STATE OF CALIFORNIA — Public Utilities Commission
San Francisco

M e m o r a n d u m

Date: June 11, 2014

To: The Commission
(Meeting of June 12, 2014)

From: Lynn Sadler, Director
Office of Governmental Affairs (OGA) – Sacramento

Subject: **SB 1139 (Hueso) – California Renewables Portfolio Standard Program.**
As amended: May 27, 2014

RECOMMENDED POSITION: OPPOSE UNLES AMENDED

SUMMARY OF BILL:
This bill would establish a new procurement program requiring all California retail sellers of electricity to enter into power purchase agreements with new geothermal facilities until a total of 500 megawatts (MW) of capacity is under contract. Specifically, the geothermal procurement program established by this bill would include the following provisions:

- Requires all California retail sellers to procure a proportionate share of the program's 500 MW capacity by no later than December 24, 2024;
- To be eligible for the program, the geothermal facilities must be constructed after January 1, 2015, and the facilities must be able to deliver their generation directly to a California balancing authority consistent with Public Utilities Code Section 399.16(b)(1);
- Procurement made through this program would not count towards meeting retail sellers' renewables portfolio standard (RPS) program compliance requirements, although geothermal resources are an RPS-eligible resource as determined by the California Energy Commission (CEC);
- Requires each California retail seller to submit a plan for complying with the geothermal procurement program no later than January 1, 2016. The CPUC must approve, modify, or reject the retail sellers' plans ;
- Authorizes a retail seller to aggregate its proportionate share with the proportionate share of another retail seller in order to minimize administrative and contracting costs;
- Requires the CEC to determine no later than June 30, 2015, the proportionate share for each retail seller and obligated POU based on the forecast retail sales for year 2018;
- One half of the proportionate share for each retail seller must be procured by December 31, 2019;
- Procurement of the 500 MW must be procured to reasonably minimize costs.

CURRENT LAW:

- Public Utilities Code Sections 399.11 – 399.32 (establishes Renewables Portfolio Standard for retail sellers and publicly-owned utilities (POUs); delegates authority to CPUC and CEC, respectively)
    - RPS statute requires that electrical corporations procure RPS-eligible resources based on a CPUC approved "least-cost, best-fit" methodology, rather than directing procurement of specific resource types, but for one limited exception.
- Public Utilities Code Section 454.5 (sets short- and long-term electricity procurement guidelines for electrical corporations which are filed with the CPUC for approval; delegates authority to CPUC)
    - Procurement plans must demonstrate, in part, how the electrical corporation will fulfill its obligation to serve its customers at just and reasonable rates.

AUTHOR'S PURPOSE:

Senator Hueso's memo for SB 1139 and the bill itself identifies several needs for the geothermal procurement program the legislation would establish:

- To utilize untapped geothermal resources in the state, specifically the potential identified in the Salton Sea Known Geothermal Resource Area;
- Local benefits associated with construction and permanent jobs, property tax revenues and lease payments to local governments and private landowners.
- To help meet energy supply and reliability needs associated with the closure of the San Onofre Generating Station (SONGS), and other older inland gas plants;
- To help support geothermal power throughout the state, which from the bill author's perspective is not adequately valued in the state's RPS program resources selection process;
- To provide long-term price stability;
- To diversify the state's portfolio of renewable resources, which in recent years experienced and increased reliance on intermittent resources like wind and solar;
- To help the stability and reliability of the state's electric transmission system;
- To help meet the state's 2020 and 2050 greenhouse gas (GHG) emission goal established in AB 32 (Nunez, 2006) and Executive Order S-3-05, respectively.

DIVISION ANALYSIS (Energy Division):

<u>There are existing policies in place to achieve many of the objectives targeted by SB 1139.</u>

The renewables portfolio standard (RPS) program requires all California retail sellers of electricity and POUs to provide 33% of electricity sales sourced from RPS-eligible

resources by 2020.[1] AB 327 (Parea, 2013) authorizes the CPUC to increase the RPS requirement for retail sellers beyond the levels identified in existing statute. The RPS program established in statute takes a "least-cost, best-fit," resource-neutral procurement approach to ensure that retail sellers (and POUs) have flexibility to procure the type of RPS-eligible resources that match their system and/or customer needs, at the lowest cost. The vast majority of RPS contracts are long-term (10-years or greater) and thus the benefits of price stability are already realized through the existing RPS program. In general, California's RPS program is meeting its goals and objectives; California's three large investor-owned utilities (IOUs) are expected to meet the 33% by 2020 goal.[2]

