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LOUISIANA LANDFILL GAS: A PROVEN, VIABLE ENERGY RESOURCE

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For years it has been known that decomposition of the waste materials in landfills produces methane gas. The problem has been how to extract that gas and make it readily available to end-users in a cost-effective manner. The first task has been accomplished. Making it available to end-users is the entrepreneurial challenge. That challenge is being met successfully in more than 40 states including Louisiana.

The U.S. Environmental Protection Agency's Landfill Methane Outreach Program reports that there 445 landfill gas energy projects currently operational across the United States. These projects generate about 11 billion KWH every year and deliver 236 million cubic feet of landfill gas every day for direct-use applications.

Many of the companies involved are household names: BMW, Cargill, Chrysler, Duke Energy, Dupont, Ford, Frito-Lay, General Electric, General Motors, Honeywell, Lucent, Mallinckrodt, NASA Goddard Space Flight Center, Nucor, Ocean Spray, Pilgrim's Pride, Rutgers University, SC Johnson, and Tropicana. The projects run the gamut from heating greenhouses, fueling garbage trucks, producing heat and electricity in cogeneration applications, and supplying fuel in a variety of manufacturing processes including steel, chemical, automobile, ethanol, and biodiesel production.

Specific public-sector projects include, for example, cogeneration at a community high school in Illinois, fueling a sludge dryer at a wastewater treatment plant in North Carolina, using heat from the combustion of landfill gas to evaporate landfill leachate in Florida, Texas, Ohio, Washington, and several other states. California with 72 operational projects leads all states. Other projects are heavily concentrated in an east-west belt which runs from Massachusetts and New York through Illinois and Wisconsin.

There are three operational projects in Louisiana involving direct-application end-users: General Motors in Keithville; Cytec Industries in Avondale; and Del-tech Corporation in Baton Rouge. Renovar Energy of Midland, Texas was the contractor on all three projects which supply fuel to boilers. There is a fourth project in Welsh which under a contract with South Texas Renewables began operations earlier this year. This is a high BTU project in which carbon dioxide and other contaminants are removed from the landfill gas until it meets natural gas pipeline specifications.

All of the nearly 445 projects across the United States remove methane, a greenhouse gas, from the environment. The Avondale project, for example, removes the annual equivalent of greenhouse gas emissions from 4,200 passenger vehicles. All of these projects take a

nuisance fuel which previously was seen as waste and use it effectively in cogeneration, direct-use, and electricity generation. Some of them clean up undesirable or toxic chemicals in the water that percolates through landfills. Others produce the energy to heat and cool our homes and businesses. A few help almond growers in California, brick manufacturers in Georgia, and producers of cranberry products in Wisconsin.

USEPA estimates that there are roughly 535 other landfills in the United States which provide opportunities for similar project development. To be included among the 535 a landfill is either currently accepting waste or has been closed for less than five years and contains at least one million tons of waste. There are candidate landfills in these Louisiana cities: Sorrento, Jena, Washington, Independence, and Walker. Additional candidates are found in Westwego (7.5 million tons of waste), Zachary (5.6 million tons), and Monroe (3.6 million tons).

Their development into operational projects depends critically on the vision to see in detail how a dump site can supply an energy resource for a specific end-user, the creativity to sell the idea to financial backers, and the perseverance to overcome resistance and make it happen.

Is there somewhere in Louisiana an entrepreneurial maverick who sees what others do not: a landfill close to an interstate highway as a fuel stop for fleets of trucks with engines which have been converted to run on compressed methane gas? The extraction technology already is in place in Louisiana. The engine technology is in place in Europe. A visionary like that could be the State's next multi-millionaire.

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