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August 5, 2013

Ms. Mary Nichols, Chairperson
California Air Resources Board
1001 I Street
Sacramento, CA 95812

Dear Ms. Nichols:

**SUBJECT: CITY OF LOS ANGELES, BUREAU OF SANITATION COMMENTS ON
THE 2013 UPDATE TO AB 32 SCOPING PLAN**

The City of Los Angeles (City), Bureau of Sanitation (Sanitation) commends the California Air Resources Board (ARB) for their efforts to reduce greenhouse gas (GHG) emissions in the state to 1990 levels by 2020, under the guidelines of the Assembly Bill (AB) 32 Scoping Plan. The priorities for the next five years and laying the groundwork to reach 2020 goals will be defined under the 2013 Update to AB 32 Scoping Plan which include the following six key topic areas: 1) transportation; 2) energy; 3) waste; 4) water; 5) agriculture; and 6) natural resources. Sanitation supports this endeavor and believes that we can achieve these goals by implementing and expanding many environmental programs as described below in areas of transportation, fuels, and infrastructure; energy generation; and recycling and waste. These programs provide a real opportunity for GHG emissions reduction, local job creation, and air quality improvement in the City.

I. TRANSPORTATION

a. Conversion of Heavy-Duty Diesel Trucks to Clean Fuel

In 2000, the City embarked on a Clean Fuel Program with the goal to convert its entire solid waste collection fleet of over 700 heavy-duty diesel-powered engines to clean fuel. Today, the City is operating the largest municipal clean fuel solid waste collection fleet in the country with over 550 natural gas collection vehicles. The use of natural gas, a low carbon fuel, will help achieve the State's GHG emissions reduction goals under AB 32.



To replace the remaining 150 diesel-powered solid waste collection vehicles at the cost of approximately \$300,000/vehicles, the City is in need of external funding, including those from the California’s cap-and-trade auction proceeds. We thank the California Air Resources Board, the South Coast Air Quality Management District (SCAQMD), and the California Energy Commission (CEC) for providing funding to support our Clean Fuel Program. This funding has allowed Sanitation to offset the incremental costs for collection vehicles equipped with natural gas engines and the costs for construction of new natural gas fueling stations. To date, our Clean Fuel Program has helped reduce GHG emissions of more than 26,000 MTCO₂e, equivalent to removing over 5,200 passenger vehicles from operation annually.

In addition to the solid resources collection fleet, Sanitation plans to replace 3 existing diesel-powered vacuum tankers with those operating on clean fuel natural gas.

As shown in Table 1, based on the fuel usage by the existing natural gas vehicles, the total reduction in GHG emissions from deployment of 100% clean fuel vehicles in the City is anticipated to be 4,700 MTCO₂e.

Table 1: Estimated Annual Greenhouse Gas Emissions Reduction from Deployment of Sanitation’s Clean Fuel Vehicles.

	Number of Vehicles	Total Annual LNG Fuel Consumption (gallons)	Total Annual Greenhouse Gas Emissions Reduction* (MTCO ₂ e)
Existing Clean Fuel Fleet	554	3,737,562	3,697
Additional New Clean Fuel Vehicles	153	1,032,215	1,021
Total	707	4,746,977	4,718

*: CA-GRETT Model (California Air Resources Board, 2009)

We request that proceeds from the California’s cap-and-trade auction program also be allocated to fund the replacement of City’s heavy diesel truck vehicles with cleaner fuel vehicles such as natural gas or electric hybrid.

b. Low Carbon Fuel Standard (LCFS)

Currently Sanitation’s fuel providers are required to reduce carbon intensity of their fuel by 10% by 2020. Liquid natural gas (LNG) fuel provider is required to meet the LCFS requirements. Any LCFS credits they receive from the LNG purchased by Sanitation remains with them unless Sanitation takes over the responsibility. Once Sanitation’s West LA compressed natural gas (CNG) fueling facility opens in 2015, Sanitation will be subject to LCFS requirements as a fueling station owner. However, CNG is exempt from LCFS requirements as CNG already meets ARB’s carbon intensity requirements. Sanitation may choose to generate LCFS credits by opting into the program. In 2015, transportation fuels will be included in the cap and trade program. However, ARB has not released any guidelines as to whether or not fuel providers will

be given free allowances similar to the electricity providers to offset the cost to consumers or not. Currently the LCFS credits cannot be used to comply with the cap and trade program. Sanitation recommends that LCFS credits be converted to cap and trade offset credits, or LCFS credits be used as a compliance instrument in the cap and trade program.

