

*As Prepared for Delivery*

**"Biogas: Benefits to the Farm, Rural America, Environment and Economy"**

**National Biomethane Summit**

Sacramento, CA

June 23, 2009

**Welcome**

Good morning everyone, thanks for inviting me to the first ever biomethane summit. I'm honored to be here kicking off the first panel. I'll try to be brief and focus on giving you an overview of what investment in biogas or biomethane means for our farms, rural America, environment and economy. Rural America is a part of the country I'm particularly dedicated to. I'm Under Secretary for Rural Development at the Department of Agriculture in Washington and I grew up on a dairy farm in South Dakota. My agency works to increase economic opportunities, create and maintain jobs and enhance quality of life. We provide loans, grants, loan guarantees and payments; and under the Food and Energy Conservation Act, or Farm Bill, we became particularly involved in financing renewable energy projects. We're one of the main government agencies helping farmers invest in biogas and since 2003, we've invested \$59.7 million, leveraging \$163 million in outside sources.

**Introduction**

A number of our programs focus on biorefinery assistance and advanced biofuels. We're committed to biogas because we believe it will benefit rural America. People talk of the local foods movement; well this is really the local energy movement. It's a holistic approach. Every step of biogas production can be handled right on the farm. The manure

from livestock can be stored and converted into biogas and the result is clean renewable energy, which then provides electricity and heat to keep our farms and local communities running. There are even benefits in post-energy production. Product is leftover, both liquid and solid and if it's not being used, then it's just a wasted resource. Many nutrients that are beneficial to crop growth remain and can be reused. The solid matter is the same consistency, look and feel as peat moss that people use in their gardens. Nutrients can be extracted from the liquid for organic fertilizer, or applied back to the fields. The solid can be transformed into fiber and used as a replacement for fibers produced from fossil fuel. It also can be used as bedding material for cows.

On the environmental side, converting waste to biogas eliminates harsh farm odors, improves air quality and prohibits waste from entering groundwater and surface runoff into streams. Through investment in biogas we can reduce our greenhouse gas emissions, dependence on foreign oil and this energy can be turned into cash – by selling it to utilities.

California has really been at the forefront of this effort and I'm sure this conference will focus heavily on the conversion of biogas to transportation fuel, which brings in a whole other dimension. Converting manure to biogas is not only CO<sub>2</sub> neutral, but will also help us reach lower car transportation emissions standards.

## **Current Outlook**

However, nationwide manure to energy projects are not very widespread. Anaerobic digesters cover less than three (3) percent of dairy cows and less than one (1) percent of hogs, but the potential is huge. According to a study published in April by USDA, in 2007 the U.S. had over nine (9) million cows on over 70,000 operations. They handle about 500 billion pounds of cow manure; but just one cow can produce about 47 cubic feet of biogas or 1.37 lbs of methane per day. That's a lot of potential.

Today, most anaerobic digesters only serve the farms and surrounding areas where biogas is produced. There are 107 dairy and 19 swine digesters. Wisconsin is leading the states with 24 projects and Pennsylvania and California are close behind with 18 and 14. The focus has been on biogas from dairy, swine and poultry, but other waste from fruit and vegetables can be added, to increase the productivity of the gas. Long-term, biogas can become more viable because unlike wind or solar, it's a renewable that can easily be stored and used as needed. It can be scrubbed and integrated into existing natural gas pipelines and sent out. I believe PG&E and BioEnergy Solutions have been the local players in this new field.

### **USDA's Role**

To meet these long-term goals, it takes a collective effort. USDA's Natural Resources Conservation Service or NRCS and Rural Development are the two main agencies working on biogas. NRCS handles the storage part, funding storage for animal waste on the farm, and Rural Development funds the anaerobic digesters. We've funded 121 under the Rural Energy for America Program, generating 450 million kWh per year. Our

Biorefinery Assistance Program funds larger-scale, first of a kind projects and we have two under review, one for 10 million and one for 15 million, in Iowa and Michigan. I encourage you to visit our [USDA.gov](http://USDA.gov) Web site to learn more about what we're doing

We're also working with the Department of Energy and the Environmental Protection Agency on a program called AgSTAR. Its Web site is [epa.gov/agstar](http://epa.gov/agstar) and its purpose is to encourage the use of biogas technologies from animal feeding operations.

Additionally, the Department of Energy has received about \$480 million for research, development, demonstration and deployment under the American Recovery and Reinvestment Act signed February 17.

### **Challenges of Biogas**

As we become more involved in renewable energy, it's clear there's no one-size-fits all solution. It will take a combination of renewables, fossil fuels and improved energy efficiency. It will take time and flexibility to determine what role biogas will play. I know the demand is there and farmers want to convert their vehicles to biogas, as the technology becomes cost-effective. The primary challenges, however, according to a survey we did of U.S. farmers who received 2003-2004 Farm Bill grants are: negotiations on interconnection and insurance requirements and costs, standby charges, energy rates and system upgrades. However, despite these issues 92% of the farmers said they would still consider anaerobic digesters as solutions to manure management.

### **Cooperatives**

One idea to address these challenges is a cooperative approach. It's one of the most effective business models for renewable energy. It's a way of addressing many of the farmers' concerns and can enhance the economic feasibility of anaerobic digesters.

Cooperatives offer:

- Improved negotiation strength,
- Technical, installation and operation assistance,
- Management and marketing services; as well as
- Financial guidance.

In USDA Rural Development, we have been providing support for rural electric cooperatives since the Rural Electrification Act of 1936, helping with transmission, bringing electricity to the grid and installing poles and lines.

An existing dairy cooperative could provide services to ease the adoption of anaerobic digester technology and/or similarly-situated farmers could form a separate entity to address their specific needs. Often the decision to install a digester is dependent upon local policies, utilities and regulations. Electricity rates, access to grants and financing are also factors.

There has been an energy monopoly by large oil, coal, nuclear and natural gas companies. However, federal law under the Federal Energy Regulatory Commission requires that utilities buy energy from their communities if possible at the avoided cost of going to a larger company. It seems clear that whatever the overall new energy policy

will be, utilities will be mandated to buy locally from renewables. Carbon credits can then be sold for the reduction of methane emissions and split up or negotiated with equitable distribution throughout the participating farms. It may be that the cooperative approach is site specific, depending on feedstock, and regional differences, but it's very possible where there are lots of small farms like in the Northeast. Like I said, there's no one-size-fits-all.

### **Conclusion**

We've got a new administration, new priorities and a new commitment to climate change. Encouraging farmers to realize the energy potential of these waste streams and growing the supply of biogas in the states are good first steps. We must bring all interested parties to the table - investors, regulators and developers. This first National Biomethane Summit is just the type of collaboration we need. I hope the discussions and ideas coming from this conference are made available to the public for consideration.

As climate legislation is developed, our department will work to ensure that our programs are considered, their benefits for rural America remain and that biofuels play a key role in providing homegrown energy options and jobs. I encourage you to visit our Web site ([rurdev.usda.gov](http://rurdev.usda.gov)) to see what we're doing.

Thank you again for having me. Mr. Gallagher I believe you're up.