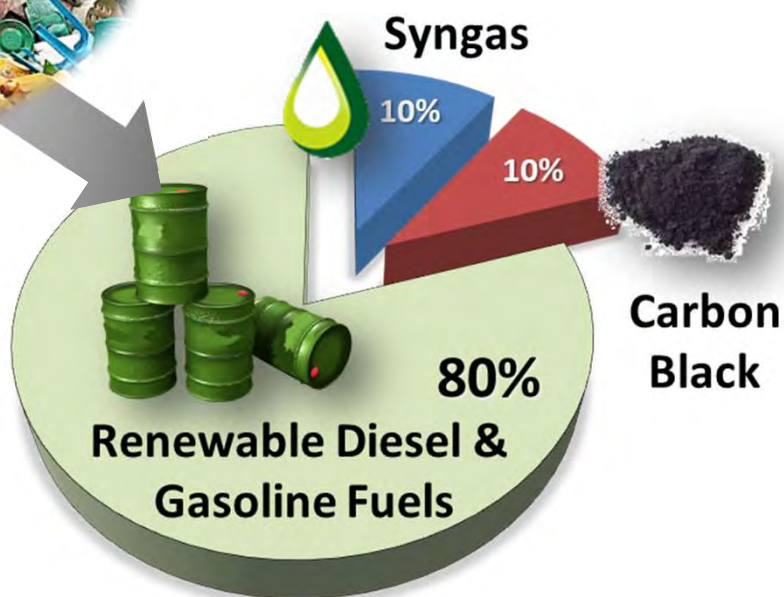




Plastics-to-Fuel Program



December 2019

Types of Plastics & Usage

1. Polyethylene (PE) is the most common plastic in a wide variety of products.

- **Low-Density Polyethylene (LDPE):** shopping bags, plastic bags, clear-food containers, disposable packaging, etc.
- **Medium-Density Polyethylene (MDPE):** gas pipes, shrink film, carrier bags, screw closures, etc.
- **High-Density Polyethylene (HDPE):** plastic bottles, piping for water and sewer, snowboards, boats, and folding chairs.
- **Ultra High Molecular Weight Polyethylene (UHMWPE):** military body armor, hydraulic seals and bearings, biomaterial for hip, knee, and spine implants, and artificial ice-skating rinks.

2. Polypropylene (PP) is the world's second-most widely produced synthetic plastic and one of the most flexible thermoplastics on the planet. Although PP is stronger than PE, it still retains flexibility. It will not crack under repeated stress. Durable, flexible, heat resistant, acid resistance, and cheap, polypropylene sheets used in laboratory equipment, automotive parts, medical devices, and food containers.

3. Polyvinyl Chloride (PVC) is the third-most produced rigid or flexible synthetic plastic polymer. PVC is well-known for its ability to blend with other materials. For example, expanded PVC sheets are a foamed polyvinyl chloride material that is ideal products like kiosks, store displays, and exhibits. The rigid form of PVC is commonly in construction materials, doors, windows, bottles, non-food packaging, and more. With the addition of plasticizers such as phthalates, the softer and more flexible form of PVC is in plumbing products, electrical cable insulation, clothing, medical tubing, and other similar products.

4. Polyethylene Terephthalate (PETE or PET) is the fourth-most produced synthetic plastic. Polyethylene Terephthalate has excellent chemical resistance to organic materials and water and is easily recyclable. It is practically shatterproof and possesses an impressive high strength to weight ratio. This plastic material is in fibers for clothing, containers for foods and liquid, glass fiber for engineering resins, carbon nanotubes, and many other products.

5. Polymethyl Methacrylate (Acrylic or PMMA) is a transparent thermoplastic used as a lightweight, shatter-resistant alternative to glass, used in sheet form in products such as acrylic mirrors and acrylic plexiglass.

6. Polycarbonate (PC) is an excellent engineering plastic that is as clear as glass and two hundred and fifty times stronger used in a wide variety of products like greenhouses, DVDs, sunglasses, police riot gear, and more.

7. Acrylonitrile-Butadiene-Styrene (ABS) is created by polymerizing styrene and acrylonitrile in the presence of polybutadiene manufactured in a range of thicknesses from 200 microns to 5mm with a maximum width of 1600mm. ABS is used in the automotive and refrigeration industries but is also in products such as boxes, gauges, protective headgear, luggage, and children's toys.

Technical & Price Proposal for PLAS-DIESEL P-10 Plastic Waste to Fuel Oil System –Gary, IN Integrated Waste Management Facilities

Quotation Ref.: Q7118-ST-P10-GAR/IND



PLAS-DIESEL P-10 Plastic Waste to Fuel Oil System



Section I

PLAS-DIESEL P-10

Plastic Waste to Fuel Oil System

Introduction

Introduction of PLAS-DIESEL P-10 System

- A. PLAS-DIESEL P-10 is an innovative and leading marketing solution for recyclable and non-recyclable petrochemical products. We convert a wide range of plastic wastes into ready-to-use low sulfur fuel products such as light diesel fuel oil, kerosene, etc. This is the fourth generation automated system in our process, which is one of the most efficient series in the world.

