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SENATE ENERGY, UTILITIES AND COMMUNICATIONS COMMITTEE
ALEX PADILLA, CHAIR

SBX1 2 - Simitian	Hearing Date: February 15, 2011	S
As Introduced: February 1, 2011	FISCAL	B
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DESCRIPTION

Current law requires investor-owned utilities (IOUs) and energy service providers (ESPs) to increase existing purchases of renewable energy by 1% of sales per year such that 20% of retail sales, as measured by usage, are procured from eligible renewable resources by December 31, 2010. This is known as the Renewables Portfolio Standard (RPS).

Current law exempts local publicly owned utilities (POUs) from the state RPS program and instead directs these utilities to implement and enforce their own renewable energy purchase programs that recognize the intent of the Legislature to encourage increasing use of renewable resources.

Governor's Executive Orders establish a target of 33% of retail sales from renewable energy by 2020 and direct the California Air Resources Board (CARB) to adopt a regulation by July 2010 requiring the state's load-serving entities to reach that target.

This bill requires IOUs, POUs, and ESPs to increase purchases of renewable energy such that at least 33% of retail sales are procured from renewable energy resources by December 31, 2020. In the interim each entity would be required to procure an average of 20% of renewable energy for the period of January 1, 2011 through December 31, 2013; 25% by December 31, 2016, and 33% by 2020.

Current law requires renewable resources to be generated in, or delivered to, the California grid.

This bill grandfathers all contracts consummated by an IOU, ESP, or POU prior to June 1, 2010. Going forward all contracts for an electricity product would be required to meet the requirements of a "loading order" that mandates minimum and maximum quantities of three product categories (or "buckets") which includes renewable resources directly connected to a California balancing authority or provided in real time without substitution from another energy source, energy not connected or delivered in real time yet still delivering electricity, and unbundled renewable energy credits.

Current law requires the CPUC to develop, by rulemaking, a procurement process for renewable resources by IOUs which includes the determination of a benchmark for the market price (market price referent or MPR) for energy against which renewable contracts are evaluated for reasonableness in price. If the cumulative costs of those contracts exceeds specified thresholds then the IOU's RPS purchase mandate is waived (aka cost cap).

This bill requires the CPUC to adopt a process for the rank order and selection of RPS projects for the least-cost and best-fit which takes into account the indirect costs of transmission and the firming and shaping of intermittent resources, the cost of resources, and the viability of projects for the IOUs. The CPUC is also required to adopt a limitation on the costs for procurement expenditures to prevent disproportionate rate impacts based on certain factors. If an IOU hits the cost limitation, the IOU can suspend procurement unless procurement can proceed without exceeding a de minimus increase in rates.

This bill allows IOUs and ESPs to apply excess generation from any compliance period to a subsequent compliance period if the generation source is from contracts of more than 10 year's duration, not including unbundled RECs. This is commonly referred to as banking.

This bill permits IOUs to apply to the CPUC to construct, own, and operate generation up to 8.25% of the IOU's retail sales projected for 2020.

This bill directs the CPUC to impose penalties on IOUs and ESPs for failure to meet the targets and to waive those penalties in specified instances where the IOUs or ESPs demonstrate specified factors have affected development of renewable generation including transmission and project delays beyond its control.

This bill authorizes the California Energy Commission (CEC) to issue a notice for failure to comply with the RPS by a POU and, if not corrected, refer the failure to comply to CARB which would be authorized to assess fines. Fines would remain with CARB and, upon appropriation by the Legislature, be used for reducing emissions of air pollution or greenhouse gases in the territory of the POU from which the fine was collected.

This bill requires the Department of Fish & Game to establish an internal division with the primary purpose of performing comprehensive planning and environment compliance services for renewable generation projects.

This bill requires the CPUC to issue a decision on applications for transmission projects within 18 months of the date of filing a completed application.

This bill directs the CEC to study run of river, out-of-country, hydroelectric generating facilities in British Columbia relative to the definition of eligible renewable electrical generation facilities.

