



November 20, 2009

VIA E-MAIL

Mr. Gary Collord
Air Pollution Specialist, Energy Section
CALIFORNIA AIR RESOURCES BOARD
1001 I Street
Sacramento, CA 95812-2828

Re: Pacific Gas and Electric Company's Comments on the California Air Resources Board's Proposed Concept Outline for the California Renewable Electricity Standard

Dear Mr. Collord:

Pacific Gas and Electric Company ("PG&E") welcomes the opportunity to provide these comments on the California Air Resources Board's ("ARB") October 2009 *Proposed Concept Outline for the California Renewable Electricity Standard* ("Concept Outline"). PG&E also looks forward to expanding on these concepts and to commenting on revised proposals as the ARB's development of the Renewable Electricity Standard ("RES") proceeds.

I. INTRODUCTION

PG&E supports a cost-effective RES designed to deliver 33 percent of each California load serving entity's ("LSE") retail sales of electricity from eligible renewable resources ("ERR") by 2020. PG&E commends the ARB, the California Public Utilities Commission ("CPUC"), and the California Energy Commission ("CEC") for the agencies' cooperative development of the Concept Outline. While the Concept Outline makes clear that a number of implementation details will need to be discussed and more fully considered, the document provides a strong starting point for RES implementation.

PG&E's comments seek primarily to ensure that the final RES adopted by the ARB will fulfill five key principles:

- 1. Expand eligible sources** to include all cost-effective, greenhouse gas-reducing renewable generation, including existing categories of ERRs located anywhere within the Western Electricity Coordinating Council ("WECC") and the expansion of existing ERR categories to include

out-of-state, run-of-the-river hydroelectric facilities up to 50 megawatts (“MW”);

2. **Adopt appropriate compliance flexibility mechanisms** so that the RES remains feasible and equitable, including: (a) realistic interim targets; (b) accounting and reporting systems that are not unduly burdensome; and (c) compliance deferment and cost smoothing measures that take into account factors beyond the control of an LSE and the uneven development timeline for renewable generation;
3. **Ensure universal application of the RES requirements** to all California LSEs, without exceptions that create unfair competitive advantages;
4. **Maintain the cost-effectiveness of the RES program** by including appropriate cost-containment mechanisms that allow the ARB to seek alternative greenhouse gas (“GHG”) reductions in the event that the RES costs significantly more than anticipated; and
5. **Delineate enforcement responsibilities** between the ARB and other state agencies like the CPUC to ensure that regulated entities are not subject to double and potentially inconsistent enforcement regimes for overlapping renewable energy procurement requirements.

II. SPECIFIC COMMENTS ON THE CONCEPT OUTLINE

A. **ARB’s Concept Outline Appropriately Builds Upon and Complements the Existing RPS Program.**

PG&E supports the positions taken in both the Governor’s Executive Order S-21-09^{1/} and in the Concept Outline^{2/} to build upon and complement the existing Renewable Portfolio Standard (“RPS”) implemented and administered by the state’s energy agencies. Certainty and stability in the renewable energy market is critical at this time of transformation in California’s energy infrastructure. In the face of severe economic and financial turmoil, the renewable energy industry is struggling to reconcile the complex demands of higher production in a shorter timeframe with major transmission, permitting, and financial constraints. The State cannot afford to add a high level of regulatory uncertainty to this already difficult development environment if we are to achieve a 33% by 2020 target. Toward this end, PG&E generally supports a simpler approach to implementing the RES wherever possible and the extension of the existing RPS rules rather than creating a new regulatory system from whole cloth.

^{1/} Executive Order S-21-09 at Ordering Paragraph 2.
^{2/} Concept Outline at p. 1.

PG&E notes that the ARB's RES will be a discrete regulatory program implemented pursuant to the 2006 Global Warming Solutions Act ("AB 32"), and that ARB has acknowledged the close relationship between the existing RPS program and the stated goals of the RES. AB 32's direction to ARB to reduce administrative burdens^{3/} and to work closely with the CPUC on matters related to the energy sector^{4/} make a high level of cooperation between ARB and the state's energy agencies both desirable and necessary. In particular, ARB should consult closely with the CPUC to ensure that the RPS and RES programs are harmonized while also leveraging the CPUC's substantial experience implementing the RPS. PG&E supports the Concept Outline's proposal of interagency agreements between the ARB and the state's energy agencies^{5/} as an appropriate way to formalize the agencies' respective roles, to ensure a consistent approach to cost containment, and to ensure the greatest benefits from consultation.

