program. Currently CPUC staff is reviewing the proposals from the IOUs on their integrated audit tool and program development. We recommend the bill be revised to include all demand side customer resources as described above, without limiting the ability of staff to develop more comprehensive approaches to IDSM, or creating redundant reporting requirements.

(2) The bill establishes an artificial deadline for preparing a strategy and reporting out to the legislature which is out of sync with the CPUC's timelines for energy efficiency strategic planning and solar program review.

This problem has been well understood for decades, and yet it has not been solved. It is unlikely that the Commission could develop a comprehensive solution to the problem and prepare a defensible report to the Legislature in such a short period of time. Rather, the legislature should seek to support the efforts already underway at the CPUC to address the issue.

This bill would require a strategy to be in place by July 1, 2010, which is six months after the date this bill could become effective (likely to be January 1, 2010). It is unrealistic to expect that the CPUC could develop and implement and report on a strategy on that time frame. We recommend the bill be revised to give the Commission at least 18 months from the effective date to consider enhancements to existing efficiency, solar, distributed generation, and demand response programs to garner greater participation by owners or occupants of multi-tenant buildings, and a subsequent 12 months before needing to report on the implementation of these enhancements.

Energy Efficiency. The Commission oversight of the utility energy efficiency portfolios occurs in three year cycles. The Commission undertook an energy efficiency strategic planning process prior to the 2009-2011 program plan filings. The utilities recently refilled their 2009-2011 energy efficiency program portfolio plans. The EE strategic plan already includes multi-tenant properties as an issue to address, and the EE portfolios proposed already address the strategic plan.

Solar. The Commission's oversight of the solar program is handled in an ongoing distributed generation rulemaking. The legislature requires the Commission to report on the program annually, commencing in June 2009. Separately, the Commission has stated its intention to review the program on a biennial basis, starting in 2009. The review cycle may be a more appropriate time to consider additional programmatic strategies aimed at multi-tenant building program participation.

Metering and Cost Recovery Mechanisms. Addressing the challenges of deploying energy efficiency and solar distributed generation in multi-tenant buildings will require addressing current metering regulations which complicate the appropriate allocation of energy efficiency and DG investment costs and benefits between tenants and building owners. There is a variety of different metering arrangements in commercial and residential multi-tenant developments in California, and a complex statute governing these. The CPUC needs to analyze further options for metering and submetering, including virtual net metering, to determine whether opportunities exist to support additional EE and solar deployment. Even if the metering challenges are addressed, the cost recovery of investments usually needs to be addressed separately.

A better approach for this bill may be to require the CPUC to report on the program, progress and the barriers to a more effective deployment of integrated demand side programs in multi-tenant buildings so that the legislature can focus on removing the barriers which are outside of the CPUC's jurisdiction. It is possible that the CPUC would have to return to the legislature with proposed legislative amendments in order to remove barriers to the metering challenges that hamper this sector. Allowing flexibility in timing and implementation of this bill is key to allowing the CPUC sufficient time to return to the legislature, if required.

Many local governments have rent control or rent policies that dictate the terms under which owners can pass along to tenants capital improvement costs. This greatly complicates the interest of owners to invest in building improvements when the owner does not pay the utility bills, and thus does not see a stream of utility cost savings from which to amortize capital improvements.

(3) The bill requires that the program it proposes be both cost-effective and "not result in any additional ratepayer surcharges" and is funded through existing utility energy efficiency programs and the California Solar Initiative.

Existing statute and Commission decisions on both solar and energy efficiency are extensively detailed in their policy parameters for funding for both policy areas. The Commission has a policy to only approve energy efficiency portfolios that are cost effective on a portfolio basis. The Commission does not hold each "strategy" within the energy efficiency plan or each program within the portfolio to the standard of cost-effective. Thus some of the efficiency programs currently offered are not cost-effective, and some of these may currently be serving multi-tenant residential and commercial building occupants. It is important that the CPUC retain its policy of having an overall-balanced and cost-effective portfolio of efficiency programs, without requiring that each individual program is cost-effective.

This provision can be problematic for distributed generation for several reasons:

- Some potential solutions to the multi-tenant building problem may not be cost effective at current market prices, especially for DG applications with their complex metering needs. Some programs targeting multi-tenant properties have been pursued by utility program administrators, with a range of cost-effectiveness. Multi-tenant building participation in DSM programs is a complex and potentially expensive problem, and the limits to "cost-effective" programs are neither helpful nor realistic.

- Spending on the CSI program is capped per SB 1 (Murray, 2006), and therefore program expenditures required for the strategy proposed in this bill would necessarily require reduced spending on other solar program elements.

- There may be new costs associated with addressing the multi-tenant problem, for example, it is not yet clear how much the Commission's authorization of Virtual Net Metering will cost the utilities for implementation. The legislation unnecessarily binds the hands of the Commission to not authorize anything that would raise costs.

PROGRAM BACKGROUND:

Distributed Generation Programs

- **California Solar Initiative (CSI)** - The CSI has a goal of installing 3,000 MW of distributed solar by 2017. The CSI provides both upfront and performance-based incentives for solar systems that are sized to offset customer load, and eligible for net energy metering (NEM).

- **The Self Generation Incentive Program (SGIP**), was established in 2001 and is one of the largest DG incentive programs in the United States, with approximately 1,200 projects totaling 300MW on-line at the end of 2007. This program would be left out of the integration proposed in this bill.

Although the CSI has not tracked data specific to multi-tenant buildings, anecdotally staff knows that some solar systems have been installed on multi-tenant buildings. In some cases, multi-tenant buildings have put in separately metered systems on one facility. Building owners may need to recoup solar system investment costs from their tenants using a side agreement since the tenant usually pays for the electricity bill.

- **Demand Response**

The CPUC has oversight over demand response programs, and these programs are also considered demand side programs, though as written, the bill would also leave out these programs.

- **Energy Efficiency**

The California Long Term Energy Efficiency Strategic Plan adopted by the PUC in D.07-10-032, directs the utilities to provide integrated program offerings that integrate the full range of demand-side management options including energy efficiency, demand response, and distributed generation which are fundamental to achieving California's strategic energy goals.

- **Sub-Metering**

On September 6, 2007, the CPUC adopted a decision (D.07-09-004) allowing sub-metering of electricity in high-rise, multi tenant commercial buildings. While the decision will offer commercial building tenants a tool to improve their energy efficiency, the scope of the decision is limited in that it applies only to Pacific Gas & Electric's service territory and only to certain commercial buildings. The new rule was a result of an agreement between PG&E and the BOMA. Virtual Net Metering is proposed for the MASH program but has yet to be implemented or its costs fully estimated.

LEGISLATIVE HISTORY:

This bill is similar to SB 1460 (Wiggins, 2008) that the CPUC supported with amendments, most of which are included or reiterated here.

STATUS: Scheduled to be heard in Senate Committee on Appropriations on May 18, 2009.

STAFF CONTACTS:

Alicia Priego, OGA (916) 322-8858 arp@cpuc.ca.gov

Date: May 13, 2009