

PPEA PROPOSAL



***Fairfax County, Virginia: Unsolicited Proposal to Develop
a Municipal Solid Waste Sorting Facility and/or Advanced Recycling
Facility on a Portion of the Closed I-95 Landfill Site***

*Submitted by the Envision Team:
Envision Waste Services, LLC
Frontline Bioenergy
Ferrous Processing and Trading
AECOM*

Date: December 9, 2022

EXECUTIVE SUMMARY

Background:

With great pleasure, the Envision Team submits its revised PPEA Competitive Unsolicited Proposal to Fairfax County, Virginia, to “Develop a Municipal Solid Waste Sorting Facility and/or Advanced Recycling Facility on a Portion of the Closed I-95 Landfill Site.” Per the County’s request, we have revised our proposal to fit on the designated 16-acre parcel located at the County’s I-95 landfill. Additional revisions made for this proposal include adjusting (down) the designed processing capacity to 650,000 tons per year of MSW input, and to assume that curbside recycling will continue throughout the contract period.

Naturally, scoping changes are required in order to reduce the site size from our originally proposed project of 300 acres down to 16 acres. For example, the 16 acre site’s size and oblique shape is simply too constrained to fit the building and equipment necessary for our previously proposed mixed waste processing facility designed to process the County’s waste to remove organics, metals, fiber, PET plastic, #4-7 plastics, and engineered fuel. Such a system requires screens, shredders, ballistic separators, magnets, eddy current separators, 50 near infrared sorters, conveyors, and more. There is simply not enough space to fit a building with all this equipment on the 16 acre site. As such, the site change dictates a new, revised plan, and in fact, we have devised an elegant solution capable of achieving significant landfill diversion and carbon reduction on the 16 acre site.

Revised Plan:

The Envision Team’s revised plan features an on-site mixed waste processing facility and an off-site organics processing and gasification facility. On the County’s 16 acre I-95 landfill facility, the Envision Team proposes to design, build, and operate a mixed waste processing facility designed to accept 650,000 tpy of MSW capable of achieving approximately **60% landfill diversion by weight**. We will accomplish this by processing waste at the MWPF to remove organics, fiber, and metals. The sorted organics and fiber will be trucked offsite to the Envision Team’s organics drying facility, organics processing facility, and Frontline Bioenergy organics gasification to RNG facility. Since the RNG is created exclusively from a biogenic feedstock, the RNG is eligible for D3 Renewable Identification Numbers (RIN) credits, the highest value RINs. Recovered ferrous and non-ferrous metals will be baled and sold to our offtake partner, Ferrous Processing and Trading (FPT). **Combined, the organics and metals will afford a landfill diversion rate of about 60%.** Carbon emissions will be virtually eliminated as our system will remove the organic fraction that would otherwise decompose in the landfill which creates methane and carbon dioxide, both of which are harmful greenhouse gases. Knowing that changes in waste processing scope were required to fit the mixed waste processing facility on the 16 acre site, we chose to prioritize our focus in the areas most protective of human health and the environment while simultaneously allowing for robust landfill diversion.

Experience:

Envision Waste Services, LLC, Frontline Bioenergy, and AECOM each have considerable relevant past experience at full scale. Envision has over 2 decades of mixed waste processing facility design, build, and operational experience. Frontline Bioenergy built and operated the largest organics gasifier in America, and AECOM is the largest A&E firm in the world, with decades of experience working together with Envision. Our wealth of experience assures success.

Thank you for the opportunity to present the Envision Team’s revised PPEA Competitive Unsolicited Proposal to Fairfax County, Virginia, to “Develop a Municipal Solid Waste Sorting Facility and/or Advanced Recycling Facility on a Portion of the Closed I-95 Landfill Site.” We look forward to establishing a long and value-added public-private partnership with Fairfax County, Virginia, designed to reduce waste, reduce harmful carbon emissions, and improve the environment in a cost-effective manner.

Sincerely,



Steven M. Viny, CEO

GENERAL INFORMATION - THE ENVISION TEAM

Mixed Waste Processing:



Envision Waste Services, LLC, 4451 Renaissance Pkwy, Cleveland, Ohio 44128
www.envisionwaste.com, Steven M. Viny, CEO, 216-496-3486, sviny@envisionwaste.net
History: Envision Waste Services is an Ohio Based LLC incorporated in 2006 with over 2 decades of Mixed Waste Processing Facility design and operational experience.

Strategic Offtake Manufacturers



Organics Gasification - Frontline Bioenergy, 1521 West F Ave., Nevada, Iowa 50201,
www.frontlinebioenergy.com, Jerod Smeenk | CEO, 515-292-1200, jsmeenk@frontlinebioenergy.com
History: Frontline Bioenergy is an Iowa LLC founded in 2003



Metals Marketing - Cleveland Cliffs/Ferrous Processing and Trading, 8550 Aetna Rd, Cleveland, OH 44105,
www.fptscrap.com, Loren Margolis | Director of Sales and Recycling Services, 216-870-9666,
loren.margolis@fptscrap.com.

Environmental Permitting and EPC Construction

AECOM

AECOM – Hunt Construction Group, 1300 East 9th St., Suite 500, Cleveland, Ohio 44114,
James Clemens | Executive Vice President, Great Lakes Region, Jim.Clemens@aecom.com, 216-210-3949
History: Hunt Construction was founded in Indianapolis in 1944. The company merged with AECOM in 2014. AECOM is the largest A&E firm in the world and is ranked by ENR the #1 Global Design Firm and #2 for Waste and Hazardous Waste Design and Engineering.

I. PROJECT CHARACTERISTICS/FEASIBILITY

EXPERIENCE/PROVEN TECHNOLOGY

Albert Einstein perhaps said it best as *"The only source of knowledge is experience."* The Envision Team certainly agrees. Therefore, the Envision Team is comprised of carefully selected companies which are recognized by the industry as most highly skilled in their respective fields. **Each of the companies comprising our Team has achieved success at commercial scale in their respective fields as proposed.**

Mixed Waste Processing:



ENVISION
Waste Services LLC

Envision Waste Services, LLC, 4451 Renaissance Pkwy, Cleveland, Ohio 44128
www.envisionwaste.com, Steven M. Viny, CEO, 216-496-3486, sviny@envisionwaste.net
History: Envision Waste Services is an Ohio Based LLC incorporated in 2006

Background – Envision Waste Services

Envision Waste Services, LLC designs, builds, and operates mixed waste processing facilities. Envision is recognized by the solid waste industry as an expert in mixed waste processing facility design and operation. Envisions' experience sets the industry's benchmark, having achieved 21 continuous years of operation of a mixed waste processing facility serving a County government. In that same 21 years, Envision earned a perfect record for operations - having never missed a single day of operation nor having had a single load of recyclables rejected by its end markets for quality or any reason. Envision developed an engineered fuel product extracted from waste to be used by cement kilns and utility boilers. Envisions' engineered fuel was used by Cemex to successfully secure final air permits for its Demopolis, Alabama, Louisville, Kentucky, and Brooksville, Florida plants, by Akron Thermal for final air permit for its RES plant, Dayton Power and Light for a final air permit for the Hutchings Station, and First Energy for its Niles plant. Concurrent with these operations, Envision developed a portable mixed waste processing system in association with Novelis – the world's largest producer of aluminum rolled products. Envision CEO Steven M. Viny has developed proprietary mixed waste processing IP including two US patents and over a dozen trade secrets for mixed waste processing technology.

For organic recovery, Mr. Viny designed, permitted, constructed, and operated for nearly two decades, the Medina County Class 1 compost facility (MSW Compost facility). To this day, the Medina Class 1 compost facility represents the only MSW compost site ever successfully permitted and operated in Ohio.

Strategic Offtake Manufacturers



Organics Gasification - Frontline Bioenergy, 1521 West F Ave., Nevada, Iowa 50201, www.frontlinebioenergy.com, Jerod Smeenk | CEO, 515-292-1200, jsmeenk@frontlinebioenergy.com

History: Frontline Bioenergy is an Iowa LLC founded in 2003 and is recognized as a Global Leader in Waste and Biomass Gasification Solutions for Renewable Energy, Renewable Fuels, and Products.

Frontline built and operated the largest agricultural gasifier in the USA (CVEC). Frontline Bioenergy is currently developing the San Joaquin Renewables organics gasification plant in San Joaquin, California. This is the first such facility to be granted D-3 Rin designation. BP is the offtaker for the RNG produced for the project.

On April 22, a collaboration between Iowa State University, Stine Seed Farms, and Frontline BioEnergy was awarded a \$1 million milestone prize for carbon removal by the XPRIZE Foundation.

Frontline Bioenergy is also a technology provider for Red Rock Biofuels, a producer of aviation fuels from woody biomass.



Metals Marketing - Cleveland Cliffs/Ferrous Processing and Trading, 8550 Aetna Rd, Cleveland, OH 44105, www.fptscrap.com, Loren Margolis | Director of Sales and Recycling Services, 216-870-9666, loren.margolis@fptscrap.com.

History: Ferrous Processing and Trading (FPT) is one of the largest scrap metal companies in the USA. FPT was recently purchased by Cleveland Cliffs which is the largest flat rolled steel manufacturer in the USA. Cleveland Cliffs is vertically integrated, from mined raw materials and ferrous scrap, to primary steelmaking and downstream finishing, stamping, tooling and tubing. Cleveland-Cliffs has the unique advantage of being self-sufficient in the production of raw materials for steelmaking. With ongoing initiatives to reduce waste, improve water conservation, and reduce carbon emissions by 25% by 2030, Cleveland Cliffs plans to become North America's leader in steelmaking sustainability.

Environmental Permitting and EPC Construction



AECOM – Hunt Construction Group, 1300 East 9th St., Suite 500, Cleveland, Ohio 44114, James Clemens | Executive Vice President, Great Lakes Region, Jim.Clemens@aecom.com, 216-210-3949

History: Hunt Construction was founded in Indianapolis in 1944. The company merged with AECOM in 2014. AECOM is a Fortune 500 Company and is the largest A&E firm in the world, with approximately 46,000 employees around the globe. In 2022, ENR ranked AECOM as the #1 Global Design firm in the world. ENR ranked AECOM #1 globally in Transportation and Water and #2 in Building, Sewer/Waste and Hazardous Waste. AECOM is recognized as a leader in all of the key markets that it serves.

FACILITY SIZE AND SITE UTILIZATION

The Envision Team's mixed waste processing facility is designed to fit on the 16 acre site located at the Fairfax County I-95 landfill. Additional privately owned or publicly owned acreage will be used for organics drying, processing/densification, and gasification. The following is a list of the land and infrastructural requirements of each respective company comprising the Envision Team:

Infrastructural requirements for the MWPF and each strategic offtake manufacturing operation are as follows:

Envision Mixed Waste Processing Facility (MWPF) Excluding Organics Drying Facility

Land: 16 acres

Water: The MWPF uses physical separation and does not require domestic water for use in the mixed waste processing operation. The MWPF will require water for employee services and cleaning.

Sewer: Sanitary sewer is required regulation as would otherwise be required in a solid waste transfer station.

Electricity: approximately 15 MW

Gas: natural gas is not required for the operation of the MWPF. Natural gas will be required for building heat during inclement weather conditions.

Communications: Yes

Frontline Bioenergy

Land: 20 acres

No utilities are required for the Frontline Bioenergy Plant. The plant will generate its own gas, electricity, and water. Therefore, it can operate off the grid. The Frontline Bioenergy plant will only require gas for startup of the gasifier.

FACILITY ALIGNMENT WITH COUNTY VISION AND CRITERIA

The Envision Team understands Fairfax County's "Vision" as an intent to leverage its solid waste to create economic development, reduce carbon emissions, and divert waste sent to the landfill for disposal to the greatest extent possible. The Envision Team's unsolicited proposal is 100% aligned with the County's vision.

