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California Energy Commission
Dockets Office, MS-4

Re: Docket No. 03-RPS-1078 and Docket No. 02-REN-1038: RPS Proceeding

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Sacramento CA 95814-5512

(Sent via email to [docket@energy.state.ca.us]; one hard copy mailed on this date)

SUBJECT: Submission of Written Comments on Proposed Changes to Guideline Revisions for RPS Implementation and Renewable Energy Program

The California Energy Commission (CEC) once again has proposed significant changes to the Guidebooks for implementation of the Renewable Portfolio Standard. Our comments are respectfully submitted to focus on only one aspect, the conditions by which a facility that processes municipal solid waste for conversion to energy, fuels and other commodities may be certified as an "eligible renewable energy generating facility". Our comments thus pertain to the specific section beginning on page 27 of the Renewables Portfolio Draft Staff Guidebook, Forth Edition¹.

CEC's Overall and Eligibility Guidebooks were developed as Implementation Guidelines, and are intended as an explanation of CEC's renewable energy implementation policies to would-be RPS participants. The CEC has the authority to periodically change the Guidebooks in response to many factors; the Guidebooks therefore also document the agency's changing *interpretation* of the continual flow of policies, amendments and modifications impacting this dynamic set of laws and regulations.

The first adopted Eligibility Guidelines came out in August 2004²; these contained eight Solid Waste Conversion Facilities criteria, by which Municipal Solid Waste (MSW) might be turned into Renewable Electricity, using a "non-combustion thermal process". Many parties now agree that the promulgated criteria are for the most part technically inaccurate, yet no consensus has been reached regarding how these legislated inconsistencies might be clarified. There have been numerous failed legislative attempts to change these eligibility criteria.

¹ Renewable Portfolio Standard Eligibility Guidebook, as proposed August 2010. CEC 300-2010-007-SD. Ppg 27-28. <http://www.energy.ca.gov/2010publications/CEC-300-2010-007/CEC-300-2010-007-SD.PDF>

² Renewable Portfolio Standard Eligibility Guidebook, adopted August 2004. CEC 500-04-002F1, Ppg 13-14. http://www.energy.ca.gov/portfolio/documents/guidebooks/2004-08-20_500-04-002F1.PDF

The iterations of the Guidebooks, however, have regularly and successfully formalized important if apparently minor alterations to the wording by which MSW conversion facility eligibility may be achieved. We feel it is useful to make a comparison of the original criteria as published in August of 2004, to the currently proposed wording. By presenting this item by item comparison, we can best offer specific observances and recommendations. Many iterations of change have taken place from the original Guidelines. As in the draft, proposed changes from the most recent version are indicated here by underline.

Original Guidelines, August 2004

Proposed Guidelines, August 2010

<p>2. Solid Waste Conversion Facilities: A facility that uses a non-combustion thermal process to convert MSW to a clean burning fuel that is then used to generate electricity is eligible for the RPS and may qualify for SEPs if it qualifies as new or repowered and is located in-state or satisfies the out-of-state requirements. Such facilities must meet all of the following criteria in accordance with Public Utilities Code section 383.5(b)(1)(C), as amended by Public Resources Code section 25741(a)(3)</p>	<p>2. Solid Waste Conversion Facilities: A facility is eligible for the RPS if 1) it uses a two-step process to create energy whereby in the first step (gasification⁴⁹ conversion) a Noncombustion thermal process that consumes no excess oxygen is used to convert MSW into a clean burning <u>gaseous or liquid</u> fuel, and then in the second step this clean-burning fuel is used to generate electricity, 2) it is located in-state or satisfies the out-of-state requirements, and 3) <u>it the conversion process</u> meets all of the following criteria in accordance with Public Resources Code Section 25741, Subdivision (b)(3):</p>
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The requirement for a two-step process mirrors well the key difference between Conversion and Incineration: the former can incorporate an informational feed-back stage that allows optimization for recovery; the latter simply “renders to ash”, without the technically challenging step of at least some characterization of the hot produced gases prior to final combustion or other use. Proposed addition of the footnote (⁴⁹) reference to the source of usage of the term “gasification” is helpful.