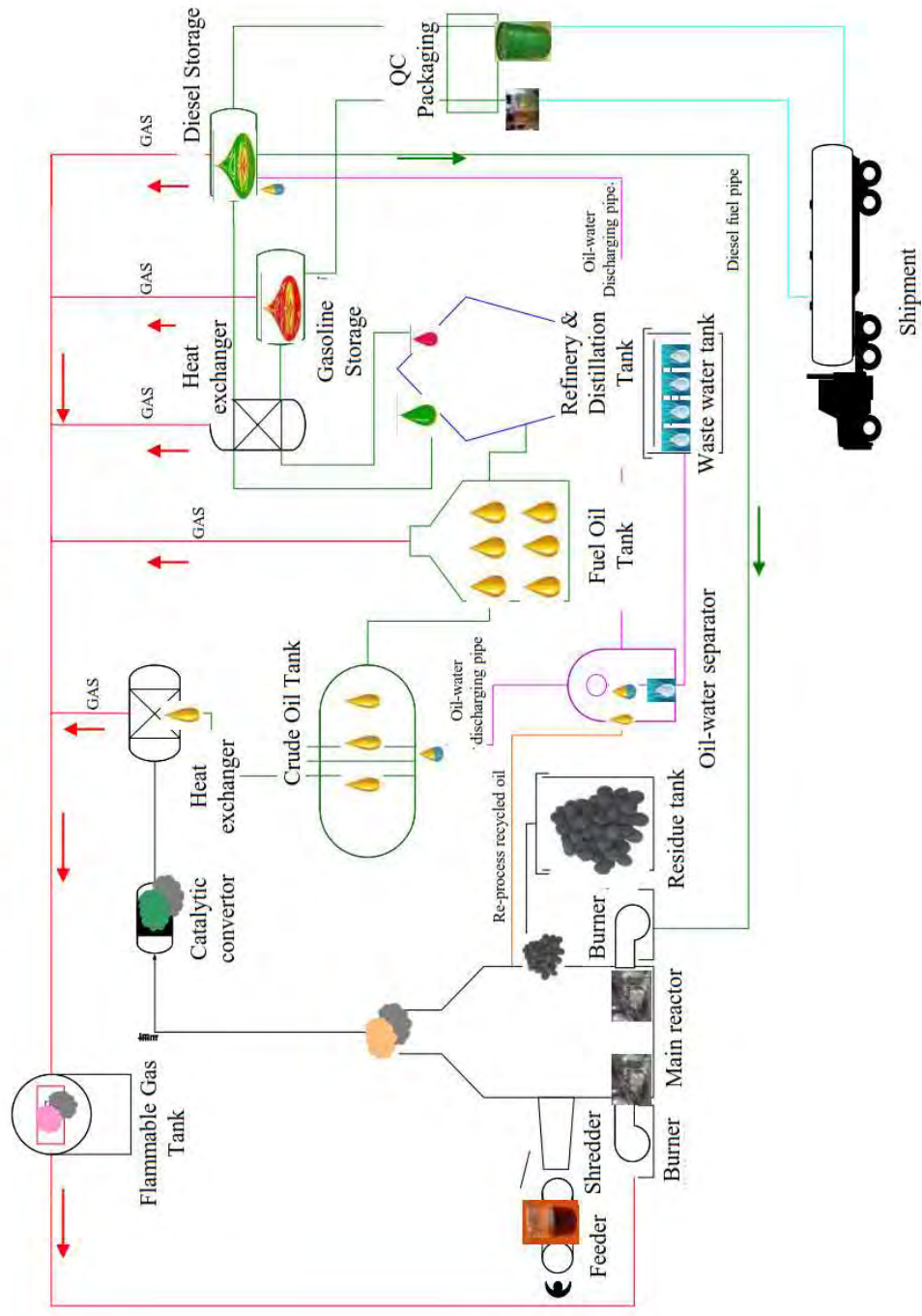
B. Working Principle of PLAS-DIESEL P-10 System

- (i) PLAS-DIESEL P-10 utilizes the **Pyrolysis** process, a thermal- chemical decomposition of organic material at elevated temperatures (peak at 300°C to 420°C) in an oxygen-free environment. It breaks down larger molecules of plastic wastes into smaller molecules called monomers, which will help lower the Pyrolytic temperatures in order to improve the production efficiency and stability, ensuring the highest fuel grade quality.
- (ii) Pyrolysis is the process of decomposing organic polymers and producing smaller hydrocarbons at elevated temperatures in the absence of oxygen. The temperature and catalyst have major effects on the reaction rate and quality of the final output.
- (iii) PLAS-DIESEL Technology transforms plastics through a catalytic cracking process. Using molecular reinforcement and recombination, petroleum hydrocarbons are produced, distilled, and refined into renewable oil. Plastic is pre-melted into liquid form and pyrolyzed at 300°C - 420°C for long-chain polymers to be decomposed into short-chain polymers. Water can be vaporized when other remaining compounds are carbonized. Renewable oils like diesel and gasoline, which constitute 70% of the total output, are separated at different distillation points. The rest of the output includes 10%-15% carbon black and 5%-10% syngas. To further maximize resources, syngas can be captured and utilized for pyrolysis.

- (iv) PLAS-DIESEL Technology produces low sulfur diesel with low pollution and zero emissions after combustion, in strict accordance with international standards.
- (v) In addition, PLAS-DIESEL renewable oil presents a higher heating value and is more environmental friendly. Due to the nature of PLAS-DIESEL feedstock, and raw plastic wastes, the cost factor is relatively low.
- (vi) Same reaction that happens inside the earth's core to form crude oil from organic matter.
- (vii) PLAS-DIESEL system can customize the process to meet the production demand and customer's product requirements.



PLAS-DIESEL P-10 Plastic Waste to Fuel Oil Process Flowchart



3D Illustration of PLAS-DIESEL P-10 Plastic Waste to Fuel Process Plant

NOTE: This drawing only shows the main processor equipment.

