



WASTE MANAGEMENT

Public Affairs

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Clerk of the Board

California Air Resources Board
1001 "I" Street
P.O. Box 2815
Sacramento, California 95812

Subject: PROPOSED RULEMAKING TO CONSIDER THE ADOPTION OF A PROPOSED CALIFORNIA CAP ON GREENHOUSE GAS EMISSIONS AND MARKET-BASED COMPLIANCE MECHANISMS REGULATION, INCLUDING COMPLIANCE OFFSET PROTOCOLS

Dear California Air Resources Board:

On behalf of Waste Management (WM), I am submitting comments on the CARB 15-Day Modifications to the Proposed Cap and Trade (C&T) Regulation issued July 27, 2011 for public comment. We appreciate the opportunity to submit these comments on the proposed regulations and their impact on solid waste management, generation of renewable energy from waste, and the importance of Waste-to-Energy (WTE) facilities and other energy generation from waste. We strongly believe the use of proper waste management methods results in a cleaner environment and fewer emissions of greenhouse gases into our atmosphere.

Waste Management 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, 17 WTE power plants, 121 recycling facilities, 34 organic processing facilities and 131 beneficial-use landfill gas projects. Many of these facilities operate in California.

Our comments focus on a limited number of issues raised by the proposed rule and its 15-day modifications:

- **Waste-to-Energy.** WM is concerned about CARB's recent reversal of its recognition of WTE's ability to lower greenhouse gases. The discussion draft regulations initially proposed that the three existing WTE facilities would be excluded from a C&T compliance obligation, but the 15-day comment proposal eliminates this exclusion. This reversal threatens facilities' operations and could

significantly increase municipal costs of waste management, environmental impacts from truck traffic and distance to disposal, and greenhouse gas emissions. WM requests, again, that a comprehensive GHG lifecycle assessment be used to determine relative GHG emissions of WTE facilities. A comprehensive life cycle assessment would find significantly fewer GHG emissions are released into the atmosphere when waste is generated into energy at a WTE facility – as compared to other energy generation and waste management methods.

- **Conversion Technologies – Deleted Language.** We support CARB's proposed removal of extraneous requirements on waste conversion technologies. This decision is appropriate as the C&T regulations should not try to reiterate other provisions of state law and policy that have little or no bearing on GHG emissions.
- **Conversion Technologies – Compliance Obligation.** We support and appreciate CARB's decision to exclude waste conversion technologies from C&T compliance obligations for the biogenic portion of the waste feedstock. We also request that the regulations allow waste conversion technologies to be excluded from C&T compliance obligations to a greater extent, up to 100%, after evaluation of the technology based on a life-cycle assessment. From a policy standpoint, all conversion technologies should be exempt, as subjection of emerging conversion technologies to the C&T obligations will place a significant burden on development. Innovative and diverse technologies for the beneficial use of waste are essential for sustainability. The C&T burden being placed on the very technologies that can deliver sustainable living will stop development before it begins.
- **Compliance Cost Recovery for Independent Power Generators.** We also comment on the need for a mechanism to allow compliance cost recovery for small generators such as WM's Norwalk CHP facility, and your consideration to allow alternative tests in determining the biogenic portion of segregated industrial wastes.
- **Offset Credit Liability.** Finally, we wish to offer some observations on the issue of offset credit liability and how that issue should be addressed in the regulations.

The Importance of Waste-to-Energy (WTE)

§ 95852.2. Emissions without a Compliance Obligation

Waste Management's Wheelabrator division has generated clean, renewable energy from waste and saved landfill space for more than 40 years. Wheelabrator facilities have converted more than 160 million tons of municipal solid waste into more than 85 billion kilowatt-hours of clean, reliable, baseload electric power. Each day,

Wheelabrator WTE power plants generate enough electricity to power more than 600,000 homes across the country.

WTE technology has been proven in life-cycle assessments to lessen the amount of greenhouse gas emissions into the atmosphere as compared with alternative waste management and energy generation options. These life-cycle assessments have been conducted for individual WTE facilities as well as the WTE industry as a whole. CARB's sister agency, the CIWMB (now CalRecycle) issued its own comprehensive life-cycle assessment of GHG reductions associated with waste management practices. For more information, go to:

<http://www.calrecycle.ca.gov/Temp/Climate/default.htm>.

The CIWMB life-cycle assessment concluded that the greatest degree of GHG reductions from the waste and recycling sector is achieved by maximizing energy recovery from waste.