Proposed Change: *It would also be helpful if the Guidebook included a footnote reference to the source of the prior change to “two-step”; the modifications interact, and tracking earlier impetus continues to increase in complexity.*

The second significant wording alteration for this proposed section revision is addition of the terms “gaseous or liquid” to clarify that “energy” indeed includes electricity and fuel.

Proposed Change: *Again, a footnote reference to source would be appreciated, as this element reflects on implementation of AB 118 among other standing programs.*

The third proposed revision, substitution of the term “the conversion process” replacing “it”, clarifies that the technical components effecting *conversion* are the focus of compliance with the criteria, rather than the entire facility. This follows well upon the Cal Recycle staff interpretation that leakage from the retort is unacceptable; while the overall control of emissions from the facility are well addressed by other standing law and regulation.

Proposed Change: *It would be wholly appropriate for this interpretation to be documented and referenced in the proposed revision.*

Following are the eight encoded criteria; only in subsection **h)** have changes been made between the 2004 encoded text and the 2010 proposed Guidebook revision, yet the prior and the proposed changes to the introductory section 2 (above) impact interpretation of *all* of the subsequent subsections. Comments are directed toward the relationship of section 2 wording to the subsections, suggesting clarification of interpretation and references for purposes of future RPS implementation:

a) The technology does not use air or oxygen in the conversion process, except ambient air to maintain temperature control.

No revision has been made in the criterion's wording, although as noted above, the earlier revision to the preceding "introductory" section *does* offer that the conversion technology must be a "...process that consumes no **excess** oxygen...". This simple shift opened the dialogue of what is indeed "excess", and effectively modifies the interpretation of use of process air/oxygen. There *is* significant technical difference between use of oxygen *only* for temperature control, and use of oxygen not in excess of the requisite "non-combustion" status of retort reaction. Modification of oxygen levels in real-time process flow is one of three system parameters that must be under continuous control in order that the operator respond appropriately to the real-time analysis of what constitutes a "clean burning gaseous or liquid fuel", along with retention time and resulting temperature.

Proposed Change: *A sub-text clarification of this oxygen-retention time-temperature relationship to production of clean-burning fuel would be appreciated.*

b) The technology produces no discharges of air contaminants or emissions, including greenhouse gases as defined in Section 42801.1 of the Health and Safety Code.

No revision is proposed. As noted above, the impact of the prior change to part 2.3 of the introductory section, shifting the focus to the conversion technology rather than the overall facility, acts to modify the interpretation of this criterion.

Proposed Change: *Inclusion of a footnote reference to the source and timing of this change would be an appropriate revision to the current Guidebook. Reference in footnote to this "retort" vs "facility" code applicability would simplify future implementation; inclusion of appropriate emissions control codes for the overall facility would also be appropriate.*

c) The technology produces no discharges to surface or groundwaters of the state.

No revision is proposed. Again, previous revision of the introductory section directs the compliance focus upon leakage from the conversion technology equipment directly to surface or groundwater. Any system residue (gas, liquid or solid) therefore **MUST** be controlled within the battery of the facility, and that control is of course subject to standing law and regulation.

Proposed Change: *Clarification would assist implementation, with code reference to applicable state water quality and water discharge pollution prevention requirements for the overall facility.*

d) The technology produces no hazardous wastes.

No revision is proposed. We would offer essentially the same comment as for b) and c) above: clarify the impact of technology vs facility reference, and footnote the appropriate DTSC / federal codes pertinent to creation and management of hazardous wastes by the facility proper.

e) As much as possible, the technology removes all recyclable materials and marketable green waste compostable materials from the solid waste stream before the conversion process, and the owner or operator of the facility certifies that those materials will be recycled or composted.

No revision has been proposed.

Proposed Change: *Seek clarification from CalRecycle as to their interpretation of this criterion, and include reference as a footnote to facilitate CEC implementation and public understanding.*

f) The facility at which the technology is used complies with all applicable laws, regulations, and ordinances.

No revision is proposed. As in the introductory section distinction, this criterion applies to the overall *facility*, not solely to the components of the facility's processing complement, and reinforces the intent that extant code be observed.

