

**M e m o r a n d u m**

**Date:** May 9, 2008

**To:** The Commission  
(Meeting of May 15, 2008)

**From:** Pamela Loomis, Deputy Director  
Office of Governmental Affairs (OGA) — Sacramento

**Subject:** **SB 1759 (Perata) – Energy: renewable energy.  
As Introduced February 22, 2008**

**LEGISLATIVE SUBCOMMITTEE RECOMMENDATION: OPPOSE**

**SUMMARY OF BILL:**

- SB 1759 would require the California Public Utilities Commission (CPUC) and/or the California Energy Commission (CEC) to:
  - Quantify and publicly provide air emissions and cumulative impacts for each newly proposed power plant and report to CARB on its implications for the achievement of the state's climate and air quality goals;
  - Report to CARB on the progress of existing renewable programs and identify obstacles to local community deployment/participation, and to perform a publicly available audit of existing low-income rate assistance, EE, solar and green-building programs and identify barriers to local community deployment and participation.
  - Require proponents of new power plant construction (including power plants already approved) to conduct a thorough and robust renewable energy alternatives assessment prior to the approval of new fossil-fueled based electric generation, and if a more carbon-beneficial combination of energy producing or energy saving sources is available, then the proponent should be required to pursue that avenue.

**SUMMARY OF SUPPORTING ARGUMENTS FOR RECOMMENDATION:**

While clearly well intended, this bill mischaracterizes the effects of new gas-fired power plant development in the state. New, more efficient and flexible gas-fired generation resources will not add to the state's emission profile. Rather, they are an important component in achieving emissions reductions by (1) replacing the disproportionately large portion of California's existing generation fleet that is made up of older, extremely inefficient, and highly polluting power plants, (2) providing ramping and load-following capabilities that will allow California to better integrate its increasing supply of intermittent, renewable resources into grid operations, and (3) replacing imports from out-of-state coal-fired generation.

The proposed legislation requires all power plant proponents to forego power plant construction if a more "carbon-beneficial combination of energy producing or energy saving sources is available." However, the bill does not indicate whether the proponents are to take into consideration the relative cost of – or any other, non-carbon environmental impacts associated with – the more carbon-beneficial alternative(s) identified. Further, and of greater concern, is that the project-by-project evaluation proposed in the bill is far inferior to a more integrated approach that can comprehensively weigh environmental, economic, and temporal trade-offs to best achieve the state's environmental and electrical reliability goals.

Finally, the bill is very unclear on what type of reporting, studies, and publicly available audits are sought for the different energy programs mentioned in this context, and as such it is impossible to determine whether or not the desired information is already being collected or if not, what level of effort would be required to do so. The bill is also unclear on which agency (the CPUC or CEC) would be responsible for which of the bill's requirements.

**SUMMARY OF SUGGESTED AMENDMENTS:**

None.

**DIVISION ANALYSIS (Energy Division):**

- This bill would impact a number of the CPUC's demand-side and supply-side energy resource programs. The three most significant impacts would be:
  - Determining the cumulative impacts of each new gas-fired power plant,
  - Developing and evaluating lower carbon alternatives on a project-by-project basis, with no consideration of cost-effectiveness or non-carbon environmental impacts, is expected to be far less effective than current, program-based approaches to developing these resources (and would require an extensive accounting and monitoring program to ensure that the alternative did not include

- resources already planned and accounted for in other forums),<sup>1</sup> and
- Studying, auditing, and/or reporting on the impacts of various energy programs.
  - These three impacts are described in further detail below.
    - Determining Cumulative Impacts of Each New Power plant.
      - Building new, flexible, highly efficient gas-fired plants will reduce emissions by retiring heavily polluting aging power plants, enabling better integration of intermittent renewable resources like wind, and reducing the State's reliance on imported electricity from coal-fired power plants.
      - In its 2007 Integrated Energy Policy Report, the CEC identified 66 aging power plants representing over 17,000 megawatts of generation in California. Generally, these powerplants are unreliable, inflexible, very inefficient to operate, and produce high levels of emissions. Consequently, with each addition of a new, highly efficient powerplant within a utility's service territory, gas consumption and emissions forecasts are both reduced as the new unit reduces reliance on the older, inefficient generation in its service area fleet.
      - Coupled with the need to replace these old generation units is the recognition that the increasing levels of intermittent renewable resources in the state are going to require flexible firming resources to ensure reliable grid operations. Intermittent renewable resources, such as wind, can lose power quickly, if for example the wind drops. Therefore, there is a need for other resources that can add power to the system quickly (ramp up) in response to intermittent resources' variations in power production. Currently, gas fired generation is the least expensive and cleanest resource capable of supporting the expansion of the State's intermittent renewable resources. The most recent CPUC Long Term Procurement Plan<sup>2</sup> proceeding decision (D.07-12-052) authorized utility procurement of new generation to address both of these concerns in an integrated fashion:

*To support the types of needs we anticipate in a GHG-constrained portfolio, we require [the utility] to procure dispatchable ramping resources that can be used to adjust for the morning and evening ramps created by intermittent*

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<sup>1</sup>Evaluations of existing low-income rate assistance, EE, solar and green-building programs are already taking place in the various forums. Modifying these evaluations and combining them into cohesive, publicly available audits will certainly have an impact on these programs, but not of the scale associated with the two impacts discussed in this section.

<sup>2</sup> CPUC oversight of utility development of procurement plans is required by Section 454.5 of the Public Utilities Code.

*types of renewable resources. Preference should be given to procurement that will encourage retirement of aging plants, particularly inefficient facilities with once-through cooling, by providing, at a minimum, qualitative preference to bids involving repowering of these units or bids for new facilities at locations in or near the load pockets in which these units are located.*

- The CPUC already requires the utilities to forecast GHG emissions associated with their existing and projected portfolios; a project-by-project version of this analysis would be resource-intensive and highly speculative, and it would show reductions, not increases in net cumulative emissions.
- The CPUC is tasked with ensuring that procurement requirements such as the one described in the above decision excerpt are met by the utilities. One component of this oversight is the requirement that the utilities forecast GHG emissions associated with their portfolios, and embedded in this forecast are the cumulative effects of new powerplant procurement. However, this forecast requires a time- and resource-intensive modeling effort that is most efficiently and accurately conducted at regular intervals on a portfolio-wide basis.<sup>3</sup>
- Given this portfolio-based approach, attempting to quantify the net effect on cumulative emissions of each individual powerplant is not only unnecessary, but it represents a significant undertaking, the results of which (given the amount and types of assumptions that would be required to assess how the addition of one specific powerplant will change the use, and in turn the emissions, of every other existing or proposed resource in the system) would be highly speculative. Most importantly, all else being equal the analysis (which is estimated to require three PYs of CPUC analytical staff time and significant additional ratepayer-funded utility staff time) will show that the addition of new gas fired generation will result in net reductions in carbon and other air emissions, not the increases that the bill's author appears to anticipate.<sup>4</sup>

- ***Evaluation and Selection of a More Carbon-Beneficial Alternative.***

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<sup>3</sup> The Long Term Procurement Plans in which these estimates are developed are updated every two years, and the level of detail required in this analysis is expected to increase in scope and complexity based on the Draft Scoping Memo issued in the new policy-focused Long Term Procurement Plan proceeding (R.08-02-007).

<sup>4</sup> The “all else equal” qualifier in this sentence relates primarily to the fact that to the extent new in-state powerplants replace electricity currently being imported from out-of-state, there will be an increase in in-state gas consumption and carbon (and other) emissions. However, given that the driver for this shift is the move away from carbon-intensive out-of-state coal generation, this increase in in-state emissions will actually represent a significant reduction in California’s carbon footprint.

- The trade-offs that need to be weighed when considering amount, location, and cost of renewable and associated dispatchable generation (and transmission) are best performed on a more comprehensive, integrated basis as is being done in the CPUC's Long Term Procurement and Renewable Portfolio Standard proceedings, not on a project-by-project basis as envisioned in this bill.
- The state's three large utilities develop and submit Long Term Procurement Plans every two years that evaluate the utilities' load and resource forecasts across a 10-year time horizon, and the CPUC authorizes procurement of new generation far enough in advance to meet the utilities' system needs based on any derived net short position. In deriving this net short position, the utilities first include the maximum amount of preferred resources that can reasonably be constructed as detailed in the RPS-required renewables goals and the energy efficiency and demand response goals developed in the CPUC proceedings for these resources.
- California's current 20% renewables by 2010 standard<sup>5</sup> and the 33% renewables by 2020 goal recommended by the CPUC and CEC in the Energy Action Plan is aggressive. The IOUs are negotiating with just about any counterparty who offers a viable project at a somewhat-reasonable price, and the state is in the process of resolving a number of challenges impeding the timely deployment of renewable generation, such as construction of transmission lines to areas where renewable resources are located, technology commercialization, and permitting hurdles. Renewable resources can also have environmental impacts (particularly when considering new transmission requirements). As noted earlier, some form of dispatchable generation is also actually needed to firm up intermittent forms of renewable generation.
- The proposed approach will create delays that could increase project costs. The project evaluation approach proposed in the bill would add an additional step in what is already a fairly protracted (two to eight year long) new generation authorization-to-completion cycle. This could result in the need to authorize procurement even further out into the future, which will increase uncertainties, both in terms of the actual amount of new generation required in the delivery year and in terms of the requirements placed on developers. Both of these uncertainties would be expected to lead to increased costs – at the system level for the former uncertainty and at the project level for the latter.
- The proposed approach would require an extensive accounting and monitoring program to ensure that the more “carbon-beneficial alternative” did not include resources already planned and accounted for in other forums. Based on the limited description of the alternative evaluation being considered by the bill, it appears that the evaluation itself would occur as part of the siting/CEQA process and would not be performed by the CPUC. However, the CPUC would need to ensure that any energy savings resources included in the alternative are

