

12/19/2007

To: Florida Public Service Commission
From: Jane Maxwell, Project Consultant 727/709-3398
Waste Energy Solutions
205 McKnight Park Dr.
Pittsburg, PA 15237

Re: Methods to Encourage Specific Renewables

Waste Energy Solutions uses anaerobic digestion technology to process organic wastes including manure, sewage solids, grease trap cleanout, and food processing wastes to produce biogas/methane and generate electricity. Waste Energy Solutions main office is in Pittsburg, PA. We are currently in the process of planning for building biogas plants in PA, MD and several other states. We may build several plants in Florida each would take in about 800 tons per day of waste and generate 4.5MW per hour plus 11,500,000 BTU of heat per hour that will be used to heat the digester tanks.

Definitely it would be beneficial to us and any other anaerobic digester companies to be able to sell the RECs separately from the electricity generation. We would also benefit from selling RECs associated with the waste heat and the power we generate and use in plant operations. Assuming that each MW of renewable energy has an attached REC, the value of the RECs from the waste heat could be calculated by converting the BTUs to MWs (3,413 BTU per kW).

We think this is fair and reasonable as the purpose of RECs is to give monetary value to the environmental value of replacing fossil fuel consumption with renewable energy. We accomplish this by using waste heat from engines operating on biogas/methane. Any renewable energy created and used in the process of generating electricity, including when it is used in biogas plant operations, has an environmental benefit that should be given the accompanying REC value.

The solar power businesses are making a similar argument that solar thermal should have associated RECs, as using solar thermal reduces the need for fossil fuel generated electricity. At the August 30th workshop a representative of Mosaic made a similar case that the heat generated from exothermic chemical reactions used to replace the need for fossil fuel should be considered renewable energy.

Electricity generation from anaerobic digestion benefits the utility companies as it is reliable 24/7. It is not dependent on the sun shining or the wind blowing. Our plants will always keep at least several days feedstock on hand in case of truck break downs or other problems. Many European countries supply a significant percentage of their power with anaerobic digestion technology. In states that have established tiers for their RFPs biogas from anaerobic digestion is in tier 1.

Electricity generation from anaerobic digestion has many benefits to consumers outside of replacing fossil fuel with renewable energy.

- All the wastes used in the process produce methane that would otherwise be released into the atmosphere. Burning this methane is important as it is 21 times as potent a GHG as carbon dioxide.
- Sending wastes to the biogas plant reduces the cost to consumers for the cost of more and larger landfills. The methane collection at a biogas plant is far more efficient than what can be accomplished from a landfill.

- Sewage solids and grease trap cleanout are presently mixed with lime and sprayed on land. This is not an environmentally sound system and it is becoming more costly as land prices increase and population increases – no one wants this applied near their home or business. The option to send sewage solids to the digester will likely save money that would otherwise have to be invested in larger more effective sewage treatment facilities.
- Florida dairies are experiencing problems with waste disposal as applying large amounts of manure causes high levels of phosphorus and nitrogen to accumulate in ground and surface water. Many dairies may close because they can't afford to be in compliance with new DEP regulations. A University of Florida study predicts that this will cost Florida from \$38 to \$332 million dollars per year and require more milk to be imported to Florida at an increased cost to consumers and an increased use of fossil fuel for importing milk. Our biogas plants can help keep Florida dairies in business by removing the manure from the farm and converting it to a solution of nitrogen and potassium that can be used in measured amounts and distributed to farms that need it.
- Along with producing energy the biogas plant produces fertilizer that can be used to replace commercial fertilizer. This reduces the need for the large amount of fossil fuel that would be used to produce an equivalent amount of commercial fertilizer.

Thank you for your time and effort in considering our concerns. Please feel free to contact me if you have questions or comments.

Jane Maxwell, Project Consultant
Waste Energy Solutions
727/709-3368