

Santa Barbara, California  
Conversion Technology Project

Evaluation of  
Request for Information (RFI)  
Responses Submitted in  
November 2009

December 21, 2009

Prepared by:



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## **1.0 INTRODUCTION**

On October 20, 2009, the County of Santa Barbara, California, together with the Cities of Santa Barbara, Goleta, Buellton and Solvang (collectively called the Public Participants), issued a Request for Proposals (RFP) for a conversion technology (CT) facility to process waste currently being disposed at the Tajiguas Landfill. The RFP identified eight short-listed companies that had responded to a Request for Information (RFI) in early 2008 and that were determined by the Public Participants in April 2008 to be qualified to provide a proposal for the project. The October 2009 RFP allowed for additional companies to submit qualifications information and be considered for the short-list, by submitting a response to the previous RFI. The deadline for submitting a response was November 19, 2009.

RFI responses were received on or before November 19, 2009, from the following three companies:

- Mustang Renewable Power Ventures
- NRG Energy, Inc.
- Urbaser S.A.

Based on the evaluation presented herein, NRG Energy, Inc. and Urbaser are determined to meet the evaluation criteria established by the RFI, and offer the potential for a technically and economically viable conversion technology project for Santa Barbara. It is recommended that these companies be added to the qualified company short-list for the RFP and be invited to submit Proposals. Mustang Renewable Power Ventures is determined to meet the evaluation criteria for the BEKON anaerobic digestion technology. The Waste 2 Energy gasification technology also proposed by Mustang does not currently meet Criterion 8 (demonstration of technology). It is recommended that Mustang Renewable Power Ventures be added to the short-list for the BEKON anaerobic digestion technology.

## **2.0 SUMMARY OF RFI RESPONDENTS**

Three RFI responses were submitted following issuance of the RFP. Each respondent is briefly introduced below

### **2.1 Mustang Renewable Power Ventures (Mustang)**

Mustang Renewable Power Ventures is a joint venture of The Dewey Group and Rossi Enterprises, and is based in San Luis Obispo, California. Jointly, Rossi and Dewey have acquired, financed, and managed over \$2 billion worth of real estate projects. Its real estate portfolio includes three former landfills. Mustang is pursuing the development of waste to energy facilities throughout California, with a focus on the Central Coast.

Mustang proposes to utilize a combination of conversion technologies. Anaerobic digestion (BEKON Energy Technologies Dry Fermentation Process) is proposed to manage food and green waste. Gasification (Waste 2 Energy or W2E Batch Oxidation System) is proposed

to manage the remaining fraction of the MSW. Mustang has procured licensing relationships with both of these technology providers. Both technologies are in operation overseas (Europe) processing similar waste as that proposed for Santa Barbara. Mustang also proposes to include a material recovery facility (MRF) ahead of the W2E conversion technology to pre-process MSW. The MRF is expected to recover glass, metal, plastic and paper that remain in the wastestream. Biogas from the anaerobic digestion process will be used to generate electricity or upgraded to pipeline-quality natural gas. Syngas from the gasification process will be used to generate electricity.

## **2.2 NRG Energy, Inc. (NRG)**

NRG Energy, Inc., headquartered in Princeton, NJ, is a Fortune-500 power generation company with a portfolio of 48 plants and over 24,000 megawatts of generation capacity. The company's projects cover a broad geographical area, and use a wide array of fuels. Approximately 10 percent of NRG's generating capacity is located in California. Areas of focus for NRG's future development efforts are reported to include development of wind power projects, biomass-based power generation, re-powering older coal units to clean syngas with plasma gasification technology, and plasma gasification conversion of municipal solid waste to clean-burning syngas. NRG Energy is proposing to process MSW using the Alter NRG/Westinghouse Plasma Corporation plasma gasification technology, which is in commercial use in Japan for MSW applications. Syngas produced would be used to generate electricity.

NRG submitted a streamlined response to the RFI, focusing on firm statements regarding their experience and capabilities aligned with each of the established evaluation criteria. NRG's response did not include detailed technical information, such as mass and energy balances or capital and operating costs specific to a project for Santa Barbara. However, Alternative Resources, Inc. has previously reviewed NRG's qualifications in detail for another recent procurement (Taunton, MA), including information obtained from visits to reference facilities in Japan and Pennsylvania and in-depth interviews of the company regarding its technical, financial and business resources, experience and capabilities. Our evaluation of NRG's qualifications as provided herein is based on their response to Santa Barbara as well as our knowledge of the company.

## **2.3 Urbaser S.A.**

Urbaser is a wholly-owned environmental subsidiary of ACS Group (Activities of Construction and Services), a Spanish company in the infrastructure, industrial services, energy and environmental markets (globally). Urbaser itself is a major waste management and services firm in the global market, but is new to the U.S. market. Waste management services provided by Urbaser include: waste treatment; waste collection and transportation; street cleaning and management of urban green space; water management and energy production. Urbaser manages 19.4 million metric tons of waste per year, with over 168 different facilities operating around the world. Urbaser's portfolio of waste treatment plants includes landfills, mechanical-biological treatment, and integrated treatment (pre-treatment, mechanical-biological treatment, and thermal treatment with energy recovery).

Recognizing that the MSW to be delivered to the Santa Barbara facility includes a significant fraction of construction and demolition (C&D) waste, Urbaser is proposing a mechanical-biological treatment plant (MBT) that includes both an MSW processing plant and a C&D sorting and recovery system. The proposed MSW processing plant would be an integrated system inclusive of mechanical separation to remove recyclables and recover an organic fraction for further processing; degradation and homogenization of the organic fraction using a bioreactor (a rotating drum operating under aerobic conditions); anaerobic digestion of the residual organic fraction; composting to stabilize the digestate; and other system components such as water treatment and odor, noise and dust control. End products would include recovered recyclables, electricity, and compost. The C&D system would consist of manual and mechanical sorting to maximize recovery and reuse of marketable C&D components.

### **3.0 EVALUATION OF RFI RESPONSES**

As part of the previous RFI in early 2008, eleven (11) evaluation criteria were adopted. The criteria were established as minimum screening parameters, with the objective that each technology supplier would be required to meet all of the criteria in order to be further considered. The criteria were structured to assess the viability of a reasonably-sized, commercial project that meets the goals of the Public Participants. The same evaluation criteria were applied to the three responses submitted in November 2009, with the exception that Criterion 8 was updated to consider operating history as of October 20, 2009. These evaluation criteria are presented below:

1. Any considered CT must be capable of processing a minimum of 100,000 tons per year (tpy) of MSW during the first operating year of the project, and must be capable of increasing capacity up to 220,000 tpy within 10 years of the first operating year of the project.
2. Any considered CT must be capable of operating for a minimum of 20 years.
3. Any considered CT must be compatible with local solid waste management programs, including recycling programs.
4. Any considered CT must be capable of diverting at least 60% by weight of the MSW received for processing from landfill disposal.
5. Any considered CT must have a projected tip fee that limits financial impact to affected ratepayers (i.e., no more than 10% beyond the price the ratepayer would expect for other alternatives). A projected tip fee of less than \$100 per ton will be considered to meet this criterion.
6. Any considered CT must produce end products that have probable, identifiable or existing markets (including electricity and/or fuel products).
7. Any considered CT must conform to California environmental standards, and must limit and/or mitigate environmental impacts of landfilling MSW.

