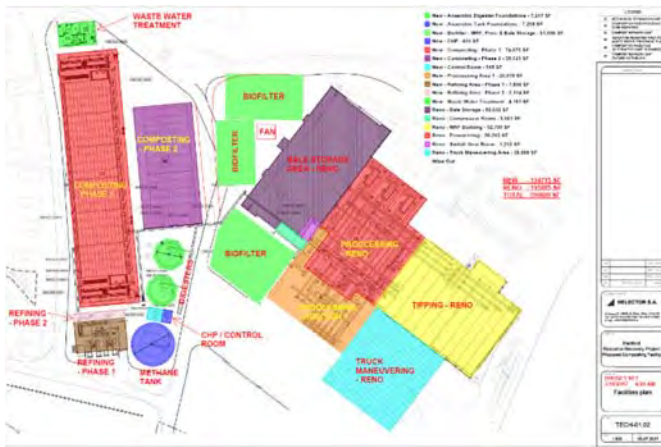




RESPONSE TO PHASE 2 REQUEST FOR PROPOSALS FOR THE FINANCING, DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE OF A SOLID WASTE MANAGEMENT PROJECT



CSWS RRF Proposed Site Plan



Fairhaven Power Block Facility, Connecticut - Redeveloped



290,000 TPY MRF + AD Santa Barbara County, CA



70 TPH MRF, Brooklyn, NY

MUSTANG RENEWABLE POWER VENTURES, LLC
17 CORPORATE PLAZA, SUITE 200
NEWPORT BEACH, CA 92660
PHONE (805) 259-9499
JOHN@DEWEYGROUP.COM

SECTION 2. EXECUTIVE SUMMARY

PROBLEM/OPPORTUNITY IN 88 WORDS

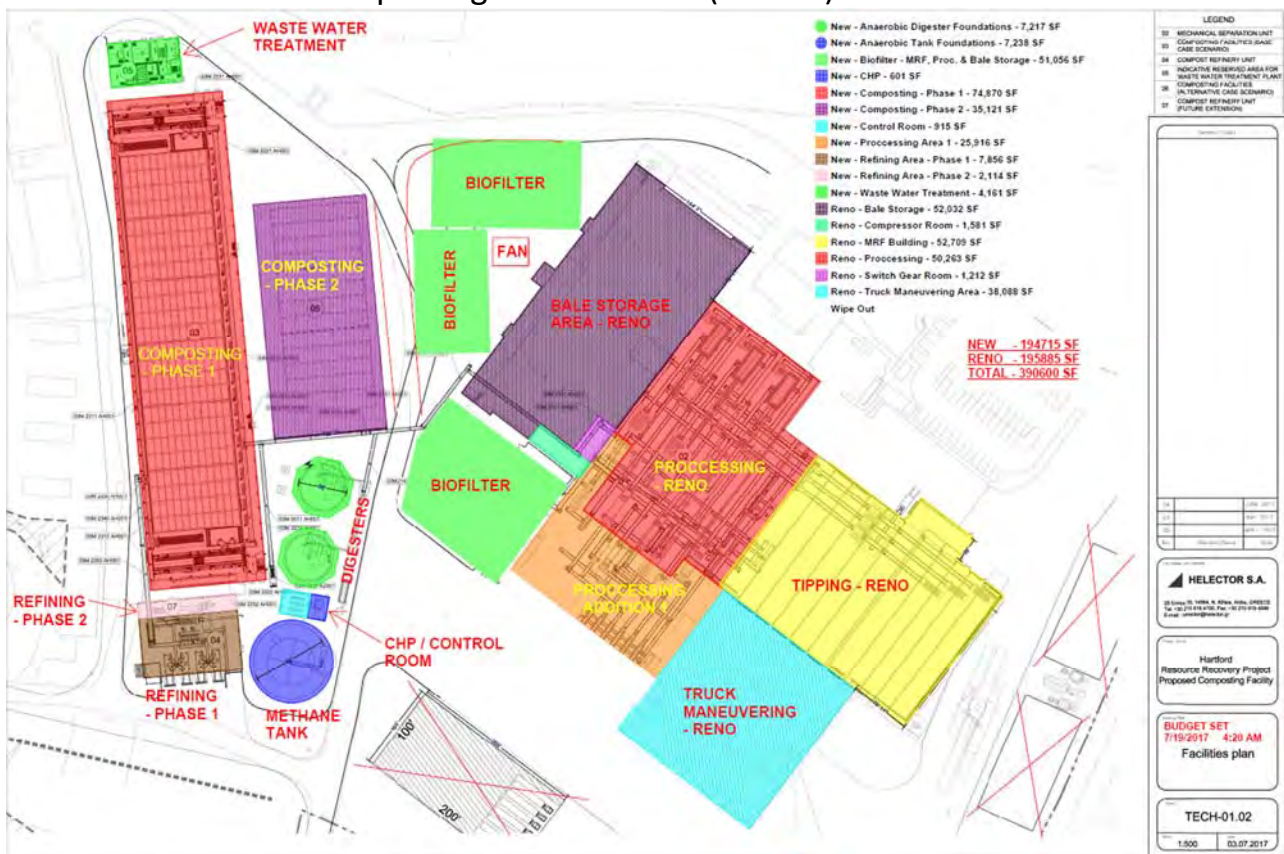
The CSWS RRF has arguably reached the end of its functional life. Decreasing power prices combined with increasing 1980's WTE plant CapEx/O&M costs could materially increase tip fees inspiring ratepayer heartburn and wholesale town opt-out.

Waste processing technologies have advanced exponentially over the past 30 years with reduced CapEx/O&M, full automation, increased recyclable recovery, renewable energy capture while greatly reducing greenhouse gases.

The Mustang Project delivers 70% diversion at competitive tip fees using low risk/proven, 21st century, environmentally superior technologies: Mixed Waste Processing + Anaerobic Digestion/Composting + Engineered Fuel.

