October 23, 2013

TO: Each Supervisor

FROM: Gail Farber
Director of Public Works

BOARD MOTION OF APRIL 20, 2010, ITEM NO. 44
CONVERSION TECHNOLOGIES IN THE COUNTY OF LOS ANGELES
SIX-MONTH STATUS UPDATE: APRIL 2013 THROUGH OCTOBER 2013

On April 20, 2010, the Board approved memoranda of understanding for three conversion technology demonstration projects and awarded a contract for consultant services for the demonstration and commercial phases of the County of Los Angeles conversion technology project, with the objective of developing alternatives to solid waste landfills within the County.

At that time, the Board also instructed the Director of Public Works, in coordination with appropriate stakeholders, to assess the feasibility of developing a conversion technology facility at one or more County landfills; to identify other potentially suitable sites within the County; and to report back to the Board within six months. In October 2010, Public Works submitted a preliminary siting assessment in response to this request and committed to providing the Board with a status report on our efforts every six months.

Subsequently, on September 25, 2012, the Board approved a motion by Supervisor Knabe directing Public Works, in conjunction with the Chief Executive Office, to work with key stakeholders to pursue and support the passage of legislation and regulations to encourage development of conversion technologies, including appropriate incentives for producing renewable energy, reducing landfill disposal, and producing low-carbon fuels.
The attached status update for April 2013 through October 2013 summarizes the efforts Public Works has undertaken in response to these Board actions to advance conversion technology development in the County.

The most significant efforts undertaken by County staff this year, led by the Chief Executive Office with support from Public Works, revolved around supporting the passage of legislation to advance conversion technologies in California. In February 2013, Senator Ricardo Lara introduced Senate Bill 804, sponsored by the County in conjunction with the California State Association of Counties. SB 804 would have added noncombustion conversion technologies to the definition of biomass conversion, creating a clear permitting pathway for these technologies while providing incentives to divert biomass from landfill disposal. Following significant efforts, SB 804 was passed by both houses of the Legislature. Unfortunately amendments made to SB 804 during the double-referral to Assembly Member Alejo's committee on Environmental Safety and Toxic Materials created complex regulatory roles for the California Department of Resources, Recycling and Recovery (CalRecycle) and South Coast Air Quality Management District, which proved to be very detrimental. Ultimately, CalRecycle was able to convince Governor Brown that these amendments made SB 804 unworkable and that CalRecycle should be allowed to develop their own fix for biomass conversion. As a result, on October 11, 2013, Governor Brown vetoed the measure, citing concerns with the last minute amendments to SB 804.

However, in his veto message Governor Brown indicated that he supported the intent of SB 804, and directed CalRecycle to work with stakeholders to "develop a sensible approach that would apply to all biomass facilities irrespective of the technologies used." The development of conversion technologies within the County continues to be important for the long term in order to provide alternatives to the export of waste to remote landfills outside the County. As such, we will continue to participate in the stakeholder process outlined by Governor Brown in order to pursue the County's adopted legislative priorities.

Additional highlights from the past six months include the following:

- Conducted a conversion technology survey to public and private stakeholders requesting feedback on legislative actions, regulatory changes, and incentives that are necessary to facilitate development of conversion technologies in California.

- Issued the second iteration of the Request for Expressions of Interest to technology vendors and financial firms. Seventeen new companies submitted information to be included in Public Works' online database, and numerous companies supplied updated information.
• Continued providing technical and planning services and information to potential conversion technology projects located in the County. This included serving on the proposal review panel for Glendale's anaerobic digestion project at the Scholl Canyon Landfill.

Public Works will continue to work with stakeholders to move forward with project development activities at sites within the County. Our next status report will be submitted to the Board by April 17, 2014.

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Attach.

cc: Chief Executive Office (Rita Robinson)
County Counsel
Executive Office
Department of Public Health
Department of Regional Planning
Los Angeles County Integrated Waste Management Task Force
Regional Planning Commission
Sanitation Districts of Los Angeles County
1 Introduction

On April 20, 2010, the County of Los Angeles Board of Supervisors unanimously approved three memoranda of understanding to develop demonstration conversion technology projects as part of the Southern California Conversion Technology Program. The purpose of the program is to encourage the development of conversion technologies as alternatives to landfills for the management of solid waste in the County. Board action on April 20, 2010, also awarded a contract for consultant services for the program's demonstration and commercial phases. The Board also approved a motion instructing the Director of the Department of Public Works, in coordination with appropriate stakeholders, to assess the feasibility of developing a conversion technology facility at one or more County landfills and to identify other potential facility sites within the County. The motion further directed Public Works to report to the Board in six months with its findings.