8. Any considered CT must have been demonstrated at a minimum of one facility of similar size or with a minimum unit size of 50 tons per day (tpd), and shall have been in operation for at least six months (as of October 20, 2009) processing MSW or similar feedstock. Demonstration facilities that have operated intermittently, but processed at least 1,000 tons of MSW or similar feedstock over a one-year period, will be considered to meet the operating requirement of this criterion.
9. Any considered CT must have a project team that has experience designing, building and operating a solid waste management facility, either individually or as a team.
10. The project developer must have bonding ability equal to the estimated cost of facility design and construction, and, during operation, equal to the estimated annual operating cost; must not be in bankruptcy; and must provide a financing plan that reasonably demonstrates that it can offer private project financing, if required.
11. The project developer must not be debarred from contracting in California.

The evaluation criteria were applied to the three RFI responses to determine which companies met the criteria. This evaluation process is presented in Section 4.0. The findings are presented in Section 5.0.

The RFI process is not intended to be used to rank any potential proposers or otherwise make a selection of a preferred conversion technology and/or project developer. Future selection will be based on detailed, comparative evaluation and ranking of formal proposals submitted in response to the RFP. As noted in the RFP, requirements for Proposal submission are more specific than those for the RFI, and such RFP requirements are to be adhered to for submittal of Proposals by short-listed companies.

## 4.0 EVALUATION OF CONVERSION TECHNOLOGIES

### 4.1 Criterion 1 – Processing Capacity

The Tajiguas Landfill currently disposes approximately 220,000 tons per year (tpy) of post-recycled municipal solid waste (MSW). Criterion 1 considered the capability of a conversion technology (CT) to process this amount of MSW, if not initially, then within 10 years of the first operating year of the project. Table 4-1 provides a summary of the processing capacity proposed and/or achievable by each respondent, along with an assessment of whether each respondent meets the criterion.

**Table 4-1. Criterion 1 – Processing Capacity**

**Criterion 1:** Any considered CT must be capable of processing a minimum of 100,000 tons per year (tpy) of MSW during the first operating year of the project, and must be capable of increasing capacity up to 220,000 tpy within 10 years of the first operating year of the project.

Project Developer and/or Technology Supplier (Listed Alphabetically)	Initial Processing Capacity	Criterion Met?
<p><b>Mustang Renewable Power Ventures</b></p> <p>[Gasification with Anaerobic Digestion]</p>	<ul style="list-style-type: none"> <li>The overall facility will have the capacity to process up to 220,000 tpy of waste. The front-end MRF will recover up to 15% recyclables, resulting in approximately 188,000 tpy going to the conversion processes. The conversion processes will include 12 BEKON digesters to process 65,000 tpy of food, green, and other compostable waste, and 4 W2E gasification trains to process up to 123,000 tpy of remaining waste.</li> <li>Regarding future capacity, the digester and gasification units are modular, enabling future expansion. Also, the MRF will have capacity to manage single-stream recyclables (to be installed within the footprint of the initial phase of project design).</li> </ul>	Yes
<p><b>NRG</b></p> <p>[Plasma Gasification]</p>	<ul style="list-style-type: none"> <li>Each plasma gasification reactor is capable of converting up to 750 tpd of MSW, providing the flexibility to process at least 100,000 tpy of waste during the first operating year (at approximately 50% capacity) and increasing capacity to 220,000 tpy within ten years or less of the first operating year (at approximately 80% capacity)</li> </ul>	Yes

<b>Project Developer and/or Technology Supplier</b> (Listed Alphabetically)	<b>Initial Processing Capacity</b>	<b>Criterion Met?</b>
<b>Urbaser S.A.</b>  [MBT - Anaerobic Digestion]	<ul style="list-style-type: none"> <li>• The initial processing capacity will be 220,000 tpy of MSW (inclusive of the C&amp;D fraction of the wastestream); preliminary layouts have been provided showing how the proposed facility would be developed within the available space</li> <li>• Reference facilities of similar design (and feedstock) and comparable (or larger) capacity are identified</li> </ul>	Yes



## 4.2 Criterion 2 – Operating Term

The Project is intended to provide a long-term waste disposal alternative for the Public Participants. Criterion 2 considered the potential life of the project, establishing a requirement that the project be capable of operating for a minimum of 20 years. As summarized in Table 4-2, all three respondents expect an operating life of at least 20 years. Not all of the proposed technologies have been in operation long enough to demonstrate a 20-year life, but many have demonstrated operation for 5-10 years and some longer. Also, all of the respondents have related facilities (e.g., processing other types of waste) that have operated for longer periods of time. All of the respondents expect a design life of at least 20 years and, assuming implementation of factors such as the following, are determined to be able to meet evaluation Criterion 2:

- Use of industry-based design and construction standards
- Implementation of routine, preventive and predictive maintenance practices
- Use of “off-the-shelf” equipment, as applicable, with long documented history
- Redundancy of key design components

**Table 4-2. Criterion 2 – Operating Term**

*Criterion 2: Any considered CT must be capable of operating for a minimum of 20 years.*

Project Developer and/or Technology Supplier (Listed Alphabetically)	Proposed Project Operating Term and/or Project Developer’s Projected Useful Life of Technology	Criterion Met?
<b>Mustang Renewable Power Ventures</b>  [Gasification with Anaerobic Digestion]	<ul style="list-style-type: none"> <li>• Expected useful life is 20-30 years with proper maintenance regime.</li> <li>• Will be designed for an economic life of 25 years; longer life achievable with proper maintenance.</li> <li>• O&amp;M budget includes annual allowance for equipment repair and maintenance.</li> </ul>	Yes
<b>NRG</b>  [Plasma Gasification]	<ul style="list-style-type: none"> <li>• All equipment will be new and commercially proven for its designated application, with certain equipment and contractor guarantees and warranties, and capable of operating for a minimum of 20 years with proper maintenance.</li> <li>• The torches that would be used in the plasma gasification reactor are of the same design as torches that have been operating at a General Motors plant in Defiance, OH since 1989. These torches have had regular maintenance over the past 20 years, with no replacement.</li> <li>• The first application of the plasma gasification system for waste conversion was commissioned in 1999 in Japan, followed by commissioning of two additional plants in Japan in 2002, providing 7-10 years of operating history.</li> </ul>	Yes

