



LOS ANGELES COUNTY
SOLID WASTE MANAGEMENT COMMITTEE/
INTEGRATED WASTE MANAGEMENT TASK FORCE
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GAIL FARBER, CHAIR
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January 15, 2014

Mr. Joe Murdoch,
Senior Vice President HDR Inc/ Solid Waste
Association of North America (SWANA) Board of Directors
1100 Wayne Avenue Suite 650
Silver Spring, MD 20910

Dear Mr. Murdoch:

**COMMENTS REGARDING THE DRAFT SWANA TECHNICAL PAPER T-11
(SECOND DRAFT) FOR “EMERGING CONVERSION TECHNOLOGIES AS PART OF
INTEGRATED SOLID WASTE MANAGEMENT”**

The Los Angeles County Integrated Waste Management Task Force (Task Force) wants to express our appreciation for your response to and consideration of our comments of November 20, 2013. We have reviewed the revised T-11 Policy that will be presented to the SWANA International Board Meeting on January 21, 2014. As Mr. John Skinner suggested in his e-mail on January 7, 2014, we are forwarding you additional comments on the draft policy.

Our comments are shown in redline/strikeout format in the enclosure. These comments reflect our general concern the draft policy does not accurately reflect the fact that many so-called “emerging” conversion technologies are operating successfully in other parts of the world including North America. The County of Los Angeles currently maintains an online database of over 40 international conversion technology vendors who currently operate or have developed facilities around the world. We encourage you to view this database located at www.SoCalConversion.org under the “Resources” tab. Each of the companies included in the database have provided the County with reference facility information. In addition to the examples we listed in our November letter, we are aware of several conversion technology facilities processing *municipal solid waste* in Germany, France, the Netherlands, Canada, Japan, Israel, and England. Furthermore, hundreds of anaerobic digestion facilities have been in successful operation around the world for many years, and California already has several facilities in varying stages of planning, design, construction, and early operation. Therefore, the claim that conversion technologies “have not...been successfully operated on a commercial scale” is simply inaccurate.

We are also offering suggested changes to make the proposed language of this technical paper more “neutral”, scientifically accurate, consistent with SWANA’s existing Policies T-7 (composting), T-8 (incineration/waste-to-energy) and T-9 landfilling), and avoids what may appear to be a bias against conversion technologies. For example,

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the detailed list of “risks” identified for conversion technologies seems inconsistent with the policy papers developed for composting, waste to energy, or landfilling given that similar (or potentially greater) “risks” are associated with any waste management facility.

Thank you for considering the Task Force’s comments. We hope the suggested changes to the draft technical paper will be incorporated in the final document presented to the SWANA International Board. We appreciate the work SWANA has done to expand awareness and understanding of a variety of solid waste topics including conversion technologies. As a highly respected organization that is international in scope and reach, we feel it is important for issue documents such as these to reflect the most accurate and up-to-date information from around the world that is relevant to the topic at hand.

Pursuant to Chapter 3.67 of the Los Angeles County Code and the California Integrated Waste Management Act of 1989 (Assembly Bill 939 [AB 939], as amended), the Task Force is responsible for coordinating the development of all major solid waste planning documents prepared for the County of Los Angeles and the 88 cities in Los Angeles County with a combined population in excess of ten million. Consistent with these responsibilities and to ensure a coordinated and cost-effective and environmentally sound solid waste management system in Los Angeles County, the Task Force also addresses issues impacting the system on a countywide basis. The Task Force membership includes representatives of the League of California Cities-Los Angeles County Division, County of Los Angeles Board of Supervisors, City of Los Angeles, waste management industry, environmental groups, the public, and a number of other governmental agencies.

We look forward to continuing to work with you on this important topic. If you have any questions, please contact Mr. Mike Mohajer of the Task Force at (909) 592-1147 or MikeMohajer@yahoo.com.

Sincerely,



Margaret Clark, Vice-Chair
Los Angeles County Solid Waste Management Committee/
Integrated Waste management Task Force and
Council Member, City of Rosemead

TM/CS:

cc: Mr. John Skinner, CEO/Executive Director SWANA
Each Member of the Los Angeles County Integrated Waste Management Task Force
Each Member of the Alternative Technology Advisory Subcommittee

SWANA TECHNICAL POLICY

T-11 FOR “~~EMERGING~~ CONVERSION TECHNOLOGIES”

AS PART OF

INTEGRATED SOLID WASTE MANAGEMENT

Policy

SWANA supports the development of “~~Emerging~~ Conversion Technologies” as an element of an integrated solid waste management system. “~~Emerging~~ Conversion Technology” (ECT) is a general term to represent a waste management technology that processes municipal solid waste into fuels, chemical products, energy sources, organic soil conditioners or other useful products. The technology may utilize non-combustion thermal, chemical, mechanical or biological methods to process the municipal solid waste. This includes technologies such as pyrolysis, gasification, acid hydrolysis, and anaerobic digestion, among others.