In October 2010, Public Works submitted a Preliminary Siting Assessment to the Board identifying potential project sites proposed by 11 municipalities and 9 private companies, and committed to providing the Board with a status report on our efforts every six months. Since that time, Public Works has worked with interested stakeholders to evaluate additional possible project locations within the County.

Subsequently, on September 25, 2012, the Board approved a motion by Supervisor Knabe directing Public Works, in conjunction with the Chief Executive Office (CEO), to work with key stakeholders to pursue and support the passage of legislation and regulations to encourage development of conversion technologies, including appropriate incentives for producing renewable energy, reducing landfill disposal, and producing low-carbon fuels.

This report provides a summary of key actions and accomplishments by Public Works, in concert with the CEO and the County's legislative advocates in Sacramento, in response to the above Board actions, for the period of April 2013 to October 2013. Most significant among those actions are efforts to support the passage of Senate Bill 804 (SB 804), cosponsored by the County and the California State Association of Counties (CSAC) and authored by Senator Ricardo Lara, as discussed in Section 3 below. Although ultimately vetoed by Governor Brown, the passage of SB 804 by both houses of the State Legislature represents a historic achievement in a multiyear effort to establish a permitting pathway for conversion technologies in California. The Governor's veto message presented a clear indication of his support for future efforts to address this issue, and we remain committed to participating in that effort in order to advocate for the County's position, in support of our need to provide safe and adequate solid waste management capacity for all 10 million residents in the County.
2 Project Background

For over a decade, Public Works has evaluated and promoted the development of conversion technology facilities as an alternative to the landfilling of solid waste. In addition to diverting solid waste from landfill disposal, such facilities produce renewable energy (electricity, gaseous, or liquid fuels), reduce environmental impacts, and create local green-collar jobs. Together with technical and public outreach consultants, Public Works has vetted various noncombustion thermal, biological, chemical, and mechanical conversion technologies, assessed potential project sites, worked with local and State agencies to create a permitting pathway for the technologies, and created a Countywide public outreach plan to educate stakeholders about the benefit of these technologies.

One of the most significant barriers to the development of conversion technologies in California has been inconsistent definitions and other provisions in State laws and regulations, which act as disincentives to the development of conversion technologies. To address this issue, on September 25, 2012, the Board approved a motion directing Public Works, in conjunction with the CEO, to work with the Sanitation Districts of Los Angeles County and other key stakeholders to:

- Actively pursue and support the passage of State and Federal legislation and regulations that would establish a clear pathway to encourage the development of conversion technologies; including clarification of the definition of conversion technologies and ensuring they qualify for appropriate incentives for producing renewable energy, reducing landfill disposal, and producing low-carbon fuels.
- Support legislation to provide renewable energy status and to continue to provide diversion credits and other incentives for energy production at existing facilities in the County that generate energy from waste.
- Outreach to State agencies and other stakeholders to share information on the technical performance and multifaceted benefits of conversion technologies, such as their role in meeting the solid waste management needs of local jurisdictions, producing green fuels, and reducing greenhouse gas emissions.
- Work with conversion technology companies to identify potential regulatory changes that are necessary to streamline the permitting process to allow conversion technology facilities to flourish in California, while complying with California's strict environmental standards.

3 Conversion Technology Legislation

During the 2013-14 California Legislative Session several bills relating to solid waste conversion technologies were introduced in the State Legislature. Assembly Bill 1126 (AB 1126) authored by Assembly Member Gordon created the definitions "Engineered Municipal Solid Waste Conversion" and "Engineered Municipal Solid Waste Conversion Facility" and made conforming changes to existing definitions with regard to the operations and facilities. SB 804 authored by Senator Lara proposed to revise the definition of "biomass conversion" to include conversion technologies that produce...
marketable products or fuels from biomass materials. In addition to SB 804 Senator Lara authored Senate Bill 715 (SB 715), which would provide renewable energy credit for power generated by the two waste-to-energy facilities in the County and require them to upgrade to noncombustion processes by 2045.