<b>Project Developer and/or Technology Supplier</b> (Listed Alphabetically)	<b>Proposed Project Operating Term and/or Project Developer's Projected Useful Life of Technology</b>	<b>Criterion Met?</b>
<b>Urbaser S.A.</b>  [MBT - Anaerobic Digestion]	<ul style="list-style-type: none"> <li>• Based on its experience with other commercial projects, and its implementation of good maintenance protocol (including supplier recommendations for operation and maintenance), Urbaser ensures that the proposed Facility will be operative beyond the requested 20 years.</li> <li>• In support of its proposed 20+ year facility life, Urbaser identifies four comparable reference facilities that have an operating history as long as 9 years and a planned operating period as long as 26 years. Urbaser has other waste management facilities with some similar facility components that have operated in excess of 20 years. Urbaser has provided several client references (letters) documenting project performance.</li> </ul>	Yes

### 4.3 Criterion 3 – Compatibility with Solid Waste Programs

Implementation of a conversion technology project is intended to be compatible with local solid waste management programs, including recycling programs. Criterion 3 considered such compatibility. Respondents were requested to describe how their technology could supplement recycling activities, and, specifically, how it could be incorporated into an integrated, municipal solid waste management program that has, as one of its priorities, recycling and/or energy and materials recovery. Table 4-3 provides a summary of information provided by respondents to address compatibility with local solid waste management programs.

**Table 4-3. Criterion 3 – Compatibility with Solid Waste Management Programs**

***Criterion 3:** Any considered CT must be compatible with local solid waste management programs, including recycling programs.*

Project Developer and/or Technology Supplier (Listed Alphabetically)	Summary of Key Statements Provided by Project Developer and/or Technology Supplier – Compatibility with Local Solid Waste Management Programs	Criterion Met?
<p><b>Mustang Renewable Power Ventures</b></p> <p>[Gasification with Anaerobic Digestion]</p>	<ul style="list-style-type: none"> <li>• The facility will supplement existing recycling programs through the recovery of recyclables in the front-end MRF.</li> <li>• The facility will divert waste from landfill disposal and will generate energy and other beneficial products.</li> <li>• The facility will be flexible to accommodate new programs (e.g., a source-separate food waste program), to process other types of waste (e.g., sludge, tires), and to adapt to changes in waste composition over time.</li> </ul>	Yes
<p><b>NRG</b></p> <p>[Plasma Gasification]</p>	<ul style="list-style-type: none"> <li>• The facility will comply with all local solid waste management and recycling programs through enhanced processing of incoming waste to the Facility.</li> <li>• Recyclable materials will be recovered on the front-end and inert material will be recovered on the back-end as vitrified slag, all of which will be marketed for re-use and/or beneficial use as applicable and possible. Post-recycled MSW will be converted to syngas and used to generate electricity.</li> </ul>	Yes

<b>Project Developer and/or Technology Supplier</b> (Listed Alphabetically)	<b>Summary of Key Statements Provided by Project Developer and/or Technology Supplier – Compatibility with Local Solid Waste Management Programs</b>	<b>Criterion Met?</b>
<b>Urbaser S.A.</b>  [MBT - Anaerobic Digestion]	<ul style="list-style-type: none"> <li>• The facility will incorporate enhanced materials recovery and energy production; it is proposed to supplement existing recycling programs through the recovery of metal, paper, cardboard, plastic and aggregate.</li> <li>• The incorporation of independently-operated modules that achieve different objectives provides flexibility in addressing feedstock changes and managing other wastes, such as sludge. For example, current or future source-separated food waste streams could be processed through the anaerobic digestion module of the integrated facility, producing renewable electricity. Sludge can be digested, or, as applicable, blended with digestate for the final composting step.</li> <li>• An improvement program will be maintained (procedural improvements and capital project improvements) to keep pace with proven, feasible technological innovations.</li> <li>• An environmental education program will be developed to increase community awareness related to waste and recycling and to facilitate maximum diversion from landfill disposal</li> </ul>	Yes

#### 4.4 Criterion 4 – Diversion from Landfill

A primary goal of the project is to increase the diversion of post-recycled MSW intended for landfill disposal through pre-processing (or post-processing) and/or conversion of post-recycled MSW into beneficial products such as energy, fuels, or other marketable products (e.g., compost, aggregate, metals). Criterion 4 established a minimum standard of 60% diversion. Table 4-4 provides a summary of the responses, focusing on the quantity of residue and corresponding diversion rate provided by each respondent. All of the respondents are determined to meet Criterion 4.

**Table 4-4. Criterion 4 – Potential for Diversion from Landfill Disposal**

**Criterion 4:** Any considered CT must be capable of diverting at least 60% by weight of the MSW received for processing from landfill disposal.

Project Developer and/or Technology Supplier (Listed Alphabetically)	Respondent's Estimated Residue Generation	Respondent's Estimated Diversion Potential <sup>(1)</sup>	Criterion Met?
<b>Mustang Renewable Power Ventures</b>  [Gasification with Anaerobic Digestion]	<ul style="list-style-type: none"> <li>Residue includes inert material removed during front-end processing, and an inert ash material from the gasification process. Mustang intends to market the ash material as a construction aggregate, which would result in diversion at the higher end of the range state.</li> </ul>	95-100%	Yes
<b>NRG</b>  [Plasma Gasification]	<ul style="list-style-type: none"> <li>Residue includes materials removed during preprocessing that are not beneficially converted in the gasification reactor and a small amount of material from the water treatment process. The vitrified slag, which is typically 1-5% of the MSW gasified, would be a residue if it could not be marketed for beneficial reuse.</li> <li>Higher residue rates could occur if the preprocessing system is optimized to produce a higher quality fuel for gasification rather than optimized to maximize diversion, but could still divert more than the minimum requirement of 60%.</li> </ul>	>90%	Yes
<b>Urbaser S.A.</b>  [MBT - Anaerobic Digestion]	<ul style="list-style-type: none"> <li>The diversion rate achieved at Urbaser's existing facilities is typically less than 60 percent. However, Urbaser has stated that it will design and operate the Santa Barbara facility to achieve a greater amount of sorting, and will guarantee that the diversion rate will be above 60 percent.</li> <li>Urbaser states that under current law, there will be no limitations on diversion credits for the technologies proposed.</li> </ul>	>60%	Yes

1. Diversion is expressed as the percent by weight of MSW received for processing

#### 4.5 Criterion 5 – Projected Tipping Fee

The Public Participants have established a project goal of financial feasibility and sustainability, which requires that any considered conversion technology have capital and operating costs that result in a feasible, cost-competitive tipping fee, with long-term financial stability that would limit financial impacts to affected ratepayers. For purpose of the RFI, tipping fee projections, with related cost and revenue information, were requested primarily to obtain a *planning level* view of the prospective economics of each potential project, and to provide some level of data for technology-to-technology comparisons. Two of the respondents (Mustang and Urbaser) provided, as background, detailed capital and operating cost and revenue information. While NRG did not provide such information, it made an explicit statement that tipping fees would not exceed 2009 landfill tipping fees by more than 10%. Given the information provided by Mustang and Urbaser, and NRG's firm statement, it is apparent that they each did sufficient analytical work to estimate a potential tipping fee. This is a sufficient indicator of their understanding of the cost and revenue structures and needs of integrated municipal solid waste projects.