Since the beginning of the RPS program, the IOUs have contracted for 390 MWs with new geothermal capacity located within California. Of the 390 MWs, one 50 MW project achieved commercial operation, one 30 MW project is delayed in meeting its commercial operation date, and nine contracts totaling 310 MWs of project capacity have been terminated.[3] This suggests that challenges exist for new geothermal resource development beyond securing a power purchase agreement.[4]

The one exception to the RPS program's resource-neutral procurement approach is where the RPS statute includes a carve-out for very small facilities, 3 MW and less, that rely on specific bioenergy resources.[5] The purpose of SB 1122 is to capture unique societal benefits associated with existing waste streams, specifically from wastewater and municipal organic waste, dairy and agricultural waste and organic forest waste. Facilities of this type have not participated in the RPS program to date. Geothermal is a commercialized technology that can readily participate in the procurement programs administered through the RPS program, (e.g. renewable auction mechanism) that can facilitate development of baseload facilities 20 MW and smaller.

The CPUC's long-term procurement planning (LTPP) proceeding (R.13-12-010) implements the requirements of Public Utilities Code Section 454.5 to ensure that the three IOUs procure sufficient electric supply to reliably meet the needs of their customers. The CPUC recently issued a decision authorizing procurement for local capacity requirements associated with the closure of SONGS (See D.14-03-004). With D.14-03-004, in conjunction with D.13-02-015 and D.14-02-016, SCE and SDG&E are collectively authorized to procure up to 2,225 MW (1,450 MW and 775 MW, respectively) of capacity from preferred resources, consistent with state policy expressed in the Energy Action Plan.[6], [7] Geothermal qualifies as a preferred resource and can participate in the IOU

---

[1] RPS procurement quantity requirements are set in Section 399.15(b)(2). The CPUC defined and implemented the procurement quantity requirements in Decision (D.)11-12-020.
[2] The large IOUs are Pacific Gas and Electric Company, Southern California Edison Company and San Diego Gas & Electric Company.
[3] RPS project status information is available in EXCEL format on the CPUC's RPS webpage. http://www.cpuc.ca.gov/PUC/energy/Renewables/index.htm
[4] Bioenergy resources, which may also operate as a baseload facility, has had a similar RPS experience. That is, these resources are able to secure power purchase agreements with IOUs but project development challenges result in a significant amount of projects failing to achieve commercial operation.
[5] SB 1122 (Rubio, 2012) established Sections 399.20(f)(2), which require the CPUC to direct electrical corporations to procure up to 250 MW from bioenergy projects. The CPUC is implementing SB 1122 in the RPS proceeding R.11-05-005.
[6] The Energy Action Plan (EAP) was enacted by the CPUC and CEC to coordinate energy policies and investment among the state energy agencies. The EAP created a "loading order" approach, which established that the state, in meeting its energy needs, would invest first in energy efficiency and demand-side resources,

procurement solicitations authorized by D.14-03-004 and D.13-02-015. However, these recent authorizations for procurement were only for local capacity in the West Los Angeles Basin and San Diego Gas & Electric service territory.

Geothermal or any other resources in the Salton Sea Known Geothermal Resource Area would be ineligible for procurement under these Decisions as their location would not alleviate capacity constraints arising from the SONGS outage, unless additional transmission lines were constructed to specifically connect these resources to the identified local capacity constrained areas.

The CPUC's 2014 LTPP proceeding (R.13-12-010) includes in its scope analysis to identify CPUC-jurisdictional "needs for new resources to meet local or system resource adequacy (RA), operational flexibility, or other requirements and to consider authorization of IOU procurement to meet that need. This includes issues related to long-term renewable planning and need for replacement generation infrastructure to eliminate reliance on power plants using OTC.[8] Consequently, the LTPP proceeding is the appropriate place to analyze California's operational flexibility needs to accommodate higher level of intermittent generation resources, such as wind and solar photovoltaic, and the types and geographic location of resources that should be procured to meet that need.