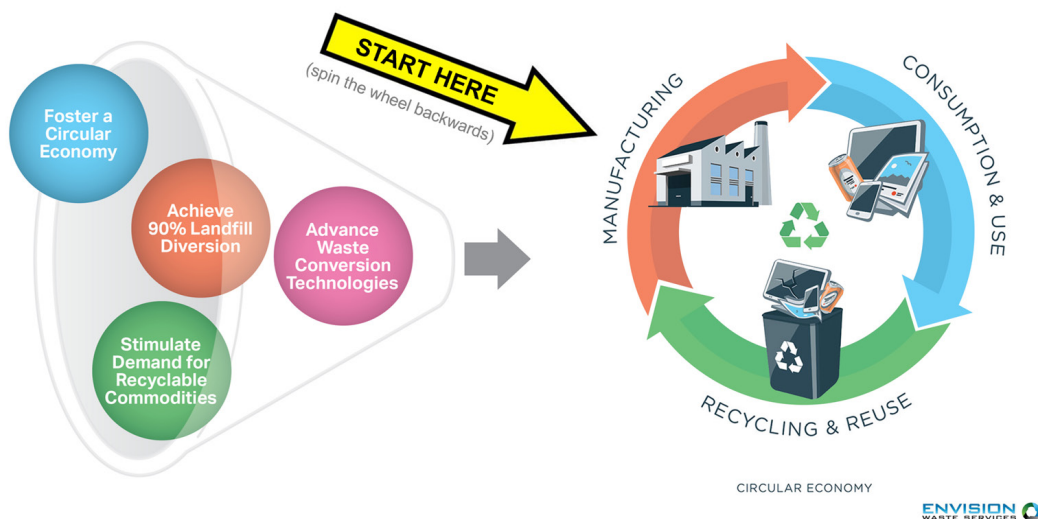
The following sections discuss the Envision Team's unique "Market-Centric" approach to waste processing as well as a mass balance depicting how our Team will divert approximately 60% of the County's waste into finished products to create a robust, circular green economy. Also discussed is our intent to capture and sequester carbon to advance the County's Climate Action Plan.


Methodology: Market Centric Approach to Mixed Waste Processing

Unique to our Team's proposal is our disruptive, "Market-Centric" approach to mixed waste processing. Alan Andreason, Professor and Associate Dean at Georgetown University and author of the book "Marketing Social Change: Behavior to Promote Health, Social Development, and the Environment" said "***The backward approach I advocate rests on the premise that the best way to design usable research is to start where the process usually ends and then work backward.***" We couldn't agree more!

Our "Market-Centric" approach first begins with identification of our end markets for the recovered materials and learning the unique material specifications for each end use manufacturer. We establish long term offtake contracts (for the life of the contract period and all extensions) with each end use manufacturer to create a synergistic team. Then we designed a MWPF to accept unsorted MSW and process that waste to extract the materials meeting the quality and quantity required by our end use manufacturers.

Key: Market Centric Approach





Our unique Market-Centric Approach results in the creation of a perpetual Green Circular Economy that will occur right in Fairfax County, Virginia! If our unsolicited proposal is accepted by Fairfax County, the full combined Envision Team including our offtake manufacturers will develop a project at the site of the I-95 Landfill that can create extraordinarily high landfill diversion, and a tremendous reduction to the County's carbon footprint.

We say that our Market-Centric approach is “disruptive” as it is the opposite approach used in conventional recycling facility design. Traditionally, recycling facilities are “feedstock-centric” as their focus is on the material infeed with the philosophy of “unscrambling the egg” into conventional baled commodities, such as paper, cardboard, rigid plastic containers, and metals with the plan to sell those commodities on the open market. Sadly, such feedstock-centric facilities are limited to sorting systems designed to extract conventional commodities, and therefore can never achieve the landfill diversion of a Market-Centric facility. Further, the feedstock-centric facility is subject to market fluctuations for the sale of their commodities. As but one example, mixed paper as a baled commodity, was selling at a negative value only a few years ago. Mixed paper rose in value earlier this year but this month, dropped in value by over 40%. The fluctuating value of traditional baled commodities was a leading cause for the suspension of over 100 recycling plants nationwide.

The Market-Centric approach, however, is supported by long-term offtake contracts at a defined stable price throughout the entire contract period to create a local, circular green economy. Therefore, the Market-Centric project is stable, predictable, and unaffected by market fluctuations. Importantly, this will allow for better long-term budgeting and financial planning for Fairfax County without the specter of unseen fluctuations in commodity values.

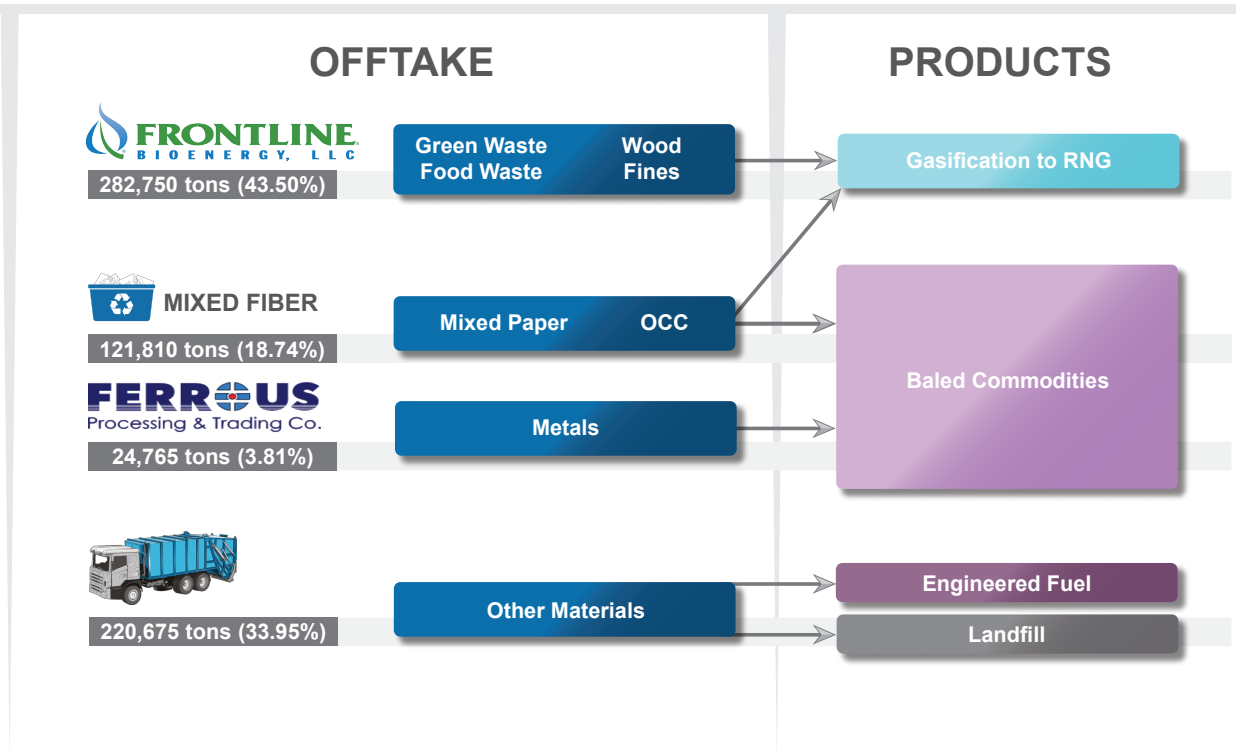
Peripheral Benefit

The benefit of the Green Circular Economy created by the full Envision Team including its end-use manufacturers is not limited to just the processing of the Fairfax County's waste into materials of beneficial reuse. Our end manufacturers can grow by accepting select materials from cities throughout the State and the District of Columbia.

Further, the products produced by our end use manufacturers will attract other industries to Fairfax County and the surrounding areas. For example, the biogenic-based RNG produced by Frontline Bioenergy is highly desired by nearly every major oil company in the USA. In the case of Frontline's San Joaquin Renewable Project, BP is the offtaker for the RNG produced for the full contract term. BP plans to build RNG fueling stations for trucks and other vehicles powered by natural gas. The point being, there is a “next development ring” that will be created as a function of the circular green economy developed by the Envision Team.

Detailed Description of the Proposed Technology

In the absence of a detailed waste characterization study for Fairfax County, the Envision Team used the waste characterization study provided by the City of Tucson, Arizona to develop a mass balance to demonstrate how Fairfax County's waste will be processed and distributed into the newly formed circular green economy.

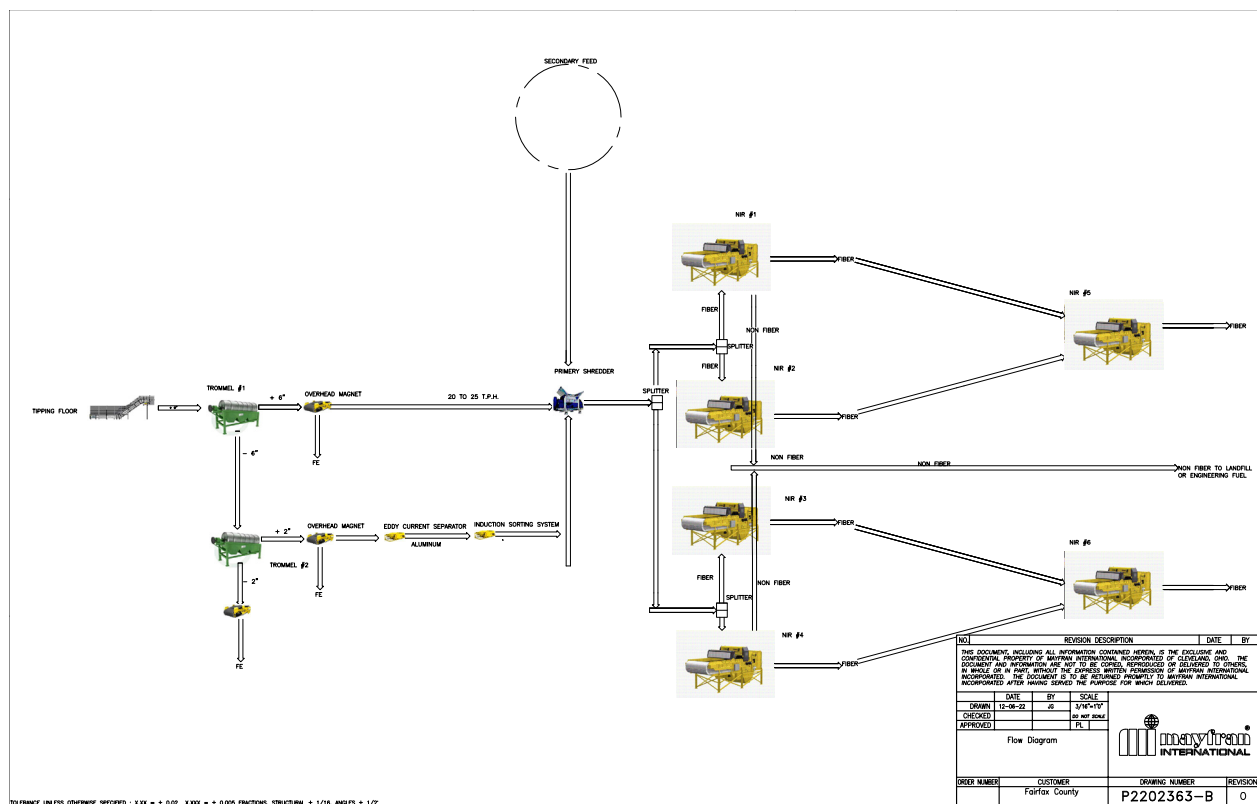


The left column includes a list of the offtake manufacturers, the middle column represents the materials we will provide to each manufacturer, and the right column represents the products that will be manufactured.

Description of Technology(s) used to Separate Each Feedstock

It is important to note that Envision has developed its own mixed waste processing intellectual property (IP) which is in some cases protected by US Patent, and in other cases, by trade secret. Our IP is critical to the success of our MWPF design and operation. Since the Fairfax County unsolicited proposal is a document that may be placed in the public domain, Envision must refrain from any discussion of its IP covered by trade secret. Likewise, although Envision has a detailed engineered drawing set for our proposed MWPF, considering the public nature of this submittal, we must refrain from furnishing our engineered drawing set at this time. We are glad to provide such documents under a suitable NDA that guarantees the protection of our IP. We therefore include a one-line flow diagram and narrative description to facilitate an understanding of our processing line absent protected IP description. It should be noted that our IP is based on and proven at full scale through our 21 years of continuous operation of MWPF's. Our IP has resulted in significant improvements in runtime, longevity, reduced maintenance, and decreased contamination.