Capital and operating cost estimates were provided by Mustang and Urbaser. Capital costs ranged from \$104.3 million to \$145.5 million, and estimated annual operating costs ranged from \$12.1 million to \$14.4 million. NRG did not provide comparable information. It can be expected that the capital and operating costs, and projected revenues, that would be presented in formal proposals would differ somewhat from such planning level estimates, since individual proposers will be able to perform site- and project-specific due diligence as they are preparing their proposals. .

Table 4.5 provides a summary of tipping fees projected by the respondents, along with an indication of information provided in support of the fees. As shown in the table, the projected tipping fees range from approximately \$58 per ton to \$95 per ton, which meet the requirements of Criterion 5.

With respect to individual respondents:

- Although NRG did not provide an estimated tipping fee, it is considered to have met the requirements of Criterion 5 because of its firm statement that the tipping fee would not exceed 10% above the 2009 landfill tipping fee.
- Both Mustang and Urbaser referenced the potential for revenues from the sale of carbon credits, but neither reflected such in their estimates of tipping fees. The RFP provides for revenue sharing in the event that carbon credits are available.

**Table 4-5. Criterion 5 – Projected Tipping Fee**

**Criterion 5:** Any considered CT must have a projected tip fee that limits financial impact to affected ratepayers (i.e., no more than 10% beyond the price the ratepayer would expect for other alternatives). A projected tip fee of less than \$100 per ton would be considered to meet this criterion.]

Project Developer and/or Technology Supplier (Listed Alphabetically)	Projected Tipping Fee	Extent of Supporting Information Provided	Criterion Met?
<b>Mustang Renewable Power Ventures</b> [Gasification with Anaerobic Digestion]	\$58/ton	<ul style="list-style-type: none"> <li>• Categorized capital costs, operating costs and project revenues provided in detail; 20-year proformas provided.</li> <li>• Annual tipping fee adjustment tied to inflation of <i>variable</i> costs (estimated total tipping fee adjustment at 1%/year).</li> <li>• Cited “well developed” compost market (\$10/ton sales price).</li> <li>• Potential for carbon credits seen, but revenues not included.</li> </ul>	Yes
<b>NRG</b> [Plasma Gasification]	Not to exceed 10% above 2009 landfill tip fee	<ul style="list-style-type: none"> <li>• NRG did not provide capital or operating cost information, revenue information, or a specific tipping fee estimate. However, NRG has provided such in other formal MSW proposals.</li> <li>• NRG stated that, in developing its project economics model, it would use the regional market-based landfill tip fee, adding that “adjustments to the tip fee in NRG’s proposal, if necessary, will not exceed 10% beyond the 2009 landfill tip fee.”</li> <li>• Tipping fee adjustment was not addressed.</li> </ul>	Yes
<b>Urbaser S.A.</b> [MBT - Anaerobic Digestion]	\$95/ton (2008 dollars)	<ul style="list-style-type: none"> <li>• Detailed capital and operating cost estimates provided; product revenues (including electricity and RECs) provided.</li> <li>• Annual tipping fee adjustment: CPI + 1.5%.</li> <li>• Potential carbon credit revenues discussed (\$5 - \$7 per ton of MSW, which would reduce tipping fees) but not at this time reflected in tipping fee estimate.</li> </ul>	Yes

#### 4.6 Criterion 6 – End Products

Directly related to the project goal of increasing diversion from landfill disposal is the goal of producing green energy and/or fuel production, along with other marketable products, as applicable, such as recovered metals and compost. Respondents were requested to identify potential products, along with the expected markets and the anticipated strength of such markets. For products that have less certain markets, respondents were requested to describe contingency plans. Information was also requested on respondent experience in marketing products at existing facilities.

Table 4-6 identifies the potential products for each respondent, along with a summary of key supporting information provided in support of the marketability of such products. Based on the information provided, all of the respondents will produce electricity or fuel as the primary product. For all of the respondents, the generation of electricity or fuel as the primary product is sufficient to establish compliance with the criterion for marketable products.

In addition to the generation of electricity or fuel, all of the respondents also generate secondary products. The respondents would recover various traditional recyclables (such as metal, glass, cardboard) through front-end processing and may generate other products such as digestate and an inert aggregate. The quality, quantity and characteristics of these byproducts can vary significantly by individual technology and based on the ultimate characteristics of the feedstock received for processing. The respondents have demonstrated varying levels of experience in marketing these secondary products.

**Table 4-6. Criterion 6 – End Products**

**Criterion 6:** Any considered CT must produce end products that have probable, identifiable or existing markets (including electricity and/or fuel products).

Project Developer and/or Technology Supplier (Listed Alphabetically)	Products	Supporting Information Regarding Marketability of Products	Criterion Met?
<b>Mustang Renewable Power Ventures</b>  [Gasification with Anaerobic Digestion]	<ul style="list-style-type: none"> <li>• Electricity from gasification</li> <li>• Electricity or pipe-line quality natural gas from anaerobic digestion</li> <li>• Compost</li> <li>• Inert ash intended to be marketed as a construction aggregate</li> <li>• Recyclables</li> </ul>	<ul style="list-style-type: none"> <li>• Products are identified by type and amount, and potential markets are addressed. Electricity assumed to be sold under long-term power purchase agreement. Strength of bottom ash market is indicated to be uncertain; contingency is landfilling.</li> <li>• Mustang will conduct a detailed analysis to determine the most financially feasible strategy to optimize the value of biogas produced by anaerobic digestion (i.e., electricity generation or upgrade to pipe-line quality natural gas).</li> </ul>	Yes



Project Developer and/or Technology Supplier (Listed Alphabetically)	Products	Supporting Information Regarding Marketability of Products	Criterion Met?
<b>NRG</b>  [Plasma Gasification]	<ul style="list-style-type: none"> <li>• Electricity</li> <li>• Vitrified Slag</li> <li>• Recyclables</li> </ul> <p><i>(Note: quantities and/or generation rates were not provided with the RFI response)</i></p>	<ul style="list-style-type: none"> <li>• The primary end product is electricity. NRG is in the business of power generation, and is an active participant within a number of regional power markets throughout the U.S. (including California, CAISO)</li> <li>• The vitrified slag is indicated as being targeted for marketing as a beneficial use material, but with some indication of uncertainty; material that could not be marketed would be disposed as residue</li> </ul>	Yes
<b>Urbaser S.A.</b>  [MBT - Anaerobic Digestion]	<ul style="list-style-type: none"> <li>• Recyclables from MSW (including metals, cardboard, paper, and plastic)</li> <li>• Electricity (and RECs associated with the sale of renewable electricity)</li> <li>• Compost</li> <li>• Aggregate and other recovered materials from C&amp;D waste</li> </ul>	<ul style="list-style-type: none"> <li>• Products are identified by type and potential amount, expected markets are identified, market strength is addressed, and expected market price is provided.</li> <li>• Compost is identified as having a probable, but undemonstrated market in California. Urbaser's RFI response includes efforts associated with identifying local markets for compost. Urbaser's long-term goal for compost is to market to large clients who will package and sell the material to consumers. It provides an alternative (contingency) of marketing directly to small customers. Urbaser expects that compost sales will focus on non-food crop applications, and has placed zero value on the compost in its financial model. As an additional contingency, Urbaser would use the compost as landfill alternative daily cover.</li> <li>• Urbaser and its U.S.-based technical advisor (AECOM) have demonstrated experience in marketing products.</li> </ul>	Yes