<u>The procurement program envisioned by SB 1139 is inconsistent with the state's longstanding policy towards renewable energy resources and technologies</u>

SB 1139 would provide preferential treatment to one electric generating technology over all others, contrary to existing legislative direction and CPUC procurement policies. Moreover, SB 1139 would prevent the procurement from these geothermal facilities from counting towards the state's RPS program.

California is a leader in renewable energy programs targeting both electricity supply and demand needs. California policies today incentivize market transformation for emerging technologies and require increased procurement from carbon-free, renewable energy resources for all electric load-serving entities in the state.

SB 1139 would establish a procurement "carve-out" for geothermal resources. This type of policy has proven useful to facilitate market transformation for emerging technologies where ratepayer funds may return long-term benefits to all Californian's. A notable example is the California Solar Initiative (CSI) established in SB 1 (Murray, 2006), which authorized incentives for customer-owned solar photovoltaic systems prior to when this promising technology was widely deployed or cost-effective to consumers. More recently, AB 2514 (Skinner, 2010), established a procurement requirement for energy storage

---

followed by renewable resources, and only then in clean conventional electricity supply. A copy of the most recent Energy Action Plan is available here: http://www.energy.ca.gov/2008publications/CEC-100-2008-001/CEC-100-2008-001.PDF

[7] Preferred Resources are defined in the State's Energy Action Plan II, at 2, as follows: "The loading order identifies energy efficiency and demand response as the State's preferred means of meeting growing energy needs. After cost-effective efficiency and demand response, we rely on renewable sources of power and distributed generation, such as combined heat and power applications."

[8] "OTC" refers to power plants that rely on once through cooling systems, which are subject to retirement to comply with State Water Quality Control Board regulations. The scoping memo for R.13-12-010 is available here: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M084/K241/84241040.PDF

systems. Both of these legislative actions targeted technologies that would not be widely deployed in the absence of legislative action, and where ratepayer investment is expected to provide long-term benefits. Geothermal technology, on the other hand, has been commercially available for decades and may not reasonably be considered an emerging technology.

There are active CPUC proceedings to analyze the long-term operational flexibility needs of California's transmission system and to develop a methodology for calculating an integration adder for fairly evaluating all RPS-eligible resources

The CPUC's 2014 LTPP proceeding (R.13-12-010) is currently examining the need for flexible resources in the future, considering different possible scenarios including higher levels of renewable generation and different types of resource mixes, e.g., on-peak/off-peak intermittent vs. baseload and flexible vs. inflexible. Part of this process includes a public stakeholder review of various computer models that simulate flexibility needs of California's transmission system at a future point in time. The information acquired through this process will help to quantify the relative flexibility impacts of different types of resources. The RPS proceeding (R.11-05-005) will then utilize information gathered from the 2014 LTPP proceeding (R.13-12-010) to develop a methodology for calculating an integration adder that will be applied in the least-cost, best-fit (LCBF) RPS project evaluation process.[9]

However, once a methodology is developed and adopted, it is not yet clear whether the application of integration cost adders will translate into a higher valuation of geothermal resources or geothermal being the highest valued resource after the LCBF process. First, it is expected that a key attribute of generation capacity under a scenario with a high proportion of intermittent generation resources (e.g., greater than 33% of electricity demand) is the ability for a resource to be flexible. That is, a resource that is rampable and dispatchable so that the system operator can bring on and off electric generating capacity in a quick and efficient manner to address the steep drop in generation from solar resources in the late afternoon as load is increasing. A baseload resource, by definition, is a resource that operates at all or most hours of the year and often has minimum capacity levels for efficient operation. Thus, a baseload geothermal resource may not be more highly valued based on the operation flexibility analysis described above.

Second, even in the event that geothermal resources are valued higher through an updated LCBF process that includes an integration adder, it is not clear that the difference will be significant enough for geothermal to be more cost-effective than other lower cost, higher valued RPS-eligible resources. Recent market data from the IOUs' 2013 RPS solicitation shows a significant difference in the average price for contracts offered to the IOUs across technologies. Specifically, the average price for a new solar photovoltaic (PV) project was approximately $73 per megawatt hour (MWh) compared to the average price for a new geothermal project of approximately $155/MWh. The renewable market response to the 2013 RPS solicitation was robust and very competitive. This suggests that the additional cost to ratepayers for a geothermal contract may exceed the benefits associated with adding geothermal resource compared to other preferred generation resources.