However, PG&E recognizes that implementation of the RES will require ARB to address issues that go beyond the current RPS program. PG&E's comments below make suggestions regarding key distinctions from the RPS program that would tailor the RES to meet the specific goals of AB 32 and the Governor's Executive Order.

B. All Cost-Effective Sources of RECs Should Be Eligible to Meet RES Targets.

PG&E supports ARB's proposal to count all ERRs under the RPS program as eligible under the RES.^{6/} PG&E also supports the Concept Outline's approach to make REC-only transactions associated with facilities located anywhere in the WECC eligible for RES compliance.^{7/} Finally, PG&E recommends expanding the current categories of ERRs to include out-of-state, run-of-the-river hydropower facilities that have capacities of 50 MWs or less. The eligibility of all of these sources will create significant cost-reduction opportunities without compromising the GHG reduction goals of the RES.

1. PG&E supports WECC-wide eligibility.

First, PG&E supports the Concept Outline's proposal to allow the use of RECs generated from ERRs connected anywhere within the Western Electric Coordinating Council ("WECC") transmission system.^{8/} PG&E also supports the Concept Outline's proposal to allow the use of unbundled, or REC-only, transactions toward RES compliance, provided the RECs are tracked by the Western Renewable Energy Generation Information System ("WREGIS") and the regulated LSE can demonstrate that the REC attribute, and its GHG emissions attributes, were not used towards other renewable generation or GHG reduction program requirements.^{9/}

^{3/} Cal. Health & Safety ("H&S") Code § 38562(b)(7).

^{4/} Cal. H&S Code § 38501(g).

^{5/} Concept Outline at p. 13.

^{6/} See Concept Outline at p. 9.

^{7/} *Id.* at p. 10.

^{8/} Concept Outline at p. 10.

^{9/} *Ibid.*

2. Delivery of RECs into California should not be required for purposes of RES compliance.

The Concept Outline requests feedback regarding the potential impact of modifying the delivery requirements for out-of-state generating resources.^{10/} Provided that any changes to delivery requirements would be prospective only and would not impact the RES eligibility of existing RPS contractual arrangements, PG&E supports modifying for purposes of the RES the existing RPS and CEC delivery requirements so that unbundled RECs need not be delivered into California to count toward RES compliance. In so modifying the delivery requirements, the ARB should harmonize its reporting rules to ensure that the GHG emissions reduction value of an undelivered, unbundled REC will count toward the state's efforts to meet the AB 32 goals.

3. The eligibility of small, non-GHG-emitting hydroelectric facilities should be expanded.

The Concept Outline seeks feedback regarding the appropriateness of modifying the limitations currently placed on certain RPS-eligible technologies.^{11/} Current RPS program eligibility rules contain a number of limitations on procurement from hydroelectric facilities, including a limitation on eligibility if a new hydroelectric facility would cause a change in the volume or timing of streamflow.^{12/} PG&E recommends that these limitations be modified so that small out-of-state, run-of-the-river hydroelectric facilities of 50 MWs or less are ERRs for purposes of the RES. PG&E is studying the feasibility of purchasing a significant amount of energy generated by such facilities, and based on this ongoing study, it appears that these small hydroelectric facilities could be a relatively cost-effective and plentiful source of GHG-free energy and/or Renewable Energy Credits ("RECs") for California and PG&E's customers. The proposed change would facilitate further study of options to procure from these small hydroelectric facilities.

C. The RES Should Contain Appropriate Compliance Flexibility Mechanisms.

Compliance flexibility mechanisms include two different types of measures: (1) compliance deferment measures that ensure that an LSE is not inequitably penalized for failure to meet a RES target when it has failed to do so because of circumstances outside of the LSE's control; and (2) compliance smoothing measures that allow banking and borrowing of RES compliance credits to even out year-to-year changes in the market and generation conditions while ensuring that the ultimate goals of the program are still met. The ARB should include both types in its RES regulation.

^{10/} *Supra* at p. 10.

^{11/} *Supra* at p. 10.