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<sup>5</sup> As implemented under Public Utilities Code 399.11 through 399.16.

separate and distinct from existing CPUC demand side management and renewable resource programs, and is estimated to require two PYs of CPUC analytical staff time and significant additional ratepayer-funded utility staff time.

- *Studying, auditing, and/or reporting on the impacts of various energy programs.*
  - The bill does not indicate what type of reporting, studies, and publicly available audits are sought for the different energy programs mentioned in conjunction with these requirements, so it is impossible to determine whether the desired information is already being collected or what level of effort would be required to do so.
  - As indicated in the following section on background information on impacted programs, many results-oriented information-gathering efforts are already being conducted by the CPUC and utilities for the energy programs identified in the bill for audits and studies. However, the bill language makes it impossible to determine whether or not the information obtained via these efforts is entirely, partially, or not at all consistent with the information being sought.
  - For instance, the utilities are currently offering energy efficiency (EE) “audit” programs in their EE portfolios through which customers can determine their energy usage and various EE measures they can employ to lower their consumption. The utilities also conduct “process evaluations” of their programs, which provide more structural evaluations of the utilities’ EE programs to determine what barriers to increased participation exist. However, if the bill requires the CPUC to conduct a separate, intensive analysis of how the 200+ EE programs in the utilities’ portfolios are being delivered, the level of participation in these programs, and an analysis of the possible barriers, at least 3 to 4 PYs of analytical staff time would be required to oversee these types of studies in order to produce the report.

#### **PROGRAM BACKGROUND:**

- Currently, portfolio emissions forecasts that include existing and planned new generation are performed by each utility and evaluated by the CPUC in the LTPP proceeding. This system-wide modeling effort is performed every two years, and the level of detail required in this analysis is expected to increase in scope and complexity based on the Draft Scoping Memo issued in the new policy-focused Long Term Procurement Plan proceeding (R.08-02-007).
- The primary power plant development process for the state’s three largest regulated utilities currently consists of:
  - CPUC authorization of new generation procurement in the LTPP proceeding based on the EAP Loading Order that factors in all existing and anticipated preferred loading order resources, existing and anticipated new conventional

generation and imports, retirements, and required 15-17% planning reserve margin,

- Utility development and execution of a solicitation for new resources consistent with the needs identified in the LTPP proceeding, culminating with the selection of winning bids,
  - Utility submittal of applications for new generation, and associated contracts, to the CPUC for approval and developer submittal of application to the CEC for siting permit, including CEQA review, and
  - Developer construction of new generation once CPUC approval and CEC permit has been acquired. This process typically takes from two to eight years, depending on the type of generation and any permitting issues that arise.
- A number of publicly available, results-oriented information sources are available for the programs identified for auditing in the bill, including:
    - Energy Efficiency (EE) – The utilities are currently offering EE audit programs in their EE portfolios through which customers can determine their energy usage and various EE measures they can employ to lower their consumption. The utilities also conduct “process evaluations” of their programs, which provide more structural evaluations of the utilities’ EE programs to determine what barriers to increased participation exist.
    - Solar/ CSI Program – The CPUC CSI program produces the Staff Progress Report: [http://www.cpuc.ca.gov/NR/rdonlyres/5C9DDC79-3E96-4241-BEEC-46D3F34254F4/0/080117\\_Jan\\_ED\\_CSI\\_Staff\\_Progress\\_Report.pdf](http://www.cpuc.ca.gov/NR/rdonlyres/5C9DDC79-3E96-4241-BEEC-46D3F34254F4/0/080117_Jan_ED_CSI_Staff_Progress_Report.pdf)
    - Low-Income Programs – The CPUC periodically performs compliance and financial audits for Program Year 2006 on California Alternative Rates for Energy (CARE) and Low Income Energy Efficiency (LIEE) for each of the major utilities. Other program studies on LIEE and CARE are also conducted, including LIEE Impact Evaluations typically conducted biennially to assess estimate gas and electric savings in aggregate and also by housing type and measure and LIEE and CARE Program Needs Assessments.
    - RPS – The RPS program reports to the Legislature quarterly on the status of the RPS program, as required by “The Supplemental Report of the 2006 Budget Act (Report) Item 8660-001-0462.” Those reports, and a plethora of other information on the RPS program’s progress, are available on the RPS website, <http://www.cpuc.ca.gov/PUC/energy/electric/RenewableEnergy/>, specifically in the “20% by 2010 Progress” section. To the extent that there are “obstacles to local community deployment/participation”, as mentioned in the bill, we would discuss those in this report. In the April report that will mail to