Project Fundamentals

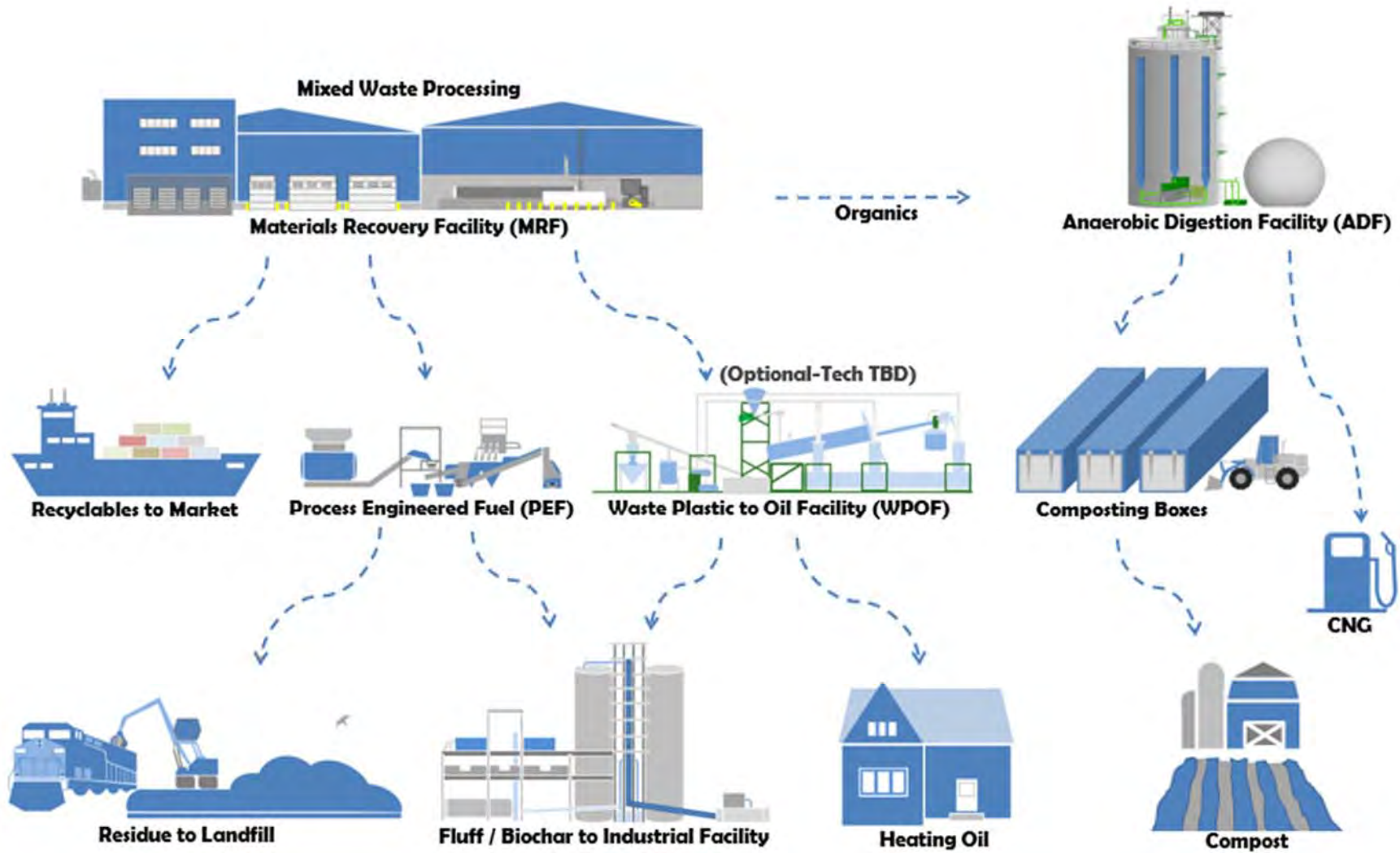
- Reuse Existing Waste Processing Facility (Reduced CapEx and Tip Fees)
- Repurpose as Mixed Waste Processing Facility – Operated by Sims Municipal Recycling
- Construct AD Facility for Organics Processing and Class 1 Renewable Energy
- Construct Composting Boxes on-site (Herhof)



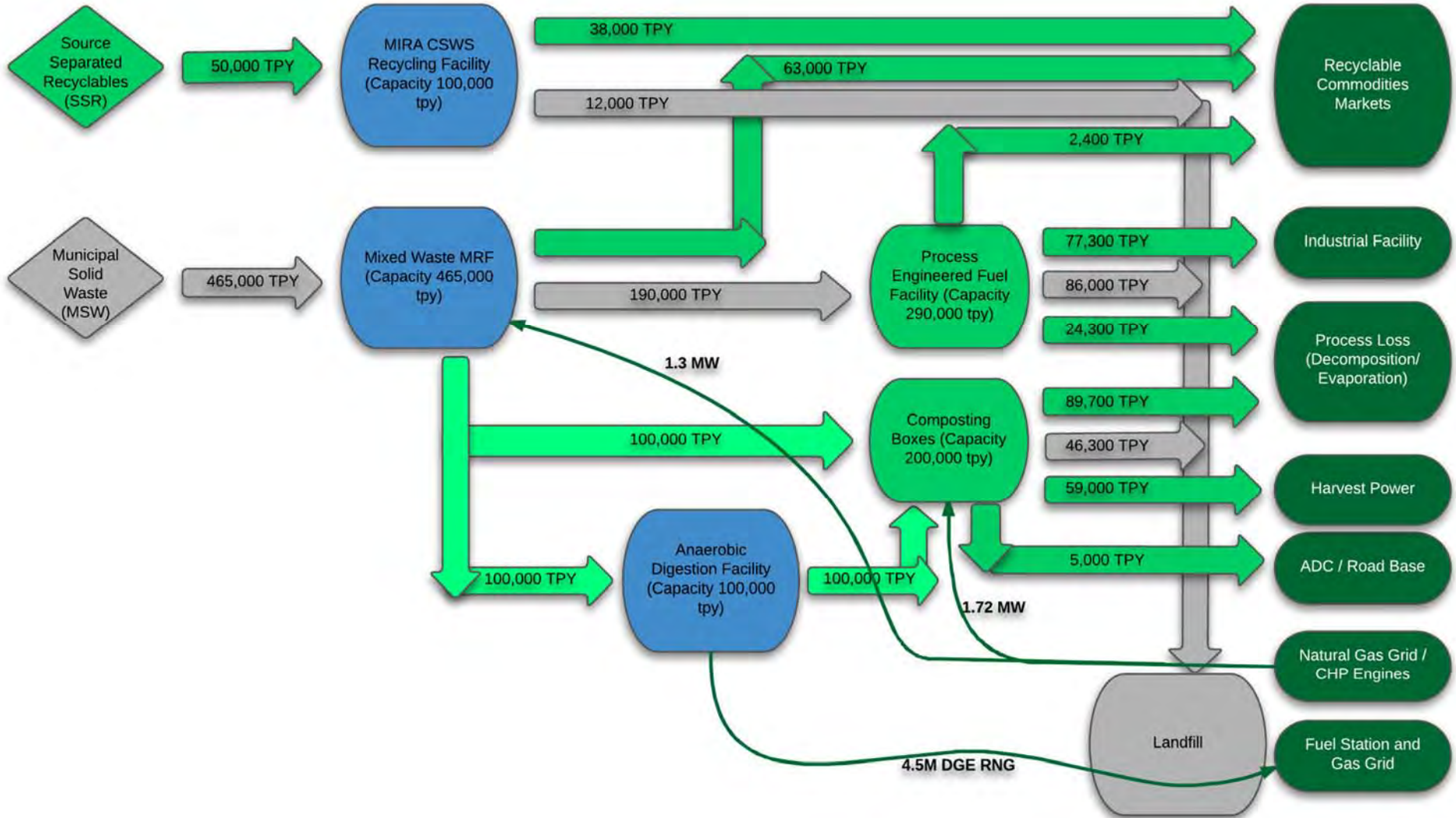
- Off-site composting, storage and marketing by Harvest Power
- Process Engineered Fuel from residue to industrial facilities
- Rail Export Residue to Remote Landfill (Casella-PA &/or Tunnel Hill)
- ~660,000/year mTCO₂e GHG reduction benefits from recycling, AD/Composting and PEF vs. existing WtE plant
- Discontinue WtE Plant Operations
- Making facility and site available for alternative uses