^{12/} *See* Cal. Pub. Util. Code § 399.12(c)(1).

1. Compliance deferment measures are necessary to ensure that LSEs are not unfairly penalized for circumstances outside of their control.

PG&E strongly agrees with the Concept Outline's proposal that ARB have discretion to find that "a shortfall was due to circumstances beyond the reasonable control of the regulated party" and, based on that finding, allow up to three years for the shortfall to be remedied.^{13/} This compliance deferment measure is necessary to address situations in which greater-than-anticipated transmission, permitting, financing, or other obstacles or natural catastrophes faced by independent, third-party developers lead to the failure of those third parties to meet their obligations under procurement contracts with regulated LSEs.

2. Cost smoothing measures are necessary to address the uneven nature of renewable generation development.

PG&E agrees with the Concept Outline proposal that cost smoothing measures like banking should be included in the RES regulation.^{14/} Banking should include both the ability to carry over surplus credit from the RPS program into the RES program and to carry forward surplus credit from year to year during RES program implementation. Allowing such banking furthers AB 32's goal of encouraging early action to reduce GHGs.^{15/} In addition to the ability to bank surplus RES credit, ARB may wish to consider additional mechanisms to smooth the transitions in compliance milestones described further in Section F, below.

In sum, compliance flexibility measures, including the measures described above, are critical to ensuring that the RES meets AB 32's requirement that measures are cost-effective and equitable.^{16/}

D. The RES Should Apply Broadly and Equally to All LSEs.

PG&E strongly supports the Concept Outline's proposal that the RES will apply to all LSEs, including electrical corporations, electric service providers, community choice aggregators, electrical cooperatives, and local publicly owned electric utilities.^{17/} However, PG&E disagrees with the additional proposal that an exemption threshold could be applied to smaller LSEs, including potentially those with annual sales of less than 500 gigawatt-hours ("GWh").^{18/} In particular, PG&E is concerned that establishing an exemption threshold of any size could create gaming opportunities by incentivizing LSEs to be fictionally split up to reduce sales below the threshold. Moreover, an exemption from the RES will perpetuate the RPS program's existing design flaw that accords a competitive advantage to non-covered entities.

^{13/} Concept Outline at p. 14.

^{14/} See Concept Outline at pp. 12-13.

^{15/} Cal. H&S Code § 38562(b)(1).

^{16/} Cal. H&S Code § 38562(b)(1), (b)(5).

^{17/} Concept Outline at p. 9.

^{18/} *Ibid.*

PG&E submits that an exemption for any LSE would conflict with the Governor's clear order that the RES apply to "all California load serving entities."^{19/}

E. Cost-Containment Mechanisms Would Ensure that the RES Remains Cost-Effective.

Cost-containment mechanisms allow ARB to determine, based upon a factual record submitted by one or more LSEs, that the costs of the RES implementation have become unreasonably high, are no longer cost-effective, and that GHG reductions attributed to the RES should be obtained elsewhere. Such a demonstration might show that the plausible compliance scenarios assumed in the adoption of the RES were invalid, including longer than expected delays in transmission development, new resource permitting, or detrimental changes in the financial markets. These changes in the assumed scenarios might leave it technically possible to achieve the RES compliance targets, but only at significantly higher costs per ton of GHG reduced than what had been estimated during RES development. A cost-containment mechanism would allow the ARB to terminate or modify the RES compliance obligations in such circumstances and order alternative GHG reductions that are more cost-effective, helping to meet AB 32's requirement that adopted measures minimize costs and maximize the total benefits.^{20/}

1. Standards for cost-containment should be harmonized across agencies with overlapping jurisdiction and adopted as part of the RES.

The cost-containment mechanism should be developed as part of the RES implementation regulation and should be part of an interagency agreement between the ARB and the energy agencies. Consistent with AB 32's requirements,^{21/} PG&E recommends that the ARB undertake a cost-benefit analysis as part of this proceeding to determine a maximum expenditure on incremental renewable power that would still be cost-effective when compared to the cost of other potential sources of GHG reductions. The CPUC and the ARB should formally agree that if executed RPS/RES-qualifying power purchase agreements ("PPA") or proposals for utility-owned renewable generation are within this cost-effectiveness window, then those proposals are *per se* just and reasonable and should generally be approved for recovery in rates. To the extent the costs of RES implementation exceed this cost-effectiveness window, the RES regulation should include procedures that allow the RES targets to be modified and substitute GHG reductions to be identified.