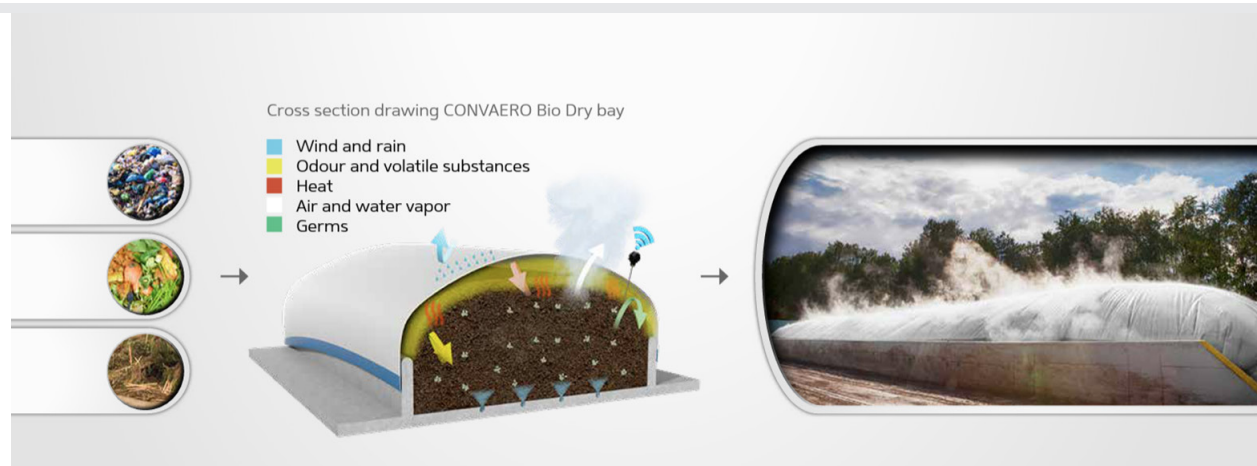
MWPF Flow Diagram



The Envision MWPF will feature 7 identical processing lines. The redundancy helps to assure system reliability as well as dealing with seasonal and weekday changes in delivered waste volume. Each MWPF processing line is designed to process approximately 100,000 tpy of unsorted MSW, assuming 5.5 days per week of operation with each operating day comprised of 2 processing shifts of 9 hours each and a third shift for cleaning and maintenance.

Organics

Waste is placed using a material handler onto the MWPF sorting line. Envisions' proprietary organics removal system is designed to open bags and liberate organics such as food waste, yard waste, and small paper items. Our proprietary system has proven to extract over 50% more organics than traditional systems. The recovered 2" minus fraction, consisting primarily of organics, passes by a magnet to remove any ferrous metal and is then transported to the offsite Eggersmann Convaero organics drying system. The Convaero system is a forced aeration system with a biological cover to speed up the composting/drying process while minimizing odors, destroying pathogens, and controlling vectors and moisture infiltration. It has been used successfully in this application throughout the world.



Once dry, the organics are placed in a proprietary shredder system designed to shred the sorted organics as well as any glass or ceramic to 1/2" minus size, while simultaneously removing any lightweight plastics. The shredded and separated organics are then pelletized and delivered to the Frontline Bioenergy gasification system and converted into renewable natural gas (RNG) and pure carbon. The RNG is placed in a natural gas pipeline which connects to the national grid and is therefore, eligible for D-3 Rins and California carbon credits. The recovered carbon can be used for soil enhancement. 100% of the organic material captured by the MWPF is turned into finished products. Of importance, no water is required for the processing of the organics! This differs from composting systems which due to the exothermic reaction created from biologic decomposition, requires the addition of water. Most impressively, the Frontline Bioenergy Gasification facility operates entirely off-grid by utilizing its own generated energy to power the plant.



Metals

The 6" minus fraction materials pass by an electro-magnet, an eddy current separator, and a conductivity sorter to assure complete metal removal. Our ferrous metal recovery system uses proprietary coils designed not to degrade over the life of the project. By contrast, virtually all other electromagnets lose 20 to 30% of their strength within the first few years of operation. We use an eccentric eddy current separator that offers superior sorting quality to concentric style eddy current separators. Also, we feed the eddy current separator with a feed system designed to assure single burden depth and single item spacing to achieve maximum quality of separation. Finally, our conductivity sensor is designed to remove all remaining metals. Certain metallurgy such as titanium, cannot be separated by magnets or eddy current devices. Since all metals can conduct electricity, the conductivity sorter liberates any remaining metals. Any remaining 6" minus material is combined with the oversize materials post primary shredding.

Large metallic objects such as white goods, bicycles, fencing, etc. are removed by a skid steer loader on the tip floor. The 6" plus size material exiting the organics removal system passes by a series of magnets to remove mid-sized ferrous metal.

Air Classifier

Envision evaluated many different air classifiers and ballistic separators during its over two decades of continuous operation of its MWPF in Ohio. We were not satisfied with the operation of any existing equipment so out of necessity, we invented our own air classification system. We protected our IP with 2 different patents. For the Fairfax County MWPF, our air classification system is designed and tuned to remove heavy items that could damage the primary shredder and/or reduce operational runtime. While the shredder is designed to stop if it encounters something it cannot shred, any stoppage reduces runtime and increases maintenance. Clearing a shredder jam can sometimes require confined space work which can be harmful to workers. Our proprietary air classifier eliminates such problems.

Primary Shredder

Often MWPF's place their primary shredder in the front of the processing line. We are unique in locating our primary shredder in the middle of our processing line. There are various reasons for this placement including but not limited to reducing contamination and improving operational runtime. Example: if the shredder is placed in the front of the processing line, organics are smashed by the shredder and pressed with great force against plastics, metals, and fiber. The organics contaminate the materials to be recovered later in the process. Next, hard to shred items such as certain metallic objects, broken concrete, containers with gaseous products, or lithium batteries can cause shredder downtime, fires, and even explosions. Our system is designed to liberate all organics, metals, batteries, and heavy, hard to shred items first. This reduces the chance for shredder stoppage, fires, or explosions which could cause significant plant downtime.

We use a single rotor, low speed, high torque primary shredder which includes a heavy flywheel. The flywheel creates kinetic energy which helps to reduce electrical surges and reduces peak electrical demand. Further, the single rotor design reduces bridging (vs two rotor shredders). Bridging causes shredder plug ups in the feed hopper and again, increases downtime. The single rotor design has lower and shorter maintenance requirements vs two rotor shredders, which combines for greater runtime.

Primary Near Infra-Red Separator


The Primary NIR separator is used to separate plastics from mixed fiber. Shredded material (nominal 6-8" in size) is placed on the primary NIR. We use NIR sorters that are 2.8 meters in width and operate with conveyor speeds of 1000 fpm. Such speeds require the feed conveyor to be placed in a sealed enclosure with air management because the high conveyor speeds act as a fan. The shredded materials can then be managed as single burden depth with singularity of individual particles of material. The NIR sorters use the most advanced HSI technology and black color recognition. Paper is ejected and conveyed to the baler for storage. Since waste generation is non-linear over the course of the year, and since the operation of the Frontline Bioenergy gasifier is linear and runs at full throughput capacity, the recovered fiber can be combined with the dried organics and used to feed the Frontline Bioenergy system at times of the year when waste volume and/or organics volume is lower. The recovered fiber can be sold as baled commodity during times of the year when waste generation is high and the addition of fiber is not required to maintain material supply to the Frontline Bio-Energy system.

Landfill/Engineered Fuel

The remaining waste is primary shredded, nominal 6-8" lightweight material with metals, plastic, and fiber removed. Such material can be further processed to create an engineered fuel product suitable for use in cement kilns and coal fired utility boilers. Envision has significant experience producing engineered fuel for cement kilns and utility boilers. Envision produced engineered fuel from residual materials at its Medina CPF location which was used by Cemex to successfully gain final air permit modifications for 3 of their cement kilns (Demopolis Alabama, Brooksville Florida, Louisville, Kentucky). Likewise, we completed successful full scale test burns at electric utility boilers including First Energy, Akron Thermal, and Dayton Power and Light.

It remains possible that all or a significant portion of the remaining material can be secondary shredded and used as a renewable source of fuel for the Titan Cement's Roanoke Cement Plant.





Any remaining waste will be directed to the Fairfax County Landfill. Since the waste is primary shredded, with organics, paper, and metals removed, the remaining waste will simplify the landfill operation, reducing landfill operational cost and environmental concerns. By eliminating the organics, there is nothing left to decompose. This eliminates the production of methane and CO₂ which helps to meet the County's Climate Action Plan. Further, the shredded material eliminates full size plastic bags which act like parachutes in the wind creating future waste. Another positive is that the shredded waste can be used as a cushion layer over new cell liner systems, which helps to reduce cell construction costs. Compaction is increased by the placement of shredded waste vs non-shredded waste. And since all cans, some of which contain propellant, are removed, it helps to reduce landfill fires. Last, the elimination of batteries helps to eliminate heavy metals often found in landfill leachate.

Anticipated Daily Operations and Hours of Operation

The daily operations will include the receipt, processing, and reporting of all inbound waste and outbound materials. All waste entering the facility will be weighed and recorded. All outbound materials will likewise be weighed and recorded. Onsite processing will include operation of the MWPF while offsite processing will include the organics drying facility, organics pelletizing facility, and a shredding operation for source separated organics delivered directly to the facility.

Hours of operation are anticipated to be Monday thru Friday, 24 hours per day, and a single 9 hour shift of operation on Saturdays. Additional hours if required by the County can be addressed.

Emissions from the MWPF are expected to be de-minimis. The MWPF does not use process water, nor does it combust anything. Therefore, emissions are no different than what one would expect at a solid waste transfer station. In fact, Envisions' MWPF's in Ohio were all permitted as transfer stations under Ohio law. Emissions from each of the strategic offtake partners are likewise expected to be de-minimis. Frontline Bioenergy has obtained a permit for its San Joaquin Renewables facility in California. California is the most challenging state in the USA to obtain such a permit. Eggersmann has permitted Convearo organics drying facilities worldwide. All our strategic offtake partners have demonstrated de-minimis emissions in each of their respective facilities.

DEMONSTRATION OF COMPANY AND STAFF EXPERIENCE WITH DESIGN, CONSTRUCTION, AND OPERATION OF ADVANCED RECYCLING AND/OR SORTING FACILITIES AS APPLICABLE:

AECOM/Hunt Construction

Hunt Construction Group, Inc. (dba AECOM Hunt) was founded in 1944 in Indianapolis by Paul Hunt, Arber Huber and Harry Nichols as a privately-held organization. It was known as Huber, Hunt & Nichols at that time. The cornerstone of its founding began during World War II with industrial/manufacturing facilities. Huber and Nichols left the company shortly after its founding and Paul Hunt carried on as sole owner. Through the years, the company's guiding principles were passed down through three generations of Hunts. In July 2014, Hunt merged with AECOM, a fully integrated infrastructure and support services firm. Today, AECOM Hunt benefits from being a part of a truly innovative organization that consists of more than 85,000 employees — including architects, engineers, designers, planners, scientists and management and construction services professionals — serving clients in more than 150 countries around the world. As part of the AECOM family, AECOM Hunt has clearly deepened its resources, broadened its expertise, and enhanced the quality of work for which they have always been known. In 2022, AECOM ranked #1 in Global Design and #2 in No. 1 globally in Transportation and Water and #2 Globally in Building, Sewer/Waste and Hazardous Waste. For 2022, AECOM Hunt is ranked among the top 10 National Contractors by Engineering News-Record.

AECOM HUNT



JIM CLEMENS

Executive Vice President

Jim is a Executive Vice President with 35 years of business leading experience. He has strong strategic business planning and execution background across a national client landscape including healthcare, aviation, higher education, industrial and civic markets. A true builder, having started his career within the building trades, Jim brings real-world solutions to complex critical building program challenges. He has directly managed over \$3B of capital programs across over 80 projects.

EXPERIENCE

41 years

EDUCATION

John Carroll University

LICENSING/PROFESSIONAL AFFILIATIONS

Design-Build Institute of America (DBIA) Member

CERTIFICATIONS

OSHA Construction 30 Hour

PROJECT RESPONSIBILITIES

- Corporate responsibility for the performance of the project team both home office and on-site
- Provides leadership, experience and technical expertise
- Anticipates and resolves construction issues
- Ensures that client expectations are met



PAUL DANSZCZAK

Project Director

Detail-oriented construction specialist with 41 years of diverse and significant hands-on construction and construction management experience including over 40 projects valued at over \$550M. Proven, exceptional management and communication skills with the particular ability to develop effective teams and maintain staff morale, efficiency and focus. Driven by challenge and adaptable to change.