II ENERGY

a. Fats, Oil and Grease

This renewable energy source can be diverted from landfill disposal for biofuel production. Restaurants and other food service establishments within the City are required to collect fats, oil, and grease (FOG) which are then taken to private anaerobic digestion facilities for biofuel production. Sanitation is currently processing 1,000 gallons per day of FOG through an anaerobic digestion (AD) treatment process. FOG generates biofuels and other renewable energy resources. Sanitation can expand this program to 50,000 gallons per day if funding is made available to retrofit and upgrade the existing facility.

b. Installation of Solar Panels at the City's Closed Landfills

The City manages several closed landfills. These closed landfills carry long-term financial requirements, monitoring responsibilities, and often have limited redevelopment potential due to budgetary, technical, environmental, and regulatory issues. Innovative solutions are currently being explored to address the optimal use of these former landfills focusing on site sustainability and renewable energy generation.

As shown in Table 2, Sanitation believes that closed landfill provide a great platform for solar power generation which will reduce GHG emissions by lowering the use of electricity generated from fossil fuels, thereby fostering local job growth, and improving the air quality in in the City. In addition, the deployment of solar power systems at these sites can contribute toward achieving the City's Renewable Portfolio Standards (RPS) goal of 35 % by 2030.

Sanitation has identified about 26 acres as suitable landfill area for solar photovoltaic (PV) system installation with potential of producing 13,400 MWh of energy in the first year of operation.

Table 2: Potential Solar Energy Generation and Estimated Annual GHG Emissions Reduction.

Potential Solar Energy Generation (MWh)	Estimated Annual GHG Emissions Reduction (in MTCO ₂ e)
13,400	9,454*

*Based on EPA's Greenhouse Gas Equivalencies Calculator using an emission factor of 7.0555×10^4 metric tons CO₂ / kWh (non-baseload emission rate, (eGRID2012 Version 1.0, U.S. annual non-baseload CO₂ output emission rate, year 2009 data

c. Deployment of Solar Compactors

The City's Waste Receptacle Program collects refuse from 3,000 white wire baskets located in heavily traveled pedestrian areas throughout the City, including commercial districts, bus stops, train stations, tourist attractions, sporting complexes, beaches, parks, office buildings, and school districts. Currently, the wire baskets do not provide the public the opportunity to segregate and recover recyclable materials, including California Redemption Value (CRV) beverage containers, as these are commingled with refuse and are sent to landfills for disposal. On average, 40 pounds of material per week is collected per white wire basket. The plan is to replace white wire baskets with solar compactors with recycling units to recover recyclables as it would provide segregation of recyclables from refuse throughout the commercial areas in the City, which will be collected and sent to City-contracted material recovery facilities for recycling, and resource recovery, thereby, conserving natural resources. Moreover, recyclables such as fruit juice boxes, orange juice and milk cartons, styrofoams, yogurt containers, grocery bags and film plastics, items most frequently are found along City's streets and beaches, will be recovered as well. Deploying these solar compactor units will reduce litter and blight throughout the City and have a special feature that signals the operator when the compactor is full to reduce truck collection events, thereby reducing emissions.

The goal of the proposed project is to recover 65% recyclables from the waste stream and reduce GHG emissions from the transportation and disposal of materials, landfill diversion, and production of these commodities from raw materials. The deployment of solar compactors will lower carbon emissions by reducing the number of truck trips to collect the material. For example, the City of Philadelphia in 2009 replaced 700 public wire trash baskets with 500 solar compactors and 210 recycling units. The installation of the solar compactors enabled them to deploy an on-street recycling program and at the same time, the compaction mechanism reduced their collection demand thereby reducing truck trips, fuel consumption, and air emissions, including GHG emissions.

Implementing this project yields many economic, social, and environmental benefits, including improving the air quality in the City as well as disadvantaged communities.

We would like to request an opportunity to meet with you and/or your staff to discuss in detail how our projects/programs can join the state in its effort to achieve GHG reduction goals mandated under the AB 32, and suggest how proceeds from the cap-and-trade auction and other funding opportunities can support the implementation of these strategies successfully within the City.