CTs offer the potential of managing a variety of solid waste streams that may not otherwise be recyclable in an environmentally sustainable manner while providing an opportunity to recover marketable products from waste materials. However, it is important to carefully evaluate different CT options to determine if a CT facility will be able to successfully complement the integrated waste management system locally. This guide was developed to provide a number of recommendations for any municipality considering the development of a CT facility.

~~The term “Emerging” is used to point out that many of these technologies, while demonstrated to operate on select portions of the waste stream, have not, for the most part, been successfully operated on a commercial scale, on traditional municipal solid waste feedstock, for an extended period of time in North America.~~

The “Emerging” nature of these technologies represents an inherent risk to communities who are developing waste processing and disposal capabilities. Risks can include the following:

- that the regulatory agencies may not be familiar with the technology, leading to a lengthy permitting and approval process;
- that the technology may not process waste on a long-term and consistent basis;
- that the technology may not be able to process mixed municipal waste;
- that the environmental performance of the technology may not meet required standards;
- that the product(s) produced by the technology may not be marketable;
- that the technology may not be able to operate on the basis of the economic pro forma provided and
- that the company promoting and/or operating the facility may not remain solvent and committed to the technology.

These risks and others may be present to varying degrees and may be able to be managed with appropriate planning.

It should be noted that SWANA supports various methods of waste prevention, reuse, recycling, processing, [energy recovery/conversion](#) and disposal as part of an integrated waste management system. SWANA has developed technical policies to provide assistance to our members in making decisions regarding the components of their systems. These include the following Technical Policies:

- Policy T 2- Solid Waste Reduction;
- Policy T 6- Recycling as Part of Integrated Solid Waste Management;
- Policy T 7-Composting as Part of Integrated Solid Waste Management;
- Policy T 8- Waste to Energy as part of Integrated Solid Waste Management;
- Policy T 9-Landfilling as Part of Integrated Solid Waste Management.

For the purposes of this policy, SWANA has not included traditional waste to energy technologies, such as mass-burn and refuse derived fuel or conventional windrow or in-vessel composting in the definition of Emerging Conversion Technologies (ECT) as they are in wide-scale use (not emerging as defined in this policy) and are considered in other technical policies.

The use of an ECT should be consistent with the USEPA Waste Management Hierarchy (<http://www.epa.gov/wastes/nonhaz/municipal/hierarchy.htm>), and with the state and local government's integrated solid waste management plan, including existing and planned waste prevention, reduction and recycling programs. Permitting of conversion technology facilities, like any other waste management facility, should be consistent with the established and long term capacity needs of local government and their integrated solid waste management plans. ECT projects may require significant upfront capital, and the economic feasibility of these projects should be reviewed by financial specialists. The full costs for the siting, design, construction and operation should be included in the costs assigned to a facility within an integrated solid waste management system, including residue management and disposal of waste that cannot be processed by the ECT, if any. Expected revenues from sales of electricity, steam/heat, fuels or other products, as well as potential revenues related to renewable energy credits and carbon credits should be considered as part of the full cost accounting.

The selection of an ECT, similar to other waste management options, should be consistent with best practices regarding engineering, economics, environmental and public health issues. The use of ECT's should be based on the assurances that during siting, design, construction and operation, the facility will comply with all federal, state/provincial and local government rules, regulations and permits.

During the past five years there have been a significant growth in the use of CTs to manage a myriad of waste materials, including municipal solid waste, particularly throughout Europe and Japan, among

other countries. technologies that have been proposed in a pilot or experimental fashion. Communities considering ECT's as part of their integrated solid waste management system should pay particular attention to the commercial viability of the technology, and look for companies/technology vendors that have a successful track record. A primary question should be, "Has this technology demonstrated the ability to consistently, (without interruption, during a prescribed period of time, under the specific performance requirements of the community), operate on a waste feedstock (quality and quantity) consistent with the adopted solid waste management plan of the community, in an environmentally sound manner?"