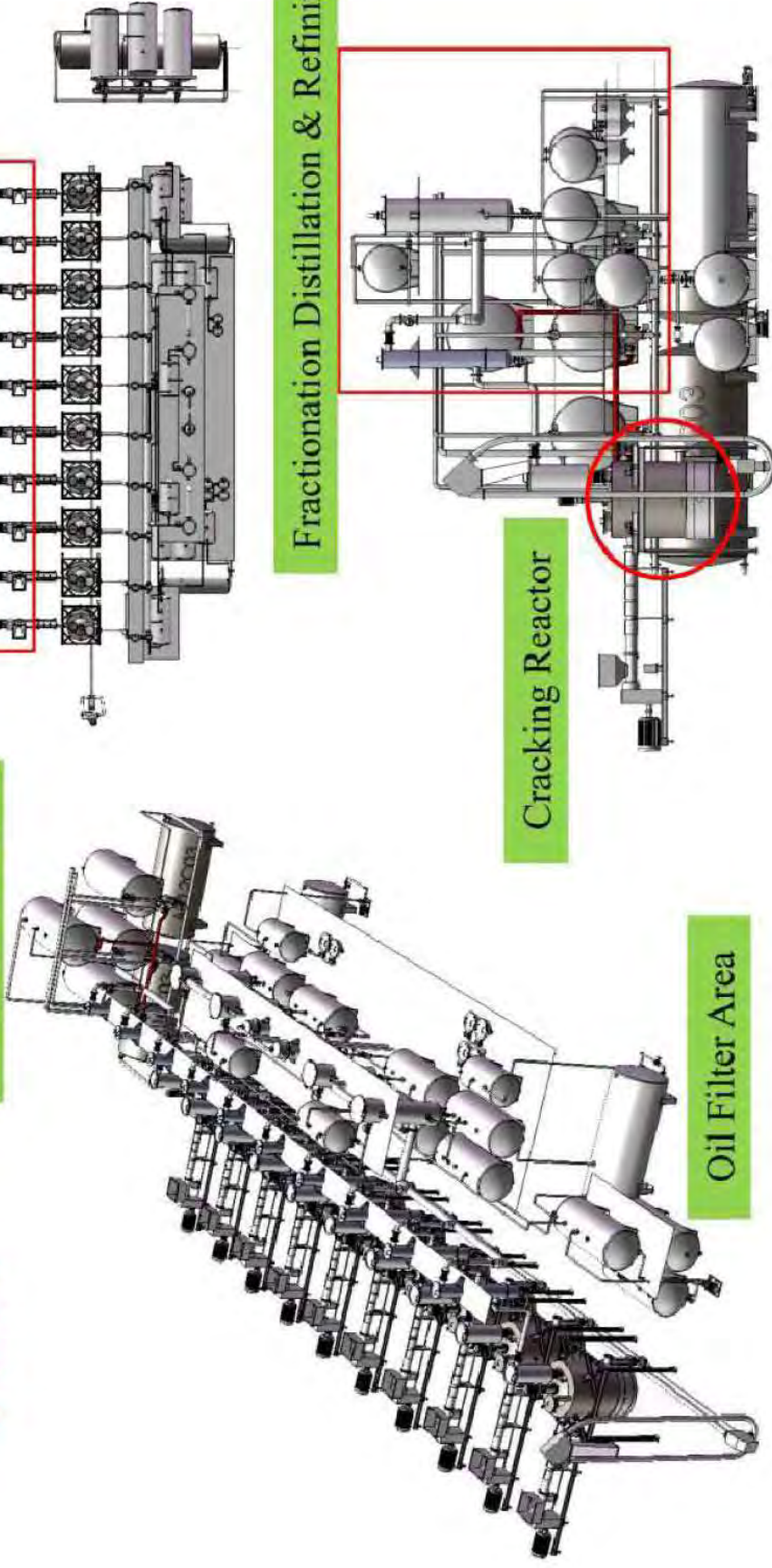
Recycled Gas Tank

Automatic Feeder

Fractionation Distillation & Refining

Cracking Reactor

Oil Filter Area



C. PLAS-DIESEL P-10 Systems Main Equipment

- (i) Automatic Feeder System
- (ii) Catalytic Pyrolysis (Cracking) System
- (iii) Exchanger Cooling Condenser System
- (iv) Fractionation Referring Receiver System
- (v) Heating and Electrical Control System

Note: For further details, please refer to attached process flow chart and schematic diagram.

D. Technological Breakthrough for the PLAS-DIESEL P-10 System

- Low reactive temperature
- Nano-processing
- Molecular recombination
- Specially designed Pyrolytic Catalyst
- The PLAS-DIESEL P-10 can handle mixed plastic wastes
- Guaranteed stability and safety
- Excellent performance & highest grade in fuel quality
- No toxic emissions. It's a self sustainable system after the first run



E. PLAS-DIESEL P-10 Commonly Used Plastic Input

Item	Plastic Bag (PE & PP)	Packing Foams (EPS)	Styrofoam (EPS)
Conversion Rate	60%~80%	60%~80%	60%~80%
			
Item	Consumer Goods Container (HDPE)	Packing Straps (PP)	Knitted Bag (PP)
Conversion Rate	60%~80%	60%~80%	60%~80%
			
Item	Bubble Wrap (LDPE)	Wire Skin (PE 、PP)	Fiber Scraps (Nylon)
Conversion Rate	60%~80%	60%~80%	60%~80%
			
Item	Industrial Mixed Plastics (PE, PS)	Recycled Paper with Film (PE)	And, More...
Conversion Rate	60%~80%	40%~60%	
			