III WASTE

a. Reduce Reliance on Landfilling

Previously, Mayor Antonio Villaraigosa directed Sanitation staff to institute programs that will increase diversion and recycling, and eliminate dependence on urban landfills. The Mayor at that time set up an intermittent goal of 75% diversion by 2013 and Zero Waste by 2025.

Sanitation, through a comprehensive stakeholder driven process that included City residents, local business, labor, community groups, nonprofit organizations, faith organization, etc., developed the Solid Waste Integrated Resources Plan, also known as the Zero Waste Plan. The Zero Waste Plan identifies various policy, program and facility needs to increase landfill diversion, source reduction, recycling and composting. The Zero Waste model assumed specific capture rates related to various policies and programs, based on research, existing municipal programs, or expert opinion, to estimate landfill diversion tons assuming full implementation of these specific policies and programs. Table 3 shows the GHG reduction potential realized from full implementation of these Zero Waste policies and programs. Under the Mayor leadership the City has implemented multiple programs and the City has achieved 76.4% diversion from landfills.

Table 3 - Annual Greenhouse Gas Emissions Reduction Potential from Implementation of Zero Waste Programs and Processing Residual Waste through Alternative Technology¹

Programs/Policies/Technical Assistance	Estimated Annual Diversion Tons ²	Annual Greenhouse Gas Emissions Reduction (MTCO ₂ E) ³
1. Increase Textile Diversion	8,994	(21,656)
2. Bulky Item Reuse and Recycling	7,073	(28,378)
3. Single Family Food Scraps	23,031	(20,471)
4. Social Marketing/Media Campaign	55,717	(148,622)
5. Modify Residential Collection Rates	135,345	(361,025)
6. Community Beautification Grants ⁴	-	
7. LAUSD Zero Waste Curriculum ⁴	-	
8. Increase Diversion at C&D Facilities	62,268	(2,911)
9. Mandatory Source Separated Recycling Ordinance for Single Family Residential	159,623	(425,785)
10. Mandatory Organics Separation Ordinance for	141,372	(125,659)

Single Family Residential		
11. Resource Recovery Center Ordinance	21,790	(58,124)
12. EPR and Packaging Reduction	149,129	(388,975)
13. Ban Certain Material from Disposal	139,349	(371,705)
14. Expand Recycling Ambassador Program	18,033	(48,102)
15. Recycling Ambassador Reinforcement for Residential	21,524	(57,414)
16. Multi-Family Recycling	48,543	(194,763)
17. Multi-Family Yard Trimmings	1,725	(72)
18. Multi-Family Food Scraps	10,649	(9,465)
19. Modify Multi-Family and Commercial Collection Rates	276,778	(738,289)
20. Requiring all commercial haulers to provide recycling services to all of their customers	70,604	(188,332)
21. Require All Businesses to Have Recycling	83,646	(223,121)
22. Provide More Public Area Recycling	213	(568)
23. Mandatory Source Separated Recycling Ordinance for Multi-Family and Commercial Generators	165,854	(442,406)
24. Mandatory Organics Separation Ordinance for Multi-Family and Commercial Generators	190,731	(169,532)
25. Multi-Family Recycling Ambassador Program	14,654	(39,089)
26. Expand Commercial Technical Assistance	4,435	(11,830)
27. Recycling Ambassador Program Reinforcement for Multi-Family and Commercial	21,017	(56,062)
Totals from Diversion Programs	1,832,097	(4,132,356)
Residual Waste Processing through Alternative Technology	1,547,799	(1,582,295)
Totals from Diversion Programs and Alt. Technology	3,379,895	(5,714,651)

¹Assumes full implementation of programs in 2030

²Based on SWIRP Zero Waste Model, February 2013

³Calculated based on US EPA WARM (February 2012 version) in metric tons of carbon dioxide equivalent.

⁴No new diversion tons have been estimated for these programs.