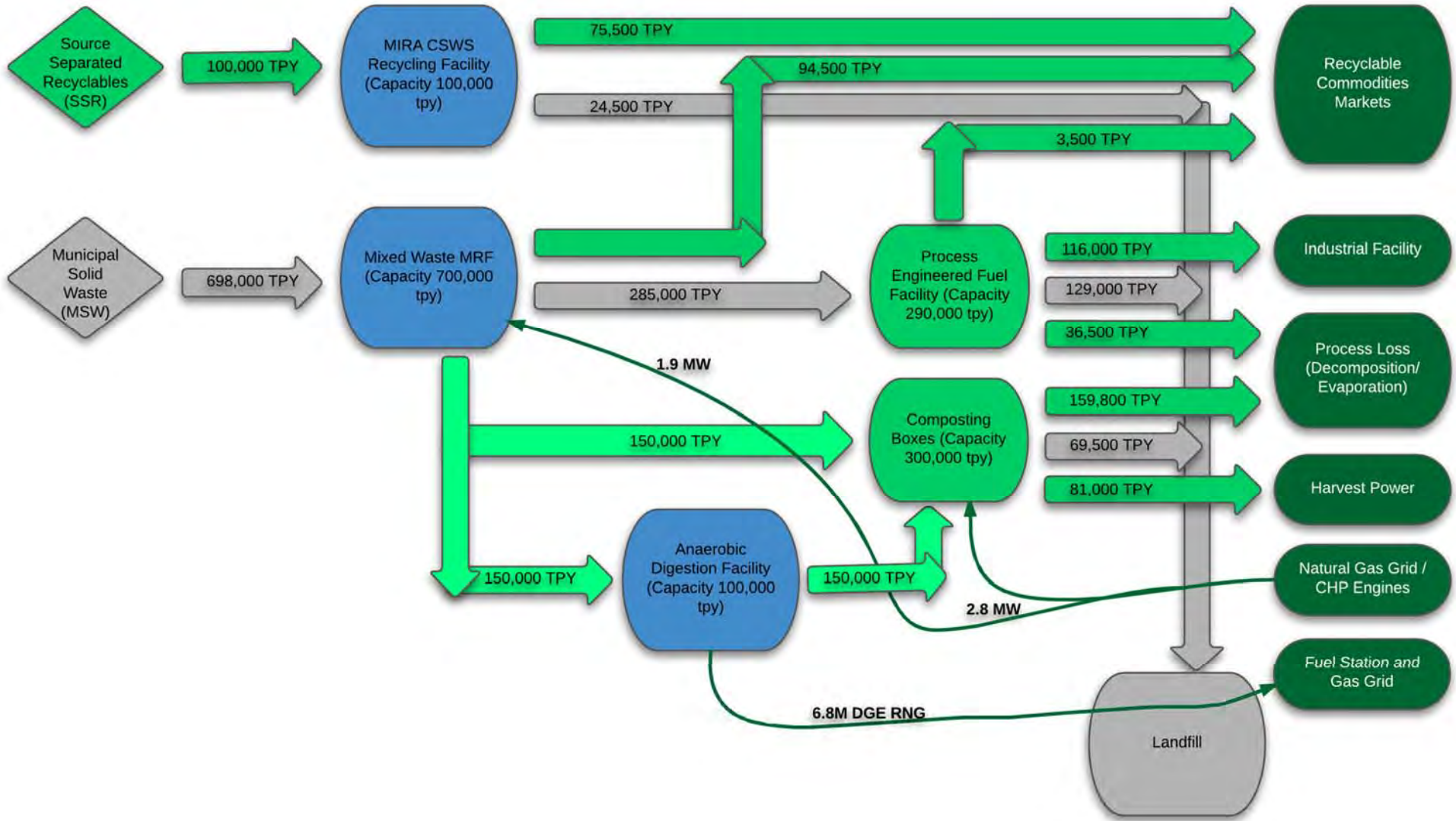
PROJECT COMPONENTS



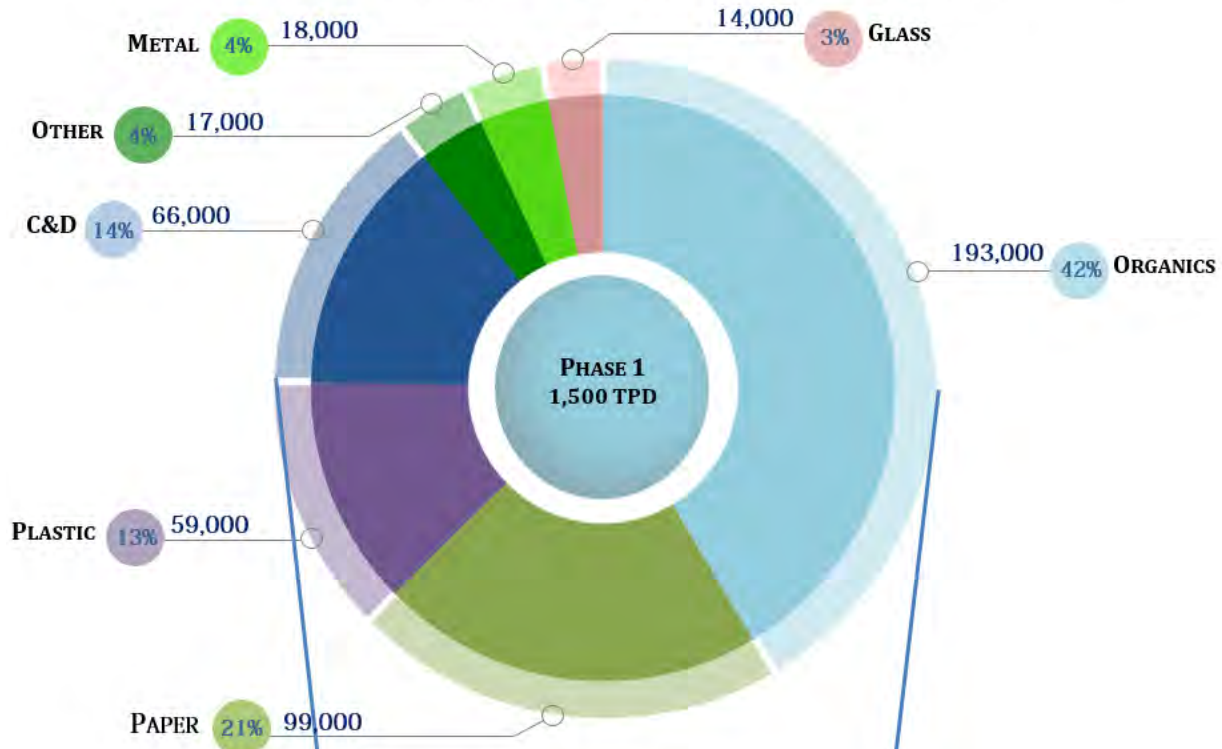
MASS BALANCE – PHASE 1



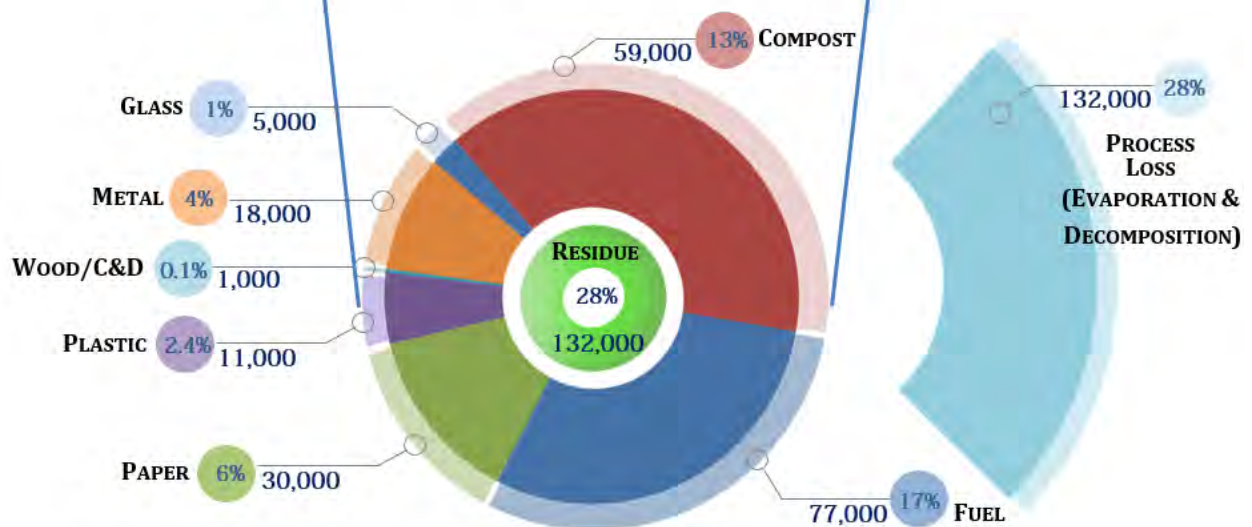
MASS BALANCE – PHASE 2



PHASE 1 TONNAGE
MIRA HARTFORD RRF WASTE COMPOSITION-465,000 TPY

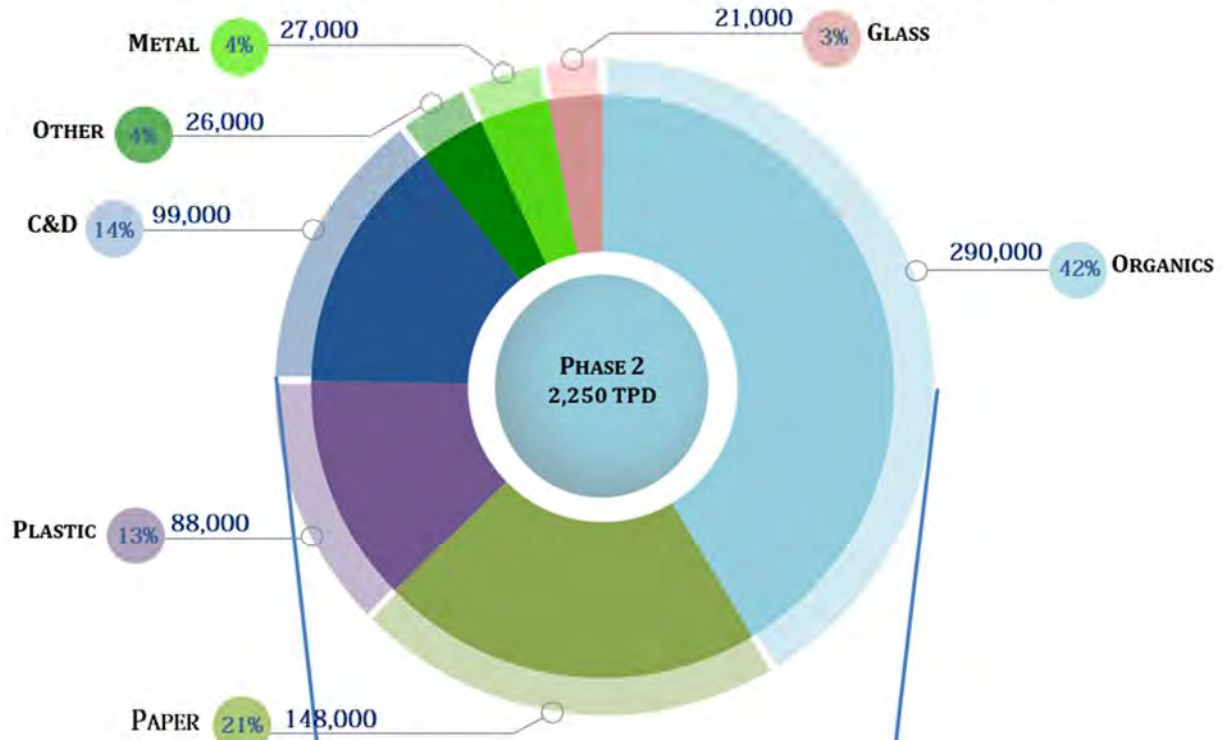


>70% DIVERSION
MIXED WASTE PROCESSING & AD/COMPOSTING

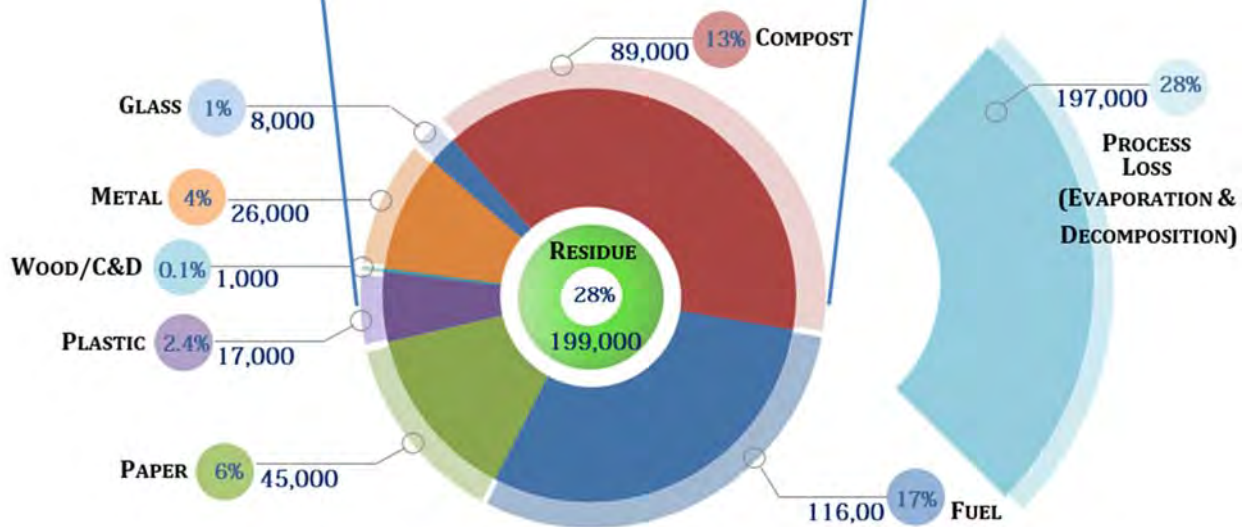


MUSTANG-SIMS RESOURCE REDISCOVERY & DIVERSION-465,000 TPY

PHASE 2 TONNAGE
MIRA HARTFORD RRF WASTE COMPOSITION-698,000 TPY



>70% DIVERSION
MIXED WASTE PROCESSING & AD/COMPOSTING



MUSTANG-SIMS RESOURCE RECOVERY & DIVERSION-698,000 TPY

PROJECT DESCRIPTION AND PROPOSED TECHNOLOGIES

The Mustang Team approach is to push the frontier of diversion and recovery, to test and develop markets and technologies, and to actively employ the best technologies, individuals and companies in the industry. At the same time, with many decades of experience as facility developers, equipment designers and waste service providers, plant operators, and material marketers, the proposed Project is careful to build from commercially proven and successful operating reference facilities, taking full account of commodity market fluctuations, technology's potential and limitations, the ever-changing nature of the waste stream, and compliance with evolving regulations and public expectations. Mustang proposes a facility that is robust and flexible, ensuring adequate capacity and appropriate redundancies to reliably handle the required volumes, and the ability to adjust to changing waste composition, regulations and markets over the life of the contract.

