

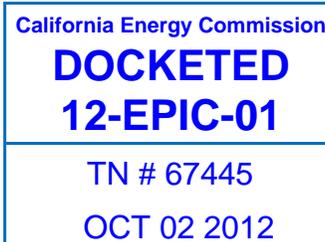


WASTE MANAGEMENT

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October 2, 2012

California Energy Commission
Dockets Office, MS-4
RE: Docket No. 12-EPIC-01
1516 North Street
Sacramento, CA 95814-5512



Submitted via email at docket@energy.ca.gov

**RE: COMMENTS ON BEHALF OF WASTE MANAGEMENT ON THE DRAFT
FIRST TRIENNIAL INVESTMENT PLAN FOR THE ELECTRIC PROGRAM
INVESTMENT CHARGE PROGRAM FOR FUNDS ADMINISTERED BY THE
CALIFORNIA ENERGY COMMISSION**

Introduction

These comments are submitted on behalf of Waste Management and Wheelabrator Technologies Inc. on the Electric Program Investment Charge Proposed 2012-2014 Triennial Investment Plan (hereafter referred to as "EPIC" or "the Plan"). The Plan as proposed will have a significant positive impact on development and commercialization of clean energy generation from waste and other bioenergy sources, including the advancement of technologies that will result in a cleaner environment and fewer emissions of greenhouse gases into our atmosphere.

Waste Management (WM) is the leading provider of comprehensive waste management and environmental services in North America. The company serves approximately 20 million municipal, commercial, industrial and residential customers through a network of 390 collection operations, 294 transfer stations, 266 active municipal solid waste (MSW) landfill disposal sites, 121 recycling facilities, 34 organic processing facilities and 136 beneficial-use landfill gas projects.

Many of these facilities operate in California. In addition, WM has recently focused on investing in emerging technologies for converting waste materials into renewable energy through its Organic Growth Group.

Wheelabrator Technologies is a wholly owned subsidiary of WM and the owner/operator of safe, clean and renewable power across the United States, including 17 waste-to-energy power plants and its Shasta Energy Plant in Anderson, California, that generates electricity from wood waste. Wheelabrator's Norwalk Energy power plant, a Combined Heat and Power facility, produces electricity sold to the local utility and provides steam and chilled water to meet the needs of a co-located state hospital.

We applaud the work of the California Energy Commission (CEC) in its development and implementation of this Plan. We believe EPIC will bring to California cutting edge energy technologies for commercial development. In addition to our interest in grant funding for bioenergy projects, WM is also prepared to invest in renewable, clean technologies in California if EPIC is structured to facilitate innovative bioenergy programs and eliminate barriers to investment and commercialization. We believe the Intellectual Property (IP) provisions as described in the Plan assist in this regard by recognizing that IP must be owned solely by the developer or private investor. While the Plan discusses an intent by the state to obtain licensing rights in technologies, we caution that any lien by the state on IP can dampen private investment and growth of advanced, clean energy which is the ultimate goal of EPIC.

Our comments are directed at three strategies for funding proposed in the Plan. Specifically, we write in support for the following:

- *S3.2 Proposed Funding Initiative: Develop Innovative Technologies, Techniques, and Deployment Strategies to Accelerate the Commercialization of Sustainable Bioenergy Systems;*
- *S4.2 Proposed Funding Initiative: Develop Innovative Tools and Strategies to Increase Utility-Scale Renewable Energy Power Plant Performance and Reliability; and,*
- *S12.1 Proposed Funding Initiative: Demonstrate and Appraise the Operational and Performance Characteristics of Pre-Commercial Biomass Conversion Technologies, Generation Systems, and Development Strategies.*

We support the Plan's goals for development of clean, beneficial bioenergy. We are in agreement with the its vision for biogas and biomass development including our support for the many benefits stated in the Plan that will result from funding bioenergy programs:

- Decrease production costs and/or otherwise increase the value of biogas;
- Increase the availability and use of anaerobic digestion technologies (*Note: This priority should extend to the further development of existing anaerobic digestion technologies at publicly owned wastewater treatment plants (POTWs) to accept organic wastes to increase beneficial methane production, capture and use*);
- Reduce the cost and environmental impacts of collecting and transporting biomass feedstocks over greater distances;
- Increase the use of advanced pollution control equipment and low- emission generators that have demonstrated the ability to meet air quality standards at pilot scale in response to San Joaquin and South Coast air districts' need;
- Provide new fuel handling systems or technologies that reduce the transportation costs of biomass feedstocks demonstrated at market scale;
- Provide for advanced biomass fuel handling and delivery systems or strategies that have shown to be economically feasible; and,
- Make commercially viable current pre-commercial integrated systems that combine biopower technologies with other processes (including waste management, composting, and recycling) into a single location.