The majority of the above policies and programs will be implemented between 2013 and 2020. Based on a study done by the Institute for Local Self-Reliance in 2009, over **4,500 green jobs will be created through the full implementation of SWIRP**. It should be noted that some of the programs identified in Table 3 have either begun implementation or are currently being evaluated under pilot programs conducted by Sanitation.

b. Recycling And Remanufacturing Infrastructure Development Through Incentives

The City's Zero Waste Plan, has a zero waste goal by 2025 and will require the development of multiple facilities to accept, process, and recycle materials collected by both public and private haulers. It is estimated that 5-10 recycling/composting and 5-7 alternative technologies facilities will be needed for the City alone to reach zero waste. Sanitation would like to engage in a dialogue with CalRecycle staff to quantify the number and type of typical facilities the State/City will need to site, permit, and build to reach 75% waste diversion by 2020. Policies must allow, encourage, and support the development of these facilities. Additionally, emphasis has to be placed on developing and incentivizing local markets to assist in GHG reduction and analyzing the full life-cycle benefits of all materials recycled.

c. Commercial and Multi-Family Private Hauler Franchise Initiative

The City currently manages a private hauler permit system for the commercial and multifamily sector of the City, which includes industrial and institutional waste generators. Additionally, the City manages a multi-family recycling program that is available to all multi-family buildings in the City, through 3 recycling contracts. Effective July 2012, AB 341 requires mandatory recycling for commercial businesses and public entities that generate more than 4 cubic yards of solid waste per week, and multi-family complexes with 5 units or more.

In 2012, the City Council indicated its intention to move from the current private waste hauler permit system to a franchise system for the collection of waste from both multifamily and commercial properties. The franchise system is intended to help the City reach its zero waste goals, and may contain elements such as maximum disposal amounts per zone, aggressive recycling and organics diversion programs, including outreach and education, clean fuel requirements, and worker health and safety requirements.

The City Council is expected to consider the commercial and multifamily private hauler franchise ordinance and associated CEQA documentation in early 2014, with projected implementation of the franchise initiative in 2017.

The SWIRP policies and programs anticipated to fall under the private hauler initiative include, but are not limited to, the following:

- Multi-Family Recycling
- Multi-Family Yard Trimmings
- Multi-Family Food Scraps
- Modify Multi-family and Commercial Collection Rates
- Require all Commercial Haulers to provide Recycling services to their Customers
- Require all Businesses to have Recycling
- Mandatory Source Separated Recycling for Multi-Family and Commercial Sectors
- Mandatory Organics Separation for Multi-Family and Commercial Sectors

- Multi-Family Recycling Ambassador Program
- Expand Commercial Technical Assistance
- Recycling Ambassador Program Reinforcement for Multi-Family and Commercial

In addition, SWIRP identified the needed facilities, such as material recovery facilities (MRFs), anaerobic digesters, composting facilities, resource recovery parks, and alternative technology facilities. Below is a more detailed description of some of these facilities, and how they will assist the City in reducing GHGs.

d. Extended Producer Responsibility (EPR), Source Reduction, And Facility Development

In December 2008, the City adopted a resolution encouraging EPR policies statewide. The City would like to see policies implemented with extensive stakeholder participation, including local governments. EPR programs can capture toxic products and hard to recycle materials, as well as packaging. Manufacturers may choose to make products with less toxic materials, or that are readily recyclable if they are required to manage their materials at the end of their lifespan. Source reduction, through state actions on single-use products, packaging reduction, and other measures, should be championed and adequately funded to decrease the materials that jurisdictions must manage. The state must hold producers responsible for providing take-back programs and/or funding for managing these “hard to recycle products,” by providing research and promoting technologies that can increase the recycling and/or recyclability of such materials.

The AB 32 Scoping Plan released in December 2008 does not currently count GHG emissions reduction for extended producer responsibility and environmentally preferable purchasing towards meeting the AB 32 goal. Sanitation is available to meet with ARB and CalRecycle staff to discuss the assumptions we made when quantifying GHG emission reductions for EPR and material disposal ban programs, as shown in Table 3.

e. Alternative Technologies

The City of Los Angeles residents and businesses generate over 10 million tons of material per year. With 85-90% diversion from landfill, the City will still need to send 1 to 1.5 million tons of post source separated solid waste to landfills. To assist in achieving the City’s Zero Waste and GHG reduction goals, safe and proven alternative technologies are proposed. These technologies are currently in use in European countries with high recycling and diversion rates. In February 2007, Sanitation released a Request for Proposals for the development of Alternative Technology facilities to process its post source separated municipal solid waste, also known as black bin waste, for resource recovery and energy production.

At present, Sanitation is negotiating with Green Conversion Systems (GCS) to establish an Alternative Technology facility in the City. It is estimated that the GCS technology would achieve GHG emissions reduction of 145,348 metric tons of carbon dioxide equivalent (MTCO₂e) annually by processing 1,000 tons per day (tpd) of black bin waste as compared to

landfilling, based on the U.S. Environmental Protection Agency (EPA) Waste Reduction Model (WARM). The GHG reduction is equivalent to removing approximately 28,500 vehicles from the road per year.