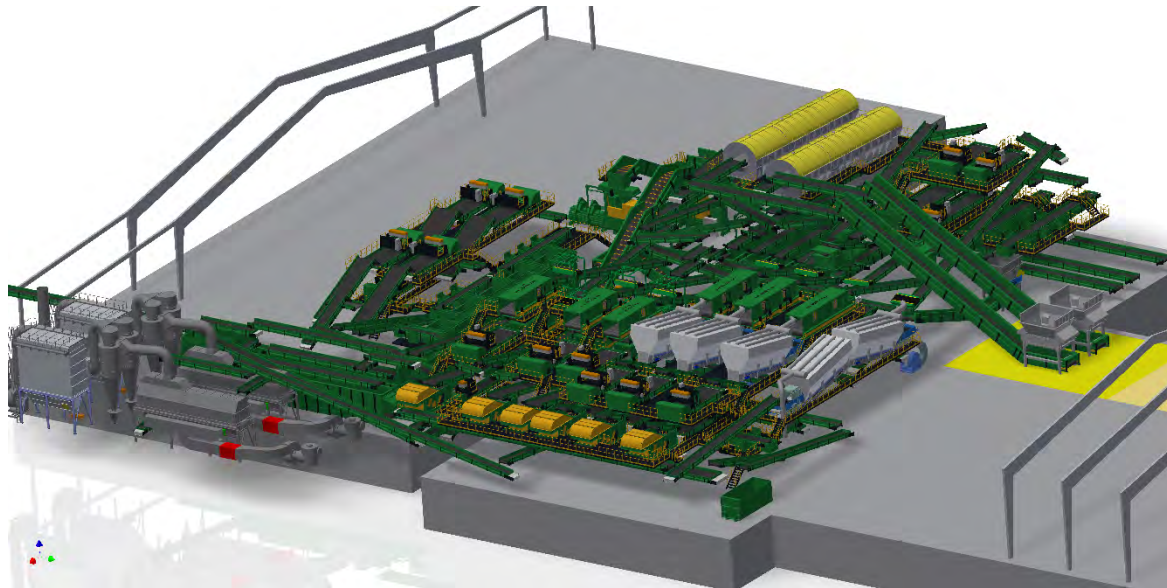
In addition, the Mustang Team is sensitive to program costs, municipal budgets, and the need to optimize recovery and diversion within a cost-effective framework. There is no doubt that over the projected 30-year life of the Project, new technologies and markets and changes in the waste stream will create new opportunities for cost-effective materials recovery/diversion, and the Mustang Team will be prepared to take advantage of these opportunities as they arise. The Team assumes at the outset, the initial Project design should allow the MIRA municipalities to achieve a minimum 60% diversion rate in the most cost-effective manner possible, with additional diversion targeted only where it can be accomplished without adding to overall per ton system costs. According to the RFP, the current diversion rate, achieved through source-separated recycling, yard waste composting and other programs, is 35%. To reach a 60% diversion threshold, 38% of the remaining 65% must be diverted. The proposed Project is estimated to achieve a project diversion rate of ~70% implying a community diversion rate of ~71% (i.e., $35\% + (\sim 70\% \text{ of } 65\%) = \sim 46\% = \sim 71\%$).

To meet and exceed the minimum diversion threshold for MIRA and its participating towns, Mustang proposes a new integrated Resource Rediscovery Project comprised of the following components:

- 1) **Transfer Stations.** The existing three Transfer Stations (or four in the event the Ellington transfer station comes back on line), with select modifications and improvements. Mustang proposes to continue to operate the Transfer Stations for MSW and source-separated recyclables. Select "non-processible" waste will be segregated at the transfer stations. Some of these items, such as propane tanks and mattresses can be recycled. However, the tonnage of these materials is not expected to be significant. Therefore, while it will be tracked and reported, for purposes of achieving the target diversion rate, Mustang assumes a <1% tonnage figure for these items. In addition to the contracted tonnages these transfer stations manage, Mustang will seek to attract additional tonnage of both recyclables and MSW. To that end, the Team has had preliminary conversations with some of the major private haulers in the areas served by these Transfer Stations, as well as transfer station operators themselves. However, for purposes of the mass balance, Mustang does not, at this time, assume any additional tonnage from other sources. While not tied to diversion, Mustang sees the potential to reduce the costs associated with recyclables that flow through the transfer stations. Currently transfer stations can achieve transfer trailer weights for recyclables that are

approximately half that of MSW. This is in part due to the inherently less dense nature of recyclables compared to MSW. However, it is also due to the limited ability to compact materials at the transfer stations. With all MIRA facilities, including the transfer stations, rolled into one contract, Mustang will be incentivized to optimize transfer stations costs, and with a 30-year contract, Mustang will be able to justify strategic capital investment at transfer stations. Mustang does not expect to achieve the same load rates as MSW, however, the Team believes a 50% to 60% improvement in load weights is achievable. Not only will this reduce transport costs, but it will also reduce the number of trucks on the road and trucks entering the Hartford Murphy Road site.

- 2) **SSR Processing.** The existing MIRA Recycling Facility, with select modifications and upgrades, will continue processing the ~70,000 TPY of Source Separated Recyclables currently accepted and be capable of processing ~100,000 tpy. Mustang/SMR will work with MIRA and the participating towns to grow this tonnage through education, outreach and participation improvements and by competing aggressively for available commercial/spot market SSR. SMR personnel have made several tours through the SSR MRF to inspect the process and equipment condition, and the budget includes capital dollars deemed necessary to bring the plant up to SMR safety standards and to ensure ongoing efficient operations and high recovery rates.
- 3) **Mixed Waste Processing.** A new, advanced mixed waste processing plant (or Mixed Waste MRF) to be located at the site and in the buildings of the existing CSWS. The Mixed Waste MRF will sort MSW to recover recyclables and segregate the organic fraction. The Mixed Waste MRF will be constructed in two phases: The first will process a minimum of ~465,000 TPY of MSW (i.e. Phase 1). The second will process up to ~700,000 TPY of MSW, and recover an estimated 14% as marketable commodities (i.e., glass, metal, paper, plastic). The Mixed Waste MRF will further segregate an estimated 43% of the MSW as an organic fraction (i.e., food scraps, yard waste and unrecyclable paper), which is directed to a new on-site Anaerobic Digestion (AD) Facility & aerobic composting boxes.



Van Dyk Recycling Solutions (VDRS) Multi-line Mixed Waste Processing Design

For detailed research articles and white papers describing the diversion benefits/risks of Mixed Waste Processing please see the following:

MSW Management, Nov-Dec 2015, Mixed Waste Processing Article:

[http://digital.mswmanagement.com/publication/?i=274950&p=38#{"page":38,"issue_id":274950}](http://digital.mswmanagement.com/publication/?i=274950&p=38#{)

MSW Management, Nov-Dec 2015, Advanced Materials Processing Article:

[http://digital.mswmanagement.com/publication/?i=274950&p=38#{"page":44,"issue_id":274950}](http://digital.mswmanagement.com/publication/?i=274950&p=38#{)