S3.2 Proposed Funding Initiative: Develop Innovative Technologies, Techniques, and Deployment Strategies to Accelerate the Commercialization of Sustainable Bioenergy Systems

WM is investing in a wide array of technologies to produce energy from municipal solid waste. These innovative technologies generate solid, liquid and gaseous fuels that can be used for electrical generation, industrial furnaces, and transportation. The EPIC program provides an opportunity to bring many of these technologies to California for development.

Development of energy from waste should be encouraged for a multitude of reasons. Energy from waste technologies may generate extremely low emissions and are thus very clean technologies. They represent low carbon energy. Many technologies that make good use of waste are best sited near urban energy demand and their generation is base load energy, not intermittent. Equally important, beneficial use of waste to generate energy encourages landfill diversion and/or cleaner, more efficient landfill operations.

In our prior comments, we pointed to promising research into the use of biosolids from wastewater treatment digesters to produce fuel. We reiterate our support here, and also believe there are many other emerging technologies that could generate electricity from waste if research funding were available to advance engineering design of these promising methods.

Likewise, WM encourages EPIC to incentivize the maximum beneficial use of existing anaerobic digestion units at wastewater treatment plants. Production of methane for beneficial use can be greatly increased by the introduction of organic wastes from the MSW stream. For example, by adding 10% additional organic materials from MSW to existing under utilized wastewater treatment plants, the production of methane for beneficial use can be increased by as much as 80%. This increase in energy output may be used to meet the needs of the wastewater treatment facility and provide excess energy to the grid.

EPIC funds can provide financial incentive to POTWs to help support incremental capital and operating costs that may be associated with the introduction of organics (food, fats, oils and greases) waste into a POTW's anaerobic digesters that significantly improve the generation of biomethane for use onsite in the generation of electricity, for conversion of CNG or LNG and/or for distribution through the pipeline. Availability of grants or performance guarantees backstopped by EPIC could bolster projects that are stymied by low tip fees and provide the economic incentives that would allow POTWs to undertake such projects. EPIC should be proactive in funding programs that increase the use of proven technologies facing economic barriers such as the highest and best use of anaerobic digesters at POTWs.

In S3.2 and other strategic programs for bioenergy, the CEC should fund research that will bring biogas (onsite landfill-gas-to-energy) and biomethane (high-BTU pipeline-quality methane) projects to California electricity customers. Landfill gas is the largest existing source of biogas currently collected in California, yet, according to CalRecycle, only about 53% of collected landfill gas is used beneficially to produce electricity or fuels. The remaining 47% is flared and its energy wasted.

In fact, the continued beneficial use of biomethane, including landfill gas, is threatened by increasingly rigorous air emissions standards for criteria pollutants being adopted by many air districts in California, most notably the South Coast (in particular note SCAQMD Rule 1110.2), the San Joaquin Valley, and Bay Area. These districts have imposed increasingly rigorous standards for NO_x, CO, and VOCs from engines used to generate electricity from waste-derived biomethane. New technologies are being developed to meet these standards

but they have not been fully demonstrated over extended periods of time and under a wide range of site-specific conditions. These technologies, while not fully demonstrated, are extremely expensive. EPIC funds should be used to demonstrate their efficacy in meeting criteria air pollutant standards and lead to the lowering of costs of operation for these emerging technologies.

The CEC should fund research to establish that biogas generated from landfills is appropriate for distribution in utility pipelines. Further demonstration of the feasibility to treat biomethane to meet pipeline standards is essential to allow the necessary technologies to be cost-effective and accessible. The distribution of high-BTU pipeline-quality biomethane from landfills and other sources to be distributed through the existing utility pipeline network should be a high priority of EPIC funding. Instead of restricting biomethane to be used onsite in engines where it is produced, low carbon waste-derived biomethane can be much more efficiently distributed in pipelines used for transportation and to produce electricity at combined cycle natural gas plants. EPIC funding of research can lead to removal of CPUC tariffs restricting development of landfill biogas for utility pipeline distribution. With EPIC funding, the acceptability and feasibility of further developing this important renewable resource can be demonstrated. The EPIC funds should be available to advance to objective of AB 1900 (Gatto), recently signed into law by Governor Jerry Brown.

S4.2 Proposed Funding Initiative: Develop Innovative Tools and Strategies to Increase Utility-Scale Renewable Energy Power Plant Performance and Reliability

The technology to commercialize biomethane and biogas-to-energy is available, but currently too expensive to be competitive in the market. In supporting more efficient methods to use landfill gas to generate power, utility-scale renewable power plant performance and reliability can be enhanced by use of cleaner energy that generates lower greenhouse gas emissions.