We believe that the City's implementation of Alternative Technologies for the processing of black bin waste will help the State achieve its AB 32 goals by increasing landfill diversion thereby preserving landfill space and reducing fugitive methane emissions from landfills as it is the second largest anthropogenic source of methane in California based on ARB's study released in 2009. In addition, these facilities reduce GHG emissions by generating biofuels and/or energy, thereby avoiding CO₂ emissions from fossil fuel and/or energy. The recovery of recyclables such as metals, glass, plastic and paper will result in less GHG emissions being generated. These facilities provide the opportunity for communities to manage their waste locally and will result in less truck traffic. Implementing this program will create a boost to the local economy in Los Angeles.

GHG emissions reduction from landfills, electricity generating sector, and transportation have been identified in the scoping plan as some of the key measures in meeting the AB 32 goals. The development of Alternative Technology facilities for waste disposal supports the achievement of these goals.

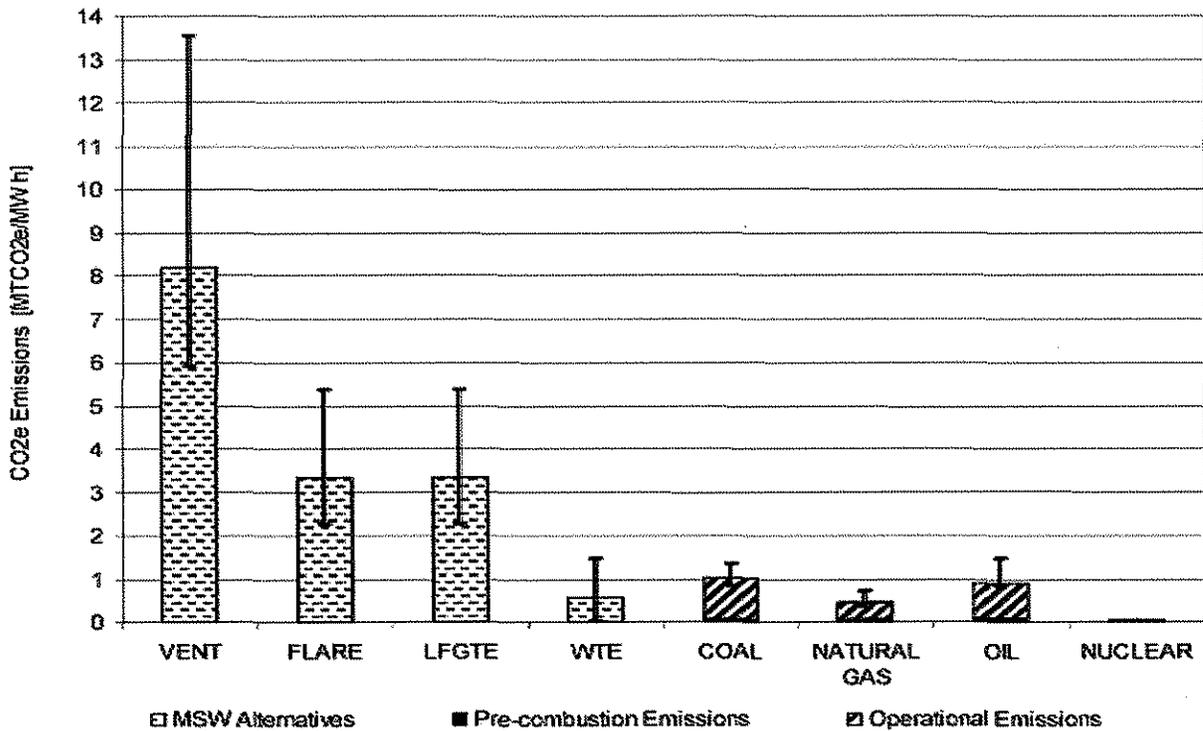
The fiscal challenges that the City and other local governments are facing is the funding to offset the cost of these facilities. We ask that ARB and CalRecycle allocate funding to local governments in order to offset the increased costs related to developing alternative technologies facilities.

