



# GULF EXPRESS INTERNATIONAL

**Gulf Express is also going green!**  
**As the Middle East representative for a USA based Renewable Energy firm we can offer the following and more:**

*World-class performance and  
reliability in air pollution control, gas cleaning  
and biomass energy systems*

## Harvesting the Energy of Life!

**FROM WASTE TO WATTS: GEI is the Middle East representative for biomass gasification technology the forward-looking solution for generating safe, renewable energy, mitigating waste disposal costs and achieving environmental goals.**

The Biomass Cogeneration System is a set of proprietary gasification, gas cleaning, and power generation technologies that can be used to convert biomass and other organic waste into a versatile, clean-burning synthesis gas (syngas). This gas can be used to generate combined heat and power (CHP), or to produce hydrogen, biofuels and valuable industrial chemicals.

The system combines proven, legacy technologies with the latest advances in science, engineering, materials and design, configured into three core components:

- \* A high-efficiency gasification reactor that converts up to 85% of carbon in biomass feedstock's into energy-rich synthesis gas.
- \* A wet electrostatic precipitator (WESP) that purifies the syngas down to submicron particulate levels at 99.99% efficiency—essential for critical downstream applications.
- \* An internal combustion engine-generator that also produces recoverable thermal energy for power cogeneration, district heating or combined cycle (IGCC).

The three subsystems are close-coupled, using electronic controls to optimize efficiency and performance with varying feedstocks and operating conditions. This configuration is flexible, scalable and adaptable for a wide range of applications, geographic locations and industries, including forestry, pulp and paper, agriculture, manufacturing, refining, metals, municipal waste management and power utilities. Potential feedstocks include agricultural, animal, industrial, wood and municipal wastes (MSW).