EXPERIENCE

41 years

EDUCATION

AS, Architecture and Environmental Design, Kent State University

LICENSING/PROFESSIONAL AFFILIATIONS

Cleveland Engineering Society, Member
Cleveland Restoration Society, Member
Northeast Ohio Chapter of NAIOP, Member
Northeast Ohio Chapter of NOSHE, Member
CMAA, Member

PROJECT RESPONSIBILITIES

- Supervision and control of all preconstruction and construction activities
- Coordinates and schedules trade/subcontractors and suppliers
- Monitors performance to ensure that work is performed correctly and on time
- Oversees project quality control and safety programs
- Resource allocation and daily communication with project leadership to facilitate on-time, within budget project delivery

AECOM HUNT



THOMAS KOVACIC

Environmental QA/QC

Thomas is a civil engineer that has been involved with construction and environmental remediation related projects since beginning professional work in 1982. He has worked in at least 35 states and Canada. His experience on these projects includes project management, construction management, landfill engineering and related construction quality assurance and certification, resident engineering, field coordination, inspection, and report preparation. Thomas has managed several permit, design, and construction-related projects and project tasks. He has served as project manager and/or certifying engineer on the construction of several landfill cells, landfill cover systems, and impoundment stabilization and closures

EXPERIENCE

35 years

EDUCATION

BS, Civil Engineering, Case Western Reserve University

LICENSING/PROFESSIONAL AFFILIATIONS

Professional Engineer (PE) - State of Kentucky, State of Kentucky

Professional Engineer (PE) - State of Ohio, State of Ohio

National Society of Professional Engineers

CERTIFICATIONS

OSHA 8-Hour HAZWOPER Supervisor Training
OSHA 40-Hour HAZWOPER Training

PROJECT RESPONSIBILITIES

- Review of all submitted items for approval
- Project Permitting and code compliance
- Inspection oversight

**STEVEN R. MAKI*****Vice President***

Steve has 40 years of experience providing preconstruction services and leading our Estimating Department. His experience includes dozens of sports and entertainment venues, as well as local market knowledge of cities across the U.S. **AECOM** Hunt's estimating team utilizes his experience and knowledge, coupled with their vast industry knowledge of current market conditions to provide an estimate and project plan that is carefully constructed and comprehensive.

EXPERIENCE

40 years

EDUCATION

BS, Construction Technology,
Purdue University
AS, Architectural Technology,
Purdue University

AREAS OF EXPERTISE

Conceptual Estimating
Preconstruction Services
Structural Services
Value Engineering

CERTIFICATIONS

ICE Training
LEED: New Construction - Construction Manager Responsibilities
MC2 Training

PROJECT RESPONSIBILITIES

- Corporate responsibility for the performance of the project team both home office and on-site
- Provides leadership, experience and technical expertise
- Anticipates and resolves construction issues
- Ensures that client expectations are met
- Resource allocation and daily communication with project leadership to facilitate on-time, within budget project delivery

**TERRY L. SUMMERS*****Senior Estimator - General Trades***

Terry has 22 years of estimating experience, specializing in the general trades. He has served as the lead estimator on over 100 projects valued at over \$21B. His experience includes markets all across the country, with a range of project sizes and industries.

EXPERIENCE

33 years

EDUCATION

BS, Building Construction
Technology, Purdue University

AREAS OF EXPERTISE

Communication
Constructability Evaluations
Cost Estimating
Design-Build Project Delivery
Preconstruction and Estimating
Services
Value Engineering

LICENSING/PROFESSIONAL AFFILIATIONS**CERTIFICATIONS**

1-MC2 Computer Estimating
Training

PROJECT RESPONSIBILITIES

- Responsible for various estimating tasks through all phases of preconstruction and construction activities
- Evaluation of various construction alternatives
- Solicitation and preparation of bids
- Quantity takeoffs and pricing

Ferrous Processing and Trading/Cleveland Cliffs

Cleveland Cliffs



Cleveland-Cliffs is the largest flat-rolled steel producer in North America. Founded in 1847 as a mine operator, Cliffs also is the largest manufacturer of iron ore pellets in North America. The Company is vertically integrated from mined raw materials and direct reduced iron to primary steelmaking and downstream finishing, stamping, tooling, and tubing. The Company serves a diverse range of markets due to its comprehensive offering of flat-rolled steel products and is the largest supplier of steel to the automotive industry in North America. Headquartered in Cleveland, Ohio, Cleveland-Cliffs employs approximately 25,000 people across its mining, steel and downstream manufacturing operations in the United States and Canada. For more information, visit www.clevelandcliffs.com

In November 2021, Cleveland-Cliffs completed its acquisition of Ferrous Processing and Trading Company, which makes the company a wholly-owned Cleveland-Cliffs facility.

Ferrous Processing and Trading (FPT) is one of North America's premier processors, buyers, sellers, and recyclers of scrap metals of all kinds. Ferrous Processing and Trading is a key supplier to the metals industry of North America. They are also a major scrap metals management company for the U.S. auto industry.

FPT currently processes approximately three million tons of scrap per year (as of Nov. 2020), approximately half of which is prime grade. Cleveland-Cliffs expects to grow its prime scrap presence through its existing relationships with industrial steel consumers.

Ferrous has facilities located in Michigan, Ohio, Tennessee, Florida, Mexico, and Ontario. Contact them on their website, <https://www.fptscrap.com/>

FPT Overview



FPT is one of the largest metals recycling and trading companies in North American with annual revenues over \$1 billion USD and metallic sales exceeding 3 million tons per year.

- Headquartered in Detroit, MI
- 25 locations throughout North America
- Global metallic sales
- Independent, non-affiliated scrap sales allow for revenue optimization for our customers

FPT provides scrap metal recycling programs and services to over 1000 individual industrial customers including OEM's (Ford, FCA, GM, and Nissan), Tiered suppliers, regional/local scrap dealers and organizations.

- Ford: handle 80% of US and Canada scrap producing locations
- FCA: handle 5 plants in United States
- GM: handle 5 plants in United States
- Nissan: handle 100% of North American operations

FPT has worked successfully with Envision - providing scrap metal recycling for over 2 decades.



Ferrous Processing & Trading –
Drew Luntz

DREW LUNTZ

As President of FPT Ohio, Andrew (Drew) Luntz directs all activity of FPT's Ohio operations; including all yard activities, commercial transactions and business development. Drew is a fifth-generation member of the Luntz scrap metal family and was born into the scrap industry in Northeastern Ohio; learning all phases of the business and developing the skills that serve FPT today. Drew previously was President and co-owner of the Luntz Corporation as well as former President of Phillips Metals.



Ferrous Processing & Trading –
Mario Macari

MARIO MACARI

As Executive Officer, Mario Macari has operational responsibilities for FPT's Florida and Cleveland operations. Mr. Macari began his scrap career with Schlafer Iron & Steel in 1990 as an Operations Manager. In 1992, Schlafer Iron & steel acquired Sam Allen & Son and he was then promoted to Plant Manager. He has been Operations Manager at many FPT locations including Strong Steel, Zalev Brothers in Windsor Ontario, and John Kronk.

Recently, Mr. Macari was instrumental in turning around FPT's Florida Operations by successfully building a

Marketing and Operations team within the region.

Mr. Macari earned a dual degree in Hotel Restaurant Management and Culinary Arts at Henry Ford Community College in 1988. His business career includes a background of 26

Envision Waste Services, LLC

Envision is the only firm in America that has 21 years of continuous mixed waste processing experience.

21 years of continuous mixed waste processing operations.

- only firm in the USA to design, build, and operate a mixed waste processing facility for over 20 continuous years

17 years of solid waste compost experience

- Only firm in Ohio to ever permit and operate a solid waste compost facility

21 years of waste transfer experience

- 4 different locations - 2 states

Technology leader

- Awarded 2 United States Patents for waste sorting equipment as well as many trade secrets

Exemplary Safety Record

- Statistically more than twice as safe as the industry average





STEVEN M. VINY

Chief Executive Officer

Steven M. Viny is the CEO of Envision Holdings. Mr. Viny has 41 years of experience in the waste industry which has included the design, construction, operation of landfills, landfill gas systems, material recovery facilities, compost facilities, engineered fuel production, and waste hauling and transportation.

Mr. Viny was awarded 2 United States Patents for waste processing equipment design as well as several US Trademarks.

Mr. Viny formerly served as the International President of the SWANA (the Solid Waste Assn of North America) as well as a Director of ISWA (the International Solid Waste Association) where he represented the United States and Canada. Mr. Viny is the recipient of the SWANA Professional Achievement Award which is their highest honor. Mr. Viny is also the recipient of the SWANA Innovation of the Year award, the Ohio Dept of Natural Resources Achievement in Excellence Award, the Governor's award from the State of Ohio, the Green Business Award from Medina County, Ohio, and many other awards.

Mr. Viny holds SWANA certifications for Manager of Landfill Operations, Manager of Transfer Operations, Manager of Collections Operations, and he is a Certified Cogeneration Professional by the Association of Energy Engineers.

EXPERIENCE

41 Years

EDUCATION

BS, Arizona State University

CERTIFICATIONS/PROFESSIONAL AFFILIATIONS

Certified Manager of Landfill Operations, Solid Waste Association of North America
Certified Transfer Station Manager, Solid Waste Association of North America
Certified Manager of Collection Systems, Solid Waste Association of North America
Certified Cogeneration Professional, Association of Energy Engineers
Director, Ohio Buckeye Chapter, Solid Waste Association of North America

PROJECT RESPONSIBILITIES

- Corporate responsibility for the overall project and project team
- Ensures that client objectives and project objectives are met or exceeded
- Directs staff to achieve project milestones and benchmarks
- Provides a corporate culture to ensure safety, public health, and environmental compliance



CLAYTON A. MINDER

Chief Financial Officer

Clayton currently serves as the CFO for Envision Waste Services, LLC. He is a results oriented leader with over 34 years of success in the solid waste industry, with extensive experience in all facets of the industry. Clayton has managed over 35 different operating locations including 7 MRF operations and has over 17 years of experience working for the largest companies in the industry.

EXPERIENCE

39 Years

EDUCATION

BA, Accounting & Finance,
Baldwin-Wallace University
MBA, Management, Lake Erie College

AWARDS

Waste Management - "Clean Sweep Audit" Award (3 time winner)
Allied Waste - District Excellence Award
Waste Management - Regional Representative Corporate
Controller's Roundtable

PROJECT RESPONSIBILITIES

- Review and input on all contract negotiations and implementation
- Supervision and control of all financial aspects of the project
- Supervision and control of all administrative aspects of the project
- Management of employment and employment practices of the project

Frontline Bioenergy

Frontline Bioenergy has been in business since 2005 and has multiple patented technologies used in its BING process. Frontline designed and built a 100 tpd gasifier that converted biomass into boiler fuel that “commercially demonstrated” the technology. This plant started operation in 2008 and was shut down in 2010 due to low natural gas prices, which made the plant uneconomical to operate.

Frontline has currently designed gasification systems for three different projects. One of these projects will convert 850 dry tons-per-day of forest residues into diesel and jet fuel. Another project will convert 350 dry tons-per-day of forest residues into renewable natural gas. A third project will convert 1,200 tons per day of agricultural residue into renewable natural gas. All three of these projects are in the engineering design phase with the first two projects expected to achieve commercial operations in 2024 and the third project expected to achieve commercial operations in 2025. Frontline has a fully integrated pilot plant at its headquarters in Nevada, IA for conversion of feedstock into RNG.





Jerod Smeenck, *Frontline Chief Executive Officer and Founder*
25 years gasification experience as engineer and research scientist at Iowa State University's Center for Sustainable Environmental Technologies

Co-founder of Carbon Energy Technology, Inc., which consulted with companies interested in renewable energy

Co-inventor of TarFreeGas® and PMFreeGas®
B.S. Mechanical Engineering, Dordt College
M.S. Mechanical Engineering, Iowa State University



T.J. Paskach, *Director of Technology*
25 years in the energy industry including UOP, a Honeywell company, and Frontline

8 years experience as CEO of liquid nitrogen ice cream technology company

Co-inventor of TarFreeGas® and PMFreeGas®

Ph.D. Chemical Engineering, Iowa State University
Professor of Practice, Chemical Process and Plant Design, Iowa State University



Arlon Binning, *Director of Operations*

42 year career in maintenance management and plant startups at Midwest ethanol plants; project management and electrical engineering at Ames Municipal Utilities.