^{19/} Executive Order S-21-09 at Ordering Paragraph 2 (emphasis added).

^{20/} Cal. H&S Code § 38562(b)(1), (b)(5).

^{21/} *Supra* at § 38562(b)(1), (b)(5).

2. Although a number of cost-containment mechanisms are possible, an annual spending cap tailored to each LSE may be the least difficult to implement.

The RPS statute contains one example of a cost-containment mechanism in the form of an above-market fund^{22/} that automatically relieves regulated entities of their obligation to purchase additional above-market renewable power to meet the RPS requirements once the limit is reached. The above-market fund is only one possible way to place a limit on maximum RES-related expenditures, and PG&E is open to exploring other possible mechanisms that accomplish this goal in a way that eases administrative burdens and complexity. Another approach, and one that PG&E supported in proposed legislation, is an annual limit on the cost that an LSE would have to incur in procuring ERRs expressed as a percentage of the LSE's revenue requirement for generation. PG&E supported a cap of 5 percent per year in the legislative process.

F. The RES Should Include Two Interim Compliance Milestones.

The Concept Outline proposes annual or multi-year compliance periods, beginning in 2013.^{23/} ARB requested feedback on the appropriateness of different compliance schedules, recognizing that annual compliance may be too frequent.^{24/} In recognition of the non-linear pattern of renewable energy development, with “lumps” of new generation coming online at different times, PG&E recommends that ARB adopt a 20 percent requirement beginning in 2013, a 25 percent requirement beginning in 2016, and a 33 percent requirement in 2020. In each of the years in between those milestones, the percentages would need to be maintained, although, as noted above, ARB may wish to include additional flexibility mechanisms to smooth the transitions between milestones.

G. Regulated Entities Should Not Be Subject To Multiple Penalties for the Same Compliance Obligations.

PG&E supports the Concept Outline's proposal that ARB would enforce the RES based upon compliance information submitted by LSEs to the CEC or CPUC.^{25/} This approach would avoid duplicate and burdensome reporting requirements for the RES and RPS programs. However, ARB should also ensure that an LSE is not subject to multiple enforcement actions by multiple state agencies for failure to procure the same RECs. ARB can avoid that outcome by formally limiting, in both its RES regulation and an inter-agency agreement with the CPUC, ARB's authority to enforce the RES to only instances in which an LSE fails to meet RES compliance targets in excess of the RPS obligation. This would be a pragmatic and legitimate exercise of ARB's enforcement discretion, and the practical effect would be that ARB would have exclusive enforcement jurisdiction for RES obligations that do not overlap with the RPS

^{22/} Cal. Pub. Util. Code § 399.15(d).

^{23/} Concept Outline at p. 12.

^{24/} *Ibid.*

^{25/} *See* Concept Outline at p. 14.

obligations (generally, for failure to procure between 20-33 percent), while the CPUC would retain exclusive enforcement jurisdiction for RPS violations (up to 20 percent).

H. ARB Should Measure Compliance in Percentages of Sales because a GHG Compliance Metric Would be Untenably Complex.

A significant portion of the Concept Outline analyzes the potential for, and requests feedback regarding, the possibility of using a compliance metric for the RES based on the quantified avoided GHG emission attributes associated with specific RECs (the “GHG Metric”).^{26/} This would involve a very significant departure from the existing RPS program, where compliance is measured in percentages of retail sales (the “Sales Metric”). PG&E strongly supports the continued use of the Sales Metric in the implementation of the RES.

While PG&E understands and appreciates ARB’s desire to translate the goal of a 33 percent RES and the interim compliance milestones into estimates of avoided GHG emissions so that the RES can demonstrably contribute to the AB 32 goals, PG&E submits that AB 32’s mandate to reduce administrative burdens^{27/} is better met by using the Sales Metric. First, attempting to translate renewable energy delivery goals into GHG reductions at too granular of a level will lead to enormous complexity that could sidetrack the rulemaking and therefore impede rather than further implementation of AB 32. This point is illustrated well by the Concept Outline itself, which asks the public to comment on the feasibility of attributing different GHG factors to different ERRs, of assessing system impacts caused by differentiating between ERRs, of accounting for GHGs attributable to line losses that depend on the location of each ERR, and of considering emissions from fossil-fueled generation needed to back-up intermittent ERRs.^{28/} PG&E submits that while these factors are logically related to the determination of a more precise GHG attribute to associate with any particular REC, a massive and complex analysis and record would be required to address any one of them satisfactorily and equitably. In plain terms, the incremental benefit to be gained through such an exercise is too inconsequential to warrant the delay and likely contention that it would generate.