[9] This issue was most recently scoped in the March 26, 2014 Assigned Commissioner's Ruling Identifying Issues And Schedule Of Review For 2014 Renewables Portfolio Standard Procurement Plans (R.11-05-005). The March 26, 2014 ruling is available here: http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M089/K136/89136150.PDF

It is unclear why a geothermal carve-out is warranted or in the best interest of California ratepayers given the CPUC is currently analyzing the types of resources needed to meet California's future transmission system needs and is revising its least-cost, best-fit methodology to reflect integration costs associated with operational flexibility system needs.

Geothermal is an RPS-eligible resource and procurement of this resource should count towards the state's RPS program

SB 1139 would require the procurement geothermal resource but prevents the renewable energy credits (RECs) associated with that procurement from counting towards a retail sellers' RPS obligation. It is unclear what benefits are gained from this limitation and it is inconsistent with existing state policy.

Imposing the geothermal procurement requirement proportionately on all retail sellers may impede the new geothermal resource development envisioned by the SB 1139

SB 1139 would authorize the CEC to determine the proportionate share of the 500 MWs of electricity that each retail seller is required to procure. This approach will be very difficult to implement because geothermal facilities tend to be relatively large in size and there are many retail sellers with very small load. By applying the procurement requirement to over 20 retail sellers, some with very small load, SB 1139 suggests that there will be a wide range of geothermal facility sizes to procure from. The economics of geothermal resources, like many electric generating facilities, are determined by the facility's capacity size as well as resource potential, and industry analysis suggests that geothermal facilities do not come in all sizes. While the April 21, 2014 amended version of the bill authorized a retail seller to aggregate its proportionate share with the proportionate share of other retail sellers or POUs in order to minimize administrative and contracting costs, it is unclear whether this will fully mitigate this challenge.

Looking at the supply side of the equation, a recent report from the Geothermal Energy Association includes data on the quantity and capacity of geothermal projects under development in California. Specifically, the report shows that there are currently 31 geothermal projects under development for a total capacity of approximately 1,100 MW (Table 2).[10] This data suggests an average project capacity size of approximately 35 MW. The CEC's recent RPS report *Tracking Progress* supports this analysis when looking at the existing geothermal resources in Imperial Valley.[11]

Looking from the perspective of the buyer, it is worthwhile analyzing how SB 1139 may be implemented for a large and small retail seller. This analysis is not intended to pre-judge the CEC's implementation of SB 1139. For illustrative purposes, assuming 2013 total

---

[10] The *Annual US Geothermal Power Production and Development Report* is available here: http://geo-energy.org/reports/2012AnnualUSGeothermalPowerProductionandDevelopmentReport_Final.pdf (See Table 2: Total Projects in Development Totals by State)

[11] Specifically, the CEC report identifies in aggregate 20 facilities with a total installed capacity of 705 MW. See Table 2: Summary of In-State Wholesale Renewable Projects On-Line in 2013. The Renewable Energy Section of the *Tracking Progress* report is available here: http://www.energy.ca.gov/renewables/tracking_progress/documents/renewable.pdf

sales figures for retail sellers of approximately 191,000 gigawatt hours (GWh),[12] and 2013 retail sales for SCE of 74,480 GWh,[13] SCE's retail sales represents approximately 39% of the state's 2013 forecasted demand.[14] This translates into a 195 MW geothermal procurement required as SCE's proportionate share of the 500 MW required by SB 1139. Contrast SCE with a smaller retail seller, e.g. Bear Valley Electric Service (BVES) with 2013 forecasted retail sales of approximately 139.4 GWh. In this example, BVES's retail sales represents 0.07% of forecasted 2013 statewide electricity demand, resulting in a proportional geothermal procurement requirement of less than 0.5 MW. It is unlikely that geothermal facilities will be developed in this size range to provide procurement opportunities for the likes of BVES, or the other numerous small retail sellers serving California load.

Finally, it is unclear why the assignment of retail sellers' proportionate share of the program's 500 MW capacity should be based on 2018 forecasted retail sales (see 399.35(b)) rather than current retail sales amounts, or why the CEC would implement this requirement rather than the CPUC through its decision implementing the geothermal procurement plans filed by retail sellers as required by SB 1139.

