Paterson Energy Pvt. Ltd.

Waste to Energy Solutions

Who are we ?

Background – Paterson Energy Pvt. Ltd

Formed in 2016

- Paterson Energy is a Waste to Energy Company, manufacturing plants for recycling plastic waste into quality Plastic Oil using a continuous type Thermochemical Depolymerisation Technology, with a processing capacity of 3TPD – 20TPD (Tons /Day).
- Paterson Energy Pvt. Ltd. is recognized as a startup by DIPP (Department of Industrial Policy & Promotion, Ministry of Commerce and Industry, Government of India).
- Promoted by Senior Professionals, with varied background, but united in their passion for a cleaner & greener future.

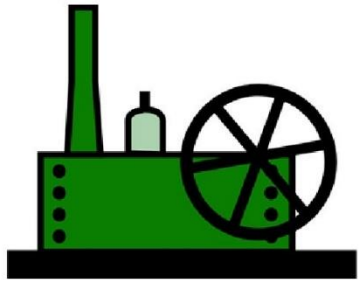
Our Vision

To Protect the environment by developing technologies and processes for the mitigation of inorganic waste, with specific focus on Plastics.

We Set-up Thermochemical Depolymerization Plants

Designing

Engineering



Manufacture

Installation

Testing

Commissioning

Trial Run

Hand Over

Business Model @ Paterson Energy

1. Paterson Energy has in-depth experience and expertise setting up plants that supply high performance continuous waste plastic to oil, Thermochemical Depolymerisation Plants

Plant
Standardised Waste Plastic Processing Capacity of 3TPD (Tons per day), 6TPD, 10TPD and 20TPD

Technology
Continuous type Thermochemical Depolymerisation technology for high efficiency and safety.

Quality
Advanced technology to manufacture high quality plastic oil without independent distillation unit.

Cost of Production
Production cost of less than ₹ 25 (USD 0.39) per litre of plastic oil.

Zero discharge & zero effluent plant.

2. We undertake Thermal Depolymerization Plant Projects on BOT basis.

Acceptable Plastic Feed Stocks

Process is designed to manage most plastic waste feedstock in single profitable process

2 HDPE

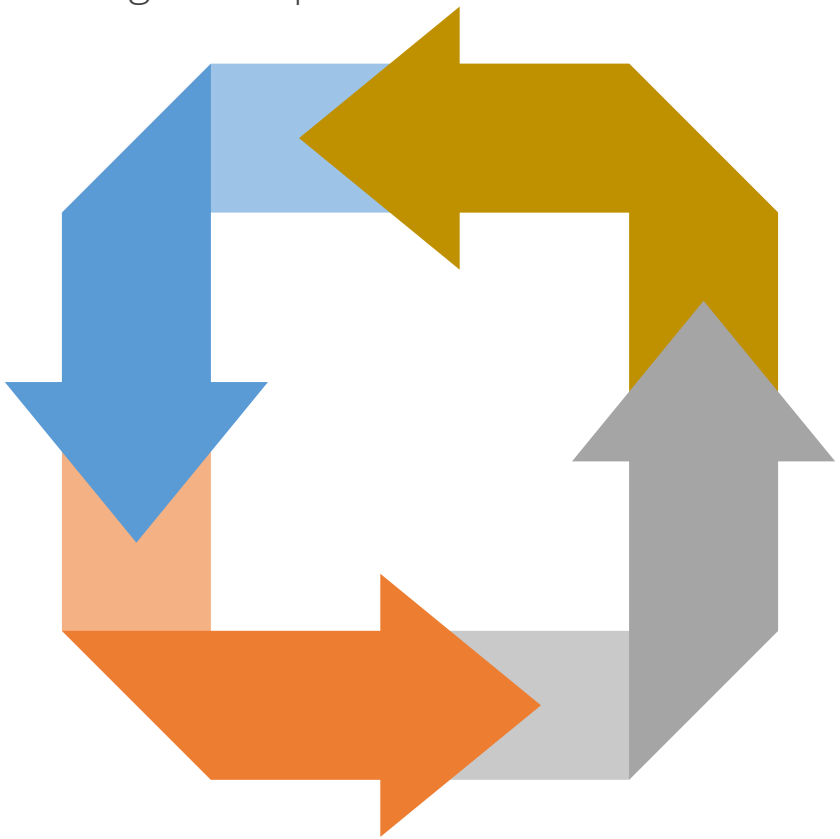
High Density Polyethylene

Toys, buckets, rigid pipes, crates, plant pots, Plastic wood, garden furniture, wheeled refuse bins, compost containers

4 LDPE

Low Density Polyethylene

Films, fertilizer bags, refuse sacks, packaging films, bubble wrap, irrigation pipes, thick shopping bags, wire and cable applications.



5 PP

Poly propylene

Syrup bottles, potato crisp bags, biscuit wrappers, crates, plant pots, drinking straws, refrigerated containers, heavy duty bags, tarpaulins.

6 PS

Polystyrene

Egg boxes, fast food trays, video cases, vending cups, disposable cutlery, seed trays, coat hangers, low cost brittle toys.

Unacceptable feedstocks.

1 PETE – Polyethylene Terephthalate

Fizzy drink, beer bottles, mineral water and soft drink bottles, fiber for clothing and carpets.

3 v – Polyvinyl Chloride

Credit cards, carpet backing and other floor covering, window and door frames, pipes and fittings.

7 – Other

Nylon(PA), Acrylonitrile butadiene styrene, Polycarbonate (PC)

Process Description

1. Shredding /Feed

   The Waste plastic is cleaned and shredded.

2. Reactor Vessel

   The shredded plastic is fed into the reactor vessel through air lock valve and heated under controlled conditions

3. Gas Burner

   The reactor is heated initially by burners using furnace oil. Later by gas produced during the process, is reused to heat the reactors.

4. Carbon Discharger

   During the process, Carbon Black in powder form is generated from reactor vessel through air lock valve and is collected separately in bags.

5. Gas Separator

   Flue Gas is generated due to the thermo-chemical reactions in the reactor.

6. Condensation

   The vaporized gases are passed through Heat Exchangers, wherein it gets condensed into liquid form and collected in the oil tank.

7. Heat Management

   The heat exchangers use coolant water as the condensing medium and this water is re-circulated. There is no discharge of cooling water medium.

Applications for fuel recycled from waste plastic

Potential Buyers

Marine/DG Engines

Construction / Mining

Construction Industry

Industrial Boiler

Rotary Kiln - Cement Plant

Casting Furnace

There is great market potential for Plastic oil, as they can be sold in open market, at a price 25% below market price of Hydrocarbon fuels.

There is a great opportunity to propagate the technology by establishing Waste to Energy Plants from 3 TPD to 20 TPD across the globe.

State of the Art Plants

Certified/standardized at every level

1. Design Certification
2. Materials for manufacturing certified by TUV GERMANY
3. Manufacturing Quality certified by LLOYDS OR SGS
4. HAZOP operations certified by HAZOP Council of India
5. Standards for process,
   Certified by Independent Industry Consultant.
6. SCADA and PLC controlled and monitored plant

Recycling Turns Things into Other Things, Which Is Like Magic

- Unknown

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