#### 4.7 Criterion 7 – Environmental Performance

An objective of the project is to divert MSW from landfill disposal, thereby limiting and/or mitigating environmental impacts of landfilling MSW. Under this criterion, this means limiting the amount of organic waste or residue from the conversion process requiring landfill disposal. By keeping organics out of the landfill, impacts to land, air and water are minimized. Also of importance in the development of a project will be the ability to obtain necessary local and State permits and approvals. Table 4-7 summarizes the assessment of each of the respondents related to general environmental performance.

**Table 4-7. Criterion 7 – Expected Environmental Performance**

**Criterion 7:** Any considered CT must conform to California environmental standards, and must limit and/or mitigate environmental impacts of landfilling MSW.

Project Developer and/or Technology Supplier (Listed Alphabetically)	Summary of Environmental Performance	Criterion Met?
<p><b>Mustang Renewable Power Ventures</b></p> <p>[Gasification with Anaerobic Digestion]</p>	<ul style="list-style-type: none"> <li>• Proven technologies with existing installations to document performance.</li> <li>• For anaerobic digestion with power generation, engines to be fitted with NOx best available control technology; potential for upgrade of biogas to pipe-line quality natural gas, which would include CO2 capture for sale.</li> <li>• For gasification, full suite of air pollution control devices including catalytic reduction for NOx control.</li> <li>• Detailed listing and discussion of expected permits and approvals provides an indication of conformance to California environmental standards.</li> <li>• Impacts of landfilling to be mitigated by the high diversion rate (95-100%) expected for the project.</li> </ul>	Yes
<p><b>NRG</b></p> <p>[Plasma Gasification]</p>	<ul style="list-style-type: none"> <li>• NRG has provided a firm statement that the technology will conform to all California environmental standards and mitigate environmental impacts of landfilling MSW (e.g., methane emissions and leachate generation).</li> <li>• Impacts of landfilling to be mitigated by the high diversion rate (&gt;90%) expected for the project.</li> </ul>	Yes

<b>Project Developer and/or Technology Supplier</b> (Listed Alphabetically)	<b>Summary of Environmental Performance</b>	<b>Criterion Met?</b>
<b>Urbaser S.A.</b>  [MBT - Anaerobic Digestion]	<ul style="list-style-type: none"> <li>• Urbaser provided a detailed listing and discussion of expected permits and approvals, as an indication of conformance to California environmental standards. Detailed discussion provided of expected plant environmental performance, including supporting information from similar facilities.</li> <li>• Project to be implemented under Urbaser's company-wide Quality and Environmental Management System framework (includes requirement of continuous environmental improvement, with criteria related to environmental policy commitments, laws and regulations, views of employees and other interested parties, and other factors.)</li> <li>• Impacts of landfilling to be achieved through diversion; specifically, pre-processing to recover recyclables and the production of marketable compost and aggregate.</li> <li>• Residue requiring disposal will generally be inert, lower-moisture content materials, which could marginally reduce landfill leachate generation.</li> </ul>	Yes

#### **4.8 Criterion 8 – Demonstration of Technology**

The resulting project is intended to be a commercial facility capable of processing on the order of 220,000 tpy of MSW for a long-term period (i.e., 20 years or more). The project is not intended to be a pilot project to further develop a particular technology or demonstrate its capabilities. Criterion 8 was established to ensure any considered technology is sufficiently demonstrated to meet the objectives of the project. Table 4-8 provides a summary of the information provided by each respondent regarding its reference facility(ies), along with other pertinent information related to demonstration of the technology. Based on information available, NRG and Urbaser meet Criterion 8.

Mustang Power meets Criterion 8 for the BEKON anaerobic digestion technology. The W2E gasification technology shows consistent progression of technology development, but does not currently meet Criterion 8. The newest gasification facility is a 132-tpd plant in Dumfries, Scotland, which has processed 2,000 tons of MSW but has not yet operated for 6 months. Earlier installations have multi-year operating histories, but have design capacities less than 50 tpd.

**Table 4-8. Criterion 8 – Demonstration of Technology**

**Criterion 8:** Any considered CT must have been demonstrated at a minimum of one facility of similar unit size or with a minimum unit size of 50 tons per day (tpd), and shall have been in operation for at least six months (as of October 20, 2009) processing MSW or similar feedstock. Demonstration facilities that have operated intermittently, but processed at least 1,000 tons of MSW or similar feedstock over a one-year period, will be considered to meet the operating requirement of this criterion.

Project Developer and/or Technology Supplier (Listed Alphabetically)	Demonstration of Conversion Technology	Criterion Met?
<p><b>Mustang Renewable Power Ventures</b></p> <p>[Gasification with Anaerobic Digestion]</p>	<p><b>Reference Facility - BEKON</b>            Location: Munich, Germany            Status: Commercial Facility            Capacity: 25,000 tpy (68 tpd assuming 365 days per year)            Type of Waste: Green Waste and Biowaste            Operating Period: November 2007 to present</p> <p><b>Reference Facility - W2E</b>            Location: Dumfries, Scotland            Status: Commercial Facility            Capacity: 132 tpd            Type of Waste: Mixed Waste            Operating Period: September 2009 to present; 2,000 tons processed</p> <p><b>Other Information</b></p> <ul style="list-style-type: none"> <li>• Mustang specified that BEKON has completed 15 projects to date, with 9 additional projects expected to be completed in 2010-2011.</li> <li>• Mustang's largest and newest W2E gasification facility (Dumfries, Scotland) consists of 2 gasifiers at 66 tpd each. It has been in operation for less than 6 months. It has processed 2,000 tons of MSW since inception.</li> <li>• Mustang described two other W2E reference facilities; a 22-tpd facility in Iceland that has been operational since 2006 and has processed 22,000 tons of MSW to date, and a 32-35 tpd facility in the Marshall Islands that has been operational since 2008 and has processed over 10,000 tons of waste for the Department of Defense (including MSW). Mustang also identified 5 other projects completed to date (all &lt;5 tpd).</li> </ul>	<p><b>Yes for BEKON AD technology</b></p> <p><b>No for W2E gasification technology</b></p>