Procurement should be required only if the costs are reasonable and projects should be evaluated using existing CPUC methodologies

Section 399.35(e) states that "electricity procured pursuant to this section shall be procured to reasonably minimize costs." The existing RPS procurement and project evaluation process for utility-scale generation projects, which allows all RPS-eligible resources to compete within a least-cost, best-fit framework, is the best method to ensure procurement intended to meet many of the goals of SB 1139 is achieved while minimizing costs.

Ratepayers funding this procurement provide revitalization benefits to Salton Sea which is outside of their IOU's service area

One of the author's intentions for SB 1139 is to utilize untapped geothermal resources in the state, specifically the potential identified in the Salton Sea Known Geothermal Resource Area. In addition to the local economic benefits that would result from project development, revenues provided by retail sellers would help to fund revitalization efforts for the Salton Sea.[15] The May 29, 2014 amendments to SB 1139 narrows the scope of the geothermal procurement program so that the requirement would only apply to retail sellers; POUs no longer have a procurement obligation. While SB 1139 does not require the development of geothermal resources in the Salton Sea, limiting the procurement obligation only to retail sellers raises equity issues that should not be overlooked as many

[12] Based on RPS procurement progress reports submitted to CPUC available at http://www.cpuc.ca.gov/PUC/energy/Renewables/index.htm

[13] The forecast of SCE's 2013 retail sales is sourced from SCE's April 1, 2014 RPS procurement progress report.
[14] While SB 1139 would require each retail sellers proportionate share based on 2018 forecasted retail sales, for simplicity, this analysis uses 2013 retail sales, which are known.
[15] The Imperial Valley Irrigation District established The Salton Sea Restoration & Renewable Energy Initiative to support activities for air quality management and habitat restoration at the Salton Sea. The initiative plans to leverage funds generated by new renewable energy projects located at the Salton Sea to help finance these activities. Last accessed on May 29, 2014: http://www.iid.com/index.aspx?page=663

of the benefits intended for SB 1139 are targeted towards local areas not served by retail sellers.

A full feasibility and cost analysis should be completed prior to requiring a specific amount of new geothermal procurement

As stated above, one of the author's intentions is to utilize geothermal resources in the Salton Sea area. Currently, the California Department of Natural Resources, Salton Sea Authority, and National Renewable Energy Lab are developing a work plan that will examine various restoration scenarios for the Salton Sea and their potential costs.[1] The overall goal of the work plan is to develop an adaptive roadmap to reach a comprehensive solution to the Salton Sea's numerous environmental concerns.

Included in the draft work plan is a review of possible financing and funding options for the various possible Salton Sea restoration activities. As part of that funding review, a land use and resource assessment, a high-level market analysis, and a power transmission analysis are planned to examine the potential of renewable energy development in the Salton Sea area. In addition to geothermal, the review will examine solar (photovoltaic and concentrating solar power), solar thermal gradient ponds, and algae, in terms of resource development potential and cost.

While Imperial Irrigation District has completed a report examining the renewable resource potential,[2] the Salton Sea Funding and Feasibility Review Work Plan is scoped to verify and expand on this report's findings. The review and analysis laid out in the Salton Sea Funding and Feasibility Review Work Plan will result a better understanding of resource potential and costs, as well as potential development barriers. As such, a procurement mandate prior to completion of the Salton Sea Funding and Feasibility Review Work Plan would be premature and could result in a procurement mandate that could ultimately be unfeasible or extremely costly.

SAFETY IMPACT:

The bill has the potential to enhance the health and well-being of California citizens in so far as the geothermal facilities developed as a result of this program displace natural gas electric generation that has harmful health and environmental impacts associated with it. Development of geothermal resources may result in increased sulfur-emissions and seismic activity.

RELIABILITY IMPACT:

The bill has the potential to either negatively or positively impact the reliability of the electricity grid depending on needs of the system and the location where the geothermal resources are developed. However, no system capacity need has been identified in the timeframe targeted by SB 1139. Furthermore, as explained above, the development of generation resources, of any type, in the Salton Sea area will not alleviate reliability needs associated with the closure of SONGS.