Expert in structural design, mechanical design, and operation of materials handling equipment



Vianney Valès, *Frontline Chairman of the Board*

29 years of experience as executive in oil & gas and developer and CEO of innovative ventures in renewable and new energies

Leading roles at GalpEnergia, Shell
CEO and Co-founder of Biovegetal, SCGE, Juniper GTL

B.S. Chemical Engineering & Econometrics from École Polytechnique (X), France
M.S. Energy Management and Policy from the University of Pennsylvania

DESIRED BUSINESS RELATIONSHIP AND ASSOCIATED ECONOMICS WITH THE COUNTY

Our hope is to establish a business relationship with Fairfax County that provides the greatest performance for landfill diversion, carbon reduction, and economic development at the lowest overall cost to the residents. In achieving this result, the greatest economy of scale will be gained by the flow control of all waste in the County such that all waste is directed to the MWPF. Government can flow control waste to a government owned facility. It cannot flow control waste to a privately owned facility. The case of *United Haulers vs Onieda-Herkimer Solid Waste Authority* illustrates this point whereby the US Supreme Court stated, “*Government entities are not the same as private businesses and laws favoring local government while treating all private entities alike are not discriminatory under the Commerce Clause.*” Preserving the County’s right to invoke flow control is essential to assure the long-term delivery of waste for the life of the project. The right of flow control is necessary for the County to realize its climate change and economic development goals. Further, the ability to acquire private financing for our offtake manufacturers, and for Envisions’ mixed waste processing equipment, should the County prefer that we maintain ownership of the equipment, is tied to the County’s ability to guarantee the delivery of its waste at a contracted price.

Ownership of the MWPF by the County offers advantages including the ability to legally preserve the right to invoke flow control, lowest cost of funds, tax exempt status, and certain savings (i.e yellow iron) for pre-negotiated government procurement. Therefore, we believe a design, build, operate contract for the MWPF will offer the greatest value to the public served. Naturally, all the offtake manufacturing infrastructure will be privately financed. If the County so desires, Envision can own and finance the MWPF equipment. Details of the terms of such financing can be discussed should the County wish to pursue this option.

We recognize the County cannot assure an exact waste volume. What the County can do is to guarantee waste flow control directing all its waste to the Envision Team’s MWPF. The County estimates its MSW as approximately 650,000 tpy. The County also has organic waste and green waste, which are not included in the 650,000 tons but could be added.

In addition to receiving the County’s waste, the Envision team looks for an initial term of 25 years. The term length is required to assure private investment by our strategic offtake manufacturers. While shorter initial terms such as 20 years could be considered, it will result in a higher cost as the investment in buildings and equipment by our offtake manufacturers and for the MWPF will then be amortized over a shorter period of time and lesser volumes of materials.

The County, at its sole discretion, could consider providing land for the offsite organics drying, processing, and gasification to RNG. Land cost will be factored into the value the offtake manufacturers can pay for our recovered materials. Therefore, the higher the land cost, the lower the price will be for our recovered materials and the lower the land cost, the higher the price will be for our recovered materials. Since tip fee is a combination of the cost to process waste and the revenue received for the sale of recovered materials, a lower land cost will result in a lower tip fee, the benefit of which will inure to the County. Each of our offtake manufacturers will pay for their own manufacturing facilities and will look to the County for assistance and support in obtaining grant funding and financial incentives from the State.

Frontline Bioenergy has expressed an interest in purchasing landfill gas generated by the County’s landfill. More information is required from the County as to the landfill gas system and the quantity and quality of the landfill gas available both now and in the future.

II. ENVIRONMENTAL STEWARDSHIP AND SUSTAINABILITY

IDENTIFICATION OF ENVIRONMENTAL BENEFITS AND ENVIRONMENTALLY SUSTAINABLE ELEMENTS OF THE PROPOSAL

ENVIRONMENTAL IMPACT

The Envision Team's proposal has a net positive environmental impact as compared to the current solid waste management program in Fairfax County, Va. Meaningful positive environmental benefits will stem from lowering carbon emissions, significantly reducing waste sent to the landfill, and creating a circular green economy. The following are some examples of how we will lower the City's carbon emissions:



Greenhouse Gas Reduction Through Landfill Diversion

MSW is a large contributor to Greenhouse Gas. A 2019 article in Chemical & Engineering News, states “Landfills are Super Emitters of methane in California. A small number of methane emitters generate a disproportionate amount of California’s methane emissions and landfills are the biggest culprit, according to a study examining greenhouse gas emissions in the State”.

<https://cen.acs.org/environment/greenhouse-gases/Roughly-50-sites-generate-one-third-of-California-methane-emissions/97/web/2019/11#:~:text=November%2012%2C%202019&text=Landfills%20are%20%22super%20emitters%22%20of,gas%20emissions%20in%20the%20state>

One cannot over-emphasize the importance of achieving a high degree of landfill diversion and in particular, the organic fraction of MSW.

Organic waste decomposes, creating methane and CO₂. Zero Waste Europe estimates CO₂ generation rates as 0.7 to 1.7 tonnes of CO₂ for each Tonne of MSW. Frontline Bioenergy estimates CO₂ as 1 ton of CO₂ for each ton of MSW. According to an article entitled Methane Emissions from Landfills, from Columbia University in 2019, methane is estimated as 0.135 tons per each ton of MSW. But Methane is far more potent as a Greenhouse Gas than CO₂. According to the USEPA, “Methane is more than 25 times as potent as carbon dioxide at trapping heat in the atmosphere.”

<https://www.epa.gov/gmi/importance-methane#:~:text=Methane%20is%20more%20than%2025,due%20to%20human%2Drelated%20activities>

Therefore, each ton of MSW yields 3.375 CO₂ equivalent tons (0.135 x 25 = 3.375 tons). As such, the combined methane and CO₂ produced by each ton of MSW yields about 4.375 tons of combined CO₂ equivalent emissions. The Envision MWPF is designed to extract organics, dry them, and deliver the dried product to the Frontline Bioenergy Gasifier to be transformed into renewable natural gas (RNG). Absent a recent waste characterization study for Fairfax, Virginia, we used the City of Tucson’s waste characterization study which shows an organic waste content of 59% of the estimated 750,000 tpy of Fairfax County waste. That equates to 442,500 tpy x 4.375 resulting in a CO₂ reduction of about 1.94 million tons per year. Over a 25-year contract period, that equates to a CO₂ reduction of about 48.5 million tons! What this shows is that each passing day, Fairfax County’s organic waste produces about 5300 tons of CO₂ equivalent emissions. More reason to begin the construction of the Envision Team’s Circular Green Economy proposal immediately!



Production of Renewable Fuels

Frontline Bioenergy will produce renewable natural gas (RNG) by gasifying the organic portion of Fairfax County's waste. Frontline's RNG displaces fossil fuels used to create energy. Further, since the RNG is produced by gasifying the biogenic portion of the Fairfax County waste stream rather than burying the waste, it prevents the biologic decomposition of waste which would otherwise result in the creation and atmospheric release of methane and carbon dioxide, both of which represent harmful greenhouse gases.

Water Conservation

Water is a finite resource. Water conservation is essential to sustain current growth. Envision does not use process water in its sorting system. Moreover, we chose to gasify organics in part, because unlike composting, gasification does NOT require the addition of water. Composting is an exothermic biological reaction that creates heat which drives off water. The composting process typically requires about 40% moisture. As moisture is driven off, sourced water must be added. Composting operations can become large users of water. In contrast, the gasification process requires the organics to be dried first. As such, we do not require supplemental water.

The I-95 Landfill is a large user of water. Landfill haul roads need regular application of water for dust control. Side slopes need water to establish vegetation. And vegetation requires water to sustain growth. As the Envision Team's project reduces landfill volume by about 60%, the use of the landfill can be all but eliminated. This too postpones the need for the construction of new landfill cells. Cell construction requires significant earthmoving, which consumes significant diesel fuel and requires the application of water for dust control. And reducing the overall footprint of the landfill by achieving a high diversion rate lessens the overall size of the landfill, which in turn lessens the volume of water needed to sustain vegetation. These are all examples of how Envision's MWPF and circular green economy solution can significantly lessen the use of water at the landfill.

Landfill Gas Utilization

To improve carbon emission reduction even further, the Envision Team's offtake manufacturer, Frontline Bioenergy, seeks to utilize landfill gas available from the I-95 landfill.

LEED Certified MWPF Building

Envision believes a project like the MWPF should lead by example. Working with AECOM, we have designed an attractive, yet purposeful building that will be LEED Certified. We also plan to use the roof area for solar electrical generation to supply a portion of the building's energy. Here is a rendering of the MWPF building:



We expect to host visitor groups from within the County, State, and around the globe who will come to see the green, circular economy created in Fairfax County, Va. It is therefore in our opinion, vital to illustrate our commitment to sustainability in construction.

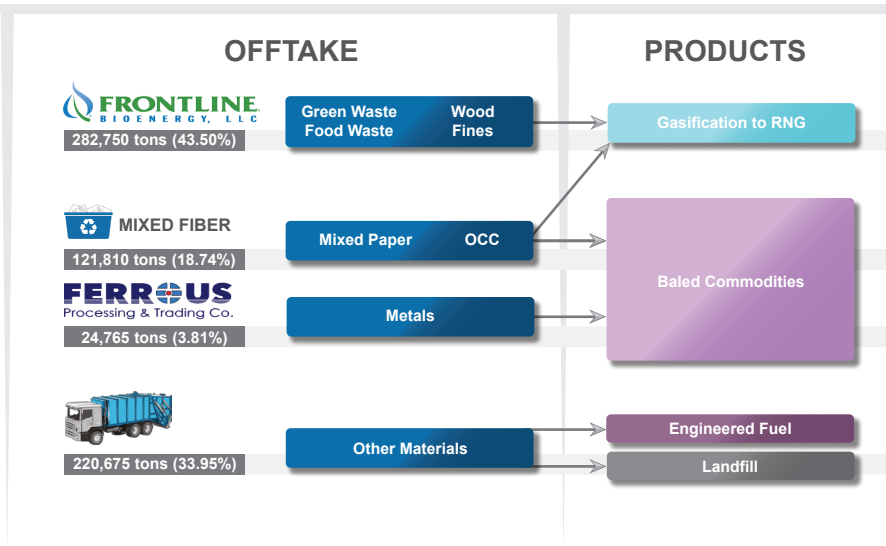
DEMONSTRATION OF ALIGNMENT WITH FAIRFAX COUNTY'S NEWLY ADOPTED ZERO WASTE PLAN

The Envision Team “is” fully aligned with Fairfax County’s newly adopted Zero Waste Plan. In fact, we will help the county exceed the Plan’s goals.

Our understanding is that Fairfax County seeks to achieve Zero Waste in County Government and schools by 2030. The County defines “Zero Waste” in their plan as follows:

“Zero Waste is a philosophy, commitment, and design principle seeking to minimize waste to close to nothing by adopting a holistic and climate-conscious approach to the vast flow of resources and waste that move through society”.

The Envision Team, through its MWPF and green circular economy, can help Fairfax County achieve “Zero Waste” by 2030 or before, for the entire County’s population and business community, not just schools and Government offices. The following diagram illustrates the relative percentage of each sorted component of the waste, the respective end use manufacturer, and the end products produced.



Actual numbers may vary as the County did not provide a detailed waste characterization report as part of the request for an unsolicited proposal.

Fairfax County can serve as a catalyst for the adoption of Zero Waste in the region:

It remains possible for Fairfax County to become a host to process additional select materials from outside the County boundaries – such as Washington DC. Our Country’s elected officials speak of a “Green New Deal” and stress the importance of Climate Change. Fairfax County and the Envision Team can provide an opportunity for Washington DC to achieve Zero Waste too.

III. ECONOMIC IMPACT AND SUSTAINABILITY, AND REVENUE GENERATION TO THE COUNTY

Maximize revenue to the County through shared revenue agreements, commission payments, job creation, long term ground lease, and/or other financial arrangements.

