



Session 3

Stationary



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Renewable Waste to Fuel Conversion

- Waste-to-energy process to use green waste
- Inductively-heated reactor at 1200 °C – 1600 °C
- Produce syngas, bio-methane and hydrogen
- Vehicle fueling and stationary power generation
- Reduce GHG emissions
- Support Stationary Clean Fuel Technologies in 2009 Plan Update

Ultra-Low Emissions Gas Turbine

- Can handle wide variety of gaseous fuels from 1.5% to 100% CH₄
- NO_x emissions less than 1 ppm
- 200 kW demonstration project at landfill with low methane concentration
- Reduce NO_x, GHG from gases in landfills
- No siloxane removal required
- 100-200 MW potential power generation in South Coast
- Support Stationary Clean Fuel Technologies in 2009 Plan Update

Renewable Liquefied Hydrogen Production

- Reform biogas from green waste recycling facility to liquefied hydrogen
- Biogas will fuel a microturbine on site to power reformer and liquefaction system
- Liquefied hydrogen will be distributed to fueling stations
- Siloxane will be removed
- Support Stationary Clean Fuel Technologies in 2009 Plan Update

Bulk Purification of Landfill Gas

- Large quantities of landfill gas is currently flared
- Approximately 35% CO₂ in landfill gas
- Previously tested a three-stage freezing heat exchanger cryogenic separation technique
- Rate of CO₂ sublimation slower than CO₂ freezing
- Proposed project will balance the sublimation and freezing rates
- Support Stationary Clean Fuel Technologies in 2009 Plan Update