RATEPAYER IMPACT:

[1] The draft work plan is titled: Salton Sea Funding and Feasibility Review Work Plan
[2] Salton Sea Revenue Potential Study prepared by ESS for Imperial Irrigation District

Because SB 1139 would require the procurement from new geothermal resource in absence of a defined energy or capacity need for the resource, this bill will likely result in higher costs to ratepayers. To the extent that SB 1139 is intended to increase the proportion of electricity generated by renewable resources or achieve the state's long-term GHG goals pursuant to AB 32, there may be more cost effective means of achieving this objective. The CPUC's LTPP proceeding takes into account the need to procure sufficient capacity to operate safe, reliable electric system while meeting state policy goals to lower GHG emissions at the least cost to ratepayers. The LTPP proceeding's analysis presented in the load and resources table shows a planning reserve margin of 35% in 2014, indicating that system supplies are well above the target 15% planning reserve margin required by state policy.[16] This implies that any additional procurement for system needs at this time would have ratepayers incur unnecessary costs.

FISCAL IMPACT:

Implementation and administration of the new geothermal procurement program established by SB 1139 requires one full-time permanent Public Utilities Regulatory Analyst (PURA) V and an Administrative Law Judge II for a limited term with an estimated total fiscal impact of $209,666. The PURA V will be allocated to the CPUC's Energy Division and the total fiscal impact (PURA V and ALJ II) will be funded by the Public Utilities Commission Utilities Reimbursement Account (PUCURA), Fund 0462.

Explanation of staffing required to implement the SB 1139 geothermal procurement program

- An ALJ II is needed for 6 months to manage a proceeding to implement the SB 1139 geothermal procurement program, including issuing a proposed decision on the geothermal procurement plans filed by retail sellers.
- The PURA V will support an Administrative Law Judge in the CPUC's review of each retail seller's plan to comply with the geothermal procurement program. SB 1139 requires retail sellers to submit a plan no later than January 1, 2016.
- The PURA V will manage outreach efforts to potential geothermal program participants, as well as, relevant state, local and federal agencies (lessees of steam fields) and Native American Tribes.
- The PURA V will oversee retail sellers' compliance with the CPUC's decision establishing geothermal procurement program requirements, pursuant to this bill. This expands the CPUC's oversight of procurement activities by California small and multi-jurisdictional utilities, electric service providers and community choice aggregators. For example,
    - Review of utility pro forma power purchase agreements,
    - Review of utility solicitation protocols,
    - Review of utility executed power purchase agreements,

[16] The LTPP load and resources table can be reviewed within the LTPP Scenario Tool. The most recent version is "Scenario Tool 2014 in Excel v1c" and is available for download here (as of April 16, 2014): http://www.cpuc.ca.gov/PUC/energy/Procurement/LTPP/ltpp_history.htm

- Oversight of retail sellers' progress towards geothermal procurement requirements,
- Oversight of retail sellers' 'queue' of available geothermal procurement program capacity.

ECONOMIC IMPACT:

The bill will likely have a net benefit on the local communities in which the geothermal facilities are developed, in the form of construction and permanent jobs (e.g., geotechnical professionals and geothermal facility operators), property tax revenues and lease payments to local governments and private landowners. Additional economic impacts may include mineral leases, steam extraction, mineral extraction, and brackish water rights. Economic benefits could be offset by higher rates associated with procurement required by the bill, as well as transmission infrastructure costs, which are socialized to all California ratepayers.

LEGAL IMPACT:

Geothermal is an RPS-eligible resource and therefore geothermal facilities may produce renewable energy credits (RECs), the metric by which RPS-obligated LSEs demonstrate compliance with the state's RPS program. The Western Renewable Energy Generation Information System (WREGIS) is used to track RECs created throughout the Western Electricity Coordinating Council (WECC). While SB 1139 would prevent the procurement associated with this geothermal program from counting towards an LSE's RPS requirement, it would not prevent these facilities from generating a REC. There is no mechanism within WREGIS to track RECs according to the program from which with the procurement originated. This will complicate the CEC's ability to verify which RECs should be permitted to count for RPS compliance and the CPUC's ability to determine compliance for retail sellers. It may also result in legal challenges among market participants if RECs are traded beyond the geothermal facility and the LSE buying the geothermal generation to meet the SB 1139 procurement requirement. There may also be instances in which only a portion of the geothermal facilities output is sold to an LSE pursuant to SB 1139.