DIRECT INVESTMENT AND JOB CREATION

The Envision Team combines for unprecedented economic development through its solid waste to green circular economy solution for Fairfax County, Virginia. **Our Team plans a combined capital expenditure of approximately \$580 million dollars along with the creation of approximately 270 skilled, permanent jobs plus temporary construction jobs.** Since our Team's plan is to locate all infrastructure on the property surrounding the I-95 Landfill as well as a land parcel inside the County but not on the landfill property, significant economic benefit and tax revenue should inure directly to the County. A breakdown of the capital expenditure and permanent job creation follows in Section IV.

GROWTH THROUGH ACQUISITION OF ADDITIONAL FEEDSTOCK, GENERATION OF HOST COMMUNITY FEES

The economic development of the green circular economy created by the Envision Team can be expanded by the acquisition of additional feedstock. We believe the Fairfax County, Va. project will become a shining example of circularity, sustainability, and carbon reduction state-wide as well as nationally. Our national government believes in Climate Action, yet they lack a plan to transform the Beltway's waste into finished products to reduce the carbon footprint in Washington, DC. The District of Columbia seeks to achieve 80% diversion by 2032. The District of Columbia produces and transfers about 200,000 tons per year of solid waste per year excluding recyclables and organic waste. We believe the announcement of a contract with the Envision Team and Fairfax County, Va. can provide the stimulus for Washington DC and others to follow and provide their organic waste and select waste volumes to our project, which in turn will assure they meet and exceed their diversion goals ahead of schedule. Importing waste from cities outside the County provides more feedstock for our end use manufacturers. And as long-term feedstocks can be added, our end use manufacturers can expand their plants which will add to their respective capital investments and jobs created.

The Envision Team believes that a "host community fee" can be levied per ton for solid waste imported from outside Fairfax County to be processed at the proposed Fairfax County/Envision Team MWPF. Incoming waste vehicles will be required to show their origin and if that origin is outside the County, the scale software will automatically calculate the host community fee, like a tax. Host community fees will be collected by Envision and sent to the County each month. Naturally, Fairfax County would also enjoy the added benefit of the increase in jobs and capital investment by our offtake partners as they upscale their plants to allow for greater production of finished materials.

It also remains possible that the District of Columbia may be interested in forming an IGA with Fairfax County for the proposed Envision Team MWPF to circular green economy solution. With an IGA in place, it is possible that the District of Columbia could provide a capital contribution for the necessary infrastructure.



Sale or Long-Term Land Lease of Land to the Offtake Manufacturers

The Envision Team looks to build their organics drying, processing, and gasification facility on land outside the I-95 landfill. For financing purposes, Envision and Frontline Bioenergy will wish to purchase the land or structure a very long term (99 year) land lease. Should the County have land that supports the beneficiation and gasification of the County's organic waste, the County could consider the sale or lease of the land, which can provide additional income to the County.

Landfill Cell Construction Cost Savings and Post-Closure Savings

Once the Envision Teams' solution is operational, landfill diversion of 60% can be realized. This means that new landfill cell construction can be postponed. It's common for landfills to experience significant settlement. When coupled with dynamic compaction from surge loading with soil stockpiles, settlement of 30 feet or more can be realized. Therefore, the landfill diversion can allow the landfill to settle, thus creating significant "free" airspace to be used later.

Savings can also be gained through postponing landfill closure and post-closure. By achieving 60% diversion, the County's future outlays for closure and post-closure fund can be delayed almost indefinitely depending on the remaining airspace and compaction as discussed above. "Kicking the can down the road" for these expenditures can have a significant impact on future budgeting for the County.

Commodity Revenue Sharing

The Envision Team is unique as we have offtake contracts for virtually all our captured recyclables for the full length of our contract term with our strategic offtake manufacturers. Our offtake contracts have fixed pricing terms. The good news is that we have essentially eliminated 100% of the commodity risk for the life of the project. This allows for stable and predictable budgeting for Fairfax County and likewise, it allows for stable and predictable pricing for our offtake manufacturers. Since our circular green economy eliminates the up and down spikes in the commodities market, it also eliminates the necessity for revenue sharing. More importantly however, it allows the Envision Team to offer low predictable pricing for mixed waste processing thru the entire contract term. So essentially, it is as if the County receives a perpetual discount on mixed waste processing.

De-Mystifying the “Revenue Share”

Having been in the mixed waste processing and single stream MRF business for several decades, Envision has a unique understanding of commodity revenue sharing and we can say, things are not what they may appear to be. As they say, there is no such thing as a “free lunch.”

Virtually all waste or recycling processors capture common materials such as paper, metals, and plastic beverage containers. They sort and bale these materials and sell them on the open market as commodities. Like all commodities, prices fluctuate, so MRF developers look to offload the project risk onto the customer (in this case, the County). They essentially overcharge for processing and then offer a commodity rebate over a preset commodity price. This has the effect of laying the commodity risk off to the County. If market prices go down, the processor is assured of their profit margin due to the inflated processing fee charged to the County. If prices go up, the processor has the double dip benefit of the higher commodity prices (less rebating a share of the increase to the County) as well as the inflated processing fee. Essentially, the processor has no risk because they are covered in both instances. The County however, pays the inflated processing cost even when markets are booming. This is why we say the processor has shifted the burden of risk onto the customer in this scenario. Furthermore, when the commodity market crashes, and commodities are well below the MRF operator’s base price, the MRF operator often cannot or will not absorb the loss and either goes out of business, begs to renegotiate the contract mid-term with the County, or simply does not renew the contract, leaving the County high and dry. I hope this helps explain the “dark art” of commodity revenue sharing as it is not intuitively what it may appear to be.

As an example of commodity value changes, Resource Recycling Magazine, September 13, 2022, stated *“The national average price for **corrugated containers (PS 11)** is down 32%, from an average \$114 per ton last month to a current average \$78 per ton. Meanwhile, **mixed paper (PS 54)** also took a dive, falling from \$44 per ton last month to \$18 per ton this month, or a drop of 59%. This compares with \$96 per ton this time last year. The national average price of **PET beverage bottles and jars** dropped again this month, by 27%. The price is now averaging 7.53 cents per pound, compared with 10.31 cents per pound this time last month. Some regions are still trading as high as 10.00 cents per pound, with most offering as low as 6.00 cents. PET was trading at 25.31 cents one year ago. Color HDPE has fallen even more dramatically and is now trading at 6.16 cents per pound. It was 11.88 cents this time last month, meaning it has fallen by 48% in just a month. **Color HDPE** averaged 58 cents one year ago. The latest numbers aren’t good by historical standards either. Over the past four years, bales of color HDPE have averaged 20.25 cents per pound, over three times the current price. On a percentage basis, the biggest fall in plastics pricing occurred with **polypropylene (PP)**, which is down a whopping 62%. This grade is now trading for about 6.16 cents per pound, down from 16.13 cents last month. PP was 32.91 cents one year ago”.*

This volatility in commodity prices illustrates the exact reason why Envision’s long-term offtake contracts would be of great value to the County.

In the Envision Team’s case, we eliminate our commodity risk from day one as we have offtake contracts for the life of the project with our offtake manufacturers. Our pricing is preset so there are no surprises on pricing or on commodity specifications. This provides for a stronger, stabilized business model, the value of which inures to the County.

DEMONSTRATE ECONOMIC FEASIBILITY FOR THE PROPOSED OPERATION, AND POTENTIAL ECONOMIC BENEFIT TO THE COUNTY

The quick answer to this question is – the Envision Team believes that our MWPF to circular green economy solution can achieve the County’s Zero Waste Goals at a nearly identical cost to the County’s current all-in programmatic costs for solid waste management.

Our Team has completed this economic exercise for other large, populous governmental jurisdictions and in each case, we were able to demonstrate a financial model illustrating our ability to achieve Net Zero waste without additional programmatic cost. In the case of Fairfax County, we simply lack the data from the County which is necessary to complete our financial model to provide such a demonstration at this time. However, we believe the elements are all in place for a similar outcome based on our experience.

Additionally, for this particular procurement, there simply is not a clear explanation of the question here. Is the question “*What is the cost per ton to achieve Zero Waste through mixed waste processing in Fairfax County?*” To play devil’s advocate, if one were to install no-cost reverse vending machines for aluminum cans in Fairfax County, such a program could show economic feasibility. The problem would be however, that a high value material such as aluminum cans helps to financially subsidize a comprehensive recycling/diversion program via commodity sales of aluminum. Although the aluminum can represents a very small percentage of the waste stream – a fraction of a single percent, it represents the highest per ton value of any recyclable material, hence a significant revenue. So, if the aluminum can were to be removed from the waste stream by a separate program, then the cost per ton or “tip fee” charged to process the remaining waste will become higher since the revenue from the aluminum can is gone.

The point here is that fractionalizing the processing of waste in our opinion, will inevitably lead to the highest cost per ton to achieve the County’s Zero Waste Goal. It will likely lead to higher combined processing fees and higher logistical costs. Plastics are in many cases, the second highest value per ton material in the waste stream. So, in the same way, if we were to design a mixed waste processing facility designed primarily to recover plastics, it too will lead to a higher overall cost per ton for the County to achieve its Zero Waste Goals.

Additionally, fractionalizing the waste stream is a huge detriment to the Climate Action Plan. The more a waste stream is fractionalized, the greater the number of curbside collections are required, which means multiple vehicles on the road and multiple processing efforts. The use of an all-in mixed waste processing option significantly increases the overall environmental effectiveness of the County’s solid waste program by eliminating the redundancy of additional curbside collections, which in turn, reduces carbon and GHG emissions to the greatest extent possible.

There are many variables that will determine the overall cost to achieve Zero Waste in Fairfax County. The Envision Team has asked some questions for which we still do not have the answers. So, absent the information required, and absent a view of the full cost for the County to achieve Zero Waste, we simply cannot commit to a set price per ton at this time for a mixed waste processing to green circular economy solution for Fairfax County. What we can tell you, is that when we’ve completed such a study for other similar sized local governments, we have found the all-in programmatic cost to achieve Zero Waste using our MWPF to circular green economy solution is nearly identical to the current all-in cost. So, in essence, we can achieve Zero Waste without additional cost. Therefore, the question begs, if the Envision Team can help Fairfax County achieve its Zero Waste goals now, as well as helping to meet the County’s Climate Action Plan, at a price that is programmatically cost neutral, then will the County consider this to be economically feasible? In the interest of the environment, the Envision Team sincerely hopes the answer is a resounding “yes!”



Identify any economic commitments or incentives that would be required from the County

The Envision Team does have some requirements to help make the financial feasibility of our MWPF to circular green economy solution work.

Flow Control of Waste

First and foremost, the Envision Team would require Fairfax County to commit to the legislative flow control of its waste to the MWPF. We do not require a minimum volume of waste, only the commitment that we will receive all the waste generated in the County. This includes residential and commercial waste, hauled by either the County or private haulers. Flow control of waste to a government owned facility is supported by the Supreme Court United Haulers vs Herkimer County decision.

Government Owned MWPF Land and Building

To achieve flow control, the County must own the land and building for the MWPF. The County can choose to own the equipment, allow the operator to own the equipment, or some combination of ownership. The County is non-taxable and can often realize GSA discounts on the purchase of equipment, thus there are cash savings for Fairfax County to own the equipment. By the same token, Envision can finance the equipment thus lowering project risk to the County.

Ability to Import Additional Waste for Processing

As stated earlier, the Envision Team's end-use manufacturers can expand their operations if there is more waste to process which in turn, creates more commodities for them to transform into finished materials. As such, the Envision Team requests permission from Fairfax County, allowing the Envision Team to import additional select waste. Envision is glad to negotiate and collect a host community fee per ton for out of county waste entering the MWPF.

Project Term

The Envision Team prefers a 25-year initial contract with options to extend for the acceptance and processing of Fairfax County's waste. This is necessary for our offtake manufacturers to amortize their investment into new, high tech manufacturing plants. However, our Team would be willing to consider a shorter contract period, sufficient to meet the Team's requirements.