F. Comparison of PLAS-DIESEL P-10 to all standard systems:

	PLAS-DIESEL P-10 System	Standard Systems
Processing Capacity	Able to process most plastic and other wastes. No categorization and cleaning needed	Unable to process #1-PET, #3-PVC, #6-PS, #7-Other, foam, nylon, etc.
Production efficiency	<ul style="list-style-type: none"> - High Temp automatic slagging system. - Multiple batch production - PLAS-DIESEL P-10 has high plastic mix ratio and highlights of diesel and kerosene within 4 hours 	No high temp slagging system and low production efficiency
Product quality	<ul style="list-style-type: none"> - Light low sulfur renewable oil (11ppm level). Low cost, high calorific value, low cost, high calorific value, low pollution and high stability. - The low sulfur diesel oil from PLAS-DIESEL P-10 can achieve higher combustion temperatures compared to diesel from standard U.S gas stations 	High sulfur fuel oil, heavy and crude oil
Conversion efficiency	70-80% (as light diesel oil)	<50% (High sulfur, heavy oil)
Mass production capability	<ul style="list-style-type: none"> - Large-scale production, parallel modular design, reduction of equipment establishment and - Multiple modules design provides the flexibility to adjust the catalyst in line with the different plastic blends to achieve maximum diesel output 	Mass production technology problems, proportional amplification equipment are not of the highest quality

G. Output Quality and Quantity of PLAS-DIESEL P-10 System

Table I

Properties	Unit	PLAS-DIESEL P-10 Diesel Output
Sulphur Content max.	ppm	11 - 100

Noteworthy: Sulphur content of 11 ppm of the diesel oil output can only be achieved for targeted pre-selected PP plastic wastes.

Table II - Net Heating Value

Properties	PLAS-DIESEL P-10	EXXON Mobil Synergy Diesel Oil	No.2 Diesel in USA	CPC Diesel in Taiwan
Net Heating Value	9,500 -11,200 K Cal/kg	10,953 K Cal/kg	10,125 K Cal/kg	9,600 K Cal/kg

Table III – Plastic Waste Handling Capacity and Output Quantity of a Standard PLAS-DIESEL P-10 (25 tons/day) line

Description/ Output	Max. Daily Output based on 24 hrs. operation	Max. Yearly Output based on 24 hrs. operation
Plastic Waste Handling Capacity	25 tons/day	9,125 tons/year
Ready to use low sulphur light diesel oil	12,000 L/day	4,380,000 L/year
Ready to use unleaded gasoline	3,000 L/day	1,095,000 L/year
Carbon Black	150 tons/month	1,800 tons/year

Noteworthy: The maximum yield output is based on washed P.P. or P.E. plastic waste at 24 HRs operation per day.

Table IV – Max. Daily Plastic Waste Handling Capacity of this Proposed Plant:

25 tons/day x 4 =	<u>100 tons/day</u>
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H. Calculation of the Estimated Area Requirement for each standard PLAS-DIESEL P-10 Subsystem

Estimated Required Area for Each PLAS-DIESEL P-10 Standard Subsystem

#	Sub-systems	M ²
1.	Core Process Equipment Assembly	1,250
2.	Heating System	160
3.	Finished Oil Warehousing	85
4.	Carbon Black Warehousing	80
5.	Gas Recycling	100
6.	Pretreatment	420
7.	Water and Gas Storage	80
8.	Waste Water Treatment	200
9.	PABX, Engineering Office, Store, Workshop, Canteen, Office, etc.	600
10.	Gensets	200
11.	Fuel Oil Tanks	300
12.	General Store	300
13.	Environmental Provisions (if any)	600
	Total:	4,375 sq.m.

I. Estimated Area Requirement for Gary, IN Integrated Waste Facility with four (4) standard PLAS-DIESEL P-10 Systems

Estimated Required Area for Four (4) PLAS-DIESEL P-10 Standard Subsystem will be approx. 181m x 146m as shown in the attached Drawing No. PL-Lay-001

J. Power Consumption Costs:

The electricity usage costs will be around US\$15 to US\$25 per ton of plastic waste, depending on the electricity billing rates in each country.

K. Carbon Trading

Each PLAS-DIESEL P-10 production line can handle 9,125 tons of plastic waste per year, which can reduce 36,287 tons of CO₂ emission annually. The average price of carbon trading at the ICE (Inter Continental Exchange) for the last few years is USD5.69/ton. One (1) PLAS-DIESEL P-10 production line can generate USD206,473 per year.

L. Plastic Waste Handling Capacity and Max. Output Quantity of the PLAS-DIESEL P-10 Plastics Waste to Fuel Plant which consists of Four (4) Nos. PLAS-DIESEL P-10 Standard Production Lines

Description/ Output	Max. Daily Output based on 24 hrs. operation	Max. Yearly Output based on 24 hrs. operation
Plastic Waste Handling Capacity	100 tons/day (25 x 4)	36,500 tons/year (100 x 365)
Ready to use low sulphur light diesel oil	48,000 L/day (12,000 x 4)	17.52M L/year (48,000 x 365)
Ready to use unleaded gasoline	12,000 L/day (3,000 x 4)	4.38M L/year (12,000 x 365)
Carbon Black	600 tons/month (150 x 4)	7,200 tons/year (600 x 12)

