



WASTE MANAGEMENT / PUBLIC AFFAIRS

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June 3, 2011

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 10-ALT-1
1516 Ninth Street
Sacramento, CA 95814-5512

Via Email: docket@energy.ca.gov

DOCKET
10-ALT-1

DATE	JUN 03 2011
RECD.	JUN 03 2011

Subject: Waste Management Comments on 2011-2012 AB 118 Investment Plan

Dear Energy Commission:

Thank you for the opportunity to submit comments on the 2011-2011 Investment Plan for the AB 118 Alternative and Renewable Fuel and Vehicle Technology Program (AB 118 Program). Waste Management (WM) is committed to expanding our fleet of natural gas (NG) and renewable natural gas fueled heavy duty vehicles. In addition, WM is heavily engaged in the development of alternative transportation fuels derived from waste materials. Examples of our investments include:

- **High Mountain Fuels.** High Mountain Fuels (HMF) is a joint venture with Linde North America to produce low-carbon Renewable LNG from landfill gas. HMF has a 13,000 gallon/day facility operating at WM's Altamont landfill in the Bay Area and HMF has applied for an AB 118 grant to assist in the construction of a second larger facility in Southern California and we are currently awaiting encumbrance of those funds.
- **Terrabon.** Terrabon uses an acid fermentation process that converts biomass feedstocks such as post-consumer food, leaf and yard, and wood waste into organic salts, which are then converted to ketones before being refined into high-octane transportation fuel.
- **Enerkem.** Enerkem's thermal-chemical technology converts diverse carbon-based waste materials including sorted municipal solid waste, C&D, and agricultural and forest residues into advanced biofuels such as ethanol.
- **S4.** S4 is a Joint Venture with InEnTec by which waste materials are processed by gasification and plasma-arc technologies to produce a syngas that can be converted into transportation fuels such as ethanol and diesel.
- **Genomatica.** Genomatica's technology produces a syngas from waste materials that can be converted into liquid fuels and other products.

From everyday collection to environmental protection, Think Green.® Think Waste Management.



- **Harvest Power.** Harvest Power uses anaerobic digestion and dry fermentation technologies to accelerate the decomposition of organic or biogenic materials to produce methane-rich biogas that can be converted into natural gas for use as a transportation fuel.
- **Agilyx.** Agilyx gasifies waste plastic, purifies the gaseous compounds and then condenses the gas-phase hydrocarbons back into synthetic crude.

WM and its investment partners are looking to the AB 118 Program to assist in the development and commercialization of these technologies in the 2011-12 and subsequent fiscal years. Please let me know if you would like to receive further information on any of these promising technologies to produce alternative transportation fuels.

WM wishes to compliment the California Energy Commission (CEC) on the Draft 2011-2011 Investment Plan which we find to be a reasonable approach to support the spectrum of alternative and renewable fuel and vehicle technologies. However, we request that the CEC consider the following proposed modifications to the Draft Investment Plan:

Gasoline Substitutes

WM supports the broad application of this category to include to all gasoline substitutes – not just ethanol production. As mentioned above, the Terrabon Technology can be used to produce low carbon ketones that can be refined into high octane fuel. WM requests that technologies, such as Terrabon, be clearly eligible for funding under the Gasoline Substitute funding category. Towards this end, WM requests that the Table 21 on page 106 be modified as follows to be consistent with this category and the summary Table 38 on page 153:

Table 21: ~~Ethanol Funding Allocation~~ Gasoline Substitutes

Further, the first category and line in this table should be modified as follows:

Advanced Cellulosic Ethanol and Gasoline Substitute Production Plants

WM also supports the comments submitted separately by Terrabon, which are also attached to this letter for reference.

Biomethane

WM supports the broad application this funding category to all cost-effective potential sources of biomethane fuels. This funding category should focus on the most cost-effective sources for producing biomethane production fuels. However, the language of this section that begins on page 114 has appears weighted to primarily support biomethane projects that focus on “pre-landfill” biomethane production.

WM concurs that pre-landfill biomethane production through conversion technologies, such as anaerobic digestion, that accept waste that has been diverted from landfills is a laudable goal and should be supported to the maximum feasible practicable. However, this category should not exclude the continued development of landfill biomethane production (i.e., landfill gas) when such projects can be shown to be a cost-effective source of biomethane production.

WM further supports the use of Biomethane funding allocation to support the evaluation and testing of biomethane sources, including processed landfill gas, prior to introduction to utility pipelines for distribution as a transportation fuel.

WM requests that this section be modified to retain pre-landfilled biomethane production as an important funding objective, but not to the total exclusion of opportunities to further develop cost-effective biomethane production from landfill gas. Towards this end, WM requests the following modifications to this section:

Last paragraph on page 114 should be modified to read:

MSW ~~is~~ one of the largest waste streams available in California and provides a readily available source of biomethane at landfills. ~~and~~ MSW is a prime feedstock for conversion to biomethane prior to landfill disposal as it will not only be using a waste product for energy production, but will also be diverting waste from entering landfills, thus extending the life of landfills.

The last sentence that begins at the bottom of page 115 and ends on page 116 should be modified to read:

The allocation ~~will focus on~~ should encourage projects that use a variety of pre-landfilled waste materials as a feedstock. However all projects that can demonstrate realistic potential to reliably produce biomethane for use as a transportation fuel will be considered. Further, the allocation will provide financial assistance to projects that require gas quality testing on new feedstocks entering the natural gas pipeline, including processed landfill gas.

Finally, the language of Table 25, Biomethane Funding Allocation on page 116 should remain unchanged. However, the language in Table 38 on page 153 should be modified to be consistent with the current language of Table 25:

Biomethane		Pre-landfill Biomethane Production <u>and Support</u>		\$8 Million
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WM appreciates your consideration of the above comments and suggested modification to the Draft Investment Plan. Please let me know if you have any comments or questions regarding this information.

Sincerely,

A handwritten signature in black ink, appearing to read "Chuck White", with a long horizontal flourish extending to the right.

Chuck White
Director of Regulatory Affairs/West

cc: Jim Boyd, Vice-Chair, Energy Commission, melliott@energy.state.ca.us
Carla Peterman, Commissioner, Energy Commission, kmcdonne@energy.state.ca.us

Attachments: 2 sets of Terrabon Comments on Draft Investment Plan