IV. PUBLIC BENEFIT AND COMPATIBILITY

ECONOMIC DEVELOPMENT

Direct Investment and Job Creation

The Envision Team combines for unprecedented economic development through its solid waste to circular green economy solution for Fairfax County, Va. **Our Team plans a combined capital expenditure of approximately \$580 million dollars along with the creation of approximately 270 skilled, permanent jobs.** Since our Team's plan is to locate all infrastructure on property both on the I-95 Landfill and other land within the County, significant economic benefit should inure directly to the Fairfax County. A breakdown of the capital expenditure and permanent job creation is as follows:

Mixed Waste Processing Facility:

Envision Waste Services, LLC estimates a capital expenditure of approximately \$180 million for solid waste and organics processing equipment to meet the requirements of our strategic offtake manufacturers. Further, Envision plans to establish approximately 197 new, permanent, skilled jobs.

Gasification of Organics to Renewable Natural Gas Plant:

Frontline Bioenergy estimates a capital expenditure of approximately \$400 million dollars to construct the gasification plant to transform prepared organics into renewable natural gas or hydrogen. Further, Frontline Bioenergy plans to establish approximately 71 new, permanent, skilled jobs.

GROWTH THROUGH ACQUISITION OF ADDITIONAL FEEDSTOCK

The economic development of the green circular economy created by the Envision Team can be expanded by the acquisition of additional feedstock. We believe the Fairfax County, Va. project will become a shining example of circularity, sustainability, and carbon reduction state-wide. Our national government believes in Climate Action yet they lack a plan to transform the Beltway's waste into finished products to reduce the carbon footprint in Washington, DC. We believe the announcement of a contract with the Envision Team and Fairfax County, Va. can provide stimulus for Washington DC and others to follow and provide their waste volumes to our project. Select waste from additional cities can provide additional feedstock for the Frontline Bioenergy gasification plant. Although the financial viability of this project is not dependent on such growth, we believe that it is in the best interest of all those involved and more importantly the environment as a whole to expand this project to the greatest extent possible.

Last, we believe the real estate values in Fairfax County will increase as the County becomes one of the first Counties in the USA to achieve Net Zero Waste and Zero Carbon. The theme of "We Are Net Zero" will attract new residents and high-tech businesses to the area which in turn will increase demand for real estate. Increased demand generally creates a rise in property values. The increase in property values benefits existing residents and business owners and it creates added tax revenue for the County. And since the County is a large land holder, an increase in property value also increases the County's assets which in turn can help to improve the County's bond rating.

In conclusion, the success of our plan will become a driver for economic growth and increased value in Fairfax County, Va.



JOB TRAINING

Our team combines to add about 270 new skilled jobs to the area. That of course requires job training. Our Team looks to work with local colleges and universities to develop course work and training relevant to the various manufacturing, processing, management, and technical jobs required. We look forward to working with Fairfax County and local educational institutions to create the training necessary to fill our newly created positions.

IMPROVED QUALITY OF LIFE AND CIVIC PRIDE

All residents and all businesses in Fairfax County, Va. will experience a sense of improved quality of life and civic pride because of the public/private partnership created by this project. By virtue of directing all County waste to our MWPF and green circular economy manufacturing campus, everyone becomes a recycler to the highest level. Fairfax County will become one of the very first Counties in the USA to achieve Net Zero Waste and be well on their way to achieving Zero Carbon. Recognition of Fairfax County as a leader in Climate Action will create a tremendous sense of civic pride which can result in an improved quality of life for the County's residents and businesses. The benefits are immeasurable!

IDENTIFICATION OF ANY ADVERSE SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS OF THE PROJECT INCLUDING ANY MITIGATION STRATEGIES

The Envision Team does not see any relevant social, economic, or environmental impacts posed by this project which might offset the benefits derived thereof.

From a social standpoint, we only see a positive impact from the Envision Team's proposed project. We plan to include a large conference room at the MWPF, designed to host school groups, business groups, church groups, and public officials from around the globe. We believe it is vital for the community to understand that their waste is being recycled to the highest level possible. This helps to instill civic pride and transparency in how the Envision Team transforms the County's waste into finished products for use in commerce. We wish to be welcoming to the public because in the end, that is who we serve. We likewise seek to work in harmony with the County to disseminate clear and concise information to the public relative to the progress achieved by the MWPF and circular green economy.

From an economic standpoint, the existing Covanta WTE contract and facility as well as the economic impact from reducing reliance on the existing landfill will need to be taken into consideration. We will need a better understating of the contracts and economics of these operations relative to the County to be able to review and discuss mitigation strategies. Existing transfer stations will likely not be impacted. From an environmental standpoint, the Envision Team's proposed MWPF to circular green economy solution should provide a positive impact. Frontline Bioenergy serves as an example of circularity, as they plan to use their own producer gases to power their manufacturing plant. Therefore, except for initial startup, the Frontline Bioenergy facility is designed to operate entirely "off the grid"! The waste product emanating from their process is carbon, a material of beneficial use. The Frontline Bioenergy process captures CO₂. That enables the CO₂ to be available for geologic sequestration, if local suitable geology exists, or to potentially sequester the CO₂ into concrete such as new roads. Carbon capture and sequestration (CCS) could allow our Team to have a negative overall carbon footprint.



CONCLUSION

The Envision Team combines for economic development in Fairfax County, Va. of approximately \$580 million dollars of direct investment and the creation of about 270 new, skilled jobs. It is certainly fair to assume programmatic and peripheral growth of the project over the initial 25-year contract period. If we accept an estimated five-time economic multiplier for peripheral growth, the overall economic impact for Fairfax County, Va. could top \$2.8 billion dollars or more over the contract period. It's simply amazing to see just how much economic growth that can be obtained from materials that are presently being burned or discarded and buried in the landfill! The project also lowers the County's carbon footprint and improves the environment. This makes for a project that is a true triple bottom line win for Fairfax County. The Envision Team's proposed public/private partnership creates significant local job training opportunities while simultaneously raising the bar for civic pride and improved quality of life. The social benefits are quite positive and there is no apparent negative environmental impact. The entire Envision Team remains excited for the opportunity to work with the County to "push the envelope" and realize the full development potential available. We believe the potential for a highly successful public/private partnership between the Envision Team and Fairfax County is quite compelling.

V. COMMUNITY OUTREACH AND EDUCATION

A community outreach strategy that includes collaboration and coordination with community members, neighboring properties, and adjacent jurisdictions

The Envision Team strongly believes in community outreach and education! We believe this process begins upon contract execution and continues thru the entire contract term. Collaboration among the County and the Envision Team is required to disseminate messaging to the public so they understand the mixed waste processing system, the end products diverted from waste, and the path towards achieving Zero Waste and Zero Carbon.

It is human nature to fear change. Although the public/private partnership developed brings significant value added to County residents and businesses, we can assume that some neighbors, area residents, and local businesses will immediately and falsely assume the worst! Therefore, it is vital to get out in front on the messaging to the public early in the process. We seek to instill confidence and transparency with the public regarding the project and the project Team. Most importantly, our messaging must be coordinated with local government so that we deliver a unified message.

As part of the design of the MWPF, we include a large conference room designed to host school groups, business groups, church groups, government officials, and more. We welcome the opportunity to “show” how we transform the County’s waste into finished products, how we reduce carbon emissions, how we reduce the County’s environmental footprint, and how we can help the public to become champions of the environment. We’re living in a world where everything must fit on your cellphone! Therefore, we look to work with the County to develop an app that will show environmental achievements accomplished thru our public/private partnership. The information should be updated regularly with the hope that residents will check their environmental app often.

Last, we look to work with local elementary schools to help augment their curriculum on the environment. In another County where we operated a MWPF, students between grades 1 thru 12 had two scheduled field trips to the MWPF. We feel it is vital to instill a sense of environmental responsibility to our youth because they represent the future of our leadership.

The Envision Team understands that community outreach and education must be a collaborative effort between the members of the Envision Team and local government. We endeavor to become a value-added public/private partner and seek to work in lockstep with local government to deliver timely, accurate, and transparent public information, and to interface with the County’s K-12 educational system.