In contrast, use of the Sales Metric is time-tested, well-understood, and complies with AB 32’s requirements so long as the compliance targets are translated at an aggregate level into estimates of associated GHG reductions. Because the Sales Metric is used in the existing RPS Program, its adoption for purposes of the RES would significantly reduce the burden on the ARB and the regulated community by allowing the generation of one compliance report for both programs. The use of a GHG Metric would fundamentally conflict with the ARB’s sensible goal, supported by the Governor’s Executive Order, of utilizing “the structure, policies and implementation mechanisms established . . . for the existing RPS Program.”^{29/}

^{26/} See generally Concept Outline at p. 11, Attachment 1, Attachment 3.

^{27/} Cal. H&S Code § 38562(b)(7).

^{28/} See Concept Outline at pp. 11, 21.

^{29/} Concept Outline at p. 1.

H. While CHP and Rooftop Solar Probably Do Not Require Special Treatment under the RES, Load Associated with Plug-In Vehicles Should be Excluded from LSE Sales for Purposes of RES Compliance.

The Concept Outline requests feedback regarding whether purchases of rooftop photovoltaic (“PV”) power or power generated by combined heat and power (“CHP”) facilities and used to serve load by LSEs should be excluded from the LSE’s sales for purposes of determining RES compliance.^{30/} Additionally, the Concept Outline asks whether loads serving plug-in vehicles should be excluded from an LSE’s sales.^{31/}

With regard to rooftop PV, PG&E notes that PV generated entirely “behind the meter” for use only at the site of generation should be distinguished from power exported at wholesale to the grid by rooftop PV systems. “Behind the meter” PV systems already reduce an LSE’s load because the customer is self-generating part or all of its demand, and this generation therefore does not need to be subtracted a second time from the LSE’s sales. Rooftop PV exported at wholesale to the grid pursuant to net metering laws^{32/}, a feed-in tariff^{33/}, or under a power purchase agreement with an LSE will include the sale to the LSE of the associated RECs, meaning that the inclusion of that power in the LSE’s sales will not change the LSEs percentages for purposes of RES compliance.

Second, with regard to CHP facilities, although PG&E does not oppose the proposal to subtract CHP generation from load, PG&E notes that since CHP facilities have operational GHG emissions, regulatory incentives given to them lead to the outcome that GHG-emitting sources would be preferred over large hydroelectric facilities and nuclear facilities with no operational GHG emissions. Because fossil-fuel fired CHP facilities are not ERRs and all CHP emit operational GHGs, giving them a regulatory preference in the context of the RES may not be appropriate.

Finally, with regard to loads associated with plug-in vehicles, PG&E supports subtracting these sales from the compliance denominator to the extent that it is practical to separately meter and track the loads. Subtracting electric vehicle loads from the RES is an equitable solution to the potential for inter-sectoral shifts in GHG emissions as the transportation sector electrifies to meet its own AB 32 emission reduction obligations.

III. CONCLUSION

Thank you for the opportunity to submit these comments. PG&E looks forward to working constructively with ARB, other state agencies, concerned stakeholders, and members of

^{30/} Concept Outline at p. 21.

^{31/} *Ibid.*

^{32/} Recently enacted Assembly Bill 920 (Stats. 2009, ch. 376) requires utilities to purchase net surplus energy from net metering customers.

^{33/} Recently enacted Senate Bill 32 (Stats. 2009, ch. 328) requires utilities to make available a standard tariff for small PV and other renewable facilities up to 3 MW.

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the public to tackle the challenge of global climate change and to ensure the successful implementation of the RES.

Very truly yours,

/s/

M. Grady Mathai-Jackson

cc: Mary Nichols, Chairman, ARB
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