Sacramento today, for example, we've identified several project development barriers and possible solutions. It seems that simply submitting this report also to CARB might satisfy the reporting requirement.

- The discussion in the bill of the CEC's Supplemental Energy Payments is no longer accurate. SB 1036 (2007), effective 1/1/2008, eliminated the CEC's authorization to "allocate and award supplemental energy payments," required the CEC to transfer "unencumbered" SEP funds back to the IOUs, and ended further SEP fund collection. Instead, above-market costs of RPS procurement are now recovered through rates, as approved by the CPUC. Energy Division is implementing SB 1036 and issued a draft Resolution, E-4160 on 3/12/08.
- The most recent LTPP decision (D.07-12-052) requires that environmental justice issues be included in the criteria used by utilities in the solicitation selection process. The CPUC included this new criterion to address the issues raised in Subsection (f) of the bill.
- The statements made in Subsection (d) related to liquefied natural gas are based on the same mischaracterization of the effects of new powerplant production in the state discussed earlier and would not be expected to occur as a result of developing new powerplants to replace aging plants and to firm renewable resources.

#### **LEGISLATIVE HISTORY:**

There are no known prior or current similar bills.

#### **FISCAL IMPACT:**

- \$491,000 to hire regulatory analysts to implement and provide ongoing oversight of:
  - The project-by-project net cumulative emissions analysis of new gas-fired powerplants (three PYs);
  - The project-by-project, "carbon-beneficial" alternative to new gas-fired powerplants evaluation (two PYs to confirm and monitor that any energy savings resources included in the alternative are separate and distinct from existing demand side management and renewable resource programs (significantly more resources would be required if this evaluation were determined to be in the CPUC's jurisdiction); and
  - The study and audit requirements the bill imposes on several CPUC energy programs (the language in the bill is too vague to determine how much of the desired analysis and information is already being performed and collected so it is

not possible to quantify the additional CPUC resources required to accomplish these tasks).

**STATUS:**

The bill failed to meet the Legislature's policy committee deadline and is now inactive in the Senate Rules Committee.

**SUPPORT/OPPOSITION:**

Support: None on file.

Opposition: None on file.

**Date:** May 9, 2008

**BILL LANGUAGE:**

BILL NUMBER: SB 1759    INTRODUCED  
BILL TEXT

INTRODUCED BY    Senator Perata

FEBRUARY 22, 2008

An act relating to energy.

LEGISLATIVE COUNSEL'S DIGEST

SB 1759, as introduced, Perata. Energy: renewable energy.

Under existing law, the Public Utilities Commission (PUC) has regulatory authority over public utilities, including electrical corporations. The Public Utilities Act requires the PUC to review and adopt a renewable energy procurement plan for each electrical corporation pursuant to the California Renewables Portfolio Standard Program. The renewables portfolio standard program requires that a retail seller of electricity, including electrical corporations, community choice aggregators, and electric service providers, but not including local publicly owned electric utilities, purchase a specified minimum percentage of electricity generated by eligible renewable energy resources, as defined, in any given year as a specified percentage of total kilowatthours sold to retail end-use customers each calendar year (renewables portfolio standard). Existing law requires the PUC to require the state's 3 largest electrical corporations, Pacific Gas and Electric Company, San Diego Gas and Electric, and Southern California Edison, to identify a separate electrical rate component to fund programs that enhance system reliability and provide in-state benefits. This rate component is a nonbypassable element of local distribution and collected on the basis of usage. Existing PUC resolutions refer to the nonbypassable rate component as a "public goods charge." The public goods charge moneys are collected to support cost-effective energy efficiency and conservation activities, public interest, research, and development not adequately provided by competitive and regulated markets, and renewable energy resources.