BACKGROUND

RPS Purpose & Program – In 2002 the California State Legislature adopted groundbreaking legislation (SB 1078, Sher) to require the state's investor-owned utilities (e.g. Pacific Gas & Electric, Southern California Edison, San Diego Gas and Electric Company, collectively referred to as IOUs) and the private companies that compete with the utilities (ESPs) to increase their annual purchases of electricity from renewable resources by at least 1% per year so that 20% of their sales would come from renewable sources by 2017. In 2006 legislation accelerated the 20% requirement to the end of 2010 (SB 107, Simitian). Flexible compliance provisions of the program can extend the deadline to 2013. Publicly owned utilities (POUs) were called upon in those bills to implement and enforce an RPS program that "recognizes the intent of the Legislature to encourage renewable resources, while taking into consideration the effect of the standard on rates, reliability, and financial resources and the goal of environmental improvement."

Although many now view the RPS program as one designed to reduce greenhouse gas (GHG) emissions, in fact the program was developed on the heels of state's electricity crisis which was in part due to the volatility of natural gas markets. The statutory intent of the RPS is stated as:

> Increasing California's reliance on eligible renewable energy resources may promote stable electricity prices, protect public health, improve environmental quality, stimulate sustainable economic development, create new employment opportunities, and reduce reliance on imported fuels. (Public Utilities Code Section 399.11[b])

The statute does not reference greenhouse gases (GHG). However since the initial adoption of the RPS program, the necessity of bringing more renewable resources to the grid has been heightened as a result of the mandate that the state reduce its GHG emissions to 1990 levels by 2020 (AB 32, Nunez/Pavley, 2006).

The RPS program was not intended to require renewable energy purchases irrespective of cost. Each contract for the development and purchase of renewable energy is submitted to the CPUC for review. Any contract below the market price referent, or MPR, (an annual calculation of the cost of developing a combined cycle natural gas plant) of is deemed per se reasonable. Any contract above the MPR is submitted to a procurement review group to consider the reasonableness of costs. To address the overall costs of the RPS, an above-market cost cap was determined for each IOU. If the IOUs costs reached that cap in any given year, then the requirement for additional renewable energy purchases at above-market costs was waived. The cost cap was triggered but the IOUs continue to pursue renewable contracts to meet the RPS goals.

IOU Progress – Since the RPS statute took effect in 2003, renewable capacity has steadily increased each year with a total of 1,702 MW of new renewable capacity coming online through 2010. With that new generation, California's three largest IOUs collectively served 15% of 2009 retail electricity sales with renewable power. The IOUs, which provide service to about three-fourths of California utility customers, report the following individual RPS percentages through 2009:

- Pacific Gas and Electric (PG&E) 14.4%
- Southern California Edison (SCE) 17.4%
- San Diego Gas & Electric (SDG&E) 10.5%.

Progress reports for 2010 will be available by March and are expected to show that the IOUs are collectively at approximately 18% and are expected to achieve the 20% RPS in the 2011-2012 timeframe.

The IOUs are also seeing strong interest from renewable generators in California's market and from larger and more experienced developers. Bids received by the IOUs for new generation hit a record in 2009 bringing in potential contracts for more than half of the total generation needed to meet a 33% target in 2020. The CPUC has approved contracts submitted by IOUs for more than 16,000 megawatts of renewable generation. Coupled with the contracts the IOUs have pending CPUC approval and under negotiation, the IOUs have enough generation under contract to exceed the 33%

goal by 25%. However, contracting continues due to anticipated challenges of bringing all of that generation online.

POU Progress – California has 46 local publicly owned utilities (POUs) which include municipal utilities, irrigation districts and joint powers authorities. They collectively serve approximately 25% of California's retail electrical load.

The POU's RPS requirement has been interpreted differently by the CEC and the POUs. The CEC reports that the POUs are required to "implement a Renewables Portfolio Standard, but are given flexibility in developing utility-specific targets, timelines, and resource eligibility rules." Most POUs have adopted an RPS target of 20% but the dates for achieving that goal varies greatly starting in 2010 for some and going out as far as 2020 for others. Some POUs (14) have already adopted a 33% (or more) by 2020 target.