Proposed Change: *A footnote reference here to pertinent air, water, hazardous waste and solid waste management regulations in addition to the separate references suggested above would greatly improve future interpretation and RPS implementation.*

g) The technology meets any other conditions established by the State Energy Resources Conservation and Development Commission (formal name of the California Energy Commission).

No revision is proposed. By clearly defining a priori purview placing the CEC as the "lead agency" for RPS determinations, this criterion places CEC in the primary position for future interpretation to improve RPS implementation. Thus proposing *interpretive* clarifications as here suggested is quite appropriate, for this Guidebook revision.

h) The facility certifies that any local agency sending solid waste to the facility diverted at least 30 percent of all solid waste it collects through solid waste reduction, recycling, and composting.

This subsection has undergone the most change since the 2004 edition, and both the original and currently proposed versions are presented in their entirety for ease of comparison prior to comments:

Original Guidelines, August 2004

Proposed Guidelines, August 2010

<p>h. The facility certifies that any local agency sending solid waste to the facility diverted at least 30 percent of all solid waste it collects through solid waste reduction, recycling and composting. To qualify for SEPs, the facility must certify that any local agency sending solid waste to the facility is in compliance with Division 30 of the Public Resources Code (commencing with section 40000), and has reduced, recycled, or composted solid waste to the maximum extent feasible, and shall have been found by the California Integrated Waste Management Board to have diverted at least 30 percent of all solid waste through source reduction, recycling, and composting.</p>	<p>h) The facility certifies that any local agency sending solid waste to the facility diverted at least 30 percent of all solid waste it collects through solid waste reduction, recycling, and composting.</p> <p>In addition to the certification or pre-certification application, applicants for MSW facilities must complete the supplemental application form for Biofuels <u>Biopower</u> and provide additional required information. (See “Additional Required Information” section.)-</p> <p><u>The MSW conversion process and the electric generation process may take place on the same site or at separate locations. If the two processes occur at different sites, the delivery of the MSW conversion gas must comply with the same delivery rules as presented in Subsection 2: Biogas.</u></p>
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Proposed Change: Due to the continual process of change which shapes the Guidebooks, we would ask again that at this stage, the sources for change from the original language be documented and made part of this proposed revision, as footnotes.

Substitution of the term “Biopower” for the previously-amended “Biofuels” text may be adequately explained in the referenced “Additional Required Information” section, but this does not aid our understanding as well as would a more thorough side-bar description of the implications of this change. With this proposed revision, the CEC appears to shift the focus away from strict production of fuels, and toward potential use of any fuels for subsequent power generation. We might assume that this is proposed to reflect that (a) we do not have a California Renewable Fuels Standard (yet) and (b) the CEC’s primary concern is with the production of renewable power (as the equivalent of “electricity”). Is this a correct interpretation, or is the use of the term “power” understood by CEC staff to be inclusive of both electricity and gaseous or liquid fuels?

Proposed Change: Clarification on this point would be highly appropriate, especially considering the proposed addition of the introductory section reference to both gaseous and liquid fuels.

The most significant proposed revision is the remaining paragraph of subsection **h)**. This clearly recognizes that the “two-step process” required in section 2.1 may be accomplished at more than one site. We applaud the specificity of this revision, but would ask for one modification: to be consistent with proposed wording changes in 2.1.

Proposed Change: *This subsection should read, "...If the two processes occur at different sites, the delivery of the MSW conversion gaseous or liquid fuel, as the energy carrier, must comply with the same delivery rules as presented in Subsection 2: Biogas."*

We thank you for the opportunity to comment on the proposed revision, and are available for further discussion should staff find this useful; please call me at (530) 823-7300 if you have any questions.

Sincerely,

JDMT, Inc

A handwritten signature in black ink that reads "Michael Theroux". The signature is fluid and cursive, with the first name "Michael" being more prominent than the last name "Theroux".

Michael Theroux
Vice President

cc via email: Kate Zocchetti, CEC
Mark Kootstra, CEC
Sarah Michaels, CEC
Howard Levenson, CalRecycle.