<b>Project Developer and/or Technology Supplier</b> (Listed Alphabetically)	<b>Demonstration of Conversion Technology</b>	<b>Criterion Met?</b>
<b>NRG</b>  [Plasma Gasification]	<p><b><u>Reference Facility</u></b>            Location: Utashinai, Japan            Status: Commercial Facility            Capacity: up to 242 tpd, depending on feedstock blend            Type of Waste: MSW and auto shredder residue            Operating Period: 2002 to present</p> <p><b><u>Reference Facility</u></b>            Location: Mihama-Mikata, Japan            Status: Commercial Facility            Capacity: 24 tpd MSW, 4 tpd sludge            Type of Waste: MSW and sludge            Operating Period: 2002 to present</p> <p><b><u>Other Information</u></b></p> <ul style="list-style-type: none"> <li>• Utashinai Plant is the largest project in operation using the Westinghouse plasma gasification technology to gasify MSW (up to 242 tpd MSW, 2 units)</li> <li>• There is a 20-tpd pilot facility in Madison, PA, which was developed in 1990, and a 24-tpd pilot plant in Yoshi, Japan, which was commissioned in 1999</li> <li>• The plasma gasification torches have been in commercial operation since 1989 (oldest application - GM plant in Defiance, OH; metal melting).</li> </ul>	Yes

<b>Project Developer and/or Technology Supplier</b> (Listed Alphabetically)	<b>Demonstration of Conversion Technology</b>	<b>Criterion Met?</b>
<b>Urbaser S.A.</b>  [MBT - Anaerobic Digestion]	<p><b><u>Reference Facility</u></b>            Location: Las Paloma - Madrid, Spain            Status: Commercial Facility            Capacity: 255,500 metric tpy            Type of Waste: MSW (86%) and packaging waste (14%)            Operating Period: 2002 to present</p> <p><b><u>Reference Facility</u></b>            Location: Las Dehesa - Madrid, Spain            Status: Commercial Facility            Capacity: 750,000 metric tpy            Type of Waste: MSW (89%), packaging waste (9%), other            Operating Period: 2000 to present</p> <p><b><u>Other Information</u></b></p> <ul style="list-style-type: none"> <li>• Urbaser manages 19.4 million metric tons of waste per year, with more than 168 facilities operating world-wide.</li> <li>• Urbaser identified and described ten facilities that are representative of its capabilities and experience with the technologies proposed for Santa Barbara (bioreactor, anaerobic digestion - Valorga or other, in-vessel composting, screening/sorting, and other ancillary processes). Only the first two of the ten facilities described by Urbaser as suitable reference facilities are listed above (Las Paloma and Las Dehesa). These two facilities both use the Valorga anaerobic digestion technology together with pre-processing and post-processing (composting) to manage predominantly MSW. Other facilities identified by Urbaser incorporate different digestion technologies. Five of the facilities listed by Urbaser demonstrate the C&amp;D processing technology.</li> <li>• Urbaser provided a listing with summary information on additional reference facilities with similar or related facility components. Many have been operating for 20 years or longer.</li> </ul>	Yes

#### 4.9 Criterion 9 – Project Team Experience

The development of a successful project requires a project developer to lead the process along with a team with the requisite experience and capabilities to deliver the services requested. Typically, the teams assembled for MSW projects would include, in addition to the lead project developer, the following key participants: an engineering, procurement and construction (EPC) contractor, which would be responsible for designing the facility, procuring equipment, and constructing and participating in start-up of the facility; a facility operator, which would operate and maintain the facility according to contract-set requirements; a guarantor, which would provide the ultimate guarantee on the costs and performance of the project; and an investment banker, which would be responsible for developing the financing plan for the project and securing the financing.

Respondents were requested to identify principal project participants and to provide information specifically related to the financial and managerial capabilities and experience of itself, as respondent, and/or its identified project team to undertake full municipal solid waste project development (design, financing, construction, and operations). In addition to general and individual capabilities and experience, the experience of identified companies in working as teams on other projects can be an important factor in considering qualifications.

In reviewing qualifications, in addition to the information provided in response to the RFI, it is also appropriate to give due consideration to the findings resulting from other, recent project development and procurement efforts. For example, the recent qualification of a respondent team by another public agency for a comparable project can reasonably be considered in making the decision of whether the respondent meets (or could reasonably be expected to meet) the criterion regarding project team experience. Given that perspective, and based upon the information provided and summarized in Table 4-9, all three respondents are determined to meet Criterion 9. The following observations are also made:

- Mustang - - The two companies that form the joint venture of Mustang (The Dewey Group and Rossi Enterprises) do not have direct and specific MSW project development experience. However, for purpose of evaluating the RFI response, experience is evaluated in consideration of the principal project participants. The technology providers to Mustang (BEKON and W2E) have appropriate experience in the design, installation and operation of their respective technologies, and will have a key role in project development and operation. Also, the advisors and consultants that comprise the overall Mustang team have relevant experience. The identified EPC contractor, Diani Companies, has solid waste experience, but such experience appears to be limited to landfills. However, Diani has experience in constructing industrial facilities and complex defense installations such as launch complexes. It also cites design/build experience. Another team member, Source California, provides engineering and construction services to the power industry. Direct experience in the construction of facilities comparable to the one anticipated for



Santa Barbara is not clear; proposal review should include a particular focus on construction capability.

- NRG - - NRG has stated it would develop a dedicated project team for the Santa Barbara project that would include NRG personnel and other participating firms with expertise in design, construction and operation of solid waste management and power generation facilities, but it did not provide detailed qualifications information for the team with its RFI response. However, NRG did provide such information for the current Taunton, MA procurement, which Alternative Resources, Inc. has reviewed and evaluated. For that procurement, NRG demonstrated its significant in-house capabilities, including technical resources and broad project development experience. NRG supplemented its own experience by including on its team experienced participants for permitting and for design and operation of pre-processing equipment.
- Urbaser - - Although new to the US market, Urbaser is one of the major waste management and services firms in the global market. It has experience in proposing on two “industry standard” procurements in California (Los Angeles and Salinas Valley), which indicates an understanding of US market procurement practices and, specific to California, procurement and regulatory requirements. AECOM is included on the Urbaser team for both those projects, as it is for the Santa Barbara project. AECOM provides diversified services, including design, permitting, operations training and capital planning. It has provided such services on comparable projects in Alberta, British Columbia, Connecticut, Minnesota, Florida, New Jersey and Maryland, and its experience includes two anaerobic digestion facilities in California.

**Table 4-9. Criterion 9 – Project Team Experience**

**Criterion 9:** Any considered CT must have a project team that has experience designing, building and operating a solid waste management facility, either individually or as a team.

