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Chairman Robert B. Weisenmiller
Commissioner Carla Peterman
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Re: RPS Proceeding: Supplemental comments on proposed revisions to the California Energy Commission's Guidebook on RPS Eligibility (re: use of de minimis amounts of nonrenewable fuel), Docket Nos. 02-REN-1038 and 11-RPS-01

Dear Chairman Weisenmiller and Commissioner Peterman:

On November 2, 2011, BrightSource Energy, Inc., along with Abengoa Solar, Inc., submitted comments on proposed revisions to the California Energy Commission's Guidebook on RPS Eligibility ("Draft Guidebook"). Those comments primarily focused on the language in the Draft Guidebook intended to implement the changes to the de minimis provisions of the Renewables Portfolio Standard ("RPS") enacted by AB 1954 (Skinner; Stats 2010, ch. 460) ("AB 1954").

AB 1954 amended California's RPS to (i) clarify the fossil fuel uses that are to be considered for de minimis treatment, and (ii) provide for a de minimis threshold of up to 5% to maximize the generation of renewable energy and reduce variability in electrical output. AB 1954 made clear that the RPS is not designed simply to promote generation of electricity from renewable resources for its own sake, but also to achieve economic and environmental benefits for California.¹ As explained in more detail below, the proposed guidance on the de minimis use of nonrenewable fuel would inadvertently hinder the achievement of the economic and environmental objectives of AB 1954 and California's RPS.

Specifically, the approaches proposed in the Draft Guidebook conflict with the letter and intent of AB 1954 in two ways. First, the Draft Guidebook would retroactively cancel the safe harbor for using de minimis amounts of renewable resources if a facility exceeds the de minimis threshold by any amount, however small. Since the de minimis threshold is based on the a plant's annual output, and the output of intermittent renewable generation is unpredictable, this creates a standard that is virtually impossible for a renewable generator to meet and still adhere to AB 1954's goals of reducing intermittency and providing more stable, reliable, economic and environmentally-responsible energy. Second, the Draft Guidebook would count nonrenewable fuels against the de minimis threshold that are not actually used to generate electricity, which would result in the "spilling" of significant quantities of renewable fuel that would otherwise have been converted into electrical energy, or the use of grid electricity for this purpose, which

¹ In providing for de minimis use of nonrenewable fuel, the Legislature created a distinct category of plants with distinct benefits. Renewable generation facilities that use a de minimis amount of nonrenewable fuel in the generation process are not hybrid or multi-fuel facilities. The Commission's Guidebook has long provided a distinction between de minimis and multi-fuel facilities (see, e.g., Renewables Portfolio Eligibility Guidebook, 3d Ed., 2008, at 19, providing for increased application and certification requirements for multi-fuel facilities that are not de minimis facilities).

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would not be economically or environmentally sound. The unintended, but significant, consequence of these approaches is that plants will fall far short of their potential to contribute towards California's RPS and its underlying goals.

We propose the following simple cures for these inadvertent problems with the Draft Guidebook:

- Eliminate the retroactive cancellation of the de minimis credit for facilities that certify as a "de minimis" facility;
- Allow "de minimis" facilities to cure an overage of nonrenewable fuel use within a short time;
- Clarify that non-generating uses of nonrenewable fuels do not count toward the de minimis limit, and provide for clear, enforceable methodologies to differentiate between non-generating and generating uses of nonrenewable fuels.

Negative Consequences of Retroactively Cancelling the De Minimis "Safe Harbor"

An intermittent renewable generator cannot accurately forecast its annual output, which is inherently subject to the variability of the renewable resource (the sun, for a solar project) in addition to the unplanned outages that any generation facility may experience. Indeed, in recognition of the fact that operators cannot accurately predict intermittent output, the California Independent System Operator Corporation ("CAISO") adopted the Participating Intermittent Resource Program ("PIRP"), which balances output across multiple periods rather than holding intermittent renewable generators responsible for penalties for output variances they cannot control. Since the de minimis threshold is assessed as a percentage of the annual output of the facility, it is equally impossible to accurately forecast the quantity of nonrenewable fuel that will enable a facility to remain below the de minimis threshold. The proposed retroactive cancellation of renewable credit issued for a facility's generation in the event that it exceeds the de minimis threshold (referred to as a "claw back" of renewable credit) therefore threatens to punish even well intentioned generators with sound business plans for something that is entirely outside of their control.²

² To illustrate, if November or December solar radiation is significantly below the levels normally expected by multi-year meteorological patterns, or if there is an unplanned end-of-the-year outage, a solar project that carefully limited its fossil fuel use during the course of the calendar year could easily find that its annual output was significantly lower than expected, and that, unintentionally and despite all reasonable efforts, it exceeded its proportional de minimis allowance.

