

New process yields fuel from biowastes

MCX Environmental Energy Corp., the United States, offers technology for obtaining solid, liquid or gaseous fuels from biowastes. The company's patented process converts raw materials from renewable sources of cellulose fibre into homogeneous biomass fuels that are custom-formulated for suspension boilers. The solid fuel, termed utility grade fuel (UGF), produces green energy and when co-fired with coal or oil it reduces emissions of SO₂, NO_x and particulate matter resulting from burning fossil fuels alone. The method for making UGF essentially involves shredding and drying waste wood to obtain a finely granulated product, with specific water content, suitable for combustion in suspension boilers. The UGF is also CO₂ neutral, thereby enabling customers to fulfil current and future greenhouse gas legislations. It can also provide extended life to ageing or mothballed coal-burning plants.

The patented SlurryCarb™ process cleanly and economically converts a variety of wastes into high-grade fuel. In this process, solid wastes are chemically altered to yield a uniform, fluid slurry fuel suitable for combustion, co-firing or re-burning in industrial and utility coal boilers. The slurry fuel can be pumped and transported through pipes or tankers to industrial and utility users, where it is stored in tanks and used as a supplement or substitute for conventional fuels like coal. As this process can be utilized over a wide range of organic waste streams, it offers an innovative solution for municipal and industrial waste disposal. Some of the applicable waste streams include municipal sewage sludge, municipal solid waste, agricultural residues, pulp and paper sludge, refuse-derived fuels, animal manure, biomass, low-rank fuel, etc.

MCX also offers an energy conversion system that through anaerobic digestion produces methane gas, carbon dioxide (CO₂) and organic fertilizer. A wide variety of feedstock (plant materials) can be used for power generation. In this process, the feedstock is fed into large, airtight tanks and allowed to ferment for approximately 60 days. Digester gas thus obtained can be further separated into methane (60 per cent) and CO₂ (40 per cent). While methane gas can be used for power generation, food-grade carbon dioxide is valuable for beverage production and the organic fertilizer can be utilized as supplemental or stand-alone soil amendment.

Benefits of the MCX process include:

- Provides an inexpensive, reliable supply of electricity;
- Reduces reliance on fossil fuels through the use of locally produced, clean-burning agri-fuel;
- Provides jobs through facility operations and maintenance and through use of land;
- Minimizes adverse environmental impact of burning harvest residues and the greenhouse effect of methane released by decomposing crops;
- Provides agricultural revenues through long-term plantings for feedstock, increased revenue per acre for existing plantings, and recovery and sale of harvest residues; and
- Generates a natural soil amendment high in slow-release nitrogen that increases soil moisture and acts as a natural herbicide.

Contact: MCX Environmental Energy Corp., 3355, Lenox Road, Suite 750, Atlanta, GA 30326 1393, the United States. Tel: +1 (404) 5047 027; Fax: +1 (404) 5047 028; E-mail: info@mc xeec.com.

Website: www.mcxeec.com