Project Developer and/or Technology Supplier (Listed Alphabetically)	Information Provided by Project Developer and/or Technology Supplier Regarding Project Team Experience	Criterion Met? <sup>(2)</sup>
<p><b>Mustang Renewable Power Ventures</b></p> <p>[Gasification with Anaerobic Digestion]</p>	<ul style="list-style-type: none"> <li>• Project team members were identified as follows, with a summary of cited experience:               <ul style="list-style-type: none"> <li>- <b>Lead Developer/Project Manager/Owner and Operator</b> - Mustang Power, a joint venture of The Dewey Group and Rossi Enterprises; Dewey Group - \$1 billion of completed real estate developments, including brownfields projects (including \$500 million financed via tax-exempt debt); principals have financing experience; Rossi Enterprises – commercial and recreational real estate experience; no solid waste management experience was presented - project development experience related to solid waste management comes from other project participants;</li> <li>- <b>Technology Suppliers</b> - BEKON Energy Technologies (anaerobic digestion) – 11 European projects; would provide and own 49% of AD plant, operate AD plant; Waste 2 Energy – would provide and operate gasification plant; cited 12 facilities on-line or in development (three commissioned since 2006);</li> <li>- <b>Investment Banker</b> – not identified;</li> <li>- <b>EPC<sup>(1)</sup></b> – Diani Companies – construction/construction management experience in industrial, commercial, institutional, defense projects; solid waste management experience limited to landfills; Source California – design and engineering services to the power industry;</li> <li>- <b>Environmental Permitting</b> – Paul Hastings (energy and environmental law; USDOE funding and waste-to-energy project experience); Brownstein, Hyatt, Farber, Schreck (environmental and permitting law); Suzanne Elledge Planning and Permitting Services (permitting); Global Waste Research Institute/CalPoly (recycling development and outreach).</li> </ul> </li> <li>• Principals in the jv and legal and environmental advisors appear to be individually appropriately qualified.</li> </ul>	<p>Yes</p>

Project Developer and/or Technology Supplier (Listed Alphabetically)	Information Provided by Project Developer and/or Technology Supplier Regarding Project Team Experience	Criterion Met? <sup>(2)</sup>
<b>NRG</b>  [Plasma Gasification]	<ul style="list-style-type: none"> <li>• NRG did not provide detailed project team information. However, information from another recent procurement (Taunton, MA) indicates that, as a major operating power utility, NRG has requisite project development capabilities and experience in-house and would supplement such capabilities with identification of certain key project participants (e.g., for permitting, waste preprocessing). NRG is routinely involved in the development of conventional and alternative fuel facilities, and is developing a comparable coal- and C&amp;D-fired gasification facility in Somerset, MA.</li> <li>• NRG stated that it would establish a dedicated project team that would include current NRG full-time employees and full-time employees from participating firms with expertise in design, construction and operation of solid waste management and power generation facilities. NRG's internal resources would be focused on: development, EPC management, finance, permitting, O&amp;M, regulatory management, legal, asset management and personnel management. Participating firms would provide support in development, construction management, permitting, plant start-up and recycling management.</li> <li>• NRG stated that personnel that would be assigned to the project would be identified in the formal proposal.</li> </ul>	Yes
<b>Urbaser S.A.</b>  [MBT - Anaerobic Digestion]	<ul style="list-style-type: none"> <li>• Project team members were identified as follows, with a summary of cited experience:               <ul style="list-style-type: none"> <li>- <b>Lead Developer/Project Manager/Owner and Operator</b> - Urbaser; manages 20 million TPY of MSW worldwide; operates 164 MSW facilities (20 anaerobic digestion with energy recovery); in-house technologies, design/engineering and project development capabilities;</li> <li>- <b>Investment Banker</b> – not identified;</li> <li>- <b>EPC<sup>(1)</sup></b> – not identified;</li> <li>- <b>Environmental Permitting</b> – AECOM; Fortune 500 company; appropriately experienced in permitting power plants, MSW processing facilities (including anaerobic digestion), MRFs, including facilities in California; Urbaser has permitted 60 facilities (with significant European experience).</li> </ul> </li> <li>• Principals and legal and environmental advisors appear to be individually appropriately qualified</li> </ul>	Yes

(1) EPC is the engineering, procurement and construction contractor.

(2) Criterion substantially met for all three respondents, with the expectation that further details regarding project participants and their roles, responsibilities and experience would be provided and reviewed as part of the formal Proposal.

#### **4.10 Criterion 10 – Financial Resources**

The Public Participants will consider technologies offered by project developers that can offer private ownership and project financing, along with adequate financial security, as demonstrated by the financial resources of the companies. Construction and performance bonds will be important risk mitigation measures for any project undertaken. The willingness of a respondent to provide such bonds would be a positive indicator of its commitment to a project. Although a project may be privately owned and operated, and as such not entail direct financial risk to the Public Participants, the project will be a key element in the overall integrated long-term waste management program. As such, the Public Participants will need protection against a disruption in the provision of the services that would be provided by a project. Construction and performance bonds would provide such protection by, for example, providing a financial source to pay for project completion, initially or, over time, for other disposal in the event of a project disruption or shutdown. Also, surety companies (the providers of bonds) will not provide bonds unless they are comfortable with both the developer and the technology. Thus, the willingness of a surety to provide bonds would be evidence that the surety had performed both technical and financial due diligence; indirectly, these can be a confidence-building back-stop to the due diligence that would be performed by the Public Participants.

For qualifications purposes, all three respondents are considered qualified regarding financial resources. More comfort may be required regarding Mustang on security. Given the estimated cost of the project, the construction performance bonding capacity of the Diani Companies, Mustang's identified EPC contractor, may not be adequate as of now to fully secure the Public Participants. It may be prudent to require Mustang to address this and consider possible options (for example, seeking an enhancement of that capacity, looking to other team members to supplement that capacity, or requiring additional security such as a letter of credit).

Information on preliminary financing plans was requested primarily to determine whether individual respondents had an understanding of and experience in the structuring of financings for municipal solid waste projects, and to underscore the position that financing would be the responsibility of the developer. Given the lack of project specificity at this point in the process, detailed financing plans and commitments would be premature. As indicated in Table 4-10, the financing approaches and assumptions offered were reasonable and reflect customary project financing conditions, including the types of waste delivery and tipping fee payment commitments that would be required of the City and County. NRG did not provide a financing plan, but it is evident from its experience in financing power plants, and from its Somerset, MA project, that it has the understanding and capability to arrange the financing for the project.