WTE's direct and indirect greenhouse gas benefits are recognized by a large number organization and interests:

- The European Union Emission Trading Scheme (EU-ETS) -- The EU-ETS specifically excludes WTE facilities from their Cap & Trade program due to WTE's ability to reduce GHG emissions from waste management.
- The European Environment Agency (EEA) attributes considerable reductions in waste management GHG emissions to increased levels of recycling and WTE.
- The Regional Greenhouse Gas Initiative (RGGI) -- Under RGGI, WTE facilities are specifically excluded because they burn municipal solid waste.
- Congressional climate change legislation (sponsored by California's Congressman Waxman and Senator Boxer) reflects the life-cycle assessment of WTE. The Waxman-Markey federal cap and trade bill (H.R. 2454), that passed the House of Representatives in the last Congress, specifically excluded qualifying WTE plants that burn five percent or less of supplemental fossil fuel (e.g., natural gas or fuel oil) and were located in communities served by recycling programs. The Boxer-Kerry (S. 1733) bill contained the same exclusion. The American Clean Energy and Leadership Act (S. 1462) also established a federal Renewable Portfolio Standard that recognized WTE as a renewable energy source.
- The net reductions achieved by WTE have been recognized internationally under the Clean Development Mechanism, as part of the Kyoto Protocol. WTE projects can generate credits through the approved methodology AM0025, "Avoided emissions from organic waste through alternative waste treatment processes."

Each of these programs focus on lowering release of greenhouse gases into the atmosphere and, as part of their design, WTE is appropriately excluded from C&T requirements. California's C&T program should do the same.

CARB's most recent change that results in subjecting the three existing WTE facilities in California to the cap will actually *increase* emissions of greenhouse gases into the atmosphere by increasing WTE facility costs, resulting in the very real possibility of reduced operation and/or plant closure. Curtailing operations and facility closure will result in higher disposal costs for communities struggling with already too-tight budgets. Waste will be transported to more distant landfills. If CARB imposes the C&T compliance obligation on existing WTE facilities, more waste will be disposed in landfills, more pollution will be emitted from increased transportation, more fuel will be consumed, fewer metals and recyclables will be recovered and *more greenhouse gases will be emitted into the atmosphere*.

We strongly urge CARB to exclude WTE from any compliance obligation under the C&T regulations. Attached to these comments are copies of two previous letters that were sent to you by Waste Management and the Energy Recovery Council that strongly support the exclusion of WTE from a compliance obligation under the C&T regulations. In addition, we have attached the additional articles that clearly document that diversion of waste to WTE facilities results in a net reduction in GHG emissions:

- *Moving from Solid Waste Disposal to Materials Management in the United States, Thorneloe et al, 2005.* This article documents the net reduction in GHG emissions that results from diverting waste to energy production (see Alternative No. 7 in charts and discussion).
- *Better management of municipal waste will reduce greenhouse gas emissions, European Environment Agency Briefing Document, 2008.* This documents that the increased use of recycling and incineration with energy recovery result in a net reduction of greenhouse gas emissions from municipal waste management.
- *Updated Analysis of Greenhouse Gas Emissions and Mitigation from Municipal Solid Waste Management Options Using a Carbon Balance, Bahor et al, 2008.* This article further documents the net GHG reductions associated with generated with producing energy from waste.

We ask that all attached documents to this letter be added to the record on this rule-making.

Conversion Technologies

§ 95852.2. Emissions without a Compliance Obligation

WM supports exclusion from the compliance obligation under the C&T regulations for conversion technologies that generate clean fuel from biomass derived portion of municipal solid waste (MSW) – as is currently proposed in the 15-day comment version. Support for conversion technologies will lead to cleaner fuel and advanced technologies. The term “conversion” may apply to anaerobic digestion, gasification, acid-hydrolysis, and other technologies that beneficially use waste. Restrictions that

appeared in the previously adopted regulations [See revised Section 95852.2(a)(7)(B)] were misplaced, and we support their deletion in the current proposal.

As additional support of CARB's decision for treatment of conversion technologies, I have attached correspondence from the CARB, the Energy Commission and CalRecycle that are on the record supporting the appropriate conversion of waste to useful energy.

WM is concerned that the proposed regulations would still place a compliance obligation on any portion of a conversion technology's emissions that are not biomass derived. WM recommends that CARB apply a life-cycle assessment approach to determine if a broader exemption from a compliance obligation is suitable for various types of conversion technologies. Many conversion technologies are relatively new and have yet to be fully demonstrated on a commercial scale. From a policy standpoint, subjecting these emerging conversion technologies to a compliance obligation for the non-biomass portion will place a significant burden on development. Innovative and diverse technologies for the beneficial use of waste are essential for sustainability. Yet, the C&T burden being placed on the very technologies that can deliver sustainable living can make them uneconomical, and stop investment, and therefore stop development before it begins.