The award of EPIC funding should not differentiate between the treatment of on-site generation as compared to offsite use of biogas to produce electrical power. There should be no restrictions or location requirements on biogas to be eligible under the Plan. The state is benefited by landfill biogas and other biogas projects that result in a cleaner environment, lower emissions and the beneficial use of waste as a fuel. Economic benefits also accrue to the state with increased jobs resulting from new projects.

As stated above, the use of pipeline distributed high-BTU low-carbon biomethane in pipelines to utility scale power plants can substantially reduce the greenhouse gas (GHG) emissions from these power plants. EPIC funds should be used to incentivize and encourage the development of cost-effective technologies to meet utility pipeline gas quality standards for use in utility scale power plant applications.

S12.1 Proposed Funding Initiative: Demonstrate and Appraise the Operational and Performance Characteristics of Pre-Commercial Biomass Conversion Technologies, Generation Systems, and Development Strategies.

The Plan makes mention of its support of pollution control technologies that can be demonstrated as the most cost-effective technologies to reduce criteria pollutant emissions. We would request specific acknowledgement for funding support of emission control devices that can ensure biomethane to energy projects remain in operation and new projects come on line, including landfill gas-to-energy projects.

As stated previously, California Air Pollution Control Districts in virtually all air districts, but particularly in the South Coast, San Joaquin Valley and Bay Area, are imposing increasingly restrictive criteria pollutant emission standards on existing landfill gas-to-energy facilities that may result in many of these bioenergy operations shutting down. EPIC funding should be available to provide supplemental funding to keep biogas to energy projects solvent and prevent a return to flaring and waste of available biogas resources. Similarly, EPIC funding should be available to defray the pollution control costs of new biogas development projects.

EPIC funds should be used to stimulate development of biomethane projects to generate both onsite and offsite bioenergy – and support the distribution of appropriately treated and conditioned biomethane through the utility pipeline system. Particularly in terms of funding, these emerging bioenergy projects need a significant commitment of financial support up-front with generous project development times.

In addition to our support for EPIC funding for the treatment of biomethane including landfill gas, we urge development and demonstration of anaerobic digestion, gasification and other types of emerging conversion technologies. The Plan should specifically recognize the importance of funding technologies that can take materials diverted from landfills and convert them into low carbon and low criteria pollutant bioenergy.

The Plan makes note of funding for advanced biomass fuel handling and delivery systems or strategies that have shown to be economically feasible. EPIC should not focus solely on biomass fuel handling and delivery systems that benefit new biomass generation, but must fund community programs that incentivize the use of in-forest residues to generate electricity from existing and new facilities. Communities near California's magnificent forests would greatly benefit from fuel incentive programs that lower the risk of devastating fires and support for biomass generation from among the most expensive of biomass fuel sources to produce: in-forest residues. Leaving overgrowth material in the state's ecologically stressed forests leaves the forests at high risk of massively destructive wildfires, impedes the functioning of watersheds, and has other negative effects on the forests and nearby communities. The fuel-production alternative also provides many more jobs in rural communities than conventional disposal or leaving in-place of the material.

Finally, strategy S 12.1 will be important to demonstrate emerging conversion technologies for converting MSW into syngas and fuels for electrical generation and transportation fuels. EPIC funds should be used to demonstrate high temperature MSW conversion technologies to show that they can operate safely with very low emissions. WM, through its Organic Growth Group, is investing in a wide range of MSW conversion technologies that we believe will ultimately provide new opportunities to beneficially use MSW and reduce dependence on landfills. Although WM and its business partners are investing in, and demonstrating, these technologies in other states, including the adjacent states of Nevada and Oregon, we have been reluctant to invest in these technologies in California due to lack of regulatory clarity. The recent controversy over the siting of the Plasco Energy Technology in Salinas is only the most recent example of this problem. Opening EPIC funds to demonstrate the efficacy of emerging conversion technologies would encourage the safe development of these technologies in California – rather than stymie them.

The Plan also appropriately encourages proposals that aggregate clean technologies to produce electricity and reduce greenhouse gases and other pollutants as part of an integrated site footprint. Clean energy generation and management of municipal solid waste streams can work synergistically to enhance and compliment technologies in the single site complex. Communities benefit greatly from development of "Recycling Parks" where a multiple of the technologies can be co-located whose benefits are magnified.

This can result in significant ratepayer benefit from not only cleaner energy generation, but also a cleaner environment due to a more advanced waste management system.

Conclusion

Thank you for the opportunity to provide comment on the proposed first Electric Program Investment Charge Plan. Please contact me if you have questions about these comments or require further information. WM looks forward to further participation in this process.

Respectfully submitted,



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