i Renewable Energy Credit

Additionally, MSW thermal technologies should be eligible for renewable energy credit in the state for several reasons: (1) Federal laws have recognized WTE facilities to be a source of renewable energy for more than 30 years. The current CA statute should be revised to include all WTE facilities to align with the federal laws provided that "reduce, reuse, and recycle" of MSW have been implemented first. (2) A regular landfill operation takes in MSW and generates landfill gas, which is considered as a renewable energy resource, while sending the same MSW to a WTE facility for energy recovery is not. U.S. EPA's study has indicated that WTE is capable of producing more electricity from the same mass of waste as compared to landfill gas to energy technology with lower air emissions (Figure 1). In 1995, the U.S. EPA implemented new, more stringent emissions standards for WTE plants. WTE facilities are now required to comply with the Maximum Achievable Control Technology (MACT) regulations. Moreover, the WTE industry has invested more than \$1 billion in upgrades and replacements to its air emissions control systems resulting to significant air emissions reductions. (3) Studies have shown that 67% of WTE's CO₂ emissions are biogenic. In addition, the California Biomass Collaborative has identified MSW as a source of biomass feedstock in CA and the current statute recognizes biomass as a renewable energy resource. (4) MSW is also readily available as feedstock to generate biofuels as compared to other fossil fuels,

which require mining and excavation resulting in additional cost and additional GHG emissions from the transportation of these materials from long distances. (5) WTE can be an alternative source of renewable energy in addition to other sources, including solar and wind power. It should be noted that some of the renewable energy resources that have been codified are not continuously operational and subject to seasonal variations and/or adverse weather conditions.

Figure 1. Comparison of carbon dioxide equivalents for conventional electricity-generating technologies



ii Diversion Credit

Post source-separated MSW processed through thermal technologies instead of being landfilled should be given full diversion credits as this alternative treatment would preserve landfill space and reduce fugitive methane emissions from landfills, which are the second largest anthropogenic source of methane in CA.

iii Cap And Trade

Several factors need to be considered prior to deciding whether to include or exclude WTE facilities from the cap and trade program: (1) A Life-Cycle Analysis (LCA) should be developed to compare GHG emissions from CA WTE facilities vs. CA landfills to determine whether GHG emissions reductions are realized by utilizing the former for landfill diversion and power generation. Currently, there is no official LCA data available for CA WTE facilities and existing data to evaluate fugitive emissions from

landfills do not account for the majority losses found at landfills. Moreover, landfill gas collection efficiencies vary based on waste composition, weather, and decay rate so using a national average value may not be representative of CA's landfill emissions. It should be taken into consideration that urban landfill space is depleting (Puente Hills Landfill Closure) and transportation emissions will increase once MSW is sent to distance landfills for disposal. The study should take into account the use of collection vehicles or rail hauling as transportation options to distant landfills. (2) Studies have shown that GHG emissions are realized when combusting one ton of MSW through WTE as it generates 550 kilowatt-hours of electricity (net) thereby avoids the mining of a quarter of a ton of coal or the importation of one barrel of oil. In comparison to other fuel types, WTE facilities emit significantly less CO₂ than fossil fuel power plants since 67% of the CO₂ emissions from WTE facilities are biogenic. In addition, it has been estimated that processing MSW through WTE rather than disposing it into a landfill reduces GHG emissions by 1.25 ton of CO₂ per ton of MSW processed. (3) Since these facilities operate continuously (24 hours per day, 7 days a week), they can provide base-load electricity. In 2006, SB 1368, the California Greenhouse Gas Emissions Performance Standard Act, prohibits utilities from entering into long-term financial commitments for base load generation unless it complies with the CO₂ emissions performance standard of 1,100 lbs. per megawatt hour (MWh) or below that can be achieved by gas-fired combined cycle units. WTE utilizing MSW as feedstock has a CO₂ emission rate of 837 lbs. per MWh, which is lower than the CO₂ emissions performance standard, will be even lower once a LCA is developed. (6) It should also be considered that the Intergovernmental Panel on Climate Change has recognized the contribution of WTE facilities towards GHG emissions reduction. IPCC reported that the estimated GHG emissions from WTE facilities are "small, around 40 MMTCO₂e/yr or less than one-tenth of landfill CH₄ emissions".

GHG emissions reduction from landfills and the electricity generating sector are realized when utilizing AT facilities, including WTE facilities, for waste disposal and should not be included in the cap and trade program as they contribute to some of the key measures in meeting AB 32 goals.

Moreover, these technologies will create green jobs, boost the local economy, create local renewable energy, recycling, and recyclable markets compared to the current landfilling practice.