PROGRAM BACKGROUND:

<u>Renewables Portfolio Standard</u>

The RPS program, as set forth in Public Utilities Code Sections 399.11- 399.32, requires that California retail sellers and publicly-owned utilities increase the portion of retail sales that comes from RPS-eligible resources so that by 2020 and for each year thereafter 33% of California's retail electricity sales is supplied by RPS-eligible resources. For the most part, retail sellers can meet the RPS procurement requirements by procuring RECs from any type of RPS-eligible resource (e.g., geothermal, wind, biogas, solar pv).

The RPS program was adopted in SB 1078 (Sher, Stats. 2002, ch. 516), and subsequently modified by SB 107 (Simitian, Stats. 2006, ch. 464), SB 1036 (Perata, Stats. 2007, ch. 685) and SB 2 (1X) (Simitian, Stats. 2011, ch. 1). The CPUC is statutorily responsible for 1) requiring each utility to submit an RPS Procurement Plan, 2) establishing an RPS cost limitation, 3) adopting a process that utilities must use to evaluate renewable energy projects proposed by independent power producers in response to the utilities' RPS

solicitations, 4) adopting RPS compliance rules, 5) reviewing and approving or rejecting utilities' RPS contracts, and 6) reporting to the Legislature on various aspects of the RPS program.

In May 2011, the CPUC initiated Rulemaking (R.) 11-05-005 to implement significant modifications made to the RPS program by SB 2 (1X), as well address ongoing program administration. Proceeding R.11-05-005 is an open proceeding.

Long-Term Resource Planning and Procurement Authorization

Pursuant to Section 454.5, the CPUC authorizes procurement for the state's three large IOUs required to meet electricity demand and to maintain system. The LTPP proceeding evaluates the supply and demand of electricity across the CAISO service area and produces ten- and twenty-year forward forecasts. These forecasts are intended to demonstrate the need for additional resources to maintain reliability – with a target supply level 15% above demand. The 2014 LTPP load and resource table forecasts a supply level 35% above demand, demonstrating that there is no need for additional resources at this time. Moreover, the system supply is not expected to drop below the 15% planning reserve margin threshold until 2030. Thus, no additional resources should be procured for system reliability within the time frames cited in this bill.

OTHER STATES' INFORMATION:

None.

SUMMARY OF SUPPORTING ARGUMENTS FOR RECOMMENDATION:

This bill in its current form should be opposed for the following reason(s):

(1) SB 1139 would conflict with the statute's existing least-cost, best-fit, resource-neutral approach to renewable resource procurement, which has proven successful in developing a diverse mix of resources at reasonable costs to ratepayers, pursuant to Public Utilities Code Section 399.13.

(2) SB 1139 would complicate state energy policy by determining whether a resource is RPS-eligible based on the program from which the resource is procured rather than the resource itself.

(3) SB 1139 would require a significant amount of new procurement from a specific resource type outside the thorough procurement planning process administered by the CPUC, pursuant to Public Utilities Code Section 454.5. This planning process demonstrates no need for additional resources until 2030.

SUMMARY OF SUGGESTED AMENDMENTS:

Amend this bill to take into consideration current studies that evaluate the viability, cost effectiveness, legal conflicts with existing policies, and transmission needs.

STATUS:

SB 1139 is referred to Asm. Utilities & Commerce.

SUPPORT/OPPOSITION:

Support: California Coalition of Utility Employees
California Latino Water Coalition
California State Association of Electrical Workers
California State Pipe Trades Council
Coachella Valley Economic Partnership
Desert Valleys Builders Association
Energy Source
Environment California
Greater Palm Springs Convention & Visitors Bureau
GreenFire Energy Inc.
Geothermal Energy Association
Imperial County Board of Supervisors
Imperial County Building Construction Trades Council
Imperial Irrigation District
Indio Chamber of Commerce
MidAmerican Renewables
Ormat
Western States Council of Sheet Metal Workers

Opposition: California Chamber of Commerce
California Manufacturers & Technology Association
California Municipal Utilities Association
California Wind Energy Association
M-S-R Public Power Agency
Office of Ratepayer Advocates
Pacific Gas and Electric Company
PacifiCorp, unless amended
Southern California Edison
Southern California Public Power Authority
The Utility Reform Network

VOTES:

May 28, 2014 – Passed on the Senate Floor (Vote: Y:21 N:11 A:8).
May 23, 2014 – Passed Senate Appropriations (Vote: Y:5 N:2 A:0).
April 29, 2014 – Passed Senate Energy, Utilities & Communications (Vote: Y:6 N:2 A:3).