Conversion technologies' enhanced material and energy recovery may result in reducing GHG emissions – even if the non-biomass portion of the feedstock is included. At the least, these technologies should have the opportunity to demonstrate this possibility. Energy derived from waste conversion technology warrants comprehensive life-cycle assessment to evaluate the avoided emissions that would occur if the waste were managed by an alternative method.

Waste-derived energy is unique from this standpoint. Fossil sources and most all other sources of energy, if left undeveloped, do not impact the environment if not converted to energy. Waste-derived sources of energy must still be managed if not used as a fuel. That alternative management of waste can result in release of greenhouse gases. Waste that is disposed and that could otherwise be recycled or beneficially used means that products that would be made from recycled materials must instead be produced from virgin resources. Sustainability practices suffer when we ignore the life-cycle impacts of making good use of waste or when we unduly burden conversion technologies with costs that ignore their total benefits. Most waste would be landfilled if it were not converted to energy, thereby generating increased methane emissions and missing an opportunity for further recovery of metals and other recyclables from the waste. Greater recovery of metals and recyclable materials and reduced methane emissions result when wastes are diverted from landfills for energy conversion. Greater material recovery and reduced emissions translates to fewer greenhouse gases emitted into our atmosphere.

The unique circumstances of waste results in avoided emissions from diversion of waste for energy conversion. This benefit must be included in any assessment of the greenhouse gas impacts and benefits of waste conversion technologies. WM strongly

requests that the proposed regulations be amended to allow assessment of the life cycle GHG benefits of energy recovery from waste, and thereafter base C&T compliance obligations for waste conversion technologies on this assessment. In the alternative, CARB can recognize now that policy reasons dictate conversion technologies should not be subjected to the cap if they are to develop as an alternative to disposal and more polluting forms of energy generation.

Treatment of Existing Contracts without Reasonable Means of Cost Recovery

The draft regulation fails to provide a forum for equitable resolution of contract provisions that result in small generators shouldering the burden of compliance costs to meet the requirements of C&T. The regulation incorrectly assumes contract renegotiation will resolve this cost issue, thus assuming both parties are equal in their contract position. In fact, utilities hold a significantly more powerful position in contract renegotiations with small generators who have no other viable energy customer than the utility with whom they have an executed contract. Without a clear means of cost recovery, small generators including Waste Management's Norwalk facility, a Natural Gas combined heat and power plant, will be severely disadvantaged and may close due to the significant cost of compliance – particularly when locked into existing power delivery contracts that do not have a provision for covering C&T compliance costs.

WM is concerned that facilities like our Norwalk CHP plant are being treated in a discriminatory manner as compared to other parties to the C&T program. Our concern is that the proposed regulation is silent on the treatment of existing, long-term contracts that have no reasonable means of recovery of GHG allowance costs. As a result, all Independent Power Producers (IPPs) are required to purchase 100% of their allowances or offsets, and presumably recover these costs from their power purchase and sale agreements. The universe of IPPs includes a relatively small but important number of IPPs who entered into power purchase and sale agreements prior to enactment of AB32, and thus could not contemplate the recovery of these unknown future costs. Norwalk, like other facilities in its position, is facing new, variable operating costs of compliance for which they have no reasonable means of recovery.

In contrast, the utilities and industrial entities that are required to participate in C&T are provided with the vast bulk of their allowances at no cost even when they have a reasonable means of market-based and/or rate-based recovery. Furthermore, in those circumstances when a Utility Owned Generator (UOG) enters into an auction to purchase allowances to meet its compliance obligation, the expenditures it makes as an electric generator revert back on a dollar-for-dollar basis to the same utility in its function as a load-serving entity. The result is that a utility and the utilities' retail customers are indifferent to the costs associated with an UOG's operations.

Unfortunately, this is not the case for the IPPs that will be competing with the UOG, as they cannot rate-base their allowance or offset purchases in such circumstances and

cannot recover their costs from the market place. The discriminatory and anti-competitive result is clear.

We recommend that all electric generators be given a comparable means of cost-recovery of their compliance obligation. Forcing the IPPs into a lopsided contract renegotiation situation with an unwilling utility contract holder is not an answer. Instead, the regulations should allow IPPs to make use of an expanded Beneficiary Holding Account or the Cap and Trade program should allocate allowances directly to this limited set of IPPs in a non-discriminatory manner, comparable to the treatment afforded utility-owned generation plants.

