

ZERO FUEL WASTE PROCESSING FURNACE

 <https://phoenix-waste-solutions.com>
 info@phoenix-waste.com



ZERO FUEL

- Saves 375 gallons of diesel or 800 gallons of propane PER DAY vs conventional USDA incinerator. ~ Texas A&M University study.
- Combined with an Organic Rankine Cycle, can cogenerate **30KW** of electricity per day.



NON POLLUTING AND DEPLOYABLE

- Meets EPA standards CFR 40 Subpart 60, EEEE limit for Very Small Waste combustors (< 35 tons/day).
- 25% less GHG than landfill or incineration.
- Easily deployed to where waste is generated to save transportation and carbon footprint.



OPERATED WITH ONE TECHNICIAN

- Electrical consumption of 18 KW / day
- 10-15 gallons of water / hour
- One technician per shift with forklift
- Little to no intervention is required during processing. Temperature is monitored. Generally 20 to 35 min/load.
- Batch loaded via top lid – 90 seconds to load.



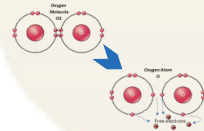
99% REDUCTION

- In a pilot study with Shell Oil, 30 cubic yards of waste was reduced 99% by volume in a nine hour period.
- The disposal rate is 5-8 tons of waste per day.
- Paper, wood, cloth, food waste, plastic, styrofoam, tires, e-waste can be thermally degraded.
- The non-toxic ash can be made into bricks or as a soil amendment. Ash passed TCLP analysis.



AFFORDABLE

- Annual consumables (Filters, Carbon pellets, Alkaline solution, catalysts) at \$20,000 per year.
- Waste processing cost of \$58/ton vs \$70 - \$150/ton for landfill. CAPEX amortized over 7 years.
- Does not include savings from transportation.



PATENTED LOW TEMPERATURE PLASMA TECHNOLOGY

- The ion generator utilizes magnetic energy to decouple oxygen molecules into two oxygen atoms and free electrons or negative ions in an exothermic process.
- The highly energetic ions react with the heat in the furnace, generating a low temperature plasma which works in conjunction with the calorific content of the waste. Furnace temperature accelerates to over 2000F.
- Since the oxygen molecule is no longer available for pairing within molecular chains, pollutants such as dioxins, furans, Nitrogen Oxides, Sulphur Dioxides associated with incineration are minimized.



LOW MAINTENANCE

- Daily : Clean ash trays, empty filters, rake carbons
- Weekly : Clean cartridge filters, check spray nozzles
- Quarterly : Replace carbons and catalyst
- Annually : Service blowers and pumps. Full inspection
- Cost of consumables : 10-15k per annum