



Leading Plasma Gasification Solutions

Converting Waste into
Clean Renewable Fuel

Presented
at
TechRealization

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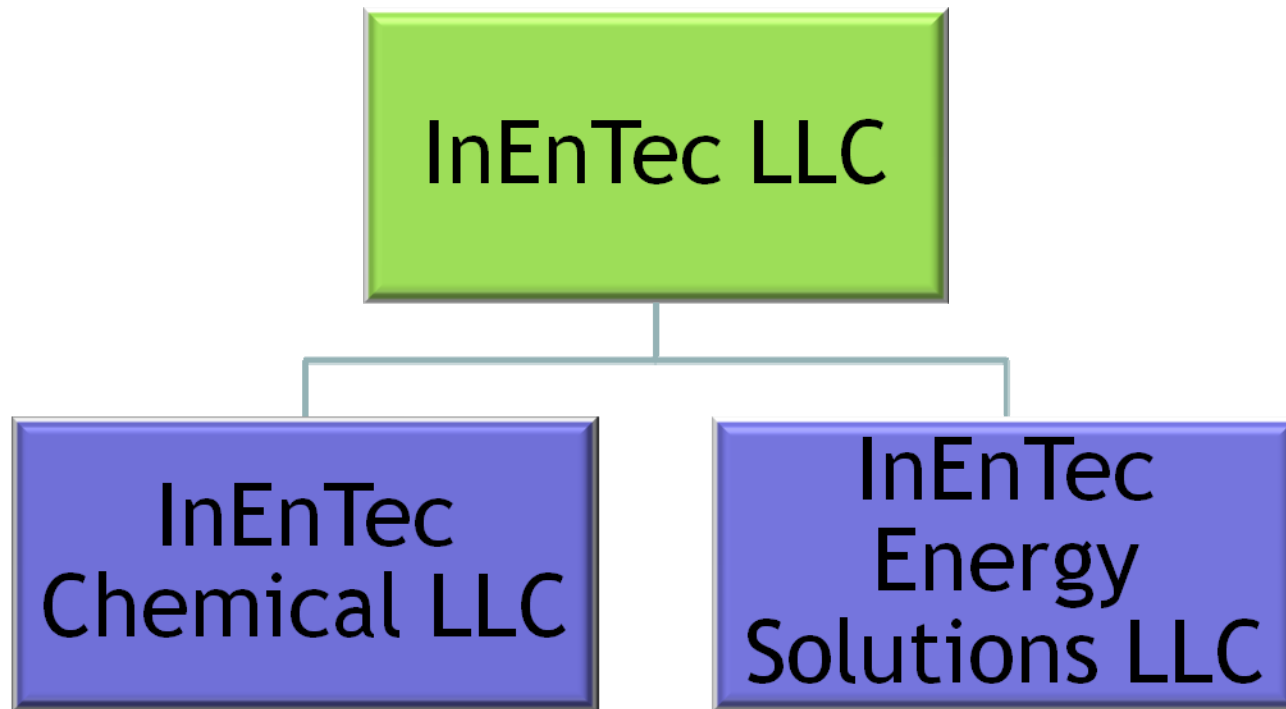
Outline

- Introduction to InEnTec
- InEnTec's Waste-to-Fuels Technology
- Richland Project

InEnTec, LLC

- Founded in 1995, formerly (IET) or Integrated Environmental Technologies LLC
- Engineering and development located in Richland, WA
- Executive team headquartered in Bend, OR
- Exclusive license for Plasma Enhanced Melter™ (PEM™) technology with over 42 patents on PEM™ related technology
- Proven Technology - installed seven commercial PEM™ systems
- Joint marketing agreements with Kawasaki Heavy Industries & Hitachi (Japan)

InEnTec Company Structure



InEnTec Progress

- **InEnTec Chemical**
 - Executed \$60 million contract with Dow Corning Corp. - construction initiated on \$25 million facility located at Dow Corning facility in Midland, Michigan
- **InEnTec Energy Solutions**
 - Recently executed contract worth \$750 million over 10 years for 50 PEM™ plants
 - InEnTec is adding new technical staff with significant growth anticipated over next few years in Richland

