

WXF-New energy: A green, sustainable, waste to energy process

Xu Fei (Philip) Wu, W&Y Environmental International Inc. Canada

Abstract

WXF-New Energy (WXF) is a technology platform consisting three major unit operations: Wastes preparation, Multi-Layer, Multi cavities Successive Bioreactor and Gas to liquid process. Up to 50% of CO₂ and 50% Methane can be catalytically converted to methanol. This process can convert industrial, agriculture, municipal biodegradable wastes; greenhouse gas; coal bed methane, coal mining gas etc. to green fuels. Comparing biogas to electricity, WXF produces 6-8 times more revenue. This process is especially valuable for the places of electricity abundance or waste treatment facilities located in remote areas where, building up a power line and transformer can be costly and the treatment facilities only have 20-25 years life cycle.

This process can turn organic wastes into biogas then green methanol. Organic wastes can be converted to biogas through landfill or anaerobic digester. The biogas then be flared or be utilized in thermal or electricity generation process. Injecting landfill gas into the city gas line or utilizing it to produce methanol also are options. However due to costly carbon wash and unstable quantity and quality of the biogas production, none of above processes has become viable industrial practice

Biography:

Xu Fei Wu is founder and Chief Scientist of W&Y Environmental International Inc. (W&Y), a Canadian environmental and sustainable energy technology company with patented landfill processes and proprietary waste to energy technologies. He has worked in environmental and sustainable energy fields over the last 25 years. Before W&Y, he worked for Conestoga-Rovers & Associates Limited, Microbe Environmental Science and Technology Inc. of Canada and The Ministry of Nuclear Industry and Ministry of Space Flight Industry of China. Xu Fei Wu holds a Master of Engineering Science degree from The University of Western Ontario.