Existing law establishes the Renewable Resource Trust Fund as a continuously appropriated fund in the State Treasury, and provides that 51.5% of the money collected by the public goods charge for renewable energy resources, after deducting certain administrative expenses, be deposited in the New Renewable Resources Account in the fund, for use by the State Energy Resources Conservation and Development Commission (Energy Commission) to foster the development of new in-state renewable electricity generation facilities. Existing law requires the Energy Commission to certify eligible renewable energy resources, to design and implement an accounting system to verify compliance with the renewables portfolio standard by retail sellers, and to award production incentives and allocate and award supplemental energy payments from the New Renewable Resources Account to cover above-market costs of purchasing electricity from eligible

renewable energy resources.

This bill would make specified legislative findings and declarations regarding the proposed construction of fossil-fuel electricity generating facilities and renewable energy resources.

Vote: majority. Appropriation: no. Fiscal committee: no. State-mandated local program: no.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. The Legislature finds and declares all of the following:

(a) California's electricity sector is increasingly dependent on natural gas, facing potential supply shortages and escalating energy prices, and it relies upon an inadequate and aging transmission infrastructure requiring modernization to better ensure the continued and efficient delivery of electricity and renewable energy throughout the state.

(b) California's current energy trend, as it relates to electricity procurement and natural gas powerplant development, will have devastating local public health, regional, economic, and global environmental impacts for decades into the future.

(c) State and local regulatory processes are underway to build a staggering 5,000 megawatts of new, local natural gas electric generators, which will commit the state to these polluting facilities for the next 30 to 50 years.

(d) Such a massive investment will facilitate California's dependency on large amounts of imported liquefied natural gas (LNG) and enhance LNG terminal siting along California's historic ocean coast, while increasing air pollution to coastal communities.

(e) The South Coast Air Quality Management District estimates that in the Los Angeles Basin alone, nine proposed natural gas powerplants will emit 17.6 million tons of carbon dioxide, 1.6 million pounds of particulate matter, 1.8 million pounds of carbon monoxide, and 132 thousand pounds of sulfur dioxide every year.

(f) Nearly all the proposed powerplants are proposed to be sited in low-income communities and communities of color, further exacerbating severe public health threats by concentrating toxic air pollution in these communities.

(g) Vast new natural gas powerplant development in California may result in not meeting requirements of California's environmental laws that may require greenhouse gas emission reductions from the electricity sector, federal air quality standards, as well as renewable energy deployment requirements from the state's investor-owned utilities.

(h) In 2005, the State Energy Resources Conservation and Development Commission, the California Power Authority, and the Public Utilities Commission adopted the Energy Action Plan II, supporting the loading order, adopted in the 2003 Integrated Energy Policy Report, that describes the priority sequence for action to address increasing energy needs in the state.

(i) The loading order consists of decreasing electricity demand by increasing energy efficiency and demand response, meeting new generation needs first with renewable and distributed generation resources, and lastly with fossil-fueled generation.

(j) Capturing energy from wind, solar, ocean, and geothermal resources builds the health of people, protects California's

environment, creates jobs, and advances the benefits of a new green energy economy.

(k) It is the intent of the Legislature that any construction of, or procurement of power from, new or proposed fossil-fueled generation resources should be justified in the context of achieving reductions in greenhouse gases to 1990 levels by 2020 and 2050 targets of 80 percent reduction in greenhouse gases below the 1990 levels.

(l) It is the intent of the Legislature that state agencies with jurisdiction in the area of electric energy generation, procurement, siting, permitting, and rate-setting and renewable energy development in both electricity and transportation sectors should conduct all of the following activities:

(1) Quantify and publicly provide the air emissions and cumulative impacts of new power plant construction in California and report to the State Air Resources Board the implications for the achievement of the state's climate and air quality goals.

(2) Report to the State Air Resources Board on the progress of existing renewable energy deployment programs and identify obstacles to the achievement of the state's renewable energy goals.

(3) Perform an audit, to be publicly available, of existing and planned low-income rate assistance, energy efficiency, solar, and green building programs and identify barriers that impede local community deployment and participation.

(m) It is the intent of the Legislature that state agencies with jurisdiction in the area of electric energy generation, procurement, siting, permitting, and rate-setting, and renewable energy development in both electricity and transportation sectors should require proponents of new powerplant construction to conduct a thorough and robust renewable energy alternatives assessment prior to the approval of new fossil-fueled based electric generation. If a more carbon-beneficial combination of energy producing or energy saving sources is available, then the proponent should be required to pursue that avenue. This process should begin with all currently approved and expected powerplants.