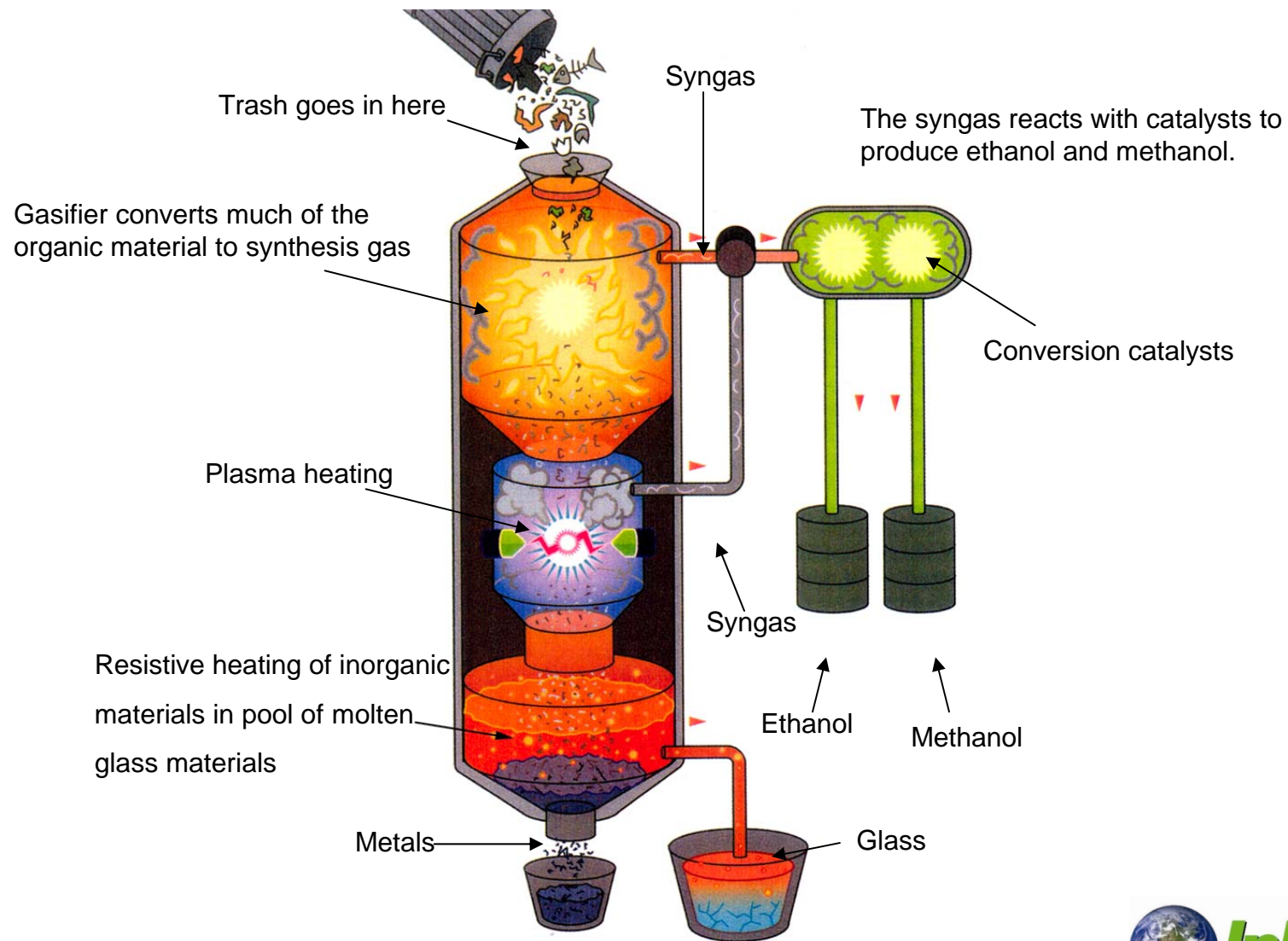
InEnTec / PNNL Established HCTF



InEnTec/Battelle partnership established in 2006 to conduct joint research of gasification and gas-to-liquids technologies.

- InEnTec Research Activities
 - Waste and biomass gasification
 - Standard cleaning of synthesis gas
 - Ultra-deep cleaning of synthesis gas
 - Gas to liquids conversion (alcohol and FT)
- Battelle
 - Coal gasification
 - In-situ Gasification Diagnostics
 - Gas-to-liquids catalyst development
 - High heat transfer catalytic reactor development