3.1 Assembly Bill 1126 (AB 1126)

AB 1126 (Gordon), which was signed into law on September 28, 2013, defines the terms “Engineered Municipal Solid Waste (EMSW) conversion” and “EMSW conversion facility.” EMSW conversion makes no distinction between combustion and noncombustion processes, and would be classified as disposal, creating no incentive for jurisdictions to send waste to these facilities rather than landfills.

AB 1126 would, however, relax some of the siting requirements for EMSW facilities that would otherwise apply to solid waste disposal facilities. Current law requires all solid waste disposal facilities to be listed in the Countywide Siting Element (CSE) and any amendments to the CSE require approval from the County Board of Supervisors and a majority of the cities in the County with a majority of the population. Under AB 1126, a CSE “providing for” an EMSW facility would only need to be approved by the city or county where the facility is located. This provision would streamline the time consuming and expensive process of amending a CSE to include a new conversion technology facility.

There are some inconsistencies and uncertainties in the definition of "EMSW conversion" as this term is applied to nonincineration conversion technologies. Some of the requirements for "EMSW conversion" do not appear to be applicable to noncombustion processes. For example, the definition of EMSW conversion includes the requirement that municipal solid waste to be converted contain no more than 25 percent “noncombustible waste” and that the facility maximizes the “burn rate of the waste.” The bill arbitrarily limits facilities to only being able to process up to 500 tons per day (tpd), which would provide nominal benefit to large jurisdictions and make it more difficult to achieve the economies of scale for a facility to compete with landfill disposal rates.

3.2 Senate Bill 804 (SB 804)

To comply with the Board of Supervisors' September 25, 2012, motion to pursue and support the passage of State and Federal legislation and regulations that would establish a clear pathway to encourage the development of conversion technologies, the County and CSAC cosponsored SB 804. SB 804 was introduced by Senator Lara in February 2013, and received support from technology companies interested in doing business in California as well as jurisdictions in California looking for more ways to manage biomass materials and keep those materials out of landfills.

Current law defines "biomass conversion" as the controlled combustion of organic materials--such as wood, lawn and garden clippings, agricultural crop residue, leaves
and tree pruning, as well as nonrecyclable paper—when separated from other solid waste and used for producing electricity or heat. This bill proposed to add conversion technologies to the definition of biomass conversion, allowing for cleaner and more efficient technologies to be used in the biomass process. This would have created a clear permitting pathway for conversion technologies while providing incentives to divert biomass from landfill disposal.

The progress of SB 804 through the Legislature was due to a concerted effort between the County’s legislative advocate, Senator Lara and his staff, and CSAC as well as Public Works staff. The effort involved building support amongst legislators, environmental groups, other jurisdictions, and industry leaders by correcting misconceptions about the scope and intent of the bill.

As the bill worked its way through the committee process, a number of questions arose about conversion technologies and how they compare to traditional combustion and whether or not they should be eligible for renewable energy and diversion credits. These questions lead to extensive discussions with key committee members and their staff, which ultimately resulted in a reduced scope for the bill. After several committee hearings in both the Senate and the House of Representatives, the final version of the bill dealing with biomass was submitted to Governor Brown for signature on September 23, 2013. Unfortunately amendments made to the bill during the double-referral to Assembly Member Alejo’s committee on Environmental Safety and Toxic Materials created complex regulatory roles for the California Department of Resources, Recycling and Recovery (CalRecycle) and South Coast Air Quality Management District (SCAQMD), which proved to be very detrimental. Ultimately, CalRecycle was able to convince the Governor that these amendments made the bill unworkable and that CalRecycle should be allowed to develop their own fix for biomass conversion. As a result, on October 11, 2013, Governor Brown vetoed SB 804. In his veto message, the Governor stated that he agrees with the intent of the bill, but that “last minute amendments made the bill overly complicated and unworkable.”

However, in the same veto message, Governor Brown directed CalRecycle to work with stakeholders to “develop a sensible approach that would apply to all biomass facilities irrespective of the technologies used.” The development of conversion technologies within the County continues to be important for the long term in order to provide alternatives to the export of waste to remote landfills outside of the County. As such, we will continue to participate in the stakeholder process outlined by the Governor in order to pursue the County’s adopted legislative priorities.