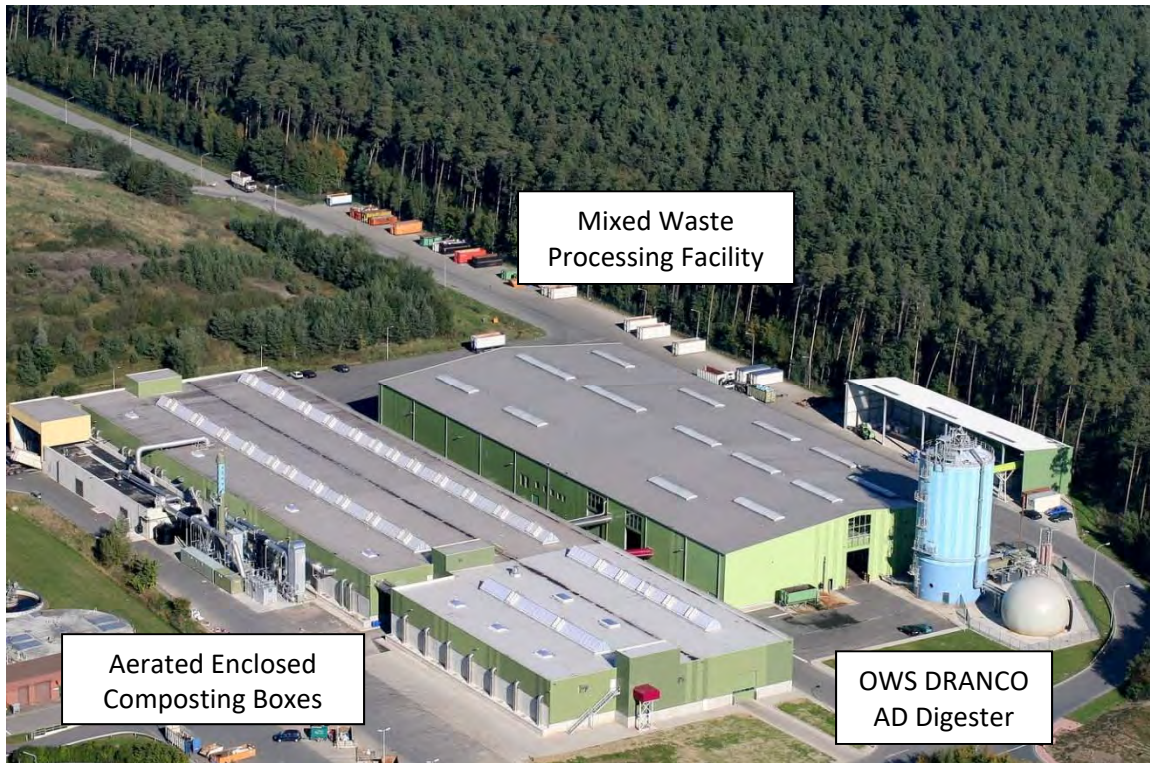
The Evolution of Mixed Waste Processing Facilities, 1970-Today, Gershman, Brickner & Bratton

<https://plastics.americanchemistry.com/Education-Resources/Publications/The-Evolution-of-Mixed-Waste-Processing-Facilities.pdf>

Mixed Waste Processing Economic and Policy Study, Burns McDonnell

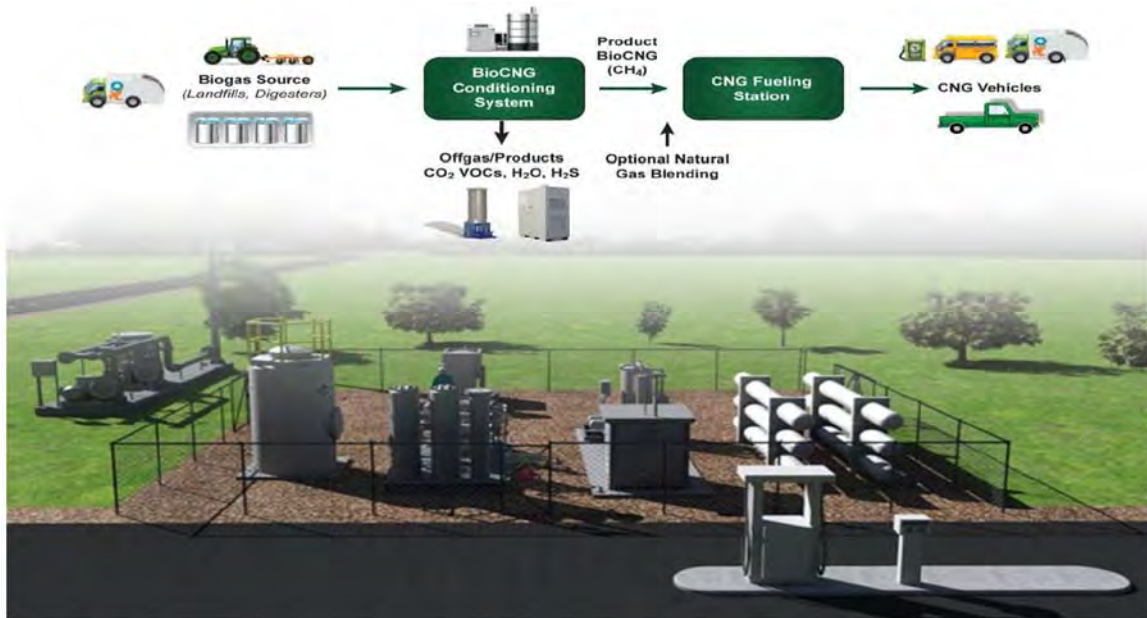
http://www.afandpa.org/docs/default-source/default-document-library/final_mixed-waste-processing-economic-and-policy-study.pdf

- 4) **Anaerobic Digestion.** A high-solids, dry fermentation AD Facility will be constructed on-site in two phases: Phase 1 will process up to ~100,000 tpy of the organic fraction of MSW (OFMSW) into compost and biogas, Phase 2 will process up to ~150,000 TPY of OFMSW similarly. The remaining tons of OFMSW in each phase are sent directly to aerated composting boxes. This split processing of the OFMSW is known as partial stream digestion. The AD Facility will use an anaerobic fermentation process in vertical digesters or silos. Steam is added as a supplemental heat to achieve a thermophilic AD cycle (>131°F) achieving pathogen reduction while producing methane-rich biogas. The biogas is cleaned up to natural gas grid standards and injected into the grid with a small portion sent to an on-site RNG Fuel Station.



OWS Dry Anaerobic Composting (DRANCO) installation in Hille Germany

- 5) **Biogas Upgrading and RNG Fueling Facility.** A BioCNG biogas conditioning system will be installed on-site to clean up and convert biogas, generated by the AD Facility, into a renewable natural gas (RNG) suitable for use as a vehicle fuel. The biogas conditioning system removes contaminants from the AD biogas such as nitrogen, H₂S, VOC's, siloxanes, CO₂, particulates and moisture. The upgrading facility will consist of three Bio CNG 400's and two BioCNG 200's with a total biogas inlet capacity of 1,600 scfm to produce an estimated 781 scfm or 415,000 MMBtu of RNG to be injected into the natural gas grid and an additional 50 scfm or 227,000 DGE CNG for on-site fueling. A dual-hose CNG dispensing facility with card reader for fleet cards and/or public sale will be constructed on-site to dispense the RNG.



BioCNG Conditioning and Fueling System

- 6) **Composting Boxes.** After biogas production and extraction, the resulting AD “digestate” is mixed with the other ~50% OFMSW recovered from the MRF and composted in fully enclosed, aerated aerobic composting boxes for 15 days at temperatures exceeding 131°F to meet US EPA PFRP requirements. Following completion of the Composting phase, material is then screened using a series of screens (2” and ½”) and a vibratory, floating bed densimetric table to remove glass and stones >1/4” to remove inerts. The finished, screened material is then transported to an off-site aerobic composting facility for final curing and storage. The AD Facility and aerobic composting boxes combined will process approximately 200,000 TPY of OFMSW recovered by the Mixed Waste MRF during Phase 1 and 300,000 TPY of OFMSW during Phase 2. The AD and Composting Boxes are fully enclosed in negative air pressure buildings with 100% of process air recycled and filtered through baghouse filters for dust collection and then through an extensive biofilter system.



Herhof Organic Waste Composting Boxes, Larnaca, Cyprus

- 7) **Off-site Compost Storage.** Finished, screened compost from the CSWS site will be transported to one of Harvest Power’s facilities in Connecticut. After the decomposition occurring in the AD and aerobic composting phases, the compost may require a short period (2 weeks) of final curing/maturation before the finished product is stored and marketed to wholesale agricultural markets for land application as a soil amendment for non-food crops (i.e., hay, dairy farms, tree farms, remediation-sites).
- 8) **Process Engineered Fuel.** The high energy content fraction of the residue from the Mixed Waste MRF will be segregated and screened with magnets and optical sorting to

produce a Process Engineered Fuel (PEF) as an alternative, renewable fuel for industrial facilities reducing fossil fuel use. PEF is similar to RDF however it excludes high valuable recyclables and high moisture content organics which are best diverted via AD & composting.