STAFF CONTACTS:

Lynn Sadler, Director Lynn.Sadler@cpuc.ca.gov
Nick Zanjani, Senior Legislative Liaison NKZ@cpuc.ca.gov
Michael Minkus, Legislative Liaison MIN@cpuc.ca.gov

BILL LANGUAGE:

SECTION 1.

The Legislature finds and declares all of the following:

(a) The California Global Warming Solutions Act of 2006 (AB 32) established a policy to reduce emissions of greenhouse gases to 1990 levels by 2020 and to continue reductions of emissions of greenhouse gases beyond 2020.

(b) Executive Order S-3-05 set a policy to reduce emissions of greenhouse gases by 80 percent from 1990 levels by 2050. Decarbonizing the electrical generation sector is a key part of achieving California's policy goals for reducing emissions of greenhouse gases.

(c) California's electrical supply portfolio must move from merely increasing the proportion of generation from eligible renewable energy resources to a portfolio of resources that supply all types of needed generation, including baseload generation, ramping generation, and peakload generation.

(d) Recent shortages in the supply of natural gas and the historic price volatility of natural gas provide additional confirmation of the need to reduce reliance on natural gas for electrical generation.

(e) California and the western United States have unique, high-quality solar and geothermal resources. California utilities are dramatically increasing their utilization of solar resources to generate electricity, but not effectively increasing the utilization of geothermal resources. California's long-term electrical supply portfolio should include much greater reliance on geothermal resources.

(f) Only a fraction of the geothermal resources that could be supplying California consumers are currently being utilized, and there has been very little increase in geothermal generation capacity during the past decade.

(g) The current process used to procure new energy resources eligible under the California Renewables Portfolio Standard Program does not adequately value the diverse types of renewable resources needed to supply California with mostly carbon-free electricity after 2020 while maintaining reliability. Almost no new baseload eligible renewable energy resources have been procured during the past decade.

(h) To maintain electrical system reliability relying on generation that, for the most part, emits no greenhouse gases, that generation must be deliverable to retail customers in real time.

(i) California's retail sellers should add at least 500 megawatts of electricity from new baseload geothermal generation by the end of 2024.

(j) Many geothermal resources have the additional benefit of supplying lithium and other strategic minerals. Currently, the United States is dependent on foreign supplies for these minerals. Lithium is needed for electric vehicle batteries. The State Air Resources Board has identified increasing electric vehicles as a California and national priority as part of implementing AB 32 and reaching goals for reducing emissions of greenhouse gases. Thus, increasing production of lithium and other strategic minerals as a cobenefit of increased production of baseload geothermal power is in the national interest of the United States.

SEC. 2.

Section 399.35 is added to the Public Utilities Code, to read:

399.35.

(a) No later than December 31, 2024, each retail seller shall procure a proportionate share of a statewide total of 500 megawatts of electricity generated by baseload geothermal powerplants that began being constructed after January 1, 2015, and that meet the requirements of paragraph (1) of subdivision (b) of Section 399.16.

(b) No later than June 30, 2015, the Energy Commission shall determine the proportionate share of the 500 megawatts of electricity that each retail seller is required to procure pursuant to

subdivision (a). For purposes of this section, "proportionate share" shall be based on the forecast retail sales for the year 2018.
(c) No later than January 1, 2016, each retail seller shall file with the commission a plan for complying with subdivision (a). Those plans shall require each retail seller to procure at least one-half of its proportionate share by December 31, 2019. Those plans may authorize a retail seller to aggregate its proportionate share with the proportionate share of another retail seller in order to minimize administrative and contracting costs. The commission shall review and approve, modify, or reject plans filed by retail sellers.
(d) The electricity procured pursuant to this section shall not count towards meeting the requirements specified in subparagraph (B) of paragraph (2) of subdivision (b) of Section 399.15.
(e) The electricity procured pursuant to this section shall be procured to reasonably minimize costs. Subdivision (c) of Section 399.15 shall not apply to electricity procured pursuant to this section.

SEC. 3.

No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.