3.3 Senate Bill 715 (SB 715)

Existing law states that facilities engaged in the combustion of municipal solid waste (waste-to-energy) are not considered a renewable energy resource. Consequently, retail sellers of energy do not receive credit under the Renewable Portfolio Standard program for the procurement of energy from such facilities. In 1999 Assembly
Bill 603 (Cardoza) granted an exception for this classification to waste-to-energy facilities located in Stanislaus County and operational since September 26, 1996.

SB 715 would extend this exception to such facilities located in the County. The bill would additionally require that in order for facilities to maintain this classification, they would need to convert to a noncombustion process by 2045 and divert at least as much waste from landfills as they did prior to conversion of the facility. Two facilities would be affected by the passage of SB 715: the Commerce Refuse-to-Energy Facility located in the City of Commerce and the Southeast Resources Recovery Facility located in the City of Long Beach.

The Board took a support position on SB 715. The bill is currently in the Senate Committee on Energy, Utilities and Communications as a two-year bill. The support is consistent with the County’s State Legislative Agenda as well as Supervisor Knabe’s September 25, 2012, motion which directed Public Works, in conjunction with the CEO, to work with the Sanitation Districts of Los Angeles County and other stakeholders to “support legislation to provide renewable energy status and to continue to provide diversion credits and other incentives for energy production at existing facilities.”

4 Public Outreach

4.1 Legislative Outreach

Public Works, in concert with the CEO legislative advocates and CSAC, conducted general legislative outreach to various public and private stakeholders seeking input on the language of SB 804 as well as requesting support for the bill as it moved through the State Legislature. Key outreach activities included drafting model support letters, sending out updates through the monthly conversion technology e-newsletter, and conducting meetings with key stakeholders and the County’s legislative advocates.

4.2 Conversion Technology Survey

In an effort to identify legislative actions, regulatory changes, and incentives that are necessary to facilitate development of conversion technologies in California, Public Works developed and conducted an online survey of stakeholders inviting them to participate and share their knowledge, experience, and concerns through a series of 15 questions. Nearly half of the 66 respondents were project developers. These developers provided a myriad of reasons why their California-based projects have been delayed, aborted, or relocated.

The following are highlights from the survey:

- Over 93 percent of respondents indicated that hurdles to the development of conversion technologies exist in California.
• Over 85 percent of respondents cited thermal technologies as being the most significantly impacted.
• The top four hurdles identified by participants are the following 1) Restrictive California environmental/energy regulations or policies, 2) Uncertainty or ineligibility regarding credits and incentives, 3) Misleading or insufficient information regarding conversion technologies, and 4) Lack of State political support.
• Over 70 percent thought a “Conversion Technology Center” was a good idea, indicating that the most helpful elements would be “political support and assistance in project development” and “assistance with navigating permitting, environmental review, etc.”

It is clear that legislative, political, and regulatory support at the State level is a make-or-break condition for the successful development conversion technology facilities in California. This is corroborated by survey responses indicating a lack of support from California officials and agencies as well as by out-of-state projects that benefited from supportive regulations and clear pathways to permitting. There is also an interest in the development of an online Conversion Technology Center, especially if it can help smooth the road through the State hurdles and other permitting and review processes.

Despite the deep concerns about hurdles and obstacles to the development of conversion technologies in California, there were also positive comments. The underlying tone of the responses showed not defeatism but a real desire to find a way to make conversion technologies an integrated part of California’s vision with regard to waste management.

5 Request for Expressions of Interest Second Solicitation

Public Works issued its second Request for Expressions of Interest (RFEI) solicitation on June 13, 2013. Similar to the RFEI solicitation in 2011, the second RFEI sought information on conversion technologies that are available in the U.S. market and would be available for application for one or more projects in the County of Los Angeles. Through this RFEI, Public Works requested from conversion technology providers and/or project developers representing conversion technology providers, information on their technology as well as qualifications and resources of their company. Public Works also issued an RFEI for financial service firms that are in the business of assisting in the structuring and financing of conversion technology projects. Public Works received responses on August 30, 2013, from the following firms:

New Companies Providing Responses

Abengoa Bioenergy
AdaptiveARC
American Waste to Energy
Anaergia
Axpo Kompogas
Bharco Ecotechnologies  
BIOFerm  
Biogas Equity 2  
Covanta Energy  
EcoCorp  
Eisenmann  
Envision Waste Services  
Himark Biogas  
IneosBio  
JFE  
Lystek  
Powerhouse Energy  
Scott Equipment  
Sierra Bioenergy

Listed Companies Providing Updates or Supplemental Information

Backstrom McCarley Berry & Co (financial)  
Government Financial Strategies Inc. (financial)  
Morgan Stanley (financial)  
William Blair & Co (financial)

AlterNRG  
Arrow Ecology  
Organic Waste Systems  
Orgaworld  
Renewable Energy Management  
Valorga/Energos  
Waste to Energy LLC

Following review by Public Works, company information provided by respondents will be included in the database on our website. The database is used by the County and by public and private project developers participating in the County's conversion technology program as an informational tool in the development of conversion technology projects. The database allows the County and other project stakeholders to initially identify and assess technologies that are ready for commercial application and that may be suited to their project-specific goals and objectives. The database is intended to encourage partnerships for the development of commercial projects.

6 Grant Opportunities

Public Works regularly researches potential State and Federal grant opportunities that the County's Conversion Technology Program could apply for. A grant would offset operation costs and enable the County to provide additional resources to stakeholders, potentially spurring project development in the region.
As discussed in the previous report, Public Works applied for funding from the California Energy Commission (CEC) for a Conversion Technology Center in February 2012. Public Works was not awarded a grant; however, the CEC indicated that a grant solicitation would be issued in 2013 that focused on resource and education centers. Unfortunately, the Centers for Alternative Fuels and Advanced Vehicle Technology grant solicitation released by the CEC on August 23, 2013, is focused almost exclusively on advanced vehicle testing and fleet conversion, with very little emphasis on alternative fuel production. Public Works will continue to have discussions with the CEC about creating additional grant solicitations under the umbrella of the Assembly Bill 118 Alternative Vehicle Technology program or other appropriate grant funding sources specifically for resource centers such as the one proposed by Public Works, as well as to support the development of on-the-ground conversion technology projects, such as the CR&R Incorporated (CR&R) project described in the next section.

7 Update on Phase III Demonstration Projects

On April 20, 2010, the Board approved memoranda of understanding with CR&R, Rainbow Disposal Company (Rainbow), and International Environmental Solutions (IES). As described in the previous report, due to economic and financial constraints, the projects proposed by Rainbow and IES are indefinitely on hold; however, CR&R’s project continues to make significant progress towards development.

7.1 CR&R Incorporated

CR&R, a local solid waste management company, is developing the 150 tpd Anaerobic Digestion project at their Perris Materials Recovery Facility (MRF) and Transfer Station (TS). Public Works actively assisted CR&R in pursuing funding for the facility, and the company was awarded a grant of more than $4.5 million from the CEC in January 2011. Since that time, the City of Perris approved the facility’s Conditional Use Permit and Mitigated Negative Declaration, as required by the California Environmental Quality Act, indicating the project will have no significant impacts on the environment. CR&R is working closely with CalRecycle and SCAQMD on their solid waste facility permit and air quality permit, respectively. The project has also been successful in obtaining two additional grants from the CEC and SCAQMD to pay for a portion of the renewable natural gas (RNG) fueling station that will be located onsite for fueling the company’s hauling fleet.

Public Works continues to monitor the development progress of CR&R’s anaerobic digestion project at their MRF in Riverside County. The project’s digester supplier is Eisenmann and Greenlane is providing their gas upgrade. CR&R is waiting on the finalization of their air permits prior to breaking ground. They anticipate this taking place in the next few months. Their RNG fuelling station has been installed and will supply RNG to their hauling fleet when the digester comes online.
8 Update on Phase IV Commercial Projects

This report provides updates on sites that have made significant progress towards development since April 2013.

8.1 Scholl Canyon Landfill, City of Glendale

The City is moving forward with plans to develop an anaerobic digestion conversion technology project at the Scholl Canyon Landfill. The landfill is located in the City of Glendale on property owned jointly by the City (90 percent) and the County (10 percent) and is operated by the County Sanitation Districts (CSD). The City has received proposals for a project and is currently reviewing them with the help of a technical review committee. Both Public Works and CSD are represented on that committee.