VI. APPENDIX



SITE PLAN



ENVISION REFERENCE FACILITIES

Medina CPF



Medina Class 1 Compost Facility





In-Situ Soil Prior to Class 1 Compost Application



Class 1 Compost Application



Growth 1 year after Class 1 Compost Application

Grand Canyon National Park - single stream container

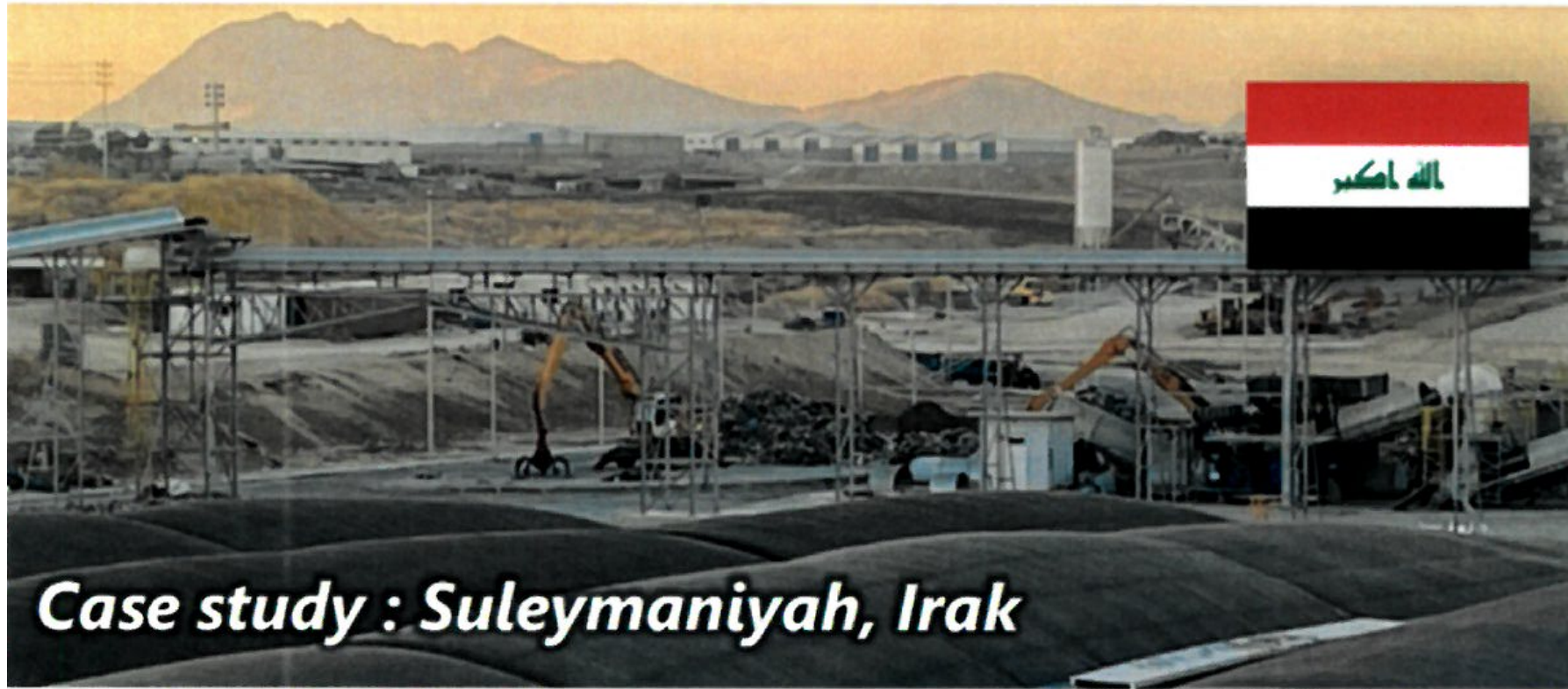


FSI Disposal



Landmark Disposal - Natural History Museum theme truck

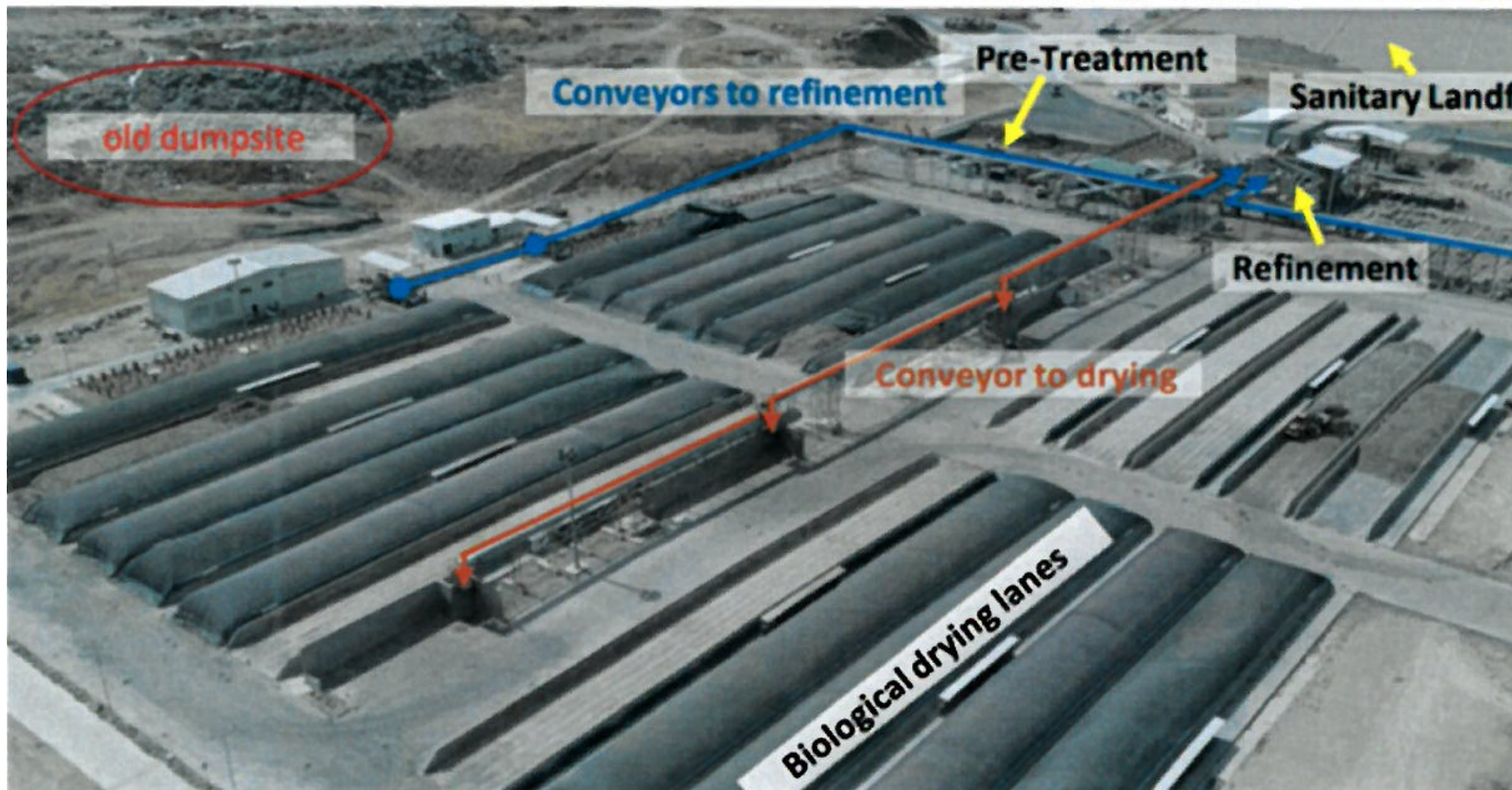




Mechanical pre-treatment

Biological drying (20 days)

Refinement (post-treatment)



Ecocem today is a 100% Faruk Group subsidiary

- BOO of MBT facility MSW to RDF
- get paid for the raw material MSW (tipping fee)

Gasin Cement Company is a 100% Faruk Group subsidiary

- Uses the RDF for pre-calciner feeding
- Reduces dependency on fossil fuel and world market price fluctuations

The Project

Biomass into Natural Gas

San Joaquin Renewables LLC (SJR) will build, own, and operate a facility in McFarland, California, that will convert agricultural waste biomass into about 80 thousand gasoline gallon-equivalents of natural gas (RNG) per day. The RNG will be transported by the SoCalGas pipelines to be used as vehicle fuel throughout California. Feedstock used in the plant will consist of agricultural wood waste, pistachio shells, and almond shells. The project is expected to be complete 18 months after construction begins.

Every day, SJR will turn over **1,000 TONS** of biomass into over **80 THOUSAND** gasoline-gallon equivalents of fuel.

The Process

Processing equipment at the plant will use [Frontline BioEnergy's](#) technologies to convert the orchard waste into RNG.



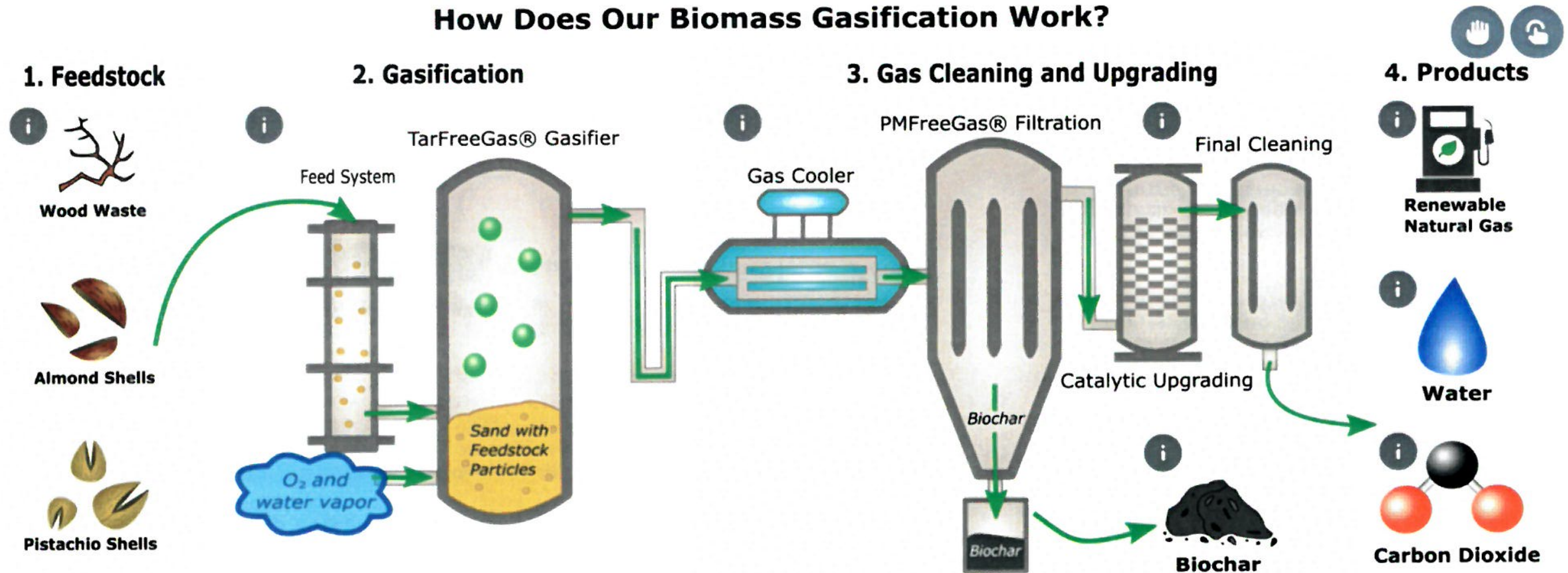
"Despite significant efforts, the South Coast and San Joaquin air basins still experience some of the worst air quality in the nation."

—Alexis Strauss, Former EPA 9 Administrator

"San Joaquin Renewables has the best approach I've seen for converting Setton Farms' pistachio shells into a valuable product."

—Jeff Gibbons, Grower Relations Manager

How Does Our Biomass Gasification Work?



The gasification process will produce RNG and several coproducts including biochar, argon and liquid nitrogen, and heat.

- **Biochar:** The plant will produce biochar, which will be sold as an ag lime substitute, fertilizer, or fertilizer ingredient that improves water and nutrient retention for enhanced crop growth.
- **Argon and Liquid Nitrogen:** Additional products include chemicals like Argon and Liquid Nitrogen, which can be sold for industrial use.
- **Heat:** Finally, waste process heat will be used to generate steam and electricity to reduce the plant's utility usage.

Environmental Impact

The plant is expected to have minimal emissions and to greatly reduce emissions from transportation and the pile burning of orchards.

The Plant: Carbon dioxide produced by the plant will be stored deep underground in an [EPA class VI sequestration well](#). This well will be drilled through multiple rock formations that trap the carbon dioxide and prevent greenhouse gas emissions.

The plant will also dramatically reduce emissions when compared to pile burning as shown by the table below.

Pile burning emissions estimates			SJR maximum emissions estimates	
	lb/ton dry biomass	ton/yr	ton/yr	min % reduction from pile burning
Particulates	10.5	748	10	99%
NOx	3.9	280	10	96%
CO	132.6	9,410	100	99%
VOCs	3.0	210	10	95%

The Fuel: The RNG produced is considered a renewable cellulosic biofuel since it is produced from woody biomass. Since the gas is renewable and used for transportation, San Joaquin Renewables will participate in both the US EPA's [Renewable Fuel Standard](#) and [California's Low Carbon Fuel Standard](#).

Diesel tailpipe emissions estimates			CNG tailpipe emissions estimates		
	lb/truck-yr	lb/yr	lb/truck-yr	lb/yr	min % reduction from diesel
Particulates	50.1	70,655	0.5	705	99%
NOx	3,751.0	5,288,910	375	528,891	90%
CO	3,205.4	4,519,595	160	225,980	95%
VOCs	96.8	136,528	24	34,132	75%

Elimination of Burning: Since the plant utilizes orchard waste, farmers have an opportunity to get rid of their waste that is more convenient and profitable than pile burning. About 70% of the project's feedstock would have been burned.

Greenhouse Gas Reduction: With the use of a carbon sequestration well, the SJR project will be carbon negative. According to the EPA's Renewable Fuel Standard acceptance [letter](#), the San Joaquin Renewables project reduces greenhouse gas emissions by 96% relative to baseline diesel emissions. This means that the more our natural gas is consumed instead of diesel, the less greenhouse gases reach the atmosphere.

Economic Impact

The plant will normally operate 24 hours per day, 7 days per week, except for planned maintenance, outages, and any unplanned shutdowns. The plant will create 45-50 high-paying full-time jobs. Many of our employees will work normal business hours. Some maintenance and operations staff will work shifts to support around-the-clock operations. The renewable natural gas produced here in California will displace out-of-state sourced fuels. Both the fuel and jobs produced will remain local.

Fact 3: Growing Demand for Cellulosic Biofuels

The Renewable Fuel Standard states that the US must have a certain amount of fuel come from renewable sources in order to have cleaner air and renewable energy. Each year, the standard has increased its requirement for cellulosic biofuel, which includes renewable natural gas. In 2019, the standard demanded 418 million gallons of cellulosic biofuel. **2020 increased the requirement to 590 million gallons of cellulosic biofuel**, a 41% year-over-year increase. The Renewable Fuel Standard and the California Low Carbon Fuel Standard both reward solutions that resolve the shortage of biofuels.

RFS Required Volumes of Cellulosic Biofuel by Year



Increasing demand of cellulosic biofuels according to the RFS annual standards.

According to the EPA, the San Joaquin Renewables project **qualifies** for the Renewable Fuel Standard. This is the first cellulosic biofuels project to be approved in five years. The natural gas produced is a cellulosic biofuel because the fuel is made from orchard wood and nut shells in the San Joaquin Valley, so SJR's natural gas production will help meet the growing demand for cellulosic biofuels.



FERROUS

Processing & Trading Co.



Scrap Recycling Management Services

Experience the “FPT Difference”

ENVISION
WASTE SERVICES

FPT OVERVIEW

FERROUS
Processing & Trading Co.

FPT is one of the largest metals recycling & trading companies in North America with annual revenues over \$1 billion USD and metallic sales exceeding 3 million tons per year.

- Headquartered in Detroit, MI
- 25 locations throughout North America.
- Global metallic sales
- Independent, non-affiliated scrap sales allow for revenue optimization for our customers

FPT provides scrap metal recycling programs and services to over 1000 individual industrial customers including OEM's (Ford, FCA, GM, and Nissan), Tiered suppliers, regional/local scrap dealers & organizations.

- Ford: handle 80% of US and Canada scrap producing locations
- FCA: handle 5 plants in US and Canada
- GM: handle 5 plants in United States
- Nissan: handle 100% of North American operations

FPT has worked successfully with Envision – providing scrap metal recycling for over 2 decades

ENVISION
WASTE SERVICES