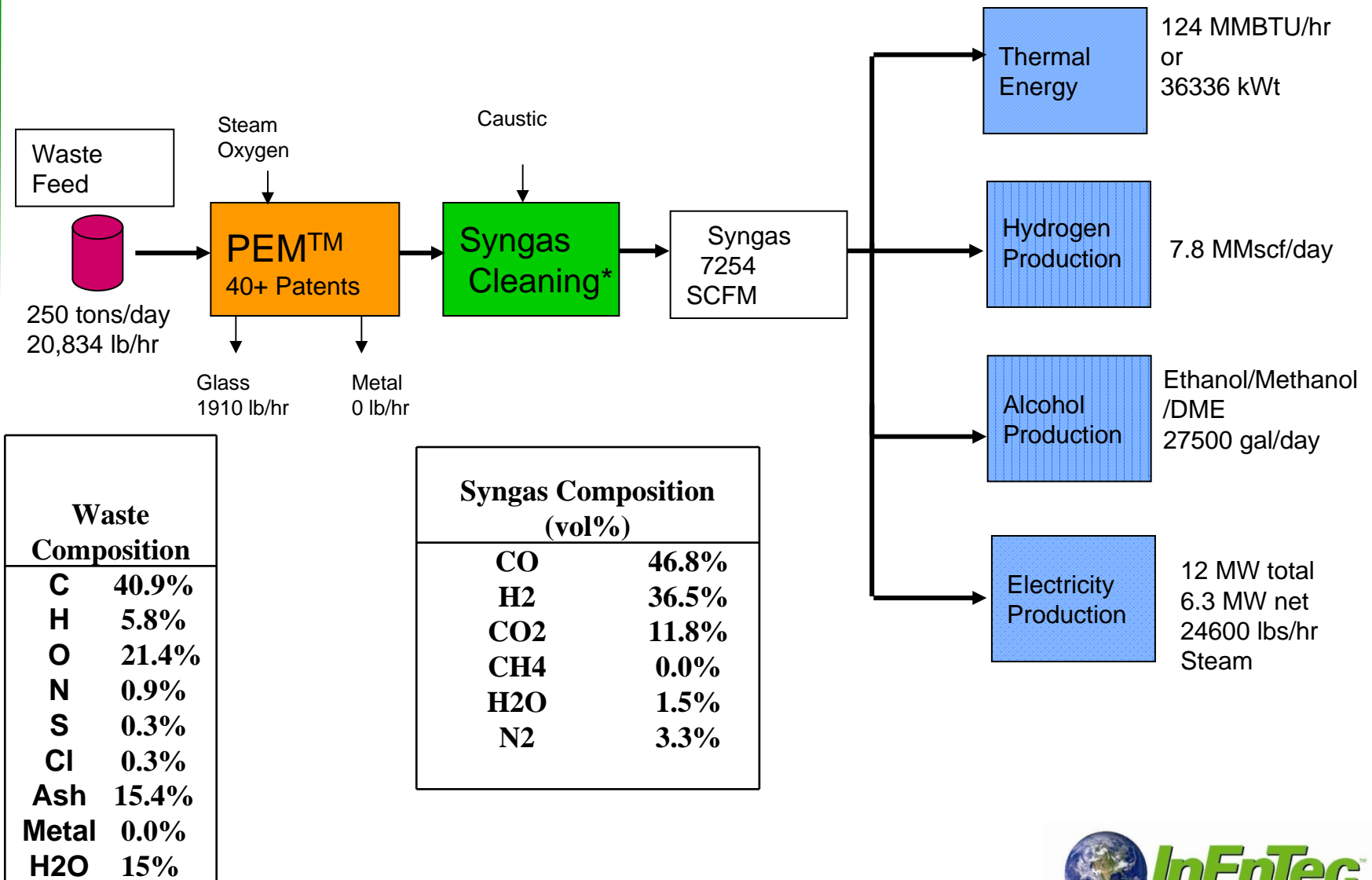
InEnTec's Plasma Enhanced Melter™ Process



Semi-trailer mounted PEMTM system



Generic Mass Balance



InEnTec Nevada Plant



InEnTec - Diversified Options

- InEnTec Energy Solutions energy conversion options
 - Conversion of waste into clean transportation fuels (i.e. ethanol, methanol, DME, etc.)
 - Conversion of waste into hydrogen for large hydrogen consumers (i.e. refining industry)
 - Conversion of waste into clean syngas fuel
 - High efficiency electrical production
 - Efficient energy storage at power plants
 - Mixed fuels facilities (i.e. coal, biomass, MSW)
 - Distributed conversion of stranded electrical production (i.e. wind energy into liquid fuel)

New Waste-to-Fuels Facility in Richland, WA

- InEnTec is deploying PEMTM system at City of Richland landfill capable of processing 25 tons of waste per day
- New facility has capability to process all waste to be generated in TCRD and produce over 1 million gallons of liquid fuel
- Facility is modular and could be located in TCRD or remain at City landfill

Fifth Scale Demonstration PDU (Richland, WA)



Fifth Scale Status (Richland, WA)



Fifth Scale Status PDU (Richland, WA)

- Waste Preparation System – City of Richland, WA



Fifth Scale Demonstration PDU (Richland, WA)



END