Bio Plastic Waste CAPEX

Investment opportunity in advanced bioplastic recycling technology

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Scale of disaster

There are significant challenges with off-grid plastic waste management, leading to environmental degradation and community health risks. Ineffective waste disposal systems and a lack of awareness contribute to escalating plastic pollution, threatening local ecosystems and livelihoods.

DEPOLYMERIZATION PROCESS – PLASTIC TO ENERGY

The depolymerization process involves the recycling of plastic waste.

In a low-temperature process, this process primarily enables material recycling of the organic waste and recyclable materials introduced in the form of conversion synthesis gas (85-90% CH_4, approx. 10% H_2 and max. 5% CO or CO_2), which is thus a full natural gas equivalent.

This synthesis gas is used as a natural gas substitute in gas turbines or gensets.

Generated electricity is utilized on powering mobile data-centers.

Oil yield for plastics and tires

Material	Oil yield
PE	50-75%
PP	50-75%
PS	50-75%
ABS	40%
Leftovers of paper	Wet 15-20%, Dry 60%
House garbage	35-50%
Plastic cable	80%
Plastic bag	50%
Submarine cable	75%
Rubber cable	35%
Sole	30%
PVC	5%
PET	5%
Big Tire	45-50%
Small Tire	35-40%

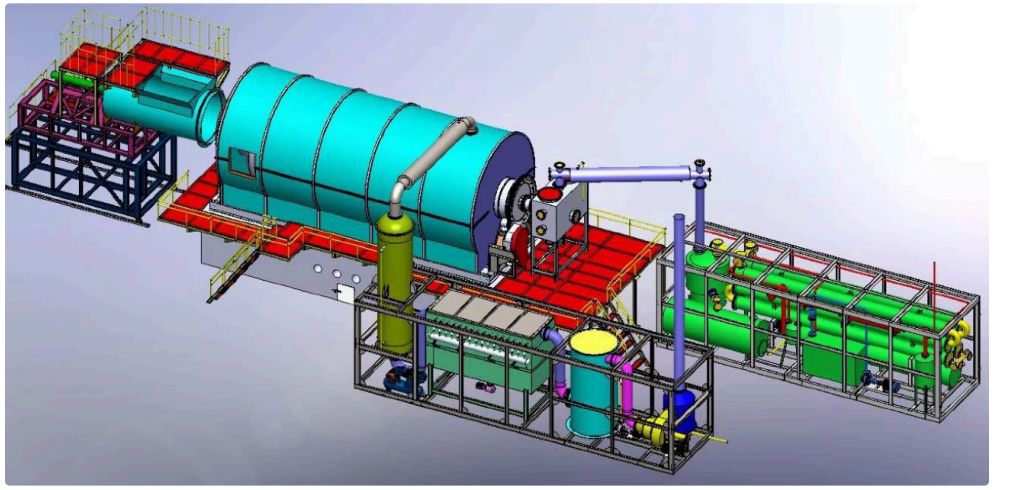
PRODUCTION + MINING CYCLE

1	2	3	4
Plastic	**Diesel**	**kWh**	**Bitcoin**
1 ton	400 l	1481	$192

**Carbon credits*

DEPOLYMERISATION

- It is a bus process system with low temperature between 105°C and 265°C
- Time, the process only takes between 4 and 12 hours depending on the amount and size of the tires (car, truck, tractor).
- Evaporated gases will be condensed in liquids by heat exchanger. The cooling water remains in the process and is recycled.
- The system can run 24 hours a day, 365 days a year.



Main Features of the plant

- 100% recycling of tires and plastic is achieved No chemicals are used in the process the process is 100% environmentally friendly.
- No pollution during or after the process. All values of pollution to the soil, air or water are well below the required directives of the European Union. The emission is inside the strictly criterion of the European Union.
- Each ton of recycled tires binds 10 tons of CO2 and protects the environment from greenhouse gases.
- The method is an alternative energy source to oil, Diesel (D2) and gas.
- The process can be used for all rubber materials.

By-products of tire recycling

CRUDE OIL (45% – 50%)

Fuel which can be used for industrial or ship engines. It also can be converted in Diesel (D2) with an extra charged distillation plant.

STEEL WIRE (12%)

The recovered steel wire in radial tires can be sold to steel manufacturers.

CARBON BLACK (28% – 35%)

Carbon black is required as a raw material which is worldwide needed.

It is artificial RUBBER natural RUBBER is becoming a rare product.

GAS (8 – 10%)

The Gas is used to run the process

Revenue per hour based on input of raw materials, tons

Ton/h	1	5	10	50
MW/h	0.4	2	4	20
S21E XP Hyd 3U	$63	$316	$632	$3,160
M60S	$44	$222	$443	$2,217
M50S	$32	$158	$316	$1,580
M30S	$24	$121	$242	$1,208
M20S	$17	$83	$166	$831

ASIC mining CAPEX/ROI 24/7 @ zero cost of electricity

ASIC	Th/s	kW	CAPEX / kW	Efficiency	Revenue, year		Payback	ROI
				/ kWh	kW	ASIC	year	
S21 XP+ Hyd.	500	5.50	$2,827	$0.16	$1,411	$7,759	2.0	50%
M60S	170	3.15	$924	$0.10	$837	$2,638	1.1	91%
M50S	126	3.28	$421	$0.07	$597	$1,955	0.7	142%
M30S	100	3.40	$237	$0.05	$456	$1,552	0.5	193%
M20S	68	3.36	$149	$0.04	$314	$1,055	0.5	211%

Mining + depolymerization CAPEX/ROI @ 24/7

*including Imagine8 ASIC upgrade + mining infrastructure + depolymerization plant

ASIC Model	Efficiency	CAPEX/1 kW		CAPEX	REVENUE	Payback	ROI
	$/kWh	ASIC + farm	AMOL	Total	1kW/year	years	
S21E XP Hyd 3U	$0.16	$7,526	$1,255	$8,781	$1,384	6.34	16%
M60S	$0.11	$1,306	$1,255	$2,562	$971	2.64	38%
M50S	$0.08	$660	$1,255	$1,915	$692	2.77	36%
M30S	$0.06	$541	$1,255	$1,796	$529	3.39	29%

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