Mustang's original proposal was to shred the PEF on-site prior to shipment. The current plan calls for baling the material and shredding it at the industrial facility site. This change was driven in part to achieve higher weights in transfer trailers and to facilitate storage, handling and load-out at the Mixed Waste MRF.

It should be noted, there are additional non-combustion options for processing residue and especially the plastics fraction. There are several companies with technology to convert waste plastics via pyrolysis into fuel such as synthetic diesel &/or home heating oil and biochar, as well as secondary chemicals such as ethanol, olefins, and methanol. Given the economics (typically requiring significant subsidies and pre-processing infrastructure such as Enerkem Edmonton) and not quite commercially proven status of these technologies, Mustang continues to evaluate pyrolysis technologies and could recommend this within 1-2 years. Currently, however, there are certain plastic materials, notably LDPE and HDPE film plastics, for which there are a few outlets (i.e., film plastic extracted from MSW as opposed to film plastics managed through consumer take-back programs). Mustang Team members are actively working to develop washing and densification capacity for this material, which would make it suitable for the resin market. This approach is far less complicated and expensive than pyrolysis, and unlike PEF, captures the full resin material value. The Project design assumes approximately 50% of film is recovered for the resin market and 50% is recovered as PEF.



VDRS Process Engineered Fuel (PEF) Equipment Design (similar to RDF)

- 9) **Residue Disposal.** A rail-based export system for non-recoverable residue. For the foreseeable future, the Mixed Waste MRF will produce (~30%) residue requiring disposal. Rail represents the most fuel-efficient means of surface transport. In addition, Mustang believes long-term rail-based disposal agreements will represent the most reliable and cost-effective approach for managing residue, particularly as landfill capacity in the region shrinks and disposal locations are further and further away. Movement of MSW by rail is common practice, particularly in the Northeast. There is active rail on adjacent properties, several hundred feet from the CSWS buildings. To develop its business model, Mustang has initiated conversations with CSX and the short-line operator (CSO), and with several rail-served MSW landfills. In addition, Mustang has performed preliminary evaluations of the two basic options for rail car loading of residue – installing new switches and siding on the CSWS property, and/or draying containerized residue to existing nearby siding. These options are described in greater detail in the subsequent Sections of the Proposal. The residue export system is projected to handle approximately 240,000 TPY.

In addition, it should be noted that there are developments in the rail-based movement of MSW that could significantly improve disposal economics. Typical methods today involve the use of top loading containers in which MSW is densified and then a lid placed on the container. Containers are then loaded onto flatbed rail cars. An alternative is to bale MSW and place bales in “bale bags”. This practice is common in Europe, and also parts of the US that use flatbed trucks to move bale bags to landfill. Significant work is currently underway with the railroads to approve the use of bale bags in gondola cars. This approach will reduce the handling and capital costs associated with containers.

10) **The Trash Museum.** Since the original RFP, MIRA has ceased to staff the Murphy Road Trash Museum due to budget constraints. The Trash Museum is a tremendous asset that Mustang proposes to bring back online. SMR operates an Education Center at its Brooklyn MRF, and is convinced the experience of visitors and the accompanying social media and spin-off communications that come from these visits has contributed to the marked improvement (nearly 30%) in public participation rates over the past three years. The Brooklyn Education Center attracts not only school groups, but also city planners, packaging designers and manufacturers, regulators, politicians and a wide range of other groups and individuals interested in how their waste is handled and how they can participate in a more sustainable waste management system. Given the visitor numbers the Trash Museum has attracted in the past, the Mustang Team believes strongly this facility should be re-activated and re-vamped to re-engage the public in CT's newest and most sustainable waste management system. Mustang will seek to couple the Trash Museum with the new mixed waste processing plant, via displays, cameras and video, as well as with renewed access to the visitor room at the Maxim Road site, which will be renovated with an updated model and educational displays.



11) **Future Power Block Facility – MIRA Site Redevelopment.** O&G Industries affiliate development company, CT Energy, is a qualified developer/redeveloper of defunct power stations into attractive, functional, value enhancing projects. CT Energy has completed due diligence of the MIRA Power Block Facility and is prepared to submit a detailed redevelopment proposal. (See **Appendix T** for O&G South Meadows Site Redevelopment Summary).

CSWS Power Block Facility – Before



CSWS Power Block Facility – After



CSWS Power Block Facility – Before



CSWS Power Block Facility – After



DIVERSION FROM DISPOSAL

The Project will achieve an overall waste diversion from landfilling and incineration of at least 70%. This is calculated as follows:

- 35% Existing Recycling Programs
- 9% Mixed Waste Processing Recyclable Recovery (14% of 65%)
- 20% Organics Diversion via AD & Composting (30% of 65%)
- 11% Process Engineered Fuel - PEF (17% of 65%)
- 75% Overall Community Diversion Rate from Mustang Project

Appendix C provides detailed mass balance for the Project.

ENVIRONMENTAL BENEFITS

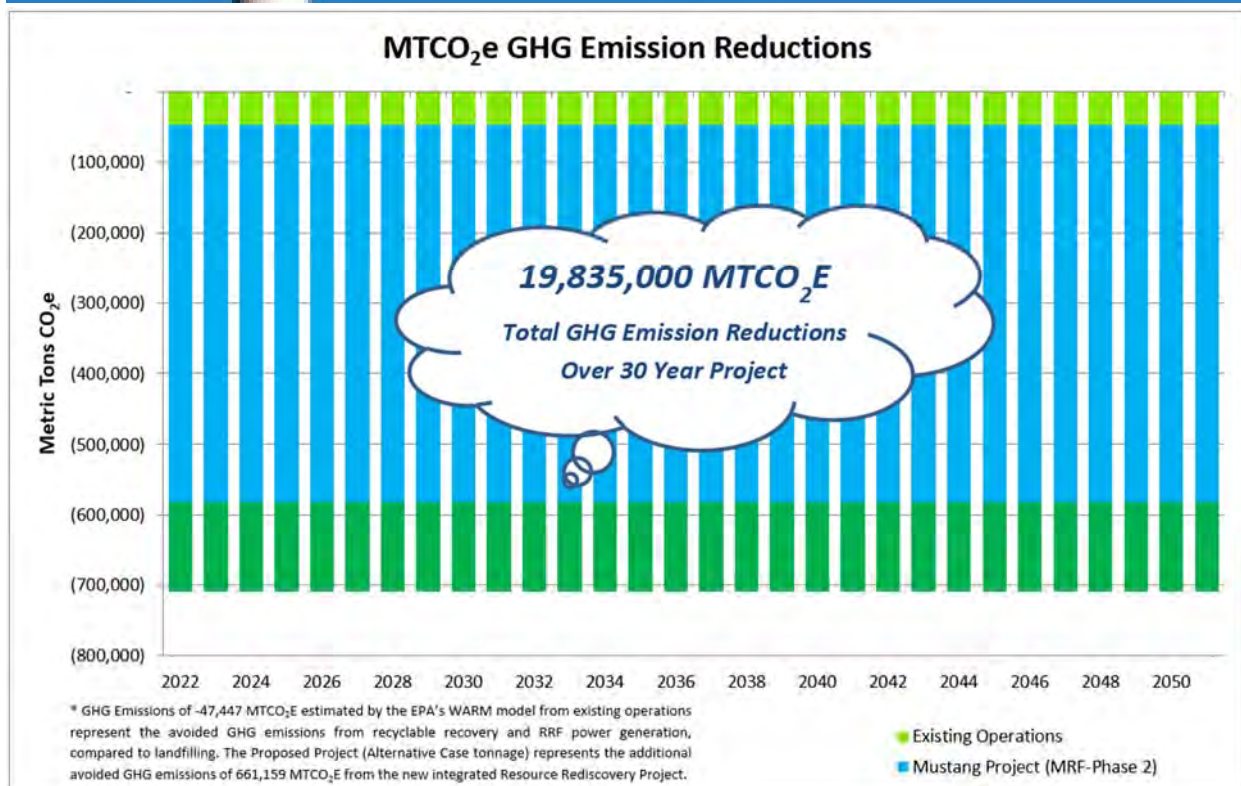
The US EPA WARM model for the Mustang Project's Alternative Case tonnage scenario (~700,000 TPY MSW) has estimated annual:

661,159 MTCO₂E Greenhouse Gas Emission Reductions

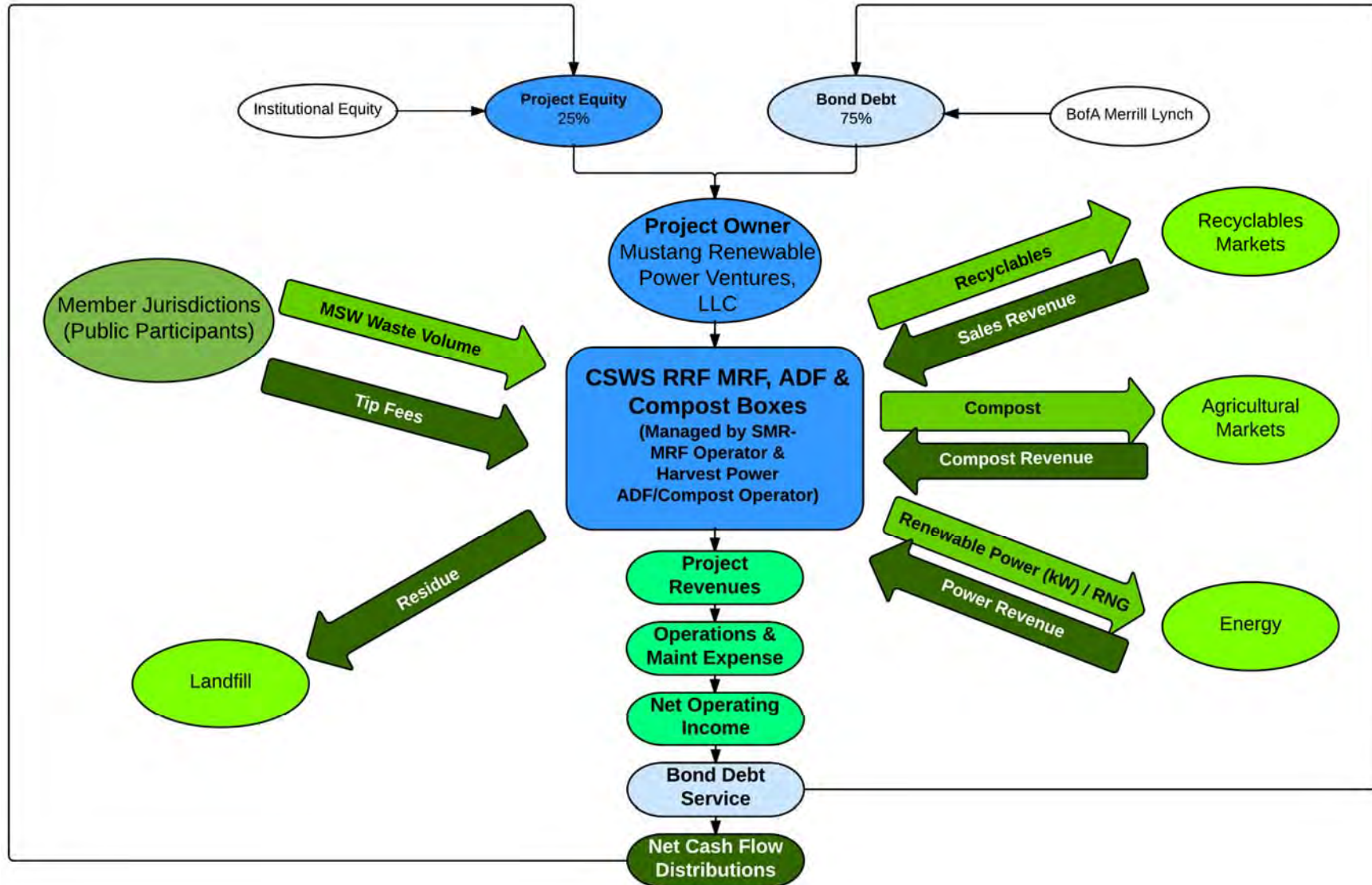
That is equivalent to...

Eliminating 139,191 Passenger Vehicles, and
Conserving 74,396,197 Gallons of Gasoline, or
Avoiding 3,545 Railway Cars of Coal

Please see **Appendix X** for the US EPA WARM Model



PROJECT FINANCIAL STRUCTURE





Project Team

Mustang has assembled a team to design, engineer, finance, construct, and operate the proposed Project, and to maintain and operate the existing MIRA Recycling Facility and Transfer Stations. The major participating firms include:

- 1) Mustang, as Project Developer and Team Lead, will manage this integrated team of global and locally experienced, financially capable partners.
- 2) Sims Municipal Recycling, as operator of the Transfer Stations, the MIRA Recycling Facility and Mixed Waste MRF (including PEF production), responsible for operation, maintenance, compliance, and materials marketing.
- 3) Van Dyk Recycling Solutions (VDRS) for Mixed Waste MRF and PEF equipment engineering, fabrication and installation. Note that equipment is manufactured by several different companies with whom VDRS has either an exclusive distribution agreement or a long-standing working relationship, including Bollegraaf, Lubo, TITECH, Walair and SSI. TITECH is the world leader in optical sorting and is involved in 90% of all MSW facilities built in Europe. Our original proposal included VDRS as equipment provider, and VDRS remains a top contender for this role. However, there are three additional qualified vendors who have provided detailed plans and budgets and remain under consideration.
- 4) Harvest Power as Operator of the AD & Composting Facilities, provider of off-site aerobic composting and storage facilities and marketer of finished compost.
- 5) Organic Waste Systems (OWS) as the Anaerobic Digestion Facility technology and system provider.
- 6) Herhof GMBH (Herhof) as the Composting Boxes technology and system provider.
- 7) O&G Industries, Inc. (O&G) as the Engineering, Procurement & Construction (EPC) Contractor.
- 8) Bank of America Merrill Lynch Securities (BAML) as tax-exempt bond debt underwriter.
- 9) Jason Radford of Ashurst, LLP (Ashurst) as Corporate Counsel; and Keith Martin of Chadbourne & Parke, LLP (Chadbourne) as Tax Counsel.
- 10) Selldorf Architects as lead design firm for new buildings to be developed as part of the proposed project.

The Mustang Team fully appreciates the serious and professional nature of MIRA's mission and this RFP, and has invested more than 1,000 man-hours over the past three months in the preparation of this RFP proposal. We are confident in our technologies, our team and financial proposal/Tip Fee pricing proposed in Section 5 herein based our team's actual experience developing, owning and operating Mixed Waste Processing MRF's, Anaerobic Digestion and Composting Projects.