8.2 Lancaster Landfill, Waste Management, Inc.

On July 10, 2013, Waste Management, Inc., (WM) issued an Invitation-Only Request for Proposals (RFP) for a green waste and food waste processing facility, on designated land within the boundaries of WM's Lancaster Landfill located in the unincorporated region of the County near the City of Lancaster. Per the RFP, the facility will have the capability to process material by composting and by an alternative technology, such as anaerobic digestion or other method that qualifies for beneficial use under Assembly Bill 939 and related regulations. The facility will process up to 2,000 tpd of green waste and food waste, of which between 250 and 400 tpd will be processed by the alternative technology.

8.3 Joint Water Pollution Control Plant, CSD/WM

Located in the City of Carson, the Joint Water Pollution Control Plant is owned and operated by CSD. This location was proposed by the City of Carson as a potential location for a conversion technology facility in 2010 when Public Works issued an invitation to site owners and operators to participate in the County’s program. Since that time, CSD and WM have partnered together to roll out a food waste digestion project at the site. The project will begin as a pilot project utilizing CSD’s existing waste water treatment digesters and 84 tpd of preconsumer food waste supplied by WM. Following a 2- to 3-year demonstration period, CSD and WM will determine if a continued partnership will be pursued.

8.4 Waste Resources Recovery MRF in Gardena, Waste Resources, Inc.

Waste Resources Inc., a solid waste hauler in the County of Los Angeles, is in the process of obtaining permits that would enable them to demonstrate an autoclave, a mechanical conversion technology system, at their MRF/TS in an unincorporated area near Gardena. This site has the advantage of being co-located with an existing MRF/TS facility and can thus make use of the existing infrastructure and processing capability. The site is of sufficient size, is zoned industrial, fully serviced with utilities, is
surrounded by other industrial uses, and is located in a County unincorporated area. The site also has very good truck access. Autoclave technology uses high temperature steam to sterilize and break down the waste, which allows for the separation of clean recyclables and leaves behind the organic fraction of the waste that can be used for anaerobic digestion.

8.5 Pebbly Beach Landfill, City of Avalon

Last year, at the request of the City of Avalon, Public Works prepared a conversion technology assessment that considered multiple options for a conversion technology facility to be located at the Pebbly Beach Landfill on the Island of Catalina. The assessment took into account the solid waste management system on the island and the economic constraints. Several conversion technology company sponsors were identified through the Public Works’ technology database that could provide small scale conversion systems in the capacity range required by the City for processing postrecycled municipal solid waste (MSW), biosolids, green waste/food waste, and possibly other materials, such as restaurant grease. These representative technology company sponsors have expressed interest in working with the City. In the meantime, the City released an RFP for residential and commercial waste collection, operation of the MRF, hazardous waste collection facility, and landfill. The City selected CR&R to provide these services and is considering developing a specific RFP for a small thermal conversion technology facility at the landfill to process residual waste and generate fuel.

9 Next Steps

Over the next six months, Public Works will actively engage on multiple fronts to implement the Board’s directives to advance conversion technology legislation in the State and create a clear pathway for their development. Among these efforts, Public Works will:

- Work with nationally recognized environmental groups to develop a white paper on “highest and best use” purposing for the most prevalent materials in the County’s waste stream.
- Continue to participate in the stakeholder process for Statewide solid waste plans currently being developed by CalRecycle and the California Air Resources Board, including the Assembly Bill 32 Scoping Plan Update and Assembly Bill 341 regulations.
- As appropriate, work with the County’s legislative advocates to support legislation that would promote continued opportunities and resources for the development of conversion technologies in California.
- Per the Governor’s instruction, work with CalRecycle, legislative staff, and other State agencies and stakeholders to develop a technology neutral approach to permitting and incentivizing conversion technologies.
- Continue to monitor State and Federal funding opportunities for a potential Conversion Technology Center.
- Continue to research potential State and Federal grant opportunities that support the development of conversion technologies.
- Conduct planning efforts as appropriate for Los Angeles County-based projects as well as monitor the CR&R project.
- Continue to review RFEI submittals and update the online database.