The POUs are required to annually report to the CEC the progress made in establishing and meeting RPS goals and the resource mix used to serve customers. Compliance data through 2009 and reported by the CEC in November 2010 show that the POU's RPS deliveries range from zero to 61%. *Collectively* that data appears to show:

Northern California Power Authority	20%
Sacramento Municipal Utility District	21%
L.A. Department of Water & Power	14%
Southern California Power Authority	2% - 20%

Transmission – Historically, electric generation sources could be located reasonably close to the load that generation was intended to serve which reduced the number of transmission lines needed. However transmission planning had to reverse course to accommodate the addition of significant renewable resources due to the fact that they are generally location constrained by the availability of the power source (e.g. where the wind blows and the sun shines). They are often far from the transmission grid and load centers, requiring extensive transmission upgrades. Consequently transmission has been seen as a major barrier to achieving the RPS goals.

Approximately three years ago the ISO opined that five to seven major transmission lines (on par with Sunrise) would be needed to meet the 33% RPS goal. It's a good thing transmission takes so long to build because in December 2010 the ISO board received a staff report advising the board that the ISO would likely not need any additional transmission over the projects that the ISO has already approved and identified to reach 33%. Those projects have not necessarily been constructed or approved by the CPUC but are in varying phases of approvals and construction.

What changed? The ISO says that the prior opinion of five to seven lines had no rigorous analysis behind it and there were no concrete compliance or power purchase agreements (PPAs) upon which to base their evaluation. Additionally, energy efficiency, distributed generation and the lagging economy have reduced retail electric sales which has reduced the amount of renewable resources required to comply with the RPS law.

Most of the transmission projects should be on line in the 2012 to 2017 time frame. The majority would or are being built by Edison, the lines are heavily concentrated in the Mojave and Colorado Desert regions of Southern California, and align with PPAs in the same region. To the extent those

PPAs fall through and/or extensive new generation is attempted outside of this region (e.g. San Joaquin Valley) the transmission plan would need revision and the result could be stranded assets.

CARB Regulation – After the veto of SB 14 (Simitian) in 2009, Governor Schwarzenegger issued an executive order (S-21-09) directing the CARB to work with the CPUC, ISO and the CEC to adopt regulations increasing California's RPS to 33% by 2020. The CARB was directed to adopt these regulations by July 31, 2010.

Prior legislation to increase the RPS goal to 33% by 2020 has had no formal opposition to that target. However, most stakeholders and agencies are frustrated by CARB's efforts. Not only does the CARB lack the authority and budget to do this work but the addition of another regulatory agency to oversee renewable progress and regulation is duplicative and inefficient for all parties. Additionally, many opine that regulations do not provide sufficient market certainty for the renewable energy industry to pursue investment with any confidence.

Nevertheless the CARB adopted regulations to impose the "Renewable Energy Standard" at its September 23, 2010 Board meeting and the Board directed its staff to do further work on the regulatory package before submitting the package to the Office of Administrative Law (OAL). That work continues and the regulations have yet to be submitted to the OAL.

COMMENTS

1) Déjà Vu – Legislation to increase the RPS goals to 33% has been attempted in each of the last two sessions. There has been little or no debate about the goal, but there has been great controversy over how to get there and from where the generation should be secured.

   The prior year, 2009, Governor Schwarzenegger vetoed SB 14 (Simitian) which also established an RPS goal of 33%. The basis of the veto concerned the delivery of renewable generation from out-of-state sources which has been addressed in the current measure (and SB 722 in 2010) by instead using a loading order for renewable generation along with other conforming and program changes to ensure a smooth transition to 33% in a cost-effective manner.