A hypothetical unit could, for example, be expected to produce 700,000 MWh annually, with 60,000 MWh of production in November and December. If, however, this unit actually produces only 20,000 MWh during those final months due to the poor weather or operational difficulties, the facility's annual output will be only 660,000 MWh. Assuming a de minimis threshold of 2%, the expected allowable output from the nonrenewable fuel would have been 14,000 MWh. Given the shortfall in output due to difficulties encountered in November and December, however, the actual allowable amount of generation attributable to nonrenewable resources would be only 13,200 MWh. The facility can be expected to have fully or nearly used up its nonrenewable fuel allotment to ensure more reliable performance, particularly during peak months, prior to November. If it had already produced 13,250 MWh from nonrenewable fuel prior to November, its nonrenewable fuel use would exceed the de minimis threshold, at just over 2%, resulting under the proposed guidance in cancellation of the entire statutory safe harbor for de minimis fuel use.

The proposed claw back can have devastating economic impacts to a de minimis facility, and even the threat of such a claw back would significantly harm financing of those facilities. Specifically, a claw back approach could result in the following damages:

- Damages to the Buyer. The buyer of the output from a de minimis facility will have had Renewable Energy Credits (“RECs”) deposited into its account on a monthly basis throughout the year. If the RECs are retroactively cancelled, the buyer will be short RECs and may be exposed to compliance penalties. If this occurs at the end of a compliance period, it may not be possible for the buyer to procure sufficient RECs to maintain compliance. The buyer will have paid for energy at the renewable energy price, and will need to seek compensation for costs and/or RECs. For a 250MW solar project without storage, 2% of annual output is approximately 14,000 MWh, amounting to 14,000 RECs, and 5% of annual output is approximately 35,000 MWh. At the current cap of \$50/MWh, these “clawed-back” RECs would be worth between \$700,000 and \$1,750,000 for each year in which this occurs.
- Damages to the Seller.
 - o *Damages Due to Buyer.* The seller, in response to the buyer, would be required to make up RECs and/or provide monetary compensation, and would also most likely be exposed to contract penalties. The financial blow to the solar project, in other words, would likely significantly exceed the \$700,000 to \$1,750,000 noted above, depending on contract terms.
 - o *Damages Resulting from Increased Financing Costs /Reduced Nonrenewable Fuel Use.* The uncertainty of whether the de minimis allowance will be clawed back in any given year will make it harder to finance renewable projects. The revenue stream from the de minimis nonrenewable fuel use, meaning the revenue from the additional renewable generation enabled by the nonrenewable fuel use, would be at risk – and risky revenue streams are generally discounted heavily or ignored. This would increase the cost of financing the project overall. To avoid financing difficulties, project owners would likely agree to reduce nonrenewable fuel use by at least 25% of the de minimis threshold, to lessen the chance that year-end surprises could cause a claw back of the de minimis allowance. This, in turn, would cause the loss of a proportional amount of electrical generation from renewable fuel, which would have been enabled by the nonrenewable fuel (e.g., if the threshold is 2%, the facility would plan to use less than 1.5%, and would lose 1% of its total output- half of which would have been generated by nonrenewable fuel and half of which would have been generated by renewable fuel). The potential rollback in net revenues for a 250 MW project would be as high as \$1 million annually.

If the guidance remains unchanged, many generators will significantly curtail their nonrenewable resource use to avoid the risks of an exceedance. The accompanying efficiency losses will in turn unnecessarily delay and impair California’s ability to achieve its RPS goals.

Too many variables are outside of the project’s control, and companies consequently need flexible legal requirements that will allow them to adapt to changing circumstances—within reason.