Testing Should Match Unique Fuel Source

§ 95852.2 (a)(1)

This Subsection excludes from a compliance obligation such “[s]olid waste materials, including the biogenic content of solid waste materials that are not 100 percent biomass, as determined by methodology specified in ASTM D6866, based on exhaust sampling or fuel sampling (and fuel usage recordkeeping) at the specified frequency **and tires which may use alternative tests**” [emphasis added] The sentence referencing tires may need to be edited and, at the least, requires a comma after “frequency” to differentiate tires from the methodology delineated for other solid waste. The sentence raises questions with regard to testing of other segregated industrial wastes listed as excluded from the Municipal Solid Waste definition if collected separately from MSW. Are tires the only segregated waste to be provided an alternative test, or may all industrial waste materials segregated from the municipal waste collection system use alternative tests appropriate for the material to determine the biogenic content and, thus, exclusion from compliance obligations? We support the use of consensus-based standards and tests best suited for the waste material for determining compliance obligations.

Invalidation of CARB Offset Credits – Offset Buyer/Seller Liability

§ 95985

Market certainty and stability are essential elements to the success of the new C&T program. We are concerned that the proposed provisions for invalidating an offset up to eight years after its certification will undermine market stability, and add unnecessary and significant compliance costs.

If a seller successfully performs all requirements determined by CARB to establish an offset and offers it for sale, and a buyer purchases an offset in good faith and with the certification of CARB that the offset is valid, that seller and buyer should not bear the risk of the State having committed an error in its evaluation and certification, or a change of law, regulation or policy that retroactively invalidates or devalues the offset. If

the State of California cannot stand behind its offset validation system, the marketplace will not function.

The approach now taken in the proposed regulation is akin to a state defining an energy source as renewable, whereby the generator of the renewable energy source establishes Renewable Energy Credits (RECs) for sale and does sell them, and eight years thereafter the state redefines the fuel source as not renewable and calls invalid all RECs sold during the eight prior years. If we applied the liability of this risk to the purchaser, he must cover the invalidated RECS by purchasing an equal amount of RECs eight years after the initial purchase in the open market. Clearly there is no means of determining the cost of this risk, and the purchaser would mitigate this risk by demanding security from the seller at the outset. Such security might be considerable, and could make it impossible for smaller offset generators to enter the marketplace because they may not have the substantial financial backing to secure insurance, letters of credit or other security required by a buyer. To be sure, large companies such as Waste Management would be in the best position to provide buyers with such financial assurances, and its offsets would arguably become more valuable (and more costly) because of a scarcity of offsets that could not cover the requirements a purchaser demands. The result, however, would not be beneficial for the system as a whole because smaller offset generators would be squeezed out and offset prices could skyrocket from the inability of the market to price this pinhole but indefinable risk.

It is an even more impossible situation to place this risk on the seller who is not in the market of purchasing credits, will be most often a smaller entity not solely in the business of offset generation, has little or no bargaining power in negotiation of the risk or its security cost, and has relied on the State's process to objectively validate its offset. Placing the risk of invalidation on the seller will chill generation to the point that only those offsets that can be backed by significant security -- most probably worth more than the offset itself -- will enter the market. The cost of that security could vary widely, as the risk itself of purchasing an unknown quantity of offsets up to eight years in the future cannot be defined by either party. While there is legal precedent generally for buyers to shoulder the risk of devaluation of a product absent fraud on the part of the seller, an unconditional, eight-year guarantee of value placed on a seller is assigned in the very rare instances where not to do so would risk bodily harm or death to the purchaser.

It is also improper, as some might argue, for CARB to set aside a percentage of the total offset into a fund that would be used to cover future invalidations. This hedge fund approach devalues an offset from the outset, and makes the seller assume the risk by giving away part of his asset, or the buyer pay more for less.

We recommend the regulations separate fraud and intentional misrepresentation from all other circumstances that CARB believes might invalidate an offset. In the case of fraud, the fraudulent party should be liable for replacement of the offsets through contracts between offset buyers and sellers. However, absent fraud or intentional misrepresentation, the risk should fall squarely on the party establishing the C&T

system, offset protocols and verification procedures -- and that is the State of California.
This approach will provide the security essential for a strong and cost-effective Cap and Trade program.

Thank you for consideration of our comments.

Sincerely,



Charles A. White, P.E.
Director of Regulatory Affairs/West

Attachments:

1. WM letter on Waste-to-Energy Regulation under Cap and Trade.
2. Energy Recovery Council Letter on Waste-to-Energy Regulation under Cap and Trade.
3. Moving from Solid Waste Disposal to Materials Management in the United States, Thorneloe et al, 2005.
4. Better management of municipal waste will reduce greenhouse gas emissions, European Environment Agency Briefing Document, 2008.
5. Updated Analysis of Greenhouse Gas Emissions and Mitigation from Municipal Solid Waste Management Options Using a Carbon Balance, Bahor et al, 2008.
6. CARB, CEC, CalRecycle letter in support of Conversion Technologies and AB 222.
7. CalRecycle letter in support of Plasco Conversion Technology.

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