

Solid Waste Demonstrations

Objectives

- Determine “Best Fit” or Ideal Fit Utilization Driven by Solid Wastes
- Identify General Forms of Solid Wastes
- Sequestration Needs for System
- Power

Forms of Wastes

- Municipal/Industrial
- Petroleum Coke
- Mine Tailings
- Prep Plant – coal
- Animal
- Sewage
- Biomass (wood, crops)
- Rubber Tires
- Coal

Concentrate on Wastes that have Consistent
heating Value

Scenario I: Power

- Waste Type:
 - Pet coke or other wastes with coal
 - 2500 tons/day
- Site Selection
 - Power Station 300 MW + (2500t/d)
 - Gasification
- Co production
 - Power, hydrogen gas turbine
 - Other Hydrogen use*
- Sequestration (key to project)
- Eastern US sites
- * End use open to economics - transportation, other

Scenario II: Transportation and Small Onsite Cogen

- Regional fleet
 - Equipment
 - Transportation – dual fuel
- Federal Incentive for Hydrogen use
- Potential fuels
 - Municipal ,animal, sewage, biomass
- Hydrogen generated at the site
- Probably not a gasification process
 - Biochemical approach
- Biomass driven Sequestration not an issue

Scenario III: Industrial

- Existing Projects
 - Delaware refinery - pet coke gasification
 - Tampa refinery – pet coke gasification
 - Boiler Modifications (development)
 - Add on to EECF project
- New Projects
 - AI Industry