   The author has attempted to address the concerns of all parties to ensure a cost-effective and successful program and opines that this bill provides a clear statutory directive and pathway for private and public utilities to reach 33% renewable energy use, facilitate the acquisition of that energy, and provides the flexibility necessary to acquire that energy in the coming decade. Additionally it provides a clear signal to financial markets of the importance and need for renewable projects in the state.

2) Renewable Loading Order – In 2009 SB 14 (Simitian) was vetoed principally over perceptions that the bill imposed excessively strict limits on in-state renewable energy versus out-of-state energy that could be counted towards the RPS. In 2010 both proponents and opponents of SB 14 worked together to revise the core provisions of the bill to address the delivery issues. This bill (and SB 722) reflects that work. In place of delivery requirements this bill establishes a renewable procurement "loading order" that mandates minimum and maximum quantities of certain products (electricity) that can be used in future contracts to meet the RPS requirements. There is no specific requirement that procurement

be from generation in California. Instead, it establishes procurement requirements for three product categories (or "buckets") as follows:

> Bucket #1 – Energy from generators either (1) directly connected to a California balancing authority (CBA), or, (2) connected to another balancing authority and providing power to a CBA via dynamic transfers or by scheduling power from the facility into a CBA on an hourly basis. The most important fact about this product category is that CBAs, like the CAISO and LADWP, have many interconnection points outside of California. Compliance targets require at least 50% of the generation to meet this category through 2013; 65% through 2016, and 75% thereafter.
>
> Bucket #2 – Unbundled RECs from generators not directly connected to a CBA. Retail sellers and POUs can secure no more than 25% through 2013; 15% through 2016, and 10% thereafter.
>
> Bucket #3 – Energy not directly connected to a California Balancing Authority or delivered in real time yet still providing electricity to the state. If unbundled RECs from Bucket #2 are not used then as much as 50% of generation can fill this bucket through 2013; 35% through 2016 and 25% thereafter. If Bucket #2 is full then the remaining generation needed to comply with the RPS could be applied to the criteria in this bucket.

3) Remaining Concerns – The opposition received by the committee have expressed broad concerns about the costs to comply with the programs and perceived barriers to compliance for ESPs. Three entities have expressed concerns about specific provisions of the bill as indicated below.

Pacific Gas & Electric. The utility has three primary concerns. First, the bill allows utilities to carry forward excess generation in one compliance period to the next but only if that generation was secured from generation sources with which the utility has a contract of ten years or more in length (banking). PG&E argues that the contracts should only be five years. Second, the utility argues that Buckets 2 and 3 should be merged into one bucket.

Finally, they argue that the bill requires the CPUC to set procurement goals within each of the three compliance periods which is onerous. Their argument may be valid. Current law set a one-time goal of 20% by 2010 with flexible compliance out to 2013. However the utilities were also required to increase renewable generation equal to one percent of retail sales each year. This bill eliminates the annual goal and replaces it with the three compliance windows of an average of 20% between 2011 and 2013, 25% by 2016 and 33% by 2020. The compliance periods were intended to reflect the realities of electricity procurement which does not come online in regular intervals, tends to be lumpy and to come online in chunks when new generation is interconnected. Given that the utilities must show progress toward 33% during each of the three compliance periods, the need for the CPUC to set interim goals within each compliance period is not apparent and not reflective of the procurement process.

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California Municipal Utilities Association. This bill would mandate RPS compliance, in detail, on the POUs for the first time. The POUs were called upon in 2002 to adopt RPS goals which reflected the program adopted by the Legislature for retail sellers. Most POUs then adopted a goal of 20% by 2017 as originally called for. However, when the Legislature moved up the 2017 deadline to 2010, some municipal utilities did not follow and retained their 2017 goals.

The POUs are now arguing that the mandates of the first compliance period (an average of 20% renewables between 2011 and 2013) is too onerous. Instead they have requested amendments to extend the deadline and establish a flat mandate of 20% by 2014 in lieu of the first compliance period. They do not ask for modification of the second two compliance deadlines.