**Table 4-10. Criterion 10 – Financial Resources**

***Criterion 10:** The project developer must have bonding ability equal to the estimated cost of facility design and construction, and, during operation, equal to the estimated annual operating cost; must not be in bankruptcy; and must provide a financing plan that reasonably demonstrates that it can offer private project financing, if required.*

<b>Project Developer and/or Technology Supplier</b> (Listed Alphabetically)	<b>Information Provided by Project Developer and/or Technology Supplier Regarding Financial Resources</b>	<b>Criterion Met?</b>
<b>Mustang Renewable Energy Ventures</b>  [Gasification with Anaerobic Digestion]	<ul style="list-style-type: none"> <li>• Performance guarantees from BEKON and Waste 2 Energy were cited.</li> <li>• Construction guarantee from Diani; Diani reports \$100 million in construction bonding capacity (plant costs approximately \$100 million).</li> <li>• Financing was discussed. Plan envisions 60%/40% debt/equity split (debt via tax-exempt private activity bonds; equity from BEKON, Mustang principals and possible third parties); Orrick Herrington &amp; Sutcliff as bond counsel, discussing banker role with Morgan Stanley and Morgan Securities.</li> </ul>	Yes
<b>NRG</b>  [Plasma Gasification]	<ul style="list-style-type: none"> <li>• NRG is a publicly-traded Fortune 500 company. It did not provide corporate financial information. However, public financial information indicates that, in 2007, NRG had revenues of \$6.9 billion, assets of \$19.2 billion and a net worth of \$5.8 billion, and with \$2 billion in letter of credit capacity.</li> <li>• In its response, NRG stated that it has not historically used performance bonds as a method of guaranteeing performance, rather using project or transaction-specific letters of credit backed by its balance sheet. It also reported that, as of December 31, 2008, NRG and its consolidated subsidiaries were contingently obligated for a total of approximately \$445 million under letters of credit and surety bonds.</li> <li>• NRG noted that it would take the construction, cost and performance risk of the project.</li> <li>• Project financing was not addressed. However, in other submissions, NRG has reported that over the past few years it closed \$10 billion in debt and equity financings in recent years - - project financings, unsecured debt, term loans, preferred stock; and tax-exempt bonds (\$58.5 million Chautagua, NY IDA). NRG is now arranging a USDOE-guaranteed financing for its Somerset, MA waste-fired gasification project.</li> </ul>	Yes

<b>Project Developer and/or Technology Supplier</b> (Listed Alphabetically)	<b>Information Provided by Project Developer and/or Technology Supplier Regarding Financial Resources</b>	<b>Criterion Met?</b>
<b>Urbaser S.A.</b>  [MBT - Anaerobic Digestion]	<ul style="list-style-type: none"> <li>• Urbaser is a wholly-owned subsidiary of ACS (Spanish industrial and infrastructure company); 2008 - - revenues \$2 billion, equity \$700 million, investments in property, equipment and projects \$1.3 billion.</li> <li>• Urbaser has \$3 billion of available bonding capacity</li> <li>• Regarding operations, Urbaser offered to consider a third-party contract operator, rather than operation by Urbaser, if the City and County preferred.</li> <li>• AECOM is a Fortune 500 company.</li> <li>• Financing was discussed, with two alternative financing approaches (taxable and tax-exempt) described in sufficient detail to indicate an understanding of project financing in the US market.</li> </ul>	Yes

#### 4.11 Criterion 11 – Contracting Status in California

Information was requested on the contracting status of the project developer to provide a threshold standard that would assure the Public Participants that there would be no questions regarding the legal standing of any potential project developer to do business in California. As summarized in Table 4-11, all three respondents provided a statement in the affirmative that they are not debarred from contracting in California. For purpose of this evaluation, all of the respondents are determined to meet Criterion 11.

**Table 4-11. Criterion 11 – Debarment**

*Criterion 11: The project developer must not be debarred from contracting in California.*

Project Developer and/or Technology Supplier (Listed Alphabetically by Type of Technology)	Statement Provided by Project Developer and/or Technology Supplier Regarding Debarment in California	Criterion Met?
<b>Mustang Renewable Power Ventures</b> [Gasification with Anaerobic Digestion]	No members of the Mustang team are debarred from contracting in California.	Yes
<b>NRG</b> [Plasma Gasification]	NRG is not debarred from contracting in California.	Yes
<b>Urbaser S.A.</b> [MBT - Anaerobic Digestion]	Urbaser is not debarred from contracting in California.	Yes

## **5.0 SUMMARY OF FINDINGS AND RECOMMENDATIONS**

Three project developers/technology suppliers submitted an RFI response in November 2009 (Mustang, NRG and Urbaser). The qualifications of those respondents were evaluated against the 11 evaluation criteria that were previously established. Table 5-1 summarizes each respondent's conformance to the evaluation criteria. As shown on Table 5-1, and described more fully in Section 4, NRG and Urbaser have been determined to substantially meet the evaluation criteria. It is recommended that NRG and Urbaser be added to the short-list of companies that was previously established, and each be invited to submit a Proposal. Mustang has been determined to substantially meet the evaluation criteria for the BEKON anaerobic digestion technology, but does not currently meet Criterion 8 for the W2E BOS gasification technology. It is recommended that Mustang be added to the short-list and be invited to submit a Proposal for the BEKON anaerobic digestion technology.

The recommended, final short-list, inclusive of the eight companies previously identified and the companies recommended for addition, is provided in Table 5-2.



**Table 5-1. Summary of Respondent’s Compliance with the Evaluation Criteria**

Project Developer and/or Technology Supplier (Listed Alphabetically)	1 – Processing Capacity	2 – Operating Term	3 – Compatibility with Solid Waste Programs	4 – Diversion from Landfill Disposal	5 – Projected Tipping Fee	6 – End Products	7 – Environmental Performance	8 – Demonstration of Technology	9 – Project Team Experience	10 – Financial Resources	11 – Not Debarred from Contracting	ARE ALL CRITERIA MET? <sup>(2)</sup>
<b>Mustang Renewable Power Ventures</b> (Gasification with Anaerobic Digestion)	✓	✓	✓	✓	✓	✓	✓	(1)	✓	✓	✓	Yes for BEKON; No for W2E gasification technology
<b>NRG</b> (Plasma Gasification)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Yes
<b>Urbaser S.A.</b> (MBT - Anaerobic Digestion)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Yes

1. The BEKON anaerobic digestion technology offered by Mustang meets Criterion 8 (demonstration of technology), but the W2E gasification technology also offered by Mustang does not (see Section 4.8).
2. As required by the RFP, all Proposers must confirm compliance with RFI criteria upon Proposal submission.

**Table 5-2. Recommended Final Short-List**

<b>Recommended Final Short-List</b> (Unranked - Listed Alphabetically by Type of Technology)
<b><u>Anaerobic Digestion</u></b> CA Renewable Technologies - CR&R/Arrow Ecocorp Mustang Renewable Power Ventures (BEKON) Urbaser (MBT - anaerobic digestion)
<b><u>Thermal Processing</u></b> AdaptiveARC (Plasma Gasification) International Environmental Solutions (Pyrolysis) Interstate Waste Technologies (Gasification) NRG Energy (Plasma Gasification) Plasco Energy Group (Plasma Gasification) Tajiguas Partners - WTE/Entech (Gasification)
<b><u>Other Technology</u></b> Herhof California (Biological Drying/Mechanical Separation/Off-Site Combustion)