M. Social Costs and other Benefits Assessment

- (i) Four (4) PLAS-DIESEL P-10 production lines with two or three shifts system in Gary, IN can create over 230 jobs for veterans in Pennsylvania. Those jobs include plant operators, service technicians, supervisors, engineers, clerks, management personnel, drivers, etc.
- (ii) From the Government's stand point, not only does this project save the state money for the handling costs of plastic waste, it also ensures that the state can realize tax revenues from other sources.
- (iii) Main benefit of PLAS-DIESEL P-10 diesel or fuel oil is that it helps reduce polluted emissions from vehicles, ships, boilers or furnaces due to its low sulfur content, which is one of the major factors in global warming.
- (iv) This project will be designed with four (4) PLAS-DIESEL P-10 production lines that can handle 100 tons (25 tons/day x 4) of plastic waste daily i.e. 36,500 tons annually. Without such technological intervention, expanding landfills or waste collection areas will cause serious harm to humans, the environment, contaminate our lands, and poison our underground water.
- (v) Environment Protection
Each PLAS-DIESEL P-10 can handle 9,125 tons of plastic waste per year and reduce 36,287 tons of CO₂ emissions annually. Four (4) production lines can reduce 145,148 tons of CO₂ emissions per year. The average price of carbon trading at the ICE is about USD 5.69/ton. In summary, such a plant can generate approx. **USD 825,892 per year in carbon sales alone.**
- (vi) States across the U.S are dealing with the challenges of expanding land fills and are more than happy to donate recycled plastic waste and grant special funding for handling of such waste to off-takers.

N. Major Components and Equipment of the PLAS-DIESEL P-10 Plastic Waste to Fuel Oil System

Each PLAS-DIESEL P-10 consists of the following equipment and systems:

- (i) Complete PLAS-DIESEL P-10 Plastic Waste to Fuel Oil Process Plant which can convert plastic waste into fuel (Diesel + Gasoline) directly.

Major Equipment included in the PPS System:

- a. Automatic Feeder System
- b. Catalytic Pyrolysis (Cracking) System
- c. Exchanger Cooling Condenser System
- d. Fractionation Distillation & Refining System
- e. Heating and Electrical Control System
- f. PLC and associated Control System
- g. Waste Heat Recovery System
- h. Fuel Oil Storage System
- i. Oil Filtering System
- j. Recycle Gas Tanks
- k. Cracking Reactor
- l. Interconnecting pipework with associated valves and control equipment
- m. Steel Platforms

O. Business Objective in Gary, IN and other target U.S Counties

(i) Short term goals: (1 year)

- Establish a minimum of 2 - 3 production plants in Gary and other counties in Indiana within 2 years.
- Development of 5th Generation of PLAS-DIESEL P-10
- Enhance corporate values by upstream and peripheral integration through various resources.

(i) Mid-term goals: (2-4 years)

- Establish min. 10 - 15 production plants in Indiana and across other U.S States.
- Development of 6th Generation of PLAS-DIESEL P-10
- Development of more robust production lines.

(i) Long-term goals: (4-10 years)

- Establish a minimum 30 - 40 production plants across the U.S, Middle East, Continental Africa and the European Union.

P. Proposed Preliminary Plant Layout Plan

- (i) Please refer to the attached DRW No. PL-LAY-001.DWG which shows the preliminary architectural layout plan.
The total foot print will be 146 m. x 181 m.
= 26,426 m² (2.65Ha.)

(ii) Major Functional Areas

- Plant Hall A
- Pretreatment Area for Plant Hall A
- Plant Hall B
- Pre-treatment Area for Plant Hall B
- Offices
- Storage
- Heater Rooms
- Fuel Oil Tanks Area
- Solar Magnetic Electricity Generator System
- Gen-set Room