They also argue that POUs which have met the 20% goal before 2011 should be allowed to carry-forward their generation from prior years to meet the goals of future years (banking). This bill does allow for banking but only but it is limited to generation between compliance periods and does not permit banking of generation earned prior to January 1, 2011.

Energy Service Providers. The intent of this bill is that all entities that sell electricity to California customers should be required to follow similar procurement requirements. Since deregulation of the electricity market in 1996 a certain number of businesses have procured electricity on the wholesale market and delivered that power directly to wholesale customers such as Safeway. They generally operate on short-term contracts (6 to 12 months in duration) and argue that they have limited access to renewable development which is largely tied-up in long-term commitments and therefore restricts their access to renewables.

These opponents have three issues with this bill: (1) the bill grandfathers existing RPS contracts going back to June 1, 2010 but should be extended for ESPs to January 13, 2011. (2) They want to apply previously generated renewables (prior to January 1, 2011) to future years (banking) as requested by the POUs. And, (3) they are opposed to the loading order established by the bill (see comment #2 above).

4) <u>Technical Amendments</u> – Two areas are in need of technical amendments.

   a) *Deadlines for agency compliance*. This bill is largely a reintroduction of SB 722 (Simitian) from 2010. Deadlines established under SB 722 for agencies to comply with the bill's requirements (e.g. CPUC & CEC) were carried over to this bill and should be extended to allow those agencies sufficient time to adopt the rules required for implementation.

   b) *Rate calculation for feed-in-tariff (FIT)*. In 2009, the Legislature adopted SB 32 (Negrete-McLeod) which required the CPUC to increase the 1.5 megawatt FIT to three megawatts and also modified the contract payment calculation which was the MPR. This bill deletes the code sections which specify how the MPR is calculated. The author has attempted to incorporate a new definition of the MPR into this bill but in doing so has inadvertently changed the basis of the calculation of the contract

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payment. This bill should be amended to ensure that the payment basis adopted by the Legislature in SB 32 is maintained.

5) Similar Legislation – This bill is identical to SB 23 (Simitian) introduced in the current, regular, legislative session.

6) Prior Legislation – Prior bills to set an RPS goal of 33% by 2020 include:

- SB 722 (Simitian, 2010), died on Senate Floor the last day of session.
- SB 14 (Simitian, 2009), vetoed.
- SB 411 (Simitian, 2007), held in Assembly.

POSITIONS

Sponsor:

Authors

Support:

American Federation of State, County and Municipal Employees
American Lung Association
American Wind Energy Association
Apollo Alliance
Breathe California
BrightSource Energy
California Center for Sustainable Energy
California Interfaith Power & Light
California League of Conservation Voters
California Wind Energy Association
Catholic Charities, Diocese of Stockton
City of Santa Clara
Clean Power Campaign
Coalition for Clean Air
Division of Ratepayer Advocates
Element Power
Environmental Entrepreneurs
enXco
First Solar
FuelCell Energy
GE Energy
Horizon Wind Energy
Iberdrola Renewables
Independent Energy Producers
Large-scale Solar Association
Natural Resources Defense Council
NextEra Energy Resources
Northern California Power Agency

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Support: (continued)

Oak Creek Energy Systems Inc.
Ormat Technologies
Power Company of Wyoming LLC
San Joaquin Valley Regional Green Jobs Coalition
Schott Solar
Solar Millennium
SunPower
Terra-Gen Power
The Solar Alliance
The Utility Reform Network
The Vote Solar Initiative
Union of Concerned Scientists
Vestas-American Wind Technology, Inc.
3 Degrees

Support if amended:

California Municipal Utilities Association
Glendale Water & Power
Southern California Public Power Authority

Oppose:

Alliance for Retail Energy Markets
California Alliance for Choice in Energy Solutions
California Business Properties Association
California League of Food Processors
California Manufacturers & Technology Association
California Retailers Association
Chemical Industry Council of California
Direct Energy Services, LLC
School Project for Utility Rate Reduction
Western States Petroleum Association

Oppose unless Amended:

Pacific Gas & Electric Company

Kellie Smith
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