Position/Recommendations

The following are considered to be best practices in the planning, siting, design and operation of ECT facilities as a part of an integrated solid waste management:

1. Planning for ECT facilities should consider the following factors:
 - evaluation of need for the technology based on current and projected waste volumes and characteristics,
 - evaluation of compatibility with recycling, composting, waste-to-energy and source reduction efforts in the community's integrated solid waste plan,
 - evaluation of the risk posture of the community,
 - evaluation of the potential delivery process and business model (Design/Build, Design Build Operate, Design Build Own Operate, etc.)

The use of experienced consultants and attorneys for development of dependable feasibility, procurement and contract documents is recommended. Consideration of ECT's should include the

following evaluations and verifications prior to commitment to a technology: (a check list could also be provided):

- a. Independent engineering evaluation of comprehensive Mass and Energy balance.
 - b. Site visit to operating facility(s) to verify viability of the technology.
 - c. Verification of operations, availability and capacity, on mixed municipal waste feed stock and/or on residuals remaining after other recycling, reuse and recovery activities (i.e post diversion MSW residuals) for an extended, continuous period of time.
 - d. Identification of pre-processing and other feedstock requirements.
 - e. Verification of environmental performance.
 - f. Determination of scale-up requirements and restrictions. Verification of the quality and quantity of facility products (electrical production, fuel, recyclables etc.) and byproducts (residue)
 - g. Comments from local users and regulators on the viability of the any reference facility(ies).
2. Sites for ECT facilities should be selected based on the following principles:
- consistency with local land use conditions and zoning codes,
 - consideration of projected ed waste availability and energy demand for the immediate surrounding area to minimize transportation and transmission costs, and
 - siting in proximity to existing infrastructure such as roads, rail access, utilities, transmission lines, steam loops/customers, collection/transfer systems, material processing and recovery facilities, and residue reuse or disposal sites,
 - consideration of and adherence to environmental justice principles. ~~disparate impacts to poor and minority communities.~~

3. Facilities ~~should~~ shall be designed by registered professional engineers and other licensed professionals with clearly demonstrated knowledge in ECT facility design, and shall be designed in accordance with the following principles:

- designed for long term operation at high availability levels,
- designed for environmental excellence in operations, including use of energy efficient equipment, minimizing use of chemicals and water, reuse of resources within operations, zero discharge of wastewater,
- designed in a manner to maximize recovery of energy and other useable products
- designed with a means for the measurement of incoming solid waste and out-shipped residue energy and products,
- designed with a means for the screening of incoming solid waste,
- designed to include or be a part of a system that includes household hazardous waste and electronic waste recovery programs when appropriate,
- designed to control run-on and run-off to minimize or prevent surface water contamination,
- designed with a means to minimize generation of and control emissions of green house gases and other air quality contaminants to ensure compliance with applicable regulations,
- designed to incorporate continuous emissions monitoring systems,
- designed to support the beneficial use of residue,
- designed for maximum recovery of reusable materials from residue,
- designed to allow for the safe transport and disposal of unusable residue in permitted disposal areas, and
- designed to allow observation of the facility and facilitate education of the public on the facility process.

4. Construction of ECT facilities shall be conducted by licensed contractors familiar with industrial level energy generating facilities with appropriate construction management, monitoring and certification experience.
5. ECT facilities should be properly commissioned and tested to ensure achievement of performance guarantees.
6. Operation of ECT facilities shall aspire to the following principles:
 - operated under the management of a provincial/state certified manager/operator in those provinces/states where certification is required,
 - operated by a manager with certification by ASME in the appropriate category of management and operation,
 - operated using an asset management program, as well as preventive and predictive maintenance programs performed to minimize outages and down time,
 - operated using real-time operational and emissions data to enable operation at highest standards,
 - operated by providing training of all on-site personnel appropriate to assigned area of responsibility,
 - operated with high standard safety programs (such as OSHA) focused on worker health and safety as well as the safety of customers and contractors at the facility,
 - operated with a provision for controlled access to facility and use by only authorized users,

Because some ECT proponents have been aggressive in approaching public sector waste management professionals, several communities have developed a “Check List” of questions that are required to be answered before the waste professionals will entertain additional discussion of the proposed technology. A sample “Check List” can be provided upon request.

Approved by the International Board on XXX, 2014.

_____, International Secretary
Dated _____, 2014