Negative Consequences of Counting Pre-Generation Warming toward the De Minimis Threshold

Counting nonrenewable fuel use for pre-generation against the de minimis threshold would have similar economic consequences. This treatment would likely cause the wasting of renewable resources that could have been converted to electricity, or increase reliance on grid power, both of which AB 1954 was intended to avoid.

Nonrenewable fuels or grid power can be used to prepare facilities for generation, while still falling below conditions needed to generate electricity. Pre-generation warming activities nevertheless have significant value, as they allow the generation equipment to more efficiently use renewable resources to create electricity by avoiding the “spilling” of renewable “fuel” that is available before generation equipment would be warm enough to make efficient use of that “fuel.” It is important to recognize, however, that at the end of the operating day, thermal energy in the generating equipment will again fall below the threshold levels needed to generate electricity, and that residual energy will not be converted into electricity- i.e., thermal energy in the system will return to the same state that nonrenewable fuels created just before start-up that morning.

Without the use of this nonrenewable fuel to prepare equipment to generate electricity from renewable “fuel,” between 1% and 2% of the renewable resource that could otherwise have been converted to electricity would be wasted. The value of this renewable power that would otherwise be lost is the value of the REC, at \$700,000 to \$1.4 million for a 250 MW plant, plus the value of 7,000 to 14,000 GWh of electricity.³

Alternative to the Draft Guidance Approach

The de minimis guidance can be readily modified to avoid conflict with the intent and language of AB 1954, and to avoid the negative outcomes described above by making the following changes:

1. Clearly Provide for Certification of De Minimis Facilities. To achieve the intent of the de minimis provisions of the RPS law, while minimizing administrative burden, the Commission should require facilities seeking to qualify for de minimis treatment to provide, as part of their application for certification, methodologies that have been certified by an independent engineer for clearly differentiating between generating and non-generating uses of nonrenewable fuels,⁴ as well as an attestation that the owner intends to keep nonrenewable fuel use to de minimis levels. The Commission has long relied, at least in part, on operator intentions and attestations of those

³ Counting the use of nonrenewable fuel for pre-generation warming activities will also create perverse incentives to replace nonrenewable fuels used for this purpose with grid power. This will burden the grid and create both economic and environmental inefficiencies that AB 1954 was intended to avoid.

⁴ The method should clearly delineate nonrenewable fuel uses that generate electricity and uses that do not convert the nonrenewable fuel to electricity, including means to measure when the facility is generating electricity as well as the minimum operating conditions for generation, so as to clearly demonstrate nonrenewable fuel use outside of generating time periods are not capable of generating electricity. The minimum operating conditions could, for example, include minimum temperatures and pressures necessary for generation turbines to operate and create electricity.

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intentions to ensure RPS eligibility, such as with the attestation required of facilities using biogas (Renewables Portfolio Eligibility Guidebook, 3d ed., 2008, at 21).

2. Allow De Minimis Facilities to Cure Exceedances. If, in a given year, a de minimis facility exceeds its de minimis nonrenewable fuel threshold, rather than retroactively withdraw renewable energy credit that had been awarded (and, generally, already credited to the buyer), the facility should be given two years to provide equivalent renewable energy credit in an amount equivalent to the exceedance, either by procuring and retiring renewable energy credits, or by having an equivalent amount of energy that would have qualified as renewable in the following year treated as nonrenewable. This treatment would be similar in concept to CAISO's PIRP approach. If the de minimis facility fails to make up renewable energy credit for its exceedances within the deadline, the buyer that received the credit should be given six months to procure and retire equivalent credits, and if the buyer fails, then (and only then) should renewable energy credit that had been awarded be retroactively withdrawn from the buyer.

The proposals outlined above would encourage the most efficient use of renewable resources, promoting attainment of the goals of the RPS, and ensuring compliance with AB 1954, all while ensuring that nonrenewable fuel allowances are not abused. Should you have any questions, we would be happy to set up a meeting to discuss this proposal, and any of the supporting examples provided in this letter, at greater length. Please let us know if you think such a meeting might be productive.

Thank you for your time and consideration.

Sincerely,



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