If we are to consider "best use" of the waste we produce, we have to recognize the huge discrepancies between landfilling versus alternatives such as composting, anaerobic digestion and MSW thermal technologies. These all have to be universally and consistently resolved in order for us to accomplish our efforts to reduce GHG emissions in the State to 1990 levels by 2020.

e. Organics Diversion from Landfill

According to the AB 32 Climate Change Proposed Scoping Plan released in October 2008, recovering organic materials from the waste stream can substantially reduce GHG emissions by diverting it from landfill disposal and managing these resources for their highest and best use. Thus, providing incentives for organic material recovery is an effective way to secure greenhouse gas emissions reduction and support AB 32 goals.

The City collects up to 1,800 tons per day of curbside green materials. These materials are processed through composting and mulching. Currently, about 15% of the material is processed at City owned facilities, and the remaining 85% is processed by private contractors.

In addition, about 25% of the City's black bin waste consists of food waste material. Highly biodegradable material such as food waste, buried at landfills (under anaerobic conditions) produces leachate and methane, both of which are environmental and public health concerns. AB 32 goals also include capturing this methane, which has 21 times the global warming potential of carbon dioxide. Diverting food wastes and other highly biodegradable organic material from landfill disposal and treating them in controlled systems such as anaerobic digestion vessels allows for the controlled capture of methane. Furthermore, the methane can be reserved as a source of renewable energy (in the form of electricity, heat, and low carbon fuels such as compressed natural gas or liquefied natural gas) thereby meeting other AB 32 Low Fuel Standards and State Renewable Portfolio Standards requirements.

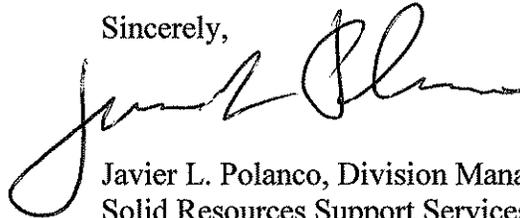
In CalRecycle's report "Current Anaerobic Digestion Technologies Used for Treatment of Municipal Organic Solid Waste" (2008), a life cycle analysis performed between landfilling, composting, and anaerobic digestion was cited, and demonstrated that compared to landfilling, anaerobic digestion decreased greenhouse gas emission by -134,379 tons CO₂e/year. When anaerobic digestion is compared to open windrow composting, GHG decreased by -93,470 tons CO₂e/year. In addition, when modeling the difference in GHG emissions between composting and landfilling of food waste for the City using the EPA WARM Model a net reduction of 0.45 MTCO₂e/ton of food waste can be realized. Thus, in comparison to landfilling, food waste material either processed through anaerobic digestion or composting will decrease GHG emissions. It should be noted that when modeling the difference in GHG emissions between composting and landfilling of yard trimmings for the City using the EPA WARM model, direct reduction in GHG's are not realized mainly because landfilling provides carbon sequestration of highly lignified and cellulosic materials. However, GHG emissions reductions are realized through the indirect benefits associated with the reduced need for water and fertilizer, thereby meeting AB 32 intended goals.

This alternative to landfilling, however, is at a higher cost than the tip fee to landfill the material. With the fiscal challenges that local governments are facing, we ask that the ARB and CalRecycle allocate funding to local governments in order to offset the increased costs related the development of additional infrastructure that is essential to reaching our zero waste goal. Moreover, we request assistance to encourage state, local and private partnerships to develop markets for these end products.

Given the aforementioned benefits, organic diversion from landfills should be given full consideration for funding through the Cap-and-Trade Auction Proceeds. The funding is greatly needed to plan for, research, and construct locally available composting and anaerobic digestion infrastructure so greenhouse gas reduction benefits are realized, as well as job creation, other public health benefits and air quality improvements.

Sanitation appreciates the opportunity to provide comments on the **2013 Update to AB 32 Scoping Plan**. If you need additional information or would like to discuss these comments further, please do not hesitate to contact me at (213) 485-3825 or Alexander Helou, Assistant Director, at (213) 485- 2210.

Sincerely,

A handwritten signature in black ink, appearing to read 'Javier L. Polanco', written in a cursive style.

Javier L. Polanco, Division Manager
Solid Resources Support Services Division

- c BOS Executives
- Alex E. Helou
- Reina Pereira
- Miguel Zermeno
- BOS Alternative Technologies Team Members