Q. Proposed Plant Layout Plan and Building Overview



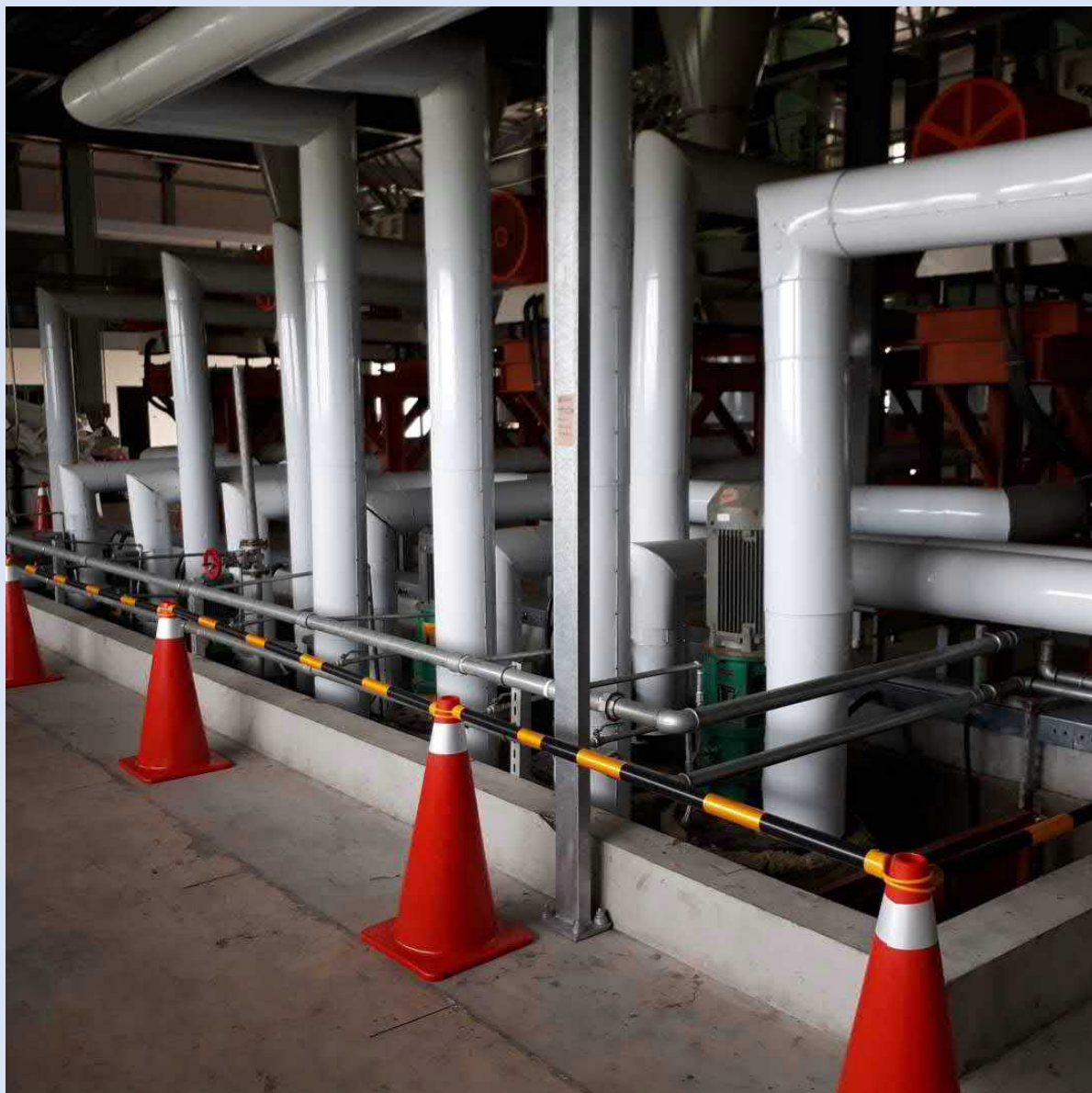
PLAS-DIESEL P-10 Production Line



PLAS-DIESEL P-10 Production Line



PLAS-DIESEL P-10 Production Line



PLAS-DIESEL P-10 Production Line



Waste Gas Recovery System



Centralized Fluid Heating System

R. Projected Revenues for the
Proposed PLAS-DIESEL P-10
Plastics Waste to Fuel Oil Plant for the
Gary, IN Integrated Waste Management Facility

R. Projected Revenues for the Proposed PLAS-DIESEL P-10 Plastic Waste to Fuel Oil Plant for the Gary, IN Integrated Waste Management Facility

In order to finalize the projected revenues of the above mentioned P-10 Plastics waste to fuel plant, we need to calculate the unit prices and factor in the assumptions. The following estimates and projections are subject to further verification and confirmation.

- (i) Diesel Oil Price – USD 0.36/L
- (ii) Gasoline Oil Price – USD 0.45/L
- (iii) Selling Price for the Carbon Black – USD 280/ton
- (iv) The Plastics Waste Handling Charges granted by the Gary Municipal Government for the handling of the Plastic Waste:
USD 80/ton

**R. Projected Revenues for the Proposed PLAS-DIESEL P-10
Plastic Waste to Fuel Oil Plant for the Gary, IN
Integrated Waste Management Facility**

Item. Ref	Works/Package Description	Projected Revenue Unit Price	Projected Quantity per Day	Projected Quantity per Year	Projected Revenue per Year (Total)	Actual Revenue/Year with 10% Deduction for Human Factors, M/C Downtime, etc. $e = 0.9 \times d$	Remarks
		a	b	$c = 365 \times b \text{ (ton)}$	$d = a \times c \text{ (USD)}$		
R1	Plastics Waste Handling Charges granted by Ft. Worth	USD 80 /ton	100 tons/day	36,500 tons/year	USD 2.92M	USD 2.63M	
R2	Light Diesel Oil Produced by the Plant	USD 0.36/L	48,000 L/day	17.5M L/year	USD 6.2 M	USD 5.62M	UP: USD 420/ton
R3	Gasoline Produced by the Plant	USD 0.45/L	12,000 L/day	4.4M L/year	USD 1.95 M	USD 1.76M	UP: USD 620/ton
R4	Selling of Carbon Black	USD 280/ton	600 ton/month	7,200 ton/year	USD 2.02M	USD 1.81M	
R5	Carbon Trading	USD 206,473 per line/year			USD 0.83M	USD 0.74M	
				Projected Revenue Total per Year:		USD 12.57M per year	

Noteworthy: These are conservative numbers. Projected Revenue is 20% less than Average. Must deduct the O&M and other Routine Costs from the Projected Revenue

Section II

PLAS-DIESEL P-10

Plastic Waste to Fuel Oil System

Price Proposal

**Project: Proposed PLAS-DIESEL P-10 Plastic Waste to Fuel Oil Plant
for the Gary, IN Integrated Waste Management Facility**

Date: Feb 24, 2020

Quotation No.: Q7118-ACE-OURSUNP10-GAR/IN

Item 1

Design, Supply and Install **Four (4) PLAS-DIESEL P-10 Plastic Waste to Fuel Oil Plant**. Each of the PLAS-DIESEL P-10 Process Plants will consist of 10 modules that work independently from each other.

The max. output and handling capacity of the Four (4) PLAS-DIESEL P-10 process plant are listed as below:

Description/ Output	Max. Daily Output based on 24 hrs. operation	Max. Yearly Output based on 24 hrs. operation
Plastic Waste Handling Capacity	100 tons/day (25 x 4)	36,500 tons/year (100 x 365)
Ready to use low sulphur light diesel oil	48,000 L/day (12,000 x 4)	17.52 M L/year (48,000 x 365)
Ready to use unleaded gasoline	12,000 L/day (3,000 x 4)	4.38 M L/year (12,000 x 365)
Carbon Black	225 tons/month (225 x 1)	2,700 tons/year (225 x 12)

@USD 9,500,000 x 4

USD 38,000,000

Each of the complete PLAS-DIESEL P-10 Plastic Waste to Fuel Oil process plants consist of the following major equipment/sub-systems listed below:

	Main Equipment	Qty.	Unit
(i)	Semi - Automatic Feeder	10	Unit
(ii)	Main Cracking Furnace	10	Unit
(iii)	Heating Equipment	1	Set
(iv)	Condenser	1	Set
(v)	Emission Recycling Equipment	1	Set
(vi)	High Temperature Tower	10	Unit
(vii)	Low Temperature Tower	10	Unit
(viii)	Catalytic Equipment	10	Unit
(ix)	Filtration Equipment	5	Unit
(x)	Carbon Residue Collector	1	Set
(xi)	EC Cabinet	10	Unit
(xii)	OP System/Monitoring Sys./Backup power	1	Set
(xiii)	Automatic Programming Software Design	1	Set

Item 2

Three (3) Complete sets of plastic waste Pre-treatment Equipment (manual type) which consists of water spray guns, washers, plastic waste shredding M/C, etc.

@ USD 125,333 x 3

USD 376,000

Item3

Design, supply and install four (4) complete fuel oil supply and storage systems which consist of the following equipment and sub-systems:

- (i) Diesel oil storage tanks
- (ii) Gasoline oil storage tanks)
- (iii) Fuel oil pumps and associated fuel oil pipework system.
- (iv) Control panel and associated electrical & control wiring works.

@ USD 180,000 x 4

USD 720,000

Item 4

Design, supply and install the complete Waste Recovery System for the heating process of plastic waste.

@ USD 302,000 x 4

USD 1,208,000

Item 5

Design, supply and install PLC control and SCADA systems for the monitoring and control of the entire production system

@ USD 75,900 x 4

USD 303,600

Item 6

Design, supply and install the Steel Platform and other associated steelworks for the Operation & Maintenance of the facility.

@ USD 102,000 x 4

USD 408,000

Item 7

Design, Supply and Install the following: **Services hook up installation. Works** from the services points provided within three (3) meters from the equipment:

- (i) Water Supply System;
- (ii) Electrical Supply System;
- (iii) Drainage Water System;
- (iv) Ventilation System

USD 5,000,000

Item 8

Hotels accommodation, air tickets, meal allowances for Engineering Staff, Supervisor and Construction Workers, etc.

USD 320,000

Item 9

Testing, Commissioning and Training of the operators and Off-taker staff.

USD 200,000

Item 10

Chemicals, Catalyst for trial runs and T&C

USD 400,000

Item 11

Ocean Freight, Shipment and Local Delivery Charges in Texas

USD 250,000

Item 12

One (1) year warranty costs.

USD 200,000

Contract Total: Items 1 to 12

USD 47,385,600

(USD 47.4M)

A. Third Party Provisions

- 1) Supply of electricity and water during the Construction, T&C and preliminary Operation phases.
- 2) Provisions of free temporary storage space if installation site is not ready.
- 3) Provision of sufficient Working Areas during the Construction and T&C period.
- 4) Provision of sufficient plastic waste approx. 100 – 120 tons/day for daily operation according to our required standards and requirements.
- 5) Provision of Site Security and relevant Protection System during the Construction, T&C and O&M period.
- 6) Provision of the following E&M service points located within three (3) meters from the equipment.
 - (i) Water Supply system;
 - (ii) Electrical Supply System;
 - (iii) Drainage Water System.
 - (iv) Ventilation System
- 7) Provision of sufficient land and areas for our system as shown in the DRW No.PL-LAY-001.DWG. All the ground surfaces shall be adequate for our specified finishing standards.

B. Third Party Labor

- 1) Undertake to guarantee fixed US Dollars shall be used as the currency in this Contract/Project and all other payments shall be in fixed US Dollars.
- 2) Provision of zoned and permitted real property for the process plant. All buildable ground shall be prepared with concrete foundation.
- 3) Customs clearance and local delivery of the equipment and installation material to job site.
- 4) Ensure all relevant costs related to Customs Clearance, Import Taxes, Profit Taxes, VAT, etc. will be exempted from this project.

- 5) Coordinate and apply for necessary permits and approval from the various Statutory Departments/Bodies in the state of Indiana.
- 6) To effectuate the contract, our company must receive the greenlight from the off-taker company specifying that we have the legal rights to build and that they are free to remit any funds from their bank accounts to our bank accounts outside the U.S. The U.S Government will not impose on our company and our shareholders, any taxes and duties for remitting funds out of the U.S.
- 7) Our company must be given written assurance from such off taker guaranteeing it will fully comply with local regulations and codes.
- 8) ~~A~~ Off-taker company must bear the costs to purchase an All Risk Insurance policy to cover Pre-Construction, Construction, Testing & Commissioning, Operation & Maintenance phases. They must;
- 9) Provide all necessary assistance and support to assist with insurance claims during all stages of work.
- 10) Provide all support and assistance to resolve disputes and problems (if any) during all phases of the project.
- 11) Provide all the necessary support and assistance for all local legal matters and documentation in Indiana.
- 12) Provide waste water treatment facilities at the construction site and P-10 Process Plant during operations.
- 13) Provide public Relations assistance in Indiana. (if necessary)
- 14) Help facilitate Renewable Energy installation including Solar PV, Wind Turbine, systems etc. (if necessary).
- 15) Provide main drainage connections and sump pit within the P-10 Plant housing Area. All the interconnecting drainage and pipeworks shall be outsourced.
- 16) Must provide required Fire Fighting and Security Systems in accordance with local regulations.
- 17) Must assist with local hiring of workers for the installation of Fuel Oil Tanks.
- 18) Must provide the required Air Conditioning for the office and Ventilation for the Processing Plant, Storage Rooms, Gensets Room, etc.
- 19) Must design and install external security boundary walls (min. 150mm thick, 2.5m high) with Security Barbed Wire around the entire wall (if necessary).
- 20) Provide S/I of Gensets (if necessary).
- 21) Must design and Build prefabricated steel Offices, Plant Rooms and Storage Rooms, etc.

C. **Terms and Conditions**

- a) Price as stated above is CIF to Port of Chicago excluding local delivery, customs clearance and import taxes in the state of Illinois.
- b) Delivery: Approx. 6 - 8 months upon order confirmation and receipt of down payment.
- c) Installation Period: Approx. 4 – 6 months after the equipment is delivered to job site. Other details, please refer to the attached preliminary Program of Works.
- d) Testing & Commissioning and Training: 2 months

CI. **Terms of Payment**

(i) For items 1 to 6

- 50% Downpayment payable within fourteen (14) days upon order confirmation and signing of the Contract;
- 25% Upon 50% completion of the Plastic Waste to Fuel Plant Equipment Fabrication in China. Joint inspection in China will be arranged to verify the actual percentage of completion.
- 25% Upon 100% completion of the Plastic Waste to Fuel Plant Equipment Fabrication. Joint inspection in China will be arranged to verify the actual percentage of completion. We will not effect the shipment unless we receive the final 25% payment.

(ii) For items 7 to 10

- 50% Downpayment payable within fourteen (14) days upon order confirmation and signing of the Contract;
- 50% By monthly interim payments based on the progress of work. The monthly Payments shall be settled within 15 days from the payment application date.

E. **Warranty Period**

One (1) year after T&C and hand-over of the plant to Client.

F. **Validity**: 4 months from this Quotation date.

G. **Projected Revenues for this PLAS-DIESEL P-10 Plant**

Please refer to Appendix A at P.8 & 9 of this Quotation.

Appendix A

Projected Revenues for the Proposed PLAS-DIESEL P-10 Plastics Waste to Fuel Oil Plant for the Gary, IN Integrated Waste Management Facility

Projected Revenues for the Proposed PLAS-DIESEL P-10
Plastics Waste to Fuel Oil Plant for the Gary, IN
Integrated Waste Management Facility

In order to calculate the projected revenues for the above mentioned P-10 Plastic waste to fuel plant, we need to consider the following unit prices and assumptions listed below, which are subject to further verification and confirmation.

- (i) Diesel Oil Price – USD 0.36/L
- (ii) Gasoline Oil Price – USD 0.45/L
- (iii) Selling Price for the Carbon Black – USD 280/ton
- (iv) The Plastic Waste Handling Charges granted by the state of Indiana - USD 80/ton

Projected Revenues for the Proposed PLAS-DIESEL P-10 Plastics Waste to Fuel Oil Plant for the Gary, IN Integrated Waste Management Facility							
Item Ref	Work/Package Description	Projected Revenue Unit Price	Projected Quantity per Day	Projected Quantity per Year	Projected Revenue per Year (Total)	Actual Revenue/Year with 10% Deduction for Human Factors, M/C Downtime, etc.	Remarks
		a	b	c = 365 x b (ton)	d = a x c (USD)	e = 0.9 x d	
R1	Plastic Waste Handling Charges granted by Ft. Worth municipality	USD 80 /ton	100 tons/day	36,500 tons/year	USD 2.92M	USD 2.63M	
R2	Light Diesel Oil Produced by the Plant	USD 0.36/L	48,000 L/day	17.5M L/year	USD 6.2 M	USD 5.62M	UP: USD 420/ton
R3	Gasoline Produced by the Plant	USD 0.45/L	12,000 L/day	4.4M L/year	USD 1.95 M	USD 1.76M	UP: USD 620/ton
R4	Selling of Carbon Black	USD 280/ton	600 tons/month	7,200 tons/year	USD 2.02M	USD 1.81M	
R5	Carbon Trading	USD 206,473 per line/year			USD 0.83M	USD 0.74M	
Projected Total revenue per Year:					USD 12.57M per year		
Noteworthy : Assumptions are approx. 20% below average earnings. We need to deduct the O&M and other Routine Costs from the Projected Revenue							

Appendix B

Pay Back Period for the Proposed PLAS-DIESEL P-10 Plastics Waste to Fuel Oil Plant for the Gary, IN Integrated Waste Management Facility

A.	<u>Initial Investment Cost Summary</u>	
A1.	Supply and install Four (4) Nos. PLAS-DIESEL P10 Plastic Waste to Fuel Process Plant (ACE Quotation No.: Q7118-ACE-OURSUNP10-Mid/PA)	USD 47.4 million
A2.	Gensets. (Estimation Only)	USD 820,000
A3.	Furniture and other Misc. Costs (Estimation Only)	USD 720,000
A4.	Misc Costs (Estimation Only)	USD 300,000
A.	Initial Investment Total (A1 to A4 Estimation only):	USD 49,225,600 (USD 49.2M)
B.	Projected Revenues estimated for the 4 Plants (Details, please refer to Appendix A above)	USD 12.57M/Year
C.	Payback Period = Initial Investment Total/Projected Revenue per Year